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NWS EARLE
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REMEDIAL INVESTIGATION REPORT

for

NAVAL WEAPONS STATION EARLE
Colts Neck, New Jersey

VOLUME II - APPENDICES A-M

Northern Division
Naval Facilities Engineering Command
Contract No. N62472-90-D-1298
Contract Task Order 0231

March 1996

VOLUME II - APPENDICES A-M

BROWN & ROOT ENVIRONMENTAL

R-51-1-6-16

REMEDIAL INVESTIGATION REPORT
FOR

NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION - NAVY (CLEAN) CONTRACT

Submitted to:
Northern Division
Environmental Branch, Code 18
Naval Facilities Engineering Command
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Contract No. N62472-90-D-1298
Contract Task Order 0231

March 1996

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LIST OF APPENDICES

A. ANALYTICAL RESULTS

a. Groundwater
b. Surface Water
c. Aqueous Waste Sample
d. Subsurface Soil
e. Surface Soil
f. Sediment
g. Floor Sweepings
h. Miscellaneous Parameters Results - Aqueous
i. Miscellaneous Parameters Results - Solids
j. Explosives Results - Aqueous
k. Explosives Results - Solids

B. SOIL GAS SURVEY REPORT

C. SOIL BORING AND MONITORING WELL INSTALLATION LOGS

a. Soil Boring Logs
b. Monitoring Well Sheets

D. SAMPLE COLLECTION LOGS

a. Groundwater Sample Logs
b. Hydropunch Sample Logs
c. Aqueous Sample Log
d. Surface Water Sample Logs
e. Sediment Sample Logs
f. Soil Boring Sample Logs
g. Surface Soil Sample Logs
h. Floor Sweepings Sample Log

E. TEST PIT DOCUMENTATION

a. Test Pit Logs
b. Test Pit Photos

F. SURVEY DATA

G. CHAIN-OF-CUSTODY FORMS

H. SLUG TEST RESULTS

I. RISK ASSESSMENT DOCUMENTATION

a. Example Quantitative Risk Assessment Calculations
b. Toxicity Profiles For COPCs
c. Example Calculations
d. IEUBK Lead Model

J. GROUNDWATER SAMPLING ENDPOINT TURBIDITY VALUES

K. DEDICATED LOW FLOW PUMP SPECIFICATIONS

a. Dedicated Low Flow Pump Contaminant Free Certification
b. Material Specifications

L. WASTE DISPOSAL RECORDS

M. ECOLOGICAL RISK ASSESSMENT TOXICITY PROFILES

APPENDIX A

ANALYTICAL RESULTS

APPENDIX A.a.

ANALYTICAL DATABASE

ORGANIC AND INORGANIC RESULTS

GROUNDWATER SAMPLES

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01GW01	01GW02	01GW02-DUP	01GW03	01GW04	01GW05	01GW05-F	02GW01	02GW02
LOCATION:	01GW01	01GW02	01GW02	01GW03	01GW04	01GW05	01GW05	02GW01	02GW02
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
aluminum	1380	7840	6940	3750	2770 J	10800 J	1120 J	424	2010 J
antimony	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7	2.7 U
arsenic	3.3 U	17.3	12.2	5.8	3.3 U	22.7	3.3 U	3.3 U	3.3 U
barium	853	678	731	50.1	371	469	114	19.4	462
beryllium	0.11 U	0.11 U	0.42	0.21	0.34	0.85	0.48	0.25	0.11 U
cadmium	2.4	2.9	2.2	1.5	2.9	3.3	3.0	0.38 U	0.68
calcium	2980	1450	1460	1210	5450	4330	3830	518	1460
chromium, hexavalent								3.0 J	20.0 U
chromium, total	19.6	121	108	43.5	34.4	148	2.0	9.9	30.7
cobalt	1.1	1.6	1.5	0.70	3.0	3.4	2.9	0.60 U	0.66
copper	20.8	77.9	73.0	1.8	21.0	10.6	2.2	0.77 U	11.6
iron	3550	24800	21900	7690	5050	23200	20.6	472	4180 J
lead	7.6 J	15.0	14.0	1.5 UJ	4.7	5.4	1.5 UJ	1.5 UJ	3.4
magnesium	1060	2180	1870	1380	2140	2690	1110	1760	1790
manganese	34.1	24.6	23.8	25.6	97.1	94.8	93.8	3.9	26.4 J
mercury	0.12 J	0.28 J	0.28 J	0.12 J	0.082	0.11	0.0090	0.0040 UJ	0.0090
nickel	2.4	5.4	3.8	2.3	0.75 U	0.75 U	5.6	1.7	3.0
potassium	2180	11000 J	10400 J	2360	5150	4890	1400	1190	2060
selenium	4.4 UJ	4.4 UJ	4.4 UJ	4.4 UJ	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
silver	1.2	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U
sodium	2430	4800	4790	1850	13100	29500	31900	3230	4870
thallium	3.6 U	3.6 U	3.6 U	4.8	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
vanadium	8.2	59.5	53.4	17.2	11.7	58.4	0.61 U	2.9	22.6
zinc	945 J	672 J	718 J	131 J	1020	366	182	3.2	314
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,2,4-trichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
1,2-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
1,3-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01GW01	01GW02	01GW02-DUP	01GW03	01GW04	01GW05	01GW05-F	02GW01	02GW02
LOCATION:	01GW01	01GW02	01GW02	01GW03	01GW04	01GW05	01GW05	02GW01	02GW02
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,4-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
2,2'-oxybis(1-chloropropane)	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
2,4,5-trichlorophenol	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U		25.0 U	25.0 U
2,4,6-trichlorophenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
2,4-dichlorophenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
2,4-dimethylphenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
2,4-dinitrophenol	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U		25.0 U	25.0 U
2,4-dinitrotoluene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
2,6-dinitrotoluene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
2-chloronaphthalene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
2-chlorophenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
2-methylnaphthalene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
2-methylphenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
2-nitroaniline	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U		25.0 U	25.0 U
2-nitrophenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
3,3'-dichlorobenzidine	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
3-nitroaniline	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U		25.0 U	25.0 U
4,6-dinitro-2-methylphenol	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U		25.0 U	25.0 U
4-bromophenyl-phenylether	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
4-chloro-3-methylphenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
4-chloroaniline	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
4-chlorophenyl-phenylether	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
4-methylphenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
4-nitroaniline	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U		25.0 U	25.0 U
4-nitrophenol	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U		25.0 U	25.0 U
N-nitroso-di-n-propylamine	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
N-nitrosodiphenylamine (1)	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U
acenaphthene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01GW01		01GW02		01GW02-DUP		01GW03		01GW04		01GW05		01GW05-F		02GW01		02GW02	
LOCATION:	01GW01		01GW02		01GW02		01GW03		01GW04		01GW05		01GW05		02GW01		02GW02	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
acenaphthylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
benzo(a)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
benzo(a)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
benzo(b)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
benzo(g,h,i)perylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ			10.0	U	10.0	U
benzo(k)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
bis(2-chloroethoxy)methane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
bis(2-chloroethyl)ether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
bis(2-ethylhexyl)phthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
butylbenzylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
carbazole	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
chrysene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
di-n-butylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
di-n-octylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
dibenz(a,h)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
dibenzofuran	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
diethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
dimethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
fluorene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
hexachlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
hexachlorobutadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
hexachlorocyclopentadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
hexachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
indeno(1,2,3-cd)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ			10.0	U	10.0	U
isophorone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
naphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01GW01		01GW02		01GW02-DUP		01GW03		01GW04		01GW05		01GW05-F		02GW01		02GW02	
LOCATION:	01GW01		01GW02		01GW02		01GW03		01GW04		01GW05		01GW05		02GW01		02GW02	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
nitrobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
pentachlorophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U			25.0	U	25.0	U
phenanthrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
phenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
pyrene	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ	10.0	U	10.0	U			10.0	U	10.0	U
VOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,1,1-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
1,1,2,2-tetrachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
1,1,2-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
1,1-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
1,1-dichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
1,2-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
1,2-dichloroethene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
1,2-dichloropropane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
2-butanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	U			10.0	U	10.0	U
2-hexanone	10.0	UJ	10.0	UJ	10.0	UJ	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
4-methyl-2-pentanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
acetone	10.0	UJ	10.0	UJ	10.0	UJ	29.0	UJ	10.0	UJ	10.0	U			10.0	UJ	30.0	UJ
benzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
bromodichloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
bromoform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
bromomethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
carbon disulfide	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	U	10.0	U			10.0	UJ	10.0	U
carbon tetrachloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
chlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
chloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
chloroform	10.0	U	10.0	U	10.0	U	10.0	U	3.0	J	10.0	U			30.0		14.0	
chloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01GW01		01GW02		01GW02-DUP		01GW03		01GW04		01GW05		01GW05-F		02GW01		02GW02	
LOCATION:	01GW01		01GW02		01GW02		01GW03		01GW04		01GW05		01GW05		02GW01		02GW02	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
cis-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
dibromochloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
ethylbenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
methylene chloride	10.0	U	10.0	U	10.0	U	1.0	J	10.0	U	10.0	U			10.0	U	10.0	U
styrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
tetrachloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
toluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
trans-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
trichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
vinyl chloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
xylene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	10.0	U
PESTICIDES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
4,4'-DDD	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U						
4,4'-DDE	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U						
4,4'-DDT	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U						
aldrin	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U						
alpha-BHC	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U						
alpha-chlordane	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U						
beta-BHC	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U						
delta-BHC	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U						
dieldrin	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U						
endosulfan I	0.0019	R	0.0024	R	0.0021	R	0.050	U	0.050	U	0.050	U						
endosulfan II	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U						
endosulfan sulfate	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U						
endrin	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U						
endrin aldehyde	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U						
endrin ketone	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U						
gamma-BHC (Lindane)	0.050	U	0.0011	R	0.0010	JN	0.050	U	0.050	U	0.050	U						

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01GW01	01GW02	01GW02-DUP	01GW03	01GW04	01GW05	01GW05-F	02GW01	02GW02
LOCATION:	01GW01	01GW02	01GW02	01GW03	01GW04	01GW05	01GW05	02GW01	02GW02
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
gamma-chlordane	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U			
heptachlor	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U			
heptachlor epoxide	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U			
methoxychlor	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U			
toxaphene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U			

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	02GW03	02GW04	02GW05	02GW06	02GW07	02GW07-F	03GW01	03GW01-F	03GW03
LOCATION:	02GW03	02GW04	02GW05	02GW06	02GW07	02GW07	03GW01	03GW01	03GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
aluminum	1790	347 J	1250 J	716 J	4350 J	141	7930	5520	448
antimony	2.8	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	6.1	2.7 U
arsenic	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	15.1	4.5	3.3 U
barium	21.2	16.7	483	33.9	367	14.0	689	34.0	16.5
beryllium	0.42	0.11 U	0.11 U	0.11 U	0.31	0.11 U	0.11 U	0.20	0.11 U
cadmium	0.45	0.38 U	0.68	0.41	0.52	1.0	11.7	12.3	2.3
calcium	1020	564	1910	3050	3700	3090	3920	3730	4540
chromium, hexavalent	20.0 U	20.0 U	2.0 J	20.0 U	2.0 J				
chromium, total	17.3	6.6	34.2	7.5	108	8.6	9.8	3.1	1.0 U
cobalt	0.60 U	0.93	0.60 U	0.70	2.2	1.8	4.4	3.6	0.60 U
copper	0.77 U	0.77 U	13.6	1.6	11.7	2.2	16.3	20.2	0.92
iron	2830	1090	4400 J	880 J	16800	79.5	26000	2670	988
lead	1.5 UJ	1.5 U	2.1	1.5 U	4.4	1.5 UJ	5.1 J	3.1 J	1.5 UJ
magnesium	972	1380	835	1830	1950	814	2560	1740	603
manganese	19.4	2.1	18.3 J	126 J	77.4	74.3	43.3	37.2	9.0
mercury	0.0040 UJ	0.083	0.0080	0.31	0.084	0.017	0.12 J	0.13 J	0.11 J
nickel	1.8	0.75 U	1.2	4.4	0.75 U	2.4	22.7	20.7	4.3
potassium	2110	1720	1880	1730	5510	1990	2270	1810	309
selenium	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 UJ	4.4 UJ	4.4 UJ
silver	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U
sodium	2810	3690	3240	3740	5200	5380	7460	7950	3490
thallium	3.6 U	3.6 U	4.8 J	3.8 J	3.6 U	3.9	3.6 U	3.6 U	3.6 U
vanadium	11.0	3.0	21.3	2.4	85.3	1.6	11.3	0.61 U	0.61 U
zinc	18.0	2.3	328	25.2 R	310	54.5	623 J	91.3 J	109 J
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,2,4-trichlorobenzene	10.0 U	10.0 U	6.0 J	2.0 J	10.0 U		10.0 U		10.0 U
1,2-dichlorobenzene	10.0 U	10.0 U	12.0	3.0 J	10.0 U		10.0 U		10.0 U
1,3-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U		10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	02GW03		02GW04		02GW05		02GW06		02GW07		02GW07-F		03GW01		03GW01-F		03GW03	
LOCATION:	02GW03		02GW04		02GW05		02GW06		02GW07		02GW07		03GW01		03GW01		03GW03	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,4-dichlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
2,2'-oxybis(1-chloropropane)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
2,4,5-trichlorophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U			25.0	U			25.0	U
2,4,6-trichlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
2,4-dichlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
2,4-dimethylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
2,4-dinitrophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U			25.0	U			25.0	U
2,4-dinitrotoluene	10.0	U	10.0	U	10.0	U	4.0	J	10.0	U			10.0	U			10.0	U
2,6-dinitrotoluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
2-chloronaphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
2-chlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
2-methylnaphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
2-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
2-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U			25.0	U			25.0	U
2-nitrophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
3,3'-dichlorobenzidine	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
3-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U			25.0	U			25.0	U
4,6-dinitro-2-methylphenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U			25.0	U			25.0	U
4-bromophenyl-phenylether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
4-chloro-3-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
4-chloroaniline	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
4-chlorophenyl-phenylether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
4-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
4-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U			25.0	U			25.0	U
4-nitrophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U			25.0	U			25.0	U
N-nitroso-di-n-propylamine	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
N-nitrosodiphenylamine (1)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
acenaphthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	02GW03		02GW04		02GW05		02GW06		02GW07		02GW07-F	03GW01		03GW01-F	03GW03	
LOCATION:	02GW03		02GW04		02GW05		02GW06		02GW07		02GW07	03GW01		03GW01	03GW03	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	1995 RI		1995 RI	1995 RI	
SEMIVOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	ug/L		ug/L	ug/L	
acenaphthylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
benzo(a)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
benzo(a)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
benzo(b)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
benzo(g,h,i)perylene	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	UJ		10.0	U		10.0	U
benzo(k)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
bis(2-chloroethoxy)methane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
bis(2-chloroethyl)ether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
bis(2-ethylhexyl)phthalate	10.0	U	10.0	U	12.0		10.0	U	10.0	U		10.0	U		10.0	U
butylbenzylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
carbazole	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
chrysene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
di-n-butylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
di-n-octylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
dibenz(a,h)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
dibenzofuran	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
diethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
dimethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
fluorene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
hexachlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
hexachlorobutadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
hexachlorocyclopentadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
hexachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
indeno(1,2,3-cd)pyrene	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	UJ		10.0	U		10.0	U
isophorone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U		10.0	U
naphthalene	10.0	U	10.0	U	4.0	J	2.0	J	10.0	U		10.0	U		10.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	02GW03		02GW04		02GW05		02GW06		02GW07		02GW07-F		03GW01		03GW01-F		03GW03	
LOCATION:	02GW03		02GW04		02GW05		02GW06		02GW07		02GW07		03GW01		03GW01		03GW03	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
nitrobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
pentachlorophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U			25.0	U			25.0	U
phenanthrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
phenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	UJ			10.0	UJ
VOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,1,1-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
1,1,2,2-tetrachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
1,1,2-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
1,1-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
1,1-dichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
1,2-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
1,2-dichloroethene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
1,2-dichloropropane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
2-butanone	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U			10.0	U			5.0	J
2-hexanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	UJ			10.0	UJ
4-methyl-2-pentanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
acetone	10.0	UJ	10.0	UJ	27.0	UJ	14.0	UJ	10.0	U			21.0	UJ			18.0	UJ
benzene	10.0	U	10.0	U	10.0	U	2.0	J	10.0	U			10.0	U			10.0	U
bromodichloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
bromoform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
bromomethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
carbon disulfide	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
carbon tetrachloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
chlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
chloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U
chloroform	10.0	U	4.0	J	8.0	J	10.0	U	10.0	U			10.0	U			10.0	U
chloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U			10.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	02GW03	02GW04	02GW05	02GW06	02GW07	02GW07-F	03GW01	03GW01-F	03GW03
LOCATION:	02GW03	02GW04	02GW05	02GW06	02GW07	02GW07	03GW01	03GW01	03GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
VOLATILES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
cis-1,3-dichloropropene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U		10.0 U
dibromochloromethane	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U		10.0 U
ethylbenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U		10.0 U
methylene chloride	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U		10.0 U
styrene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U		10.0 U
tetrachloroethene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U		10.0 U
toluene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U		10.0 U
trans-1,3-dichloropropene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U		10.0 U
trichloroethene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U		10.0 U
vinyl chloride	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U		10.0 U
xylene (total)	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U		10.0 U
PESTICIDES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
4,4'-DDD							0.10 U		0.10 U
4,4'-DDE							0.10 U		0.10 U
4,4'-DDT							0.10 U		0.10 U
aldrin							0.050 U		0.050 U
alpha-BHC							0.050 U		0.050 U
alpha-chlordane							0.050 U		0.050 U
beta-BHC							0.050 U		0.050 U
delta-BHC							0.050 U		0.050 U
dieldrin							0.10 U		0.10 U
endosulfan I							0.050 U		0.050 U
endosulfan II							0.10 U		0.10 U
endosulfan sulfate							0.10 U		0.10 U
endrin							0.10 U		0.10 U
endrin aldehyde							0.10 U		0.10 U
endrin ketone							0.10 U		0.10 U
gamma-BHC (Lindane)							0.050 U		0.050 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	02GW03	02GW04	02GW05	02GW06	02GW07	02GW07-F	03GW01	03GW01-F	03GW03
LOCATION:	02GW03	02GW04	02GW05	02GW06	02GW07	02GW07	03GW01	03GW01	03GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
gamma-chlordane							0.050 U		0.050 U
heptachlor							0.050 U		0.050 U
heptachlor epoxide							0.050 U		0.050 U
methoxychlor							0.50 U		0.50 U
toxaphene							5.0 U		5.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	03GW03-F	03GW05	03GW06	04GW01	04GW02	04GW04	04GW05	04GW06	04GW07
LOCATION:	03GW03	03GW05	03GW06	04GW01	04GW02	04GW04	04GW05	04GW06	04GW07
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
aluminum	152	268 J	498 J	1590 J	923 J	1490 J	2690 J	578 J	107
antimony	10.6	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
arsenic	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
barium	16.0	41.7	2.6	498 J	12.6	22.1	961 J	22.9	20.4
beryllium	0.11 U	0.11 U	0.11 U	0.75	0.11 U	1.6	0.11 U	0.11 U	0.11 U
cadmium	2.2	6.5	0.38 U	0.44	0.84	0.38 U	0.81	0.44	0.38 U
calcium	4440	6340	7260	3670	55000	506	6190	1420	4260
chromium, total	1.0 U	1.4	1.3	2.4	1.3	1.0 U	5.4	1.0 U	1.0 U
cobalt	0.60 U	8.4	0.60 U	0.60 U	0.60 U	0.60 U	1.1	0.60 U	0.69
copper	11.9	1.2	0.79	9.8	1.1	1.8	18.3	1.0	1.7
iron	433	930 J	440 J	554	20900	153	7680	647	75.3
lead	1.5 UJ	1.5 U	1.5 U	2.4	1.5 U	1.5 U	3.0	2.4	1.5 U
magnesium	619	807	3240	1410	22000	273	1180	735	1020
manganese	11.0	534 J	4.4	18.4	306	12.8	28.2	28.1	25.1
mercury	0.10 J	0.0090	0.0080	0.021	0.022	0.0050	0.060	0.010	0.079 J
nickel	5.2	8.8	1.1	2.3	0.75 U	2.4	2.2	1.0	4.6
potassium	283	1000	497	613	9080	350	1660	503	1080
selenium	4.4 UJ	4.4 U	4.4 U	4.4 UJ	4.4 UJ	4.4 UJ	4.4 UJ	4.4 UJ	4.4 U
silver	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U
sodium	3480	4440	4120	3030	5210	3600	2290	3130	3100
thallium	3.6 U	3.6 U	4.0 J	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
vanadium	0.61 U	0.61 U	0.69	0.61 U	0.61 U	0.61 U	7.1	0.61 U	0.61 U
zinc	107 J	259	1.6 U	381	1.6 U	19.0	558	4.0	6.5
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,2,4-trichlorobenzene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-dichlorobenzene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,3-dichlorobenzene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,4-dichlorobenzene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	03GW03-F	03GW05	03GW06	04GW01	04GW02	04GW04	04GW05	04GW06	04GW07
LOCATION:	03GW03	03GW05	03GW06	04GW01	04GW02	04GW04	04GW05	04GW06	04GW07
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
2,2'-oxybis(1-chloropropane)		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2,4,5-trichlorophenol		25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
2,4,6-trichlorophenol		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2,4-dichlorophenol		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2,4-dimethylphenol		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2,4-dinitrophenol		25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
2,4-dinitrotoluene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2,6-dinitrotoluene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-chloronaphthalene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-chlorophenol		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-methylnaphthalene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-methylphenol		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-nitroaniline		25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
2-nitrophenol		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
3,3'-dichlorobenzidine		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
3-nitroaniline		25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
4,6-dinitro-2-methylphenol		25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
4-bromophenyl-phenylether		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-chloro-3-methylphenol		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-chloroaniline		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-chlorophenyl-phenylether		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-methylphenol		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-nitroaniline		25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
4-nitrophenol		25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
N-nitroso-di-n-propylamine		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
N-nitrosodiphenylamine (1)		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
acenaphthene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
acenaphthylene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	03GW03-F	03GW05	03GW06	04GW01	04GW02	04GW04	04GW05	04GW06	04GW07
LOCATION:	03GW03	03GW05	03GW06	04GW01	04GW02	04GW04	04GW05	04GW06	04GW07
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
anthracene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
benzo(a)anthracene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
benzo(a)pyrene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
benzo(b)fluoranthene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
benzo(g,h,i)perylene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
benzo(k)fluoranthene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
bis(2-chloroethoxy)methane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
bis(2-chloroethyl)ether		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
bis(2-ethylhexyl)phthalate		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
butylbenzylphthalate		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
carbazole		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
chrysene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
di-n-butylphthalate		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
di-n-octylphthalate		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
dibenz(a,h)anthracene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
dibenzofuran		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
diethylphthalate		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
dimethylphthalate		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
fluoranthene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
fluorene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
hexachlorobenzene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
hexachlorobutadiene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
hexachlorocyclopentadiene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
hexachloroethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
indeno(1,2,3-cd)pyrene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
isophorone		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
naphthalene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
nitrobenzene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	03GW03-F	03GW05	03GW06	04GW01	04GW02	04GW04	04GW05	04GW06	04GW07
LOCATION:	03GW03	03GW05	03GW06	04GW01	04GW02	04GW04	04GW05	04GW06	04GW07
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
pentachlorophenol		25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
phenanthrene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
phenol		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
pyrene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
VOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,1,1-trichloroethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1,2,2-tetrachloroethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1,2-trichloroethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1-dichloroethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1-dichloroethene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-dichloroethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-dichloroethene (total)		10.0 U	10.0 U	10.0 U	25.0	10.0 U	19.0	10.0 U	10.0 U
1,2-dichloropropane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-butanone		10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U
2-hexanone		10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U
4-methyl-2-pentanone		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
acetone		10.0 UJ	10.0 UJ	10.0 UJ	14.0 UJ	10.0 UJ	10.0 UJ	10.0 UJ	10.0 UJ
benzene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
bromodichloromethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
bromoform		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
bromomethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
carbon disulfide		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
carbon tetrachloride		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
chlorobenzene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
chloroethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
chloroform		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	1.0 J	10.0 U
chloromethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
cis-1,3-dichloropropene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	03GW03-F	03GW05	03GW06	04GW01	04GW02	04GW04	04GW05	04GW06	04GW07
LOCATION:	03GW03	03GW05	03GW06	04GW01	04GW02	04GW04	04GW05	04GW06	04GW07
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
VOLATILES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
dibromochloromethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
ethylbenzene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
methylene chloride		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
styrene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
tetrachloroethene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
toluene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
trans-1,3-dichloropropene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
trichloroethene		10.0 U	10.0 U	10.0 U	1.0 J	10.0 U	55.0	10.0 U	10.0 U
vinyl chloride		10.0 U	10.0 U	10.0 U	3.0 J	10.0 U	10.0 U	10.0 U	10.0 U
xylene (total)		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
PESTICIDES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
4,4'-DDD		0.10 U	0.10 U						
4,4'-DDE		0.10 U	0.10 U						
4,4'-DDT		0.10 U	0.10 U						
Aroclor-1016		1.0 U	1.0 U						
Aroclor-1221		2.0 U	2.0 U						
Aroclor-1232		1.0 U	1.0 U						
Aroclor-1242		1.0 U	1.0 U						
Aroclor-1248		1.0 U	1.0 U						
Aroclor-1254		1.0 U	1.0 U						
Aroclor-1260		1.0 U	1.0 U						
aldrin		0.050 U	0.050 U						
alpha-BHC		0.050 U	0.050 U						
alpha-chlordane		0.050 U	0.050 U						
beta-BHC		0.050 U	0.050 U						
delta-BHC		0.050 U	0.050 U						
dieldrin		0.10 U	0.10 U						
endosulfan I		0.050 U	0.050 U						

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	03GW03-F	03GW05	03GW06	04GW01	04GW02	04GW04	04GW05	04GW06	04GW07
LOCATION:	03GW03	03GW05	03GW06	04GW01	04GW02	04GW04	04GW05	04GW06	04GW07
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
endosulfan II		0.10 U	0.10 U						
endosulfan sulfate		0.10 U	0.10 U						
endrin		0.10 U	0.10 U						
endrin aldehyde		0.10 U	0.10 U						
endrin ketone		0.10 U	0.10 U						
gamma-BHC (Lindane)		0.0016 R	0.050 U						
gamma-chlordane		0.0081 J	0.050 U						
heptachlor		0.050 U	0.050 U						
heptachlor epoxide		0.050 U	0.050 U						
methoxychlor		0.50 U	0.50 U						
toxaphene		5.0 U	5.0 U						

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	05GW01	05GW02	05GW03	05GW04	05GW05	05GW06	05GW07	05GW08	06GW01
LOCATION:	05GW01	05GW02	05GW03	05GW04	05GW05	05GW06	05GW07	05GW08	06GW01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
aluminum	2150 J	4310	7870 J	468 J	2740	2600	42000	497	1320
antimony	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
arsenic	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	5.3	3.3 U	5.1
barium	47.5	32.4	25.9	11.0	65.5	16.1	17.2	31.0	30.4
beryllium	0.11 U	0.29	0.22	0.11 U	0.81	0.11 U	1.1	0.11 U	0.11 U
cadmium	0.51	0.77	1.9	0.65	1.0	7.2	7.5	0.38 U	7.0
calcium	855	3530	1120	1350	10300	4130	7370	2490	22000
chromium, total	16.8	5.6	12.0	5.2	6.9	6.1	33.4	4.7	1.0 U
cobalt	0.60 U	10.1	4.7	0.60 U	3.8	13.6	29.6	0.60 U	7.6
copper	1.1	0.77 U	1.0	2.0	0.77 U	0.77 U	1.2	1.0	0.77 U
iron	2670 J	453	1450 J	6980 J	2310	59200	9140	331	95200
lead	1.5 U	1.5 U	2.1	1.6	1.5 U	1.9	1.5 U	1.5 UJ	1.5 UJ
magnesium	2090	1280	1170	1250	4860	3170	6720	1800	17300
manganese	12.7	65.0	37.1 J	41.4 J	171	156	302	18.9	1820
mercury	0.013	0.093	0.012	0.012	0.10	0.13	0.13	0.11 J	0.0040 UJ
nickel	2.6	25.5	16.3	6.3	21.6	30.8	102 J	0.75 U	3.7
potassium	1820	2120	1760	970	2320	1240	2850	945	3620
selenium	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 UJ	4.4 U
silver	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U
sodium	6150	4320	4800	4370	4700	33300	10200	3920	83100
thallium	3.9 J	5.1 J	3.6 U	3.6 U	5.6 J	3.6 UJ	3.6 UJ	3.6 U	3.6 U
vanadium	8.9	1.7	6.4	2.9	4.1	0.61 U	10.8	1.2	0.61 U
zinc	6.1 R	1.6 U	34.8 R	17.0 R	65.4 R	179 R	1170 R	1.6 U	18.9
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,2,4-trichlorobenzene									10.0 U
1,2-dichlorobenzene									10.0 U
1,3-dichlorobenzene									10.0 U
1,4-dichlorobenzene									10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	05GW01	05GW02	05GW03	05GW04	05GW05	05GW06	05GW07	05GW08	06GW01	
LOCATION:	05GW01	05GW02	05GW03	05GW04	05GW05	05GW06	05GW07	05GW08	06GW01	
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	
2,2'-oxybis(1-chloropropane)									10.0	U
2,4,5-trichlorophenol									25.0	U
2,4,6-trichlorophenol									10.0	U
2,4-dichlorophenol									10.0	U
2,4-dimethylphenol									10.0	U
2,4-dinitrophenol									25.0	U
2,4-dinitrotoluene									10.0	U
2,6-dinitrotoluene									10.0	U
2-chloronaphthalene									10.0	U
2-chlorophenol									10.0	U
2-methylnaphthalene									10.0	U
2-methylphenol									10.0	U
2-nitroaniline									25.0	U
2-nitrophenol									10.0	U
3,3'-dichlorobenzidine									10.0	U
3-nitroaniline									25.0	U
4,6-dinitro-2-methylphenol									25.0	U
4-bromophenyl-phenylether									10.0	U
4-chloro-3-methylphenol									10.0	U
4-chloroaniline									10.0	U
4-chlorophenyl-phenylether									10.0	U
4-methylphenol									10.0	U
4-nitroaniline									25.0	U
4-nitrophenol									25.0	U
N-nitroso-di-n-propylamine									10.0	U
N-nitrosodiphenylamine (1)									10.0	U
acenaphthene									10.0	U
acenaphthylene									10.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	05GW01	05GW02	05GW03	05GW04	05GW05	05GW06	05GW07	05GW08	06GW01
LOCATION:	05GW01	05GW02	05GW03	05GW04	05GW05	05GW06	05GW07	05GW08	06GW01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
anthracene									10.0 U
benzo(a)anthracene									10.0 U
benzo(a)pyrene									10.0 U
benzo(b)fluoranthene									10.0 U
benzo(g,h,i)perylene									10.0 U
benzo(k)fluoranthene									10.0 U
bis(2-chloroethoxy)methane									10.0 U
bis(2-chloroethyl)ether									10.0 U
bis(2-ethylhexyl)phthalate									10.0 U
butylbenzylphthalate									10.0 U
carbazole									10.0 U
chrysene									10.0 U
di-n-butylphthalate									10.0 U
di-n-octylphthalate									10.0 U
dibenz(a,h)anthracene									10.0 U
dibenzofuran									10.0 U
diethylphthalate									10.0 U
dimethylphthalate									10.0 U
fluoranthene									10.0 U
fluorene									10.0 U
hexachlorobenzene									10.0 U
hexachlorobutadiene									10.0 U
hexachlorocyclopentadiene									10.0 U
hexachloroethane									10.0 U
indeno(1,2,3-cd)pyrene									10.0 U
isophorone									10.0 U
naphthalene									10.0 U
nitrobenzene									10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	05GW01		05GW02		05GW03		05GW04		05GW05		05GW06		05GW07		05GW08		06GW01	
LOCATION:	05GW01		05GW02		05GW03		05GW04		05GW05		05GW06		05GW07		05GW08		06GW01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
pentachlorophenol																	25.0	U
phenanthrene																	10.0	U
phenol																	10.0	U
pyrene																	10.0	U
VOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
1,1,1-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1,2,2-tetrachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1,2-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1-dichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	3.0	J	2.0	J	10.0	U	10.0	U
1,2-dichloroethene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	9.0	J	2.0	J	10.0	U	10.0	U
1,2-dichloropropane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-butanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-hexanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	U
4-methyl-2-pentanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
acetone	26.0	UJ	10.0	U	22.0	UJ	21.0	UJ	12.0	U	70.0	U	22.0	U	10.0	UJ	10.0	UJ
benzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	2.0	J	3.0	J	10.0	U	10.0	U
bromodichloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromoform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromomethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbon disulfide	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbon tetrachloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloroform	22.0		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
cis-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	05GW01		05GW02		05GW03		05GW04		05GW05		05GW06		05GW07		05GW08		06GW01	
LOCATION:	05GW01		05GW02		05GW03		05GW04		05GW05		05GW06		05GW07		05GW08		06GW01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
dibromochloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
ethylbenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	2.0	J	10.0	U	10.0	U	10.0	U
methylene chloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	2.0	J	10.0	U	10.0	U	10.0	U
styrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
tetrachloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
toluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
trans-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
trichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	4.0	J	2.0	J	10.0	U	10.0	U
vinyl chloride	10.0	U	10.0	U	10.0	U	10.0	U	2.0	J	10.0	U	10.0	U	10.0	U	10.0	U
xylene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	4.0	J	10.0	U	10.0	U	10.0	U
PESTICIDES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
4,4'-DDD																	0.10	U
4,4'-DDE																	0.10	U
4,4'-DDT																	0.10	U
aldrin																	0.050	U
alpha-BHC																	0.050	U
alpha-chlordane																	0.050	U
beta-BHC																	0.050	U
delta-BHC																	0.050	U
dieldrin																	0.10	U
endosulfan I																	0.050	U
endosulfan II																	0.10	U
endosulfan sulfate																	0.10	U
endrin																	0.10	U
endrin aldehyde																	0.10	U
endrin ketone																	0.10	U
gamma-BHC (Lindane)																	0.0008	J
gamma-chlordane																	0.050	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	05GW01	05GW02	05GW03	05GW04	05GW05	05GW06	05GW07	05GW08	06GW01	
LOCATION:	05GW01	05GW02	05GW03	05GW04	05GW05	05GW06	05GW07	05GW08	06GW01	
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	
PESTICIDES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	
heptachlor									0.050	U
heptachlor epoxide									0.050	U
methoxychlor									0.50	U
toxaphene									5.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	06GW02	06GW03	06GW04	07GW01	07GW02	07GW03	07GW04	07GW05	10GW01
LOCATION:	06GW02	06GW03	06GW04	07GW01	07GW02	07GW03	07GW04	07GW05	10GW01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
aluminum	420	190	145	174	557 J	393	320 J	1850	2920
antimony	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
arsenic	3.3 U	8.8	26.8	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
barium	64.9	48.2	45.0	11.9	24.2	42.2	26.8	112	64.2
beryllium	0.21	0.11 U	0.11 U	0.11 U	0.11 U	0.40	0.11 U	0.66	0.42
cadmium	1.2	2.2	5.2	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.40
calcium	5670	8290	89800	916	1480	1460	1050	1330	7040
chromium, total	1.0 U	1.0 U	1.2	1.0 U	1.0 U	1.0 U	1.9	1.0 U	10.1
cobalt	4.0	0.81	0.60 U	1.6	0.85	28.2	1.0	6.9	3.3
copper	0.77 U	0.77 U	0.77 U	0.77 U	1.8	0.77 U	1.7	0.77 U	0.77 U
iron	13400	24800	66700	913	145	298	561	63.7	319
lead	1.5 UJ	1.5 UJ	1.5 UJ	2.3	1.5 U	1.5 UJ	1.5 U	1.5 UJ	2.6
magnesium	5220	3120	53000	723	594	2120	1990	6920	3330
manganese	280	61.3	855	19.0	48.9	246	15.2	63.7	146
mercury	0.0040 UJ	0.0040 UJ	0.0040 UJ	0.0050	0.033	0.0040 UJ	0.017	0.34 J	0.10
nickel	5.0	0.76	1.0	4.2	1.2	3.4	3.1	4.8	10.6
potassium	2250	2440	9270	941	1400	714	1140	1950	2430
selenium	4.4 U	4.4 U	4.4 U	4.4 UJ	4.4 UJ	4.4 U	4.4 UJ	4.4 U	4.4 U
silver	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U
sodium	34800	25000	20800	4240	20600	4710	7040	17800	31400
thallium	3.6 U	3.6 U	3.6 U	4.0	3.6 U	3.6 U	3.6 U	3.6 U	3.6 UJ
vanadium	0.61 U	0.61 U	0.61 U	0.83	0.61 U	0.61 U	0.71	0.61 U	0.72
zinc	25.8 R	7.1	3.3	1.6 U	1.6 U	8.8	1.6 U	13.4	51.8 R
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,2,4-trichlorobenzene	10.0 U	10.0 U	10.0 U						
1,2-dichlorobenzene	10.0 U	10.0 U	10.0 U						
1,3-dichlorobenzene	10.0 U	10.0 U	10.0 U						
1,4-dichlorobenzene	10.0 U	10.0 U	10.0 U						

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	06GW02		06GW03		06GW04		07GW01	07GW02	07GW03	07GW04	07GW05	10GW01
LOCATION:	06GW02		06GW03		06GW04		07GW01	07GW02	07GW03	07GW04	07GW05	10GW01
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
2,2'-oxybis(1-chloropropane)	10.0	UJ	10.0	UJ	10.0	UJ						
2,4,5-trichlorophenol	25.0	U	25.0	U	25.0	U						
2,4,6-trichlorophenol	10.0	U	10.0	U	10.0	U						
2,4-dichlorophenol	10.0	U	10.0	U	10.0	U						
2,4-dimethylphenol	10.0	U	10.0	U	10.0	U						
2,4-dinitrophenol	25.0	UJ	25.0	UJ	25.0	UJ						
2,4-dinitrotoluene	10.0	U	10.0	U	10.0	U						
2,6-dinitrotoluene	10.0	U	10.0	U	10.0	U						
2-chloronaphthalene	10.0	U	10.0	U	10.0	U						
2-chlorophenol	10.0	U	10.0	U	10.0	U						
2-methylnaphthalene	10.0	U	10.0	U	10.0	U						
2-methylphenol	10.0	U	10.0	U	10.0	U						
2-nitroaniline	25.0	U	25.0	U	25.0	U						
2-nitrophenol	10.0	U	10.0	U	10.0	U						
3,3'-dichlorobenzidine	10.0	U	10.0	U	10.0	U						
3-nitroaniline	25.0	UJ	25.0	UJ	25.0	UJ						
4,6-dinitro-2-methylphenol	25.0	U	25.0	U	25.0	U						
4-bromophenyl-phenylether	10.0	U	10.0	U	10.0	U						
4-chloro-3-methylphenol	10.0	U	10.0	U	10.0	U						
4-chloroaniline	10.0	U	10.0	U	10.0	U						
4-chlorophenyl-phenylether	10.0	U	10.0	U	10.0	U						
4-methylphenol	10.0	U	10.0	U	10.0	U						
4-nitroaniline	25.0	UJ	25.0	UJ	25.0	UJ						
4-nitrophenol	25.0	UJ	25.0	UJ	25.0	UJ						
N-nitroso-di-n-propylamine	10.0	U	10.0	U	10.0	U						
N-nitrosodiphenylamine (1)	10.0	U	10.0	U	10.0	U						
acenaphthene	10.0	U	10.0	U	10.0	U						
acenaphthylene	10.0	U	10.0	U	10.0	U						

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	06GW02		06GW03		06GW04		07GW01	07GW02	07GW03	07GW04	07GW05	10GW01
LOCATION:	06GW02		06GW03		06GW04		07GW01	07GW02	07GW03	07GW04	07GW05	10GW01
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
anthracene	10.0	U	10.0	U	10.0	U						
benzo(a)anthracene	10.0	U	10.0	U	10.0	U						
benzo(a)pyrene	10.0	U	10.0	U	10.0	U						
benzo(b)fluoranthene	10.0	U	10.0	U	10.0	U						
benzo(g,h,i)perylene	10.0	U	10.0	U	10.0	U						
benzo(k)fluoranthene	10.0	U	10.0	U	10.0	U						
bis(2-chloroethoxy)methane	10.0	U	10.0	U	10.0	U						
bis(2-chloroethyl)ether	10.0	U	10.0	U	10.0	U						
bis(2-ethylhexyl)phthalate	10.0	UJ	10.0	UJ	10.0	UJ						
butylbenzylphthalate	10.0	UJ	10.0	UJ	10.0	UJ						
carbazole	10.0	U	10.0	U	10.0	U						
chrysene	10.0	U	10.0	U	10.0	U						
di-n-butylphthalate	10.0	U	10.0	U	10.0	U						
di-n-octylphthalate	10.0	UJ	10.0	UJ	10.0	UJ						
dibenz(a,h)anthracene	10.0	U	10.0	U	10.0	U						
dibenzofuran	10.0	U	10.0	U	10.0	U						
diethylphthalate	10.0	U	10.0	U	10.0	U						
dimethylphthalate	10.0	U	10.0	U	10.0	U						
fluoranthene	10.0	U	10.0	U	10.0	U						
fluorene	10.0	U	10.0	U	10.0	U						
hexachlorobenzene	10.0	U	10.0	U	10.0	U						
hexachlorobutadiene	10.0	U	10.0	U	10.0	U						
hexachlorocyclopentadiene	10.0	UJ	10.0	UJ	10.0	UJ						
hexachloroethane	10.0	U	10.0	U	10.0	U						
indeno(1,2,3-cd)pyrene	10.0	U	10.0	U	10.0	U						
isophorone	10.0	U	10.0	U	10.0	U						
naphthalene	10.0	U	10.0	U	10.0	U						
nitrobenzene	10.0	U	10.0	U	10.0	U						

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	06GW02		06GW03		06GW04		07GW01		07GW02		07GW03		07GW04		07GW05		10GW01	
LOCATION:	06GW02		06GW03		06GW04		07GW01		07GW02		07GW03		07GW04		07GW05		10GW01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
pentachlorophenol	25.0	UJ	25.0	UJ	25.0	UJ												
phenanthrene	10.0	U	10.0	U	10.0	U												
phenol	10.0	U	10.0	U	10.0	U												
pyrene	10.0	U	10.0	U	10.0	U												
VOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,1,1-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1,2,2-tetrachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1,2-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	1.0	J	10.0	U
1,1-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1-dichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloroethene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	4.0	J	10.0	U
1,2-dichloropropane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-butanone	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	UJ	10.0	U	10.0	UJ	10.0	U	10.0	U
2-hexanone	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	UJ	10.0	U	10.0	UJ	10.0	U	10.0	U
4-methyl-2-pentanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
acetone	12.0	UJ	10.0	UJ	10.0	UJ	21.0	UJ	20.0	UJ	11.0	UJ	21.0	UJ	11.0	UJ	12.0	U
benzene	10.0	U	10.0	U	10.0	U	10.0	U	1.0	J	10.0	U	10.0	U	10.0	U	10.0	U
bromodichloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromoform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromomethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbon disulfide	10.0	U	10.0	UJ	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbon tetrachloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	11.0		10.0	U	10.0	U	10.0	U	10.0	U
chloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloroform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	2.0	J	10.0	U	10.0	U
chloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
cis-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	06GW02		06GW03		06GW04		07GW01		07GW02		07GW03		07GW04		07GW05		10GW01	
LOCATION:	06GW02		06GW03		06GW04		07GW01		07GW02		07GW03		07GW04		07GW05		10GW01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
dibromochloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
ethylbenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
methylene chloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
styrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
tetrachloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
toluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
trans-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
trichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
vinyl chloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
xylene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
PESTICIDES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
4,4'-DDD	0.10	U	0.10	U	0.10	U												
4,4'-DDE	0.10	U	0.10	U	0.10	U												
4,4'-DDT	0.10	U	0.10	U	0.10	U												
aldrin	0.050	U	0.050	U	0.050	U												
alpha-BHC	0.050	U	0.050	U	0.050	U												
alpha-chlordane	0.050	U	0.050	U	0.050	U												
beta-BHC	0.050	U	0.050	U	0.050	U												
delta-BHC	0.050	U	0.050	U	0.050	U												
dieldrin	0.10	U	0.10	U	0.10	U												
endosulfan I	0.050	U	0.050	U	0.0021	J												
endosulfan II	0.10	U	0.10	U	0.10	U												
endosulfan sulfate	0.10	U	0.10	U	0.10	U												
endrin	0.10	U	0.10	U	0.10	U												
endrin aldehyde	0.10	U	0.10	U	0.10	U												
endrin ketone	0.10	U	0.10	U	0.10	U												
gamma-BHC (Lindane)	0.050	U	0.050	U	0.050	U												
gamma-chlordane	0.050	U	0.050	U	0.050	U												

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	06GW02		06GW03		06GW04		07GW01	07GW02	07GW03	07GW04	07GW05	10GW01
LOCATION:	06GW02		06GW03		06GW04		07GW01	07GW02	07GW03	07GW04	07GW05	10GW01
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/L**		**ug/L**		**ug/L**		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
heptachlor	0.050	U	0.050	U	0.050	U						
heptachlor epoxide	0.050	U	0.050	U	0.050	U						
methoxychlor	0.50	U	0.50	U	0.50	U						
toxaphene	5.0	U	5.0	U	5.0	U						

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	10GW01-DUP		10GW02		10GW03		10GW04		10GW05		10GW06		10GW07		11GW01		11GW02	
LOCATION:	10GW01		10GW02		10GW03		10GW04		10GW05		10GW06		10GW07		11GW01		11GW02	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
INORGANICS	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
aluminum	2860		1890		195		1160		1480		1720		5820		177		1260	
antimony	2.7	U	2.7	U	2.7	U	2.7	U	2.7	U	2.7	U	2.7	U	2.7	U	2.7	U
arsenic	3.3	U	3.3	U	3.3	U	3.3	U	4.7		3.3	U	3.3	U	3.3	U	3.3	U
barium	62.7		49.0		2.0		30.5		26.2		75.6		38.5		38.6		27.4	
beryllium	0.42		0.53		0.11	U	0.20		0.29		0.14		1.8		0.11	U	0.11	U
cadmium	0.57		0.38	U	0.38	U	0.38	U	0.85		0.45		0.38	U	0.38	U	0.38	U
calcium	6850		1240		3760		2760		1570		1100		1840		739		274	
chromium, total	11.5		6.0		4.3		7.2		22.8		7.9		3.2		11.4		4.4	
cobalt	3.3		2.7		2.4		2.1		3.9		2.7		5.0		0.63		1.8	
copper	0.77	U	6.7		0.77	U	0.77	U	0.77	U	0.77	U	0.77	U	1.4		0.85	
iron	387		279		186		451		16600		3740		1200		166		1180	
lead	2.5		1.5	U	1.5	U	1.5	U	2.1		1.5	U	1.5	U	1.5	UJ	1.5	UJ
magnesium	3240		380		1520		1210		2750		1390		2040		1330		811	
manganese	142		32.0		2.9		13.0		16.8		23.9		43.0		5.1		15.4	
mercury	0.11		0.084		0.11		0.085		0.11		0.11		0.10		0.11	J	0.12	J
nickel	8.1		6.2		5.4		1.6		7.7		3.8		5.7		1.0		4.7	
potassium	2420		775		574		1000		3090		1170		6950		1480		1140	
selenium	4.4	U	4.4	U	4.4	U	4.4	U	4.4	U	4.4	U	4.4	U	4.4	UJ	4.4	UJ
silver	0.94	U	0.94	U	0.94	U	0.94	U	1.5		0.94	U	0.94	U	0.94	U	0.94	U
sodium	30200		2150		7760		9050		11700		7290		6360		2390		3490	
thallium	3.6	UJ	3.6	UJ	3.6	UJ	3.7	J	3.6	UJ	3.6	UJ	3.6	UJ	3.6	U	3.6	U
vanadium	0.70		0.85		1.3		2.2		15.0		8.0		7.1		0.61	U	1.4	
zinc	20.0	R	140	R	1.6	U	20.2	R	9.9	R	124	R	1.6	U	1.6	U	1.9	R
VOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,1,1-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1,2,2-tetrachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1,2-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	10GW01-DUP		10GW02		10GW03		10GW04		10GW05		10GW06		10GW07		11GW01		11GW02	
LOCATION:	10GW01		10GW02		10GW03		10GW04		10GW05		10GW06		10GW07		11GW01		11GW02	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
1,1-dichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloroethene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloropropane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-butanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-hexanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-methyl-2-pentanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
acetone	17.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U	10.0	U	37.0	UJ	26.0	UJ
benzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromodichloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromoform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromomethane	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U
carbon disulfide	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	UJ	10.0	UJ
carbon tetrachloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloroform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	3.0	J	10.0	U
chloromethane	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U
cis-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dibromochloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
ethylbenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
methylene chloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
styrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
tetrachloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
toluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
trans-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
trichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
vinyl chloride	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	10GW01-DUP	10GW02	10GW03	10GW04	10GW05	10GW06	10GW07	11GW01	11GW02
LOCATION:	10GW01	10GW02	10GW03	10GW04	10GW05	10GW06	10GW07	11GW01	11GW02
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
VOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
xylene (total)	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	11GW03	11GW04	11GW05	13GW01	13GW01-F	13GW02	13GW02-DEC95	13GW03	13GW03-F
LOCATION:	11GW03	11GW04	11GW05	13GW01	13GW01	13GW02	13GW02	13GW03	13GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI	1995 RI
INORGANICS	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
aluminum	3010 J	2350	2770	14600 J	530 J	4160 J		15800 J	13.4
antimony	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U		2.7 U	2.7 U
arsenic	3.3 U	3.3 U	3.3 U	18.0	3.3 U	3.3 U		15.2	3.3 U
barium	518	40.8	33.6	70.1	54.7	285		10.0	2.0
beryllium	0.11 U	0.11 U	0.11 U	1.1	0.21	0.11 U		0.90	0.11 U
cadmium	0.60	0.62	0.57	4.8	5.5	1.0		1.6	0.56
calcium	2090	922	973	8900	7850	11900		3890	3150
chromium, total	28.9	31.0	31.0	233	2.3	74.4		296	1.0 U
cobalt	0.83	0.89	1.0	4.4	2.6	2.1		3.8	1.4
copper	13.5	1.0	1.1	3.2	2.7	14.2		3.5	0.90
iron	4310 J	4120	4190	31100	459	48200		57900	22700
lead	3.0	1.5 UJ	1.5 UJ	10.5 J	1.5 UJ	6.8		13.4	1.5 UJ
magnesium	1500	2240	1090	4040	1630	2340		3330	982
manganese	15.3 J	7.4	18.0	121	83.4	117		78.2	60.5
mercury	0.013	0.12 J	0.11 J	0.049	0.038	0.11		0.056	0.017
nickel	3.2	1.9	1.1	13.9	7.6	0.75 U		11.5	2.0
potassium	2160	1670	1440	9330 J	3000	3920		7300 J	739
selenium	4.4 U	4.4 UJ	4.4 UJ	5.3 J	4.4 U	4.4 U		4.6 J	4.4 U
silver	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	1.0		0.94 U	0.94 U
sodium	3530	3080	2200	8810	3590	6860		9780	7880
thallium	3.6 U	3.6 U	3.6 U	3.6 UJ	3.6 U	3.6 U		10.4 J	4.3
vanadium	13.5	11.7	12.3	111	0.61 U	35.6		146	0.61 U
zinc	348	1.6 U	1.6 U	94.6	72.8	265		34.9	7.7
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,2,4-trichlorobenzene				10.0 U		10.0 U		10.0 U	
1,2-dichlorobenzene				10.0 U		10.0 U		10.0 U	
1,3-dichlorobenzene				10.0 U		10.0 U		10.0 U	
1,4-dichlorobenzene				10.0 U		10.0 U		10.0 U	

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	11GW03	11GW04	11GW05	13GW01	13GW01-F	13GW02	13GW02-DEC95	13GW03	13GW03-F
LOCATION:	11GW03	11GW04	11GW05	13GW01	13GW01	13GW02	13GW02	13GW03	13GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI	1995 RI
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
2,2'-oxybis(1-chloropropane)				10.0 U		10.0 U		10.0 U	
2,4,5-trichlorophenol				25.0 U		25.0 U		25.0 U	
2,4,6-trichlorophenol				10.0 U		10.0 U		10.0 U	
2,4-dichlorophenol				10.0 U		10.0 U		10.0 U	
2,4-dimethylphenol				10.0 U		10.0 U		10.0 U	
2,4-dinitrophenol				25.0 U		25.0 U		25.0 U	
2,4-dinitrotoluene				10.0 U		10.0 U		10.0 U	
2,6-dinitrotoluene				10.0 U		10.0 U		10.0 U	
2-chloronaphthalene				10.0 U		10.0 U		10.0 U	
2-chlorophenol				10.0 U		10.0 U		10.0 U	
2-methylnaphthalene				10.0 U		10.0 U		10.0 U	
2-methylphenol				10.0 U		10.0 U		10.0 U	
2-nitroaniline				25.0 U		25.0 U		25.0 U	
2-nitrophenol				10.0 U		10.0 U		10.0 U	
3,3'-dichlorobenzidine				10.0 U		10.0 U		10.0 U	
3-nitroaniline				25.0 U		25.0 U		25.0 U	
4,6-dinitro-2-methylphenol				25.0 U		25.0 U		25.0 U	
4-bromophenyl-phenylether				10.0 U		10.0 U		10.0 U	
4-chloro-3-methylphenol				10.0 U		10.0 U		10.0 U	
4-chloroaniline				10.0 U		10.0 U		10.0 U	
4-chlorophenyl-phenylether				10.0 U		10.0 U		10.0 U	
4-methylphenol				10.0 U		10.0 U		2.0 J	
4-nitroaniline				25.0 U		25.0 U		25.0 U	
4-nitrophenol				25.0 U		25.0 U		25.0 U	
N-nitroso-di-n-propylamine				10.0 U		10.0 U		10.0 U	
N-nitrosodiphenylamine (1)				10.0 U		10.0 U		10.0 U	
acenaphthene				10.0 U		10.0 U		10.0 U	
acenaphthylene				10.0 U		10.0 U		10.0 U	

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	11GW03	11GW04	11GW05	13GW01	13GW01-F	13GW02	13GW02-DEC95	13GW03	13GW03-F
LOCATION:	11GW03	11GW04	11GW05	13GW01	13GW01	13GW02	13GW02	13GW03	13GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI	1995 RI
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
anthracene				10.0 U		10.0 U		10.0 U	
benzo(a)anthracene				10.0 U		10.0 U		10.0 U	
benzo(a)pyrene				10.0 U		10.0 U		10.0 U	
benzo(b)fluoranthene				10.0 U		10.0 U		10.0 U	
benzo(g,h,i)perylene				10.0 U		10.0 UJ		10.0 U	
benzo(k)fluoranthene				10.0 U		10.0 U		10.0 U	
bis(2-chloroethoxy)methane				10.0 U		10.0 U		10.0 U	
bis(2-chloroethyl)ether				10.0 U		10.0 U		10.0 U	
bis(2-ethylhexyl)phthalate				10.0 U		10.0 U		10.0 U	
butylbenzylphthalate				10.0 U		10.0 U		10.0 U	
carbazole				10.0 U		10.0 U		10.0 U	
chrysene				10.0 U		10.0 U		10.0 U	
di-n-butylphthalate				10.0 U		10.0 U		10.0 U	
di-n-octylphthalate				10.0 U		10.0 U		10.0 U	
dibenz(a,h)anthracene				10.0 U		10.0 U		10.0 U	
dibenzofuran				10.0 U		10.0 U		10.0 U	
diethylphthalate				10.0 U		10.0 U		10.0 U	
dimethylphthalate				10.0 U		10.0 U		10.0 U	
fluoranthene				10.0 U		10.0 U		10.0 U	
fluorene				10.0 U		10.0 U		10.0 U	
hexachlorobenzene				10.0 U		10.0 U		10.0 U	
hexachlorobutadiene				10.0 U		10.0 U		10.0 U	
hexachlorocyclopentadiene				10.0 U		10.0 U		10.0 U	
hexachloroethane				10.0 U		10.0 U		10.0 U	
indeno(1,2,3-cd)pyrene				10.0 U		10.0 UJ		10.0 U	
isophorone				10.0 U		10.0 U		10.0 U	
naphthalene				10.0 U		10.0 U		10.0 U	
nitrobenzene				10.0 U		10.0 U		10.0 U	

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	11GW03	11GW04	11GW05	13GW01	13GW01-F	13GW02	13GW02-DEC95	13GW03	13GW03-F
LOCATION:	11GW03	11GW04	11GW05	13GW01	13GW01	13GW02	13GW02	13GW03	13GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI	1995 RI
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
pentachlorophenol				25.0 U		25.0 U		25.0 U	
phenanthrene				10.0 U		10.0 U		10.0 U	
phenol				10.0 U		10.0 U		10.0 U	
pyrene				10.0 UJ		10.0 U		10.0 UJ	
VOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,1,1-trichloroethane	10.0 U	10.0 U	10.0 U	5.0 J		10.0 U	10.0 U	10.0 U	
1,1,2,2-tetrachloroethane	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
1,1,2-trichloroethane	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
1,1-dichloroethane	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
1,1-dichloroethene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
1,2-dichloroethane	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
1,2-dichloroethene (total)	10.0 U	10.0 U	10.0 U	10.0 U		7.0 J	2.0 J	10.0 U	
1,2-dichloropropane	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
2-butanone	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
2-hexanone	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
4-methyl-2-pentanone	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
acetone	17.0 UJ	16.0 UJ	31.0 UJ	10.0 U		10.0 U	10.0 U	10.0 U	
benzene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
bromodichloromethane	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
bromoform	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
bromomethane	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
carbon disulfide	10.0 U	10.0 UJ	10.0 UJ	10.0 UJ		10.0 U	10.0 U	10.0 UJ	
carbon tetrachloride	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
chlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
chloroethane	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
chloroform	2.0 J	1.0 J	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
chloromethane	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
cis-1,3-dichloropropene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	11GW03	11GW04	11GW05	13GW01	13GW01-F	13GW02	13GW02-DEC95	13GW03	13GW03-F
LOCATION:	11GW03	11GW04	11GW05	13GW01	13GW01	13GW02	13GW02	13GW03	13GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI	1995 RI
VOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
dibromochloromethane	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
ethylbenzene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
methylene chloride	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
styrene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
tetrachloroethene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
toluene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
trans-1,3-dichloropropene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
trichloroethene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
vinyl chloride	10.0 U	10.0 U	10.0 U	10.0 U		11.0	10.0 J	10.0 U	
xylene (total)	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	10.0 U	10.0 U	
PESTICIDES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
4,4'-DDD				0.10 U		0.10 U		0.10 U	
4,4'-DDE				0.10 U		0.10 U		0.10 U	
4,4'-DDT				0.051 J		0.029 J		0.10 U	
Aroclor-1016				1.0 U		1.0 U		1.0 U	
Aroclor-1221				2.0 U		2.0 U		2.0 U	
Aroclor-1232				1.0 U		1.0 U		1.0 U	
Aroclor-1242				1.0 U		1.0 U		1.0 U	
Aroclor-1248				1.0 U		1.0 U		1.0 U	
Aroclor-1254				1.0 U		1.0 U		1.0 U	
Aroclor-1260				1.0 U		1.0 U		1.0 U	
aldrin				0.050 U		0.050 U		0.050 U	
alpha-BHC				0.0010 R		0.050 U		0.050 U	
alpha-chlordane				0.050 U		0.050 U		0.050 U	
beta-BHC				0.050 U		0.050 U		0.050 U	
delta-BHC				0.025 R		0.050 U		0.050 U	
dieldrin				0.022 J		0.10 U		0.10 U	
endosulfan I				0.028 JN		0.050 U		0.050 U	

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	11GW03	11GW04	11GW05	13GW01	13GW01-F	13GW02	13GW02-DEC95	13GW03	13GW03-F
LOCATION:	11GW03	11GW04	11GW05	13GW01	13GW01	13GW02	13GW02	13GW03	13GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI	1995 RI
PESTICIDES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
endosulfan II				0.10 U		0.10 U		0.10 U	
endosulfan sulfate				0.10 U		0.10 U		0.10 U	
endrin				0.10 U		0.10 U		0.10 U	
endrin aldehyde				0.10 U		0.10 U		0.10 U	
endrin ketone				0.10 U		0.10 U		0.10 U	
gamma-BHC (Lindane)				0.050 U		0.050 U		0.050 U	
gamma-chlordane				0.050 U		0.050 U		0.050 U	
heptachlor				0.011 J		0.0052 JN		0.050 U	
heptachlor epoxide				0.044 R		0.013 R		0.050 U	
methoxychlor				0.50 U		0.50 U		0.50 U	
toxaphene				5.0 U		5.0 U		5.0 U	

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	13GW04	13GW05	16GW01	16GW02	16GW02-F	16GW03	16GW04	16GW04-DL	16GW05
LOCATION:	13GW04	13GW05	16GW01	16GW02	16GW02	16GW03	16GW04	16GW04	16GW05
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
							Unvalidated Data	Unvalidated Data	Unvalidated Data
INORGANICS	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
aluminum	7430 J	1420 J	5290 J	3720 J	161	5480 J	1340		900
antimony	9.7	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	60.0 U		60.0 U
arsenic	39.2	3.3 U	5.6	5.8	3.3 U	5.3	9.4		10.0 U
barium	57.8	91.3	321	356	3.1	408	4.4		31.2
beryllium	1.6	0.67	0.18	0.11 U	0.11 U	0.26	5.0 U		5.0 U
cadmium	1.2	63.9	0.38 U	0.38 U	0.38 U	0.38 U	0.65		0.56
calcium	3170	4990	7190	2530	1990	6160	23500		17700
chromium, total	252	26.3	116	80.5	13.6	116	24.0		5.3
cobalt	8.4	6.1	1.4	1.3	0.88	1.6	0.71		50.0 U
copper	8.1	2.6	12.2	15.2	3.2	13.7	0.80		0.88
iron	27100	866	14100	11300	179	15300	178000		49100
lead	18.8	3.4 J	3.2	2.0	1.5 UJ	3.1	2.1		5.4
magnesium	2610	2120	2100	1410	602	2610	5800		4660
manganese	58.3	138	70.2	10.8	10.9	25.6	47.0		84.0
mercury	0.059	0.047	0.086	0.084	0.025	0.088	0.035		0.050
nickel	13.0	35.7	0.75 U	0.75 U	1.9	0.75 U	40.0 U		40.0 U
potassium	8270 J	2620	3870	2510	323	4320	5000 U		1870
selenium	39.9	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	13.5		5.0 U
silver	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	10.0 U		10.0 U
sodium	3520	5860	57700	49400	50100	48000	104000		159000
thallium	23.8 J	3.6 UJ	3.6 U	3.6 U	3.6 U	3.6 U	10.0 U		10.0 U
vanadium	152	2.6	52.9	34.1	1.0	53.4	11.0		50.0 U
zinc	52.9	1950	191	260	4.2	208	20.0		17.2
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,2,4-trichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	100 U	400 U	10.0 U
1,2-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	100 U	400 U	10.0 U
1,3-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	100 U	400 U	10.0 U
1,4-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	100 U	400 U	10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	13GW04		13GW05		16GW01		16GW02		16GW02-F	16GW03		16GW04		16GW04-DL		16GW05	
LOCATION:	13GW04		13GW05		16GW01		16GW02		16GW02	16GW03		16GW04		16GW04		16GW05	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	1995 RI		1995 RI		1995 RI		1995 RI	
												Unvalidated Data		Unvalidated Data		Unvalidated Data	
SEMIVOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L	ug/L		ug/L		ug/L		ug/L	
2,2'-oxybis(1-chloropropane)	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
2,4,5-trichlorophenol	25.0	U	25.0	U	25.0	U	25.0	U		25.0	U	250	U	1000	U	25.0	U
2,4,6-trichlorophenol	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
2,4-dichlorophenol	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
2,4-dimethylphenol	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	48.0	
2,4-dinitrophenol	25.0	U	25.0	U	25.0	U	25.0	U		25.0	U	250	U	1000	U	25.0	U
2,4-dinitrotoluene	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
2,6-dinitrotoluene	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
2-chloronaphthalene	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
2-chlorophenol	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
2-methylnaphthalene	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	1900	J	1800		170	J
2-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
2-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U		25.0	U	250	U	1000	U	25.0	U
2-nitrophenol	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
3,3'-dichlorobenzidine	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
3-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U		25.0	U	250	U	1000	U	25.0	U
4,6-dinitro-2-methylphenol	25.0	U	25.0	U	25.0	U	25.0	U		25.0	U	250	U	1000	U	25.0	U
4-bromophenyl-phenylether	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
4-chloro-3-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
4-chloroaniline	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
4-chlorophenyl-phenylether	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
4-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
4-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U		25.0	U	250	U	1000	U	25.0	U
4-nitrophenol	25.0	U	25.0	U	25.0	U	25.0	U		25.0	U	250	U	1000	U	25.0	U
N-nitroso-di-n-propylamine	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
N-nitrosodiphenylamine (1)	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U
acenaphthene	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	91.0	J	91.0	J	8.0	J
acenaphthylene	10.0	U	10.0	U	10.0	U	10.0	U		10.0	U	100	U	400	U	10.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	13GW04		13GW05		16GW01		16GW02		16GW02-F		16GW03		16GW04		16GW04-DL		16GW05	
LOCATION:	13GW04		13GW05		16GW01		16GW02		16GW02		16GW03		16GW04		16GW04		16GW05	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
													Unvalidated Data		Unvalidated Data		Unvalidated Data	
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
anthracene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
benzo(a)anthracene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
benzo(a)pyrene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
benzo(b)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
benzo(g,h,i)perylene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	UJ	100	U	400	U	10.0	U
benzo(k)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
bis(2-chloroethoxy)methane	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
bis(2-chloroethyl)ether	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
bis(2-ethylhexyl)phthalate	10.0	U	10.0	U	10.0	U	10.0	U			1.0	J	100	U	400	U	92.0	J
butylbenzylphthalate	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
carbazole	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	12.0	
chrysene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
di-n-butylphthalate	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
di-n-octylphthalate	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
dibenz(a,h)anthracene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
dibenzofuran	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	73.0	J	63.0	J	6.0	J
diethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
dimethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
fluorene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	140		140	J	11.0	
hexachlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
hexachlorobutadiene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
hexachlorocyclopentadiene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
hexachloroethane	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
indeno(1,2,3-cd)pyrene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	UJ	100	U	400	U	10.0	U
isophorone	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U
naphthalene	10.0	U	10.0	U	10.0	U	10.0	U			1.0	J	690		690		100	J
nitrobenzene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	10.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	13GW04		13GW05		16GW01		16GW02		16GW02-F		16GW03		16GW04		16GW04-DL		16GW05	
LOCATION:	13GW04		13GW05		16GW01		16GW02		16GW02		16GW03		16GW04		16GW04		16GW05	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI Unvalidated Data		1995 RI Unvalidated Data		1995 RI Unvalidated Data	
SEMIVOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
pentachlorophenol	25.0	U	25.0	U	25.0	U	25.0	U			25.0	U	250	U	1000	U	25.0	U
phenanthrene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	240		230	J	17.0	
phenol	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	100	U	400	U	11.0	
pyrene	10.0	UJ	10.0	UJ	10.0	U	10.0	U			10.0	U	27.0	J	400	U	10.0	U
VOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
1,1,1-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
1,1,2,2-tetrachloroethane	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
1,1,2-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
1,1-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
1,1-dichloroethene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
1,2-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
1,2-dichloroethene (total)	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	11.0	J	10.0	J	50.0	U
1,2-dichloropropane	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
2-butanone	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
2-hexanone	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
4-methyl-2-pentanone	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
acetone	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
benzene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	350		340		1700	J
bromodichloromethane	10.0	U	10.0	U	10.0	U	10.0	U			1.0	J	25.0	U	100	U	50.0	U
bromoform	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
bromomethane	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
carbon disulfide	1.0	J	10.0	UJ	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
carbon tetrachloride	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
chlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
chloroethane	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
chloroform	10.0	U	10.0	U	4.0	J	10.0	U			6.0	J	25.0	U	100	U	50.0	U
chloromethane	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U
cis-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U			10.0	U	25.0	U	100	U	50.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	13GW04	13GW05	16GW01	16GW02	16GW02-F	16GW03	16GW04	16GW04-DL	16GW05
LOCATION:	13GW04	13GW05	16GW01	16GW02	16GW02	16GW03	16GW04	16GW04	16GW05
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
							Unvalidated Data	Unvalidated Data	Unvalidated Data
VOLATILES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
dibromochloromethane	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	25.0 U	100 U	50.0 U
ethylbenzene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	330	300	170
methylene chloride	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	25.0 U	100 U	50.0 U
styrene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	25.0 U	100 U	50.0 U
tetrachloroethene	10.0 U	10.0 U	10.0 U	10.0 U		1.0 J	25.0 U	100 U	50.0 U
toluene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	40.0	39.0	160
trans-1,3-dichloropropene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	25.0 U	100 U	50.0 U
trichloroethene	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	25.0 U	100 U	50.0 U
vinyl chloride	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	25.0 U	100 U	50.0 U
xylene (total)	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U	1700 J	1600	250
PESTICIDES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
4,4'-DDD	0.10 U	0.10 U							
4,4'-DDE	0.10 U	0.10 U							
4,4'-DDT	0.10 U	0.10 U							
Aroclor-1016	1.0 U	1.0 U							
Aroclor-1221	2.0 U	2.0 U							
Aroclor-1232	1.0 U	1.0 U							
Aroclor-1242	1.0 U	1.0 U							
Aroclor-1248	1.0 U	1.0 U							
Aroclor-1254	1.0 U	1.0 U							
Aroclor-1260	1.0 U	1.0 U							
aldrin	0.050 U	0.050 U							
alpha-BHC	0.050 U	0.050 U							
alpha-chlordane	0.050 U	0.050 U							
beta-BHC	0.050 U	0.050 U							
delta-BHC	0.050 U	0.050 U							
dieldrin	0.10 U	0.10 U							
endosulfan I	0.050 U	0.050 U							

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	13GW04		13GW05		16GW01	16GW02	16GW02-F	16GW03	16GW04	16GW04-DL	16GW05
LOCATION:	13GW04		13GW05		16GW01	16GW02	16GW02	16GW03	16GW04	16GW04	16GW05
DATA SOURCE:	1995 RI		1995 RI		1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
									Unvalidated Data	Unvalidated Data	Unvalidated Data
PESTICIDES	**ug/L**		**ug/L**		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
endosulfan II	0.10	U	0.10	U							
endosulfan sulfate	0.10	U	0.10	U							
endrin	0.10	U	0.10	U							
endrin aldehyde	0.10	U	0.10	U							
endrin ketone	0.10	U	0.10	U							
gamma-BHC (Lindane)	0.050	U	0.050	U							
gamma-chlordane	0.050	U	0.050	U							
heptachlor	0.050	U	0.050	U							
heptachlor epoxide	0.050	U	0.050	U							
methoxychlor	0.50	U	0.50	U							
toxaphene	5.0	U	5.0	U							

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16GW05-DL	16GW06	16GW06-F	16MW01	17GW01	17GW03	17GW04	17GW05	19GW01
LOCATION:	16GW05	16GW06	16GW06	16MW01	17GW01	17GW03	17GW04	17GW05	19GW01
DATA SOURCE:	1995 RI Unvalidated Data	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
aluminum		85200 J	132	2110	2090	1360	96.8	1500 J	3890
antimony		2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
arsenic		156	3.6	3.3 U	3.3 U	4.2	19.7	7.0	3.3 U
barium		432	8.1	133	49.7	118	590	16.0	16.7
beryllium		9.8	0.11 U	0.44	4.5	1.4	0.11 U	0.11 U	0.11 U
cadmium		4.9	2.0	0.41	0.43	0.87	8.3	0.38 U	0.73
calcium		3210	2490	14200	11000	7290	517000	1700	17200 J
chromium, total		2070	12.6	34.0	1.1	1.0 U	1.0 U	4.6	20.2
cobalt		8.8	0.75	2.6	24.7	14.0	0.72	2.2	2.0
copper		41.9	0.87	5.1	0.77 U	0.83	1.0	2.5	4.8
iron		379000	53500	1240	1400	10800	54300	11300	1980
lead		46.5	1.5 UJ	2.0	1.5 UJ	5.7 J	1.5 UJ	3.8 J	1.5 UJ
magnesium		17700	763	2880	14500	6990	89900	1440	27400
manganese		79.6	39.0	77.9	3040	732	864	79.9	20.2
mercury		0.18	0.016	0.084 J	0.0040 UJ	0.0040 UJ	0.0040 UJ	0.054	0.12 J
nickel		20.0	1.3	184	43.2	15.8	0.75 U	3.2	6.3
potassium		54900	624	2650	3000	3040	92700	2460	1020
selenium		17.0	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 UJ
silver		0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U
sodium		16100	16100	69300	15800	28900	15700000	4780	4050
thallium		15.6	3.6 U	13.0	3.6 U	3.6 U	3.6 U	3.6 UJ	3.6 U
vanadium		874	0.87	1.0	1.1	10.2	0.61 U	18.1	5.5
zinc		360	10.0	2.0	253 R	68.9 R	3.8	10.5	5.8 R
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,2,4-trichlorobenzene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
1,2-dichlorobenzene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
1,3-dichlorobenzene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
1,4-dichlorobenzene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16GW05-DL		16GW06		16GW06-F	16MW01		17GW01		17GW03		17GW04		17GW05		19GW01
LOCATION:	16GW05		16GW06		16GW06	16MW01		17GW01		17GW03		17GW04		17GW05		19GW01
DATA SOURCE:	1995 RI Unvalidated Data		1995 RI		1995 RI	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**
2,2'-oxybis(1-chloropropane)	50.0	U	10.0	U		10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U	
2,4,5-trichlorophenol	120	U	25.0	U		25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	
2,4,6-trichlorophenol	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
2,4-dichlorophenol	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
2,4-dimethylphenol	52.0		10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
2,4-dinitrophenol	120	U	25.0	U		25.0	U	25.0	UJ	25.0	U	25.0	U	25.0	U	
2,4-dinitrotoluene	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
2,6-dinitrotoluene	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
2-chloronaphthalene	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
2-chlorophenol	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
2-methylnaphthalene	250		10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
2-methylphenol	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
2-nitroaniline	120	U	25.0	U		25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	
2-nitrophenol	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
3,3'-dichlorobenzidine	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
3-nitroaniline	120	U	25.0	U		25.0	U	25.0	UJ	25.0	U	25.0	U	25.0	U	
4,6-dinitro-2-methylphenol	120	U	25.0	U		25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	
4-bromophenyl-phenylether	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
4-chloro-3-methylphenol	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
4-chloroaniline	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
4-chlorophenyl-phenylether	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
4-methylphenol	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
4-nitroaniline	120	U	25.0	U		25.0	U	25.0	UJ	25.0	U	25.0	U	25.0	U	
4-nitrophenol	120	U	25.0	U		25.0	U	25.0	UJ	25.0	U	25.0	U	25.0	U	
N-nitroso-di-n-propylamine	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
N-nitrosodiphenylamine (1)	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
acenaphthene	11.0	J	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	
acenaphthylene	50.0	U	10.0	U		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16GW05-DL	16GW06	16GW06-F	16MW01	17GW01	17GW03	17GW04	17GW05	19GW01
LOCATION:	16GW05	16GW06	16GW06	16MW01	17GW01	17GW03	17GW04	17GW05	19GW01
DATA SOURCE:	1995 RI Unvalidated Data	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
anthracene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
benzo(a)anthracene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
benzo(a)pyrene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
benzo(b)fluoranthene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
benzo(g,h,i)perylene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
benzo(k)fluoranthene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
bis(2-chloroethoxy)methane	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
bis(2-chloroethyl)ether	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
bis(2-ethylhexyl)phthalate	190	3.0 J		10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	
butylbenzylphthalate	50.0 U	10.0 U		10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	
carbazole	16.0 J	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
chrysene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
di-n-butylphthalate	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
di-n-octylphthalate	50.0 U	10.0 U		10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	
dibenz(a,h)anthracene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
dibenzofuran	7.0 J	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
diethylphthalate	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
dimethylphthalate	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
fluoranthene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
fluorene	14.0 J	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
hexachlorobenzene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
hexachlorobutadiene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
hexachlorocyclopentadiene	50.0 U	10.0 U		10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	
hexachloroethane	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
indeno(1,2,3-cd)pyrene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
isophorone	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
naphthalene	220	3.0 J		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
nitrobenzene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16GW05-DL	16GW06	16GW06-F	16MW01	17GW01	17GW03	17GW04	17GW05	19GW01
LOCATION:	16GW05	16GW06	16GW06	16MW01	17GW01	17GW03	17GW04	17GW05	19GW01
DATA SOURCE:	1995 RI Unvalidated Data	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
pentachlorophenol	120 U	25.0 U		25.0 U	25.0 UJ	25.0 U	25.0 U	25.0 U	
phenanthrene	22.0 J	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
phenol	15.0 J	12.0		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
pyrene	50.0 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	
VOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,1,1-trichloroethane	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1,2,2-tetrachloroethane	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1,2-trichloroethane	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1-dichloroethane	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1-dichloroethene	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-dichloroethane	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-dichloroethene (total)	100 U	38.0		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-dichloropropane	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-butanone	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-hexanone	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ
4-methyl-2-pentanone	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
acetone	100 U	12.0 U		10.0 UJ	10.0 UJ	10.0 UJ	12.0 UJ	10.0 UJ	17.0 UJ
benzene	1900	200		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
bromodichloromethane	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
bromoform	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 U
bromomethane	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
carbon disulfide	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 U
carbon tetrachloride	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
chlorobenzene	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
chloroethane	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
chloroform	100 U	10.0 U		14.0	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
chloromethane	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
cis-1,3-dichloropropene	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16GW05-DL	16GW06	16GW06-F	16MW01	17GW01	17GW03	17GW04	17GW05	19GW01
LOCATION:	16GW05	16GW06	16GW06	16MW01	17GW01	17GW03	17GW04	17GW05	19GW01
DATA SOURCE:	1995 RI Unvalidated Data	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
VOLATILES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
dibromochloromethane	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
ethylbenzene	160	2.0 J		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
methylene chloride	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
styrene	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
tetrachloroethene	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
toluene	160	7.0 J		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
trans-1,3-dichloropropene	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
trichloroethene	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
vinyl chloride	100 U	10.0 U		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
xylene (total)	250	26.0		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
PESTICIDES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
4,4'-DDD					0.10 U				
4,4'-DDE					0.10 U				
4,4'-DDT					0.10 U				
aldrin					0.050 U				
alpha-BHC					0.050 U				
alpha-chlordane					0.050 U				
beta-BHC					0.050 U				
delta-BHC					0.050 U				
dieldrin					0.10 U				
endosulfan I					0.050 U				
endosulfan II					0.10 U				
endosulfan sulfate					0.10 U				
endrin					0.10 U				
endrin aldehyde					0.10 U				
endrin ketone					0.10 U				
gamma-BHC (Lindane)					0.050 U				
gamma-chlordane					0.050 U				

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16GW05-DL	16GW06	16GW06-F	16MW01	17GW01	17GW03	17GW04	17GW05	19GW01
LOCATION:	16GW05	16GW06	16GW06	16MW01	17GW01	17GW03	17GW04	17GW05	19GW01
DATA SOURCE:	1995 RI Unvalidated Data	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
heptachlor					0.050 U				
heptachlor epoxide					0.050 U				
methoxychlor					0.50 U				
toxaphene					5.0 U				

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	19GW02	19GW03	19GW05	19GW06	19GW07	23GW01	23GW02	23GW02-F	23GW03
LOCATION:	19GW02	19GW03	19GW05	19GW06	19GW07	23GW01	23GW02	23GW02	23GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
aluminum	1690 J	1210	9610 J	360 J	7670 J	25600 J	9500 J	1790 J	41700 J
antimony	2.7 U	2.7 U	2.7 U	2.7 U	6.7	2.7 U	2.7 U	2.7 U	2.7 U
arsenic	3.3 U	3.5	3.3 U	3.3 U	27.4	27.7	8.4	3.3 U	40.4
barium	29.3	753	50.2	25.2	85.1	46.0	298	33.3	60.0
beryllium	0.11 U	0.11 U	0.75	0.11 U	1.0	3.7	1.0	0.11 U	6.5
cadmium	1.1	2.0	1.3	2.6	7.5	3.4	3.0	10.9	15.0
calcium	1330	2770	8620	3250	13600	7960	6450	6010	10200
chromium, hexavalent				20.0 U					
chromium, total	16.2	14.4	43.1	3.9	36.1	1210	486	29.9	2380
cobalt	1.3	1.6	1.9	1.0	15.6	23.6	9.9	6.1	27.2
copper	0.77 U	17.5	0.77 U	0.77 U	5.6	20.6	11.2	2.6	33.5
iron	3200	4880	794	950	3040	60100	25800	4890	108000
lead	1.6	1.9 J	5.1	2.1	17.2	45.3	19.8	8.6 J	50.1
magnesium	1080	921	2570	958	5180	7440	2860	1020	9900
manganese	12.4	8.1	185	55.5	45.4	18.6	59.3	60.7	48.3
mercury	0.0070	0.10 J	0.031	0.029	0.054	0.071	0.081	0.026	0.048
nickel	8.9	5.3	4.8	5.8	25.4	80.4	13.2	17.9	83.0
potassium	831	1020	1340	876	1540	19800 J	8660	2420	37700 J
selenium	4.4 UJ	4.4 UJ	4.4 UJ	4.4 UJ	27.2	7.5 J	4.4 U	4.4 U	4.4 U
silver	0.94 U	0.94 U	0.94 U	0.94 U	1.0	1.0	0.94 U	0.94 U	0.94 U
sodium	6690	3640	5270	4110	48100	6360	8450	8050	28600
thallium	3.6 U	3.6 U	3.6 U	3.6 U	28.9 J	3.9 J	3.6 U	3.6 U	3.6 UJ
vanadium	7.4	7.2	0.61 U	2.3	15.6	612	211	1.4	1140
zinc	51.8	470 J	1.6 U	7.6	694	199	322	86.9	282
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,2,4-trichlorobenzene						10.0 U	10.0 U		10.0 U
1,2-dichlorobenzene						10.0 U	10.0 U		10.0 U
1,3-dichlorobenzene						10.0 U	10.0 U		10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	19GW02	19GW03	19GW05	19GW06	19GW07	23GW01	23GW02	23GW02-F	23GW03
LOCATION:	19GW02	19GW03	19GW05	19GW06	19GW07	23GW01	23GW02	23GW02	23GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,4-dichlorobenzene						10.0 U	10.0 U		10.0 U
2,2'-oxybis(1-chloropropane)						10.0 U	10.0 U		10.0 U
2,4,5-trichlorophenol						25.0 U	25.0 U		25.0 U
2,4,6-trichlorophenol						10.0 U	10.0 U		10.0 U
2,4-dichlorophenol						10.0 U	10.0 U		10.0 U
2,4-dimethylphenol						10.0 U	10.0 U		10.0 U
2,4-dinitrophenol						25.0 U	25.0 U		25.0 U
2,4-dinitrotoluene						10.0 U	10.0 U		10.0 U
2,6-dinitrotoluene						10.0 U	10.0 U		10.0 U
2-chloronaphthalene						10.0 U	10.0 U		10.0 U
2-chlorophenol						10.0 U	10.0 U		10.0 U
2-methylnaphthalene						10.0 U	10.0 U		10.0 U
2-methylphenol						10.0 U	10.0 U		10.0 U
2-nitroaniline						25.0 U	25.0 U		25.0 U
2-nitrophenol						10.0 U	10.0 U		10.0 U
3,3'-dichlorobenzidine						10.0 U	10.0 U		10.0 U
3-nitroaniline						25.0 U	25.0 U		25.0 U
4,6-dinitro-2-methylphenol						25.0 U	25.0 U		25.0 U
4-bromophenyl-phenylether						10.0 U	10.0 U		10.0 U
4-chloro-3-methylphenol						10.0 U	10.0 U		10.0 U
4-chloroaniline						10.0 U	10.0 U		10.0 U
4-chlorophenyl-phenylether						10.0 U	10.0 U		10.0 U
4-methylphenol						10.0 U	10.0 U		10.0 U
4-nitroaniline						25.0 U	25.0 U		25.0 U
4-nitrophenol						25.0 U	25.0 U		25.0 U
N-nitroso-di-n-propylamine						10.0 U	10.0 U		10.0 U
N-nitrosodiphenylamine (1)						10.0 U	10.0 U		10.0 U
acenaphthene						10.0 U	10.0 U		10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	19GW02	19GW03	19GW05	19GW06	19GW07	23GW01	23GW02	23GW02-F	23GW03
LOCATION:	19GW02	19GW03	19GW05	19GW06	19GW07	23GW01	23GW02	23GW02	23GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
acenaphthylene						10.0 U	10.0 U		10.0 U
anthracene						10.0 U	10.0 U		10.0 U
benzo(a)anthracene						10.0 U	10.0 U		10.0 U
benzo(a)pyrene						10.0 U	10.0 U		10.0 U
benzo(b)fluoranthene						10.0 U	10.0 U		10.0 U
benzo(g,h,i)perylene						10.0 U	10.0 U		10.0 U
benzo(k)fluoranthene						10.0 U	10.0 U		10.0 U
bis(2-chloroethoxy)methane						10.0 U	10.0 U		10.0 U
bis(2-chloroethyl)ether						10.0 U	10.0 U		10.0 U
bis(2-ethylhexyl)phthalate						10.0 U	10.0 U		10.0 U
butylbenzylphthalate						10.0 U	10.0 U		10.0 U
carbazole						10.0 U	10.0 U		10.0 U
chrysene						10.0 U	10.0 U		10.0 U
di-n-butylphthalate						10.0 U	10.0 U		10.0 U
di-n-octylphthalate						10.0 U	10.0 U		10.0 U
dibenz(a,h)anthracene						10.0 U	10.0 U		10.0 U
dibenzofuran						10.0 U	10.0 U		10.0 U
diethylphthalate						10.0 U	10.0 U		10.0 U
dimethylphthalate						10.0 U	10.0 U		10.0 U
fluoranthene						10.0 U	10.0 U		10.0 U
fluorene						10.0 U	10.0 U		10.0 U
hexachlorobenzene						10.0 U	10.0 U		10.0 U
hexachlorobutadiene						10.0 U	10.0 U		10.0 U
hexachlorocyclopentadiene						10.0 U	10.0 U		10.0 U
hexachloroethane						10.0 U	10.0 U		10.0 U
indeno(1,2,3-cd)pyrene						10.0 U	10.0 U		10.0 U
isophorone						10.0 U	10.0 U		10.0 U
naphthalene						10.0 U	10.0 U		10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	19GW02	19GW03	19GW05	19GW06	19GW07	23GW01	23GW02	23GW02-F	23GW03
LOCATION:	19GW02	19GW03	19GW05	19GW06	19GW07	23GW01	23GW02	23GW02	23GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
nitrobenzene						10.0 U	10.0 U		10.0 U
pentachlorophenol						25.0 U	25.0 U		25.0 U
phenanthrene						10.0 U	10.0 U		10.0 U
phenol						10.0 U	10.0 U		10.0 U
pyrene						10.0 UJ	10.0 U		10.0 UJ
VOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,1,1-trichloroethane	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
1,1,2,2-tetrachloroethane	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
1,1,2-trichloroethane	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
1,1-dichloroethane	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
1,1-dichloroethene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
1,2-dichloroethane	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
1,2-dichloroethene (total)	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
1,2-dichloropropane	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
2-butanone	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
2-hexanone	10.0 UJ	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
4-methyl-2-pentanone	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
acetone	26.0 UJ	19.0 UJ	10.0 UJ	10.0 UJ	10.0 U	10.0 U	10.0 U		10.0 U
benzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
bromodichloromethane	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
bromoform	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
bromomethane	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 UJ
carbon disulfide	10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 UJ	10.0 U		10.0 U
carbon tetrachloride	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
chlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
chloroethane	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
chloroform	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		6.0 J
chloromethane	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	19GW02	19GW03	19GW05	19GW06	19GW07	23GW01	23GW02	23GW02-F	23GW03
LOCATION:	19GW02	19GW03	19GW05	19GW06	19GW07	23GW01	23GW02	23GW02	23GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
VOLATILES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
cis-1,3-dichloropropene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
dibromochloromethane	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
ethylbenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
methylene chloride	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
styrene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
tetrachloroethene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
toluene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
trans-1,3-dichloropropene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
trichloroethene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
vinyl chloride	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
xylene (total)	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U		10.0 U
PESTICIDES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
4,4'-DDD						0.10 U	0.10 U		0.10 U
4,4'-DDE						0.10 U	0.10 U		0.10 U
4,4'-DDT						0.074 R	0.034 J		0.10 U
aldrin						0.050 U	0.050 U		0.050 U
alpha-BHC						0.050 U	0.050 U		0.050 U
alpha-chlordane						0.050 U	0.050 U		0.050 U
beta-BHC						0.050 U	0.050 U		0.050 U
delta-BHC						0.050 U	0.050 U		0.050 U
dieldrin						0.016 JN	0.10 U		0.10 U
endosulfan I						0.025 JN	0.0078 JN		0.038 R
endosulfan II						0.10 U	0.10 U		0.10 U
endosulfan sulfate						0.10 U	0.10 U		0.10 U
endrin						0.10 U	0.10 U		0.10 U
endrin aldehyde						0.10 U	0.10 U		0.10 U
endrin ketone						0.10 U	0.10 U		0.10 U
gamma-BHC (Lindane)						0.050 U	0.0086 J		0.034 R

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	19GW02	19GW03	19GW05	19GW06	19GW07	23GW01	23GW02	23GW02-F	23GW03
LOCATION:	19GW02	19GW03	19GW05	19GW06	19GW07	23GW01	23GW02	23GW02	23GW03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
gamma-chlordane						0.0081 R	0.050 U		0.0089 R
heptachlor						0.050 U	0.050 U		0.014 R
heptachlor epoxide						0.025 R	0.013 JN		0.032 R
methoxychlor						0.50 U	0.50 U		0.50 U
toxaphene						5.0 U	5.0 U		5.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	23GW03-F	26GW01	26GW02	26GW03	26GW04	26GW05	26GW06	29GW01	29GW02
LOCATION:	23GW03	26GW01	26GW02	26GW03	26GW04	26GW05	26GW06	29GW01	29GW02
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
aluminum	104	614 J	927 J	406 J	328	501 J	460 J	562 J	575 J
antimony	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
arsenic	4.1	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.7
barium	27.3	518	464	475	13.2	89.6	46.9	17.1	21.3
beryllium	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
cadmium	8.5	0.52	0.42	0.38 U	4.4	0.52	0.38 U	0.94	0.38 U
calcium	5640	17800	3540	7010	4600	6590	11100	25400	41400
chromium, total	2.2	1.3	1.2	1.4	1.0 U	1.0 U	1.0 U	14.1	8.3
cobalt	10.2	2.9	0.92	0.60 U	1.2	5.0	5.8	0.60 U	0.60 U
copper	2.2	8.7	13.8	9.2	4.0	0.82	0.81	0.77 U	0.77 U
iron	452	4740 J	828 J	719 J	90.8	284	373	34800	13900
lead	1.5 UJ	2.6	1.5 U	1.5 U	1.5 UJ	1.5 U	1.5 U	2.0 J	1.5 U
magnesium	478	2170	636	2120	724	923	1920	4070	6720
manganese	37.3	106 J	10.6	3.3	11.0	87.5	155	102	92.7
mercury	0.011	0.012	0.021	0.014	0.11 J	0.080	0.083	0.065	0.040
nickel	25.6	0.75 U	1.0	0.81	0.75 U	0.75 U	0.75 U	1.0	1.5
potassium	3050	3640	1100	362	569	1350	1290	3270	2910
selenium	4.4 U	4.4 U	4.4 U	4.4 U	4.4 UJ	4.4 U	4.4 U	4.4 U	4.4 U
silver	0.94 U	0.94 U	0.94 U	0.94 U	3.3	0.94 U	0.94 U	0.94 U	0.94 U
sodium	27100	4580	3250	2650	3910	2360	12500	42900	7310
thallium	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 UJ	3.6 UJ
vanadium	1.0	1.6	1.0	0.81	0.61 U	0.61 U	0.61 U	2.8	3.4
zinc	66.9	326	326	280	8.3 R	180	100	3.8	3.4
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,2,4-trichlorobenzene								10.0 U	10.0 U
1,2-dichlorobenzene								10.0 U	10.0 U
1,3-dichlorobenzene								10.0 U	10.0 U
1,4-dichlorobenzene								10.0 U	10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	23GW03-F	26GW01	26GW02	26GW03	26GW04	26GW05	26GW06	29GW01		29GW02	
LOCATION:	23GW03	26GW01	26GW02	26GW03	26GW04	26GW05	26GW06	29GW01		29GW02	
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI		1995 RI	
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**		**ug/L**	
2,2'-oxybis(1-chloropropane)								10.0	U	10.0	U
2,4,5-trichlorophenol								25.0	U	25.0	U
2,4,6-trichlorophenol								10.0	U	10.0	U
2,4-dichlorophenol								10.0	U	10.0	U
2,4-dimethylphenol								10.0	U	10.0	U
2,4-dinitrophenol								25.0	UJ	25.0	U
2,4-dinitrotoluene								10.0	U	10.0	U
2,6-dinitrotoluene								10.0	U	10.0	U
2-chloronaphthalene								10.0	U	10.0	U
2-chlorophenol								10.0	U	10.0	U
2-methylnaphthalene								10.0	U	10.0	U
2-methylphenol								10.0	U	10.0	U
2-nitroaniline								25.0	U	25.0	U
2-nitrophenol								10.0	U	10.0	U
3,3'-dichlorobenzidine								10.0	U	10.0	U
3-nitroaniline								25.0	U	25.0	U
4,6-dinitro-2-methylphenol								25.0	U	25.0	U
4-bromophenyl-phenylether								10.0	U	10.0	U
4-chloro-3-methylphenol								10.0	U	10.0	U
4-chloroaniline								10.0	U	10.0	U
4-chlorophenyl-phenylether								10.0	U	10.0	U
4-methylphenol								10.0	U	10.0	U
4-nitroaniline								25.0	U	25.0	U
4-nitrophenol								25.0	U	25.0	U
N-nitroso-di-n-propylamine								10.0	U	10.0	U
N-nitrosodiphenylamine (1)								10.0	U	10.0	U
acenaphthene								10.0	U	10.0	U
acenaphthylene								10.0	U	10.0	U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	23GW03-F	26GW01	26GW02	26GW03	26GW04	26GW05	26GW06	29GW01	29GW02
LOCATION:	23GW03	26GW01	26GW02	26GW03	26GW04	26GW05	26GW06	29GW01	29GW02
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
anthracene								10.0 U	10.0 U
benzo(a)anthracene								10.0 U	10.0 U
benzo(a)pyrene								10.0 U	10.0 U
benzo(b)fluoranthene								10.0 U	10.0 U
benzo(g,h,i)perylene								10.0 U	10.0 U
benzo(k)fluoranthene								10.0 U	10.0 U
bis(2-chloroethoxy)methane								10.0 U	10.0 U
bis(2-chloroethyl)ether								10.0 U	10.0 U
bis(2-ethylhexyl)phthalate								10.0 U	10.0 U
butylbenzylphthalate								10.0 U	10.0 U
carbazole								10.0 U	10.0 U
chrysene								10.0 U	10.0 U
di-n-butylphthalate								10.0 U	10.0 U
di-n-octylphthalate								10.0 U	10.0 U
dibenz(a,h)anthracene								10.0 U	10.0 U
dibenzofuran								10.0 U	10.0 U
diethylphthalate								10.0 U	10.0 U
dimethylphthalate								10.0 U	10.0 U
fluoranthene								10.0 U	10.0 U
fluorene								10.0 U	10.0 U
hexachlorobenzene								10.0 U	10.0 U
hexachlorobutadiene								10.0 U	10.0 U
hexachlorocyclopentadiene								10.0 U	10.0 U
hexachloroethane								10.0 U	10.0 U
indeno(1,2,3-cd)pyrene								10.0 U	10.0 U
isophorone								10.0 U	10.0 U
naphthalene								10.0 U	10.0 U
nitrobenzene								10.0 U	10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	23GW03-F	26GW01	26GW02	26GW03	26GW04	26GW05	26GW06	29GW01	29GW02
LOCATION:	23GW03	26GW01	26GW02	26GW03	26GW04	26GW05	26GW06	29GW01	29GW02
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
pentachlorophenol								25.0 UJ	25.0 U
phenanthrene								10.0 U	10.0 U
phenol								10.0 U	10.0 U
pyrene								10.0 U	10.0 UJ
VOLATILES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-trichloroethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1,2,2-tetrachloroethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1,2-trichloroethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1-dichloroethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,1-dichloroethene		3.0 J	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-dichloroethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-dichloroethene (total)		2000	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	1.0 J	10.0 U
1,2-dichloropropane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-butanone		10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 UJ	10.0 U	10.0 U
2-hexanone		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-methyl-2-pentanone		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
acetone		13.0 UJ	12.0 UJ	11.0 UJ	32.0 UJ	10.0 UJ	10.0 UJ	10.0 UJ	10.0 U
benzene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
bromodichloromethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
bromoform		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 U
bromomethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ
carbon disulfide		10.0 UJ	10.0 UJ	10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 UJ	10.0 U
carbon tetrachloride		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
chlorobenzene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
chloroethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
chloroform		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	1.0 J	10.0 U	10.0 U
chloromethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
cis-1,3-dichloropropene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	23GW03-F	26GW01	26GW02	26GW03	26GW04	26GW05	26GW06	29GW01	29GW02
LOCATION:	23GW03	26GW01	26GW02	26GW03	26GW04	26GW05	26GW06	29GW01	29GW02
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
VOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
dibromochloromethane		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
ethylbenzene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
methylene chloride		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
styrene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
tetrachloroethene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	1.0 J	10.0 U	10.0 U
toluene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
trans-1,3-dichloropropene		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
trichloroethene		1700	10.0 U	10.0 U	10.0 U	10.0 U	1.0 J	10.0 U	10.0 U
vinyl chloride		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
xylene (total)		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
PESTICIDES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Aroclor-1016								1.0 U	1.0 U
Aroclor-1221								2.0 U	2.0 U
Aroclor-1232								1.0 U	1.0 U
Aroclor-1242								1.0 U	1.0 U
Aroclor-1248								1.0 U	1.0 U
Aroclor-1254								1.0 U	1.0 U
Aroclor-1260								1.0 U	1.0 U

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGGW01	BGGW01-DUP	BGGW02	BGGW03	BGGW04	---	---	---	---
LOCATION:	BGGW01	BGGW01	BGGW02	BGGW03	BGGW04	---	---	---	---
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI				
INORGANICS	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**				
aluminum	1980	2080	287	242 J	1670 J				
antimony	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U				
arsenic	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U				
barium	73.5	72.1	16.2	50.2	78.1				
beryllium	0.11 U	0.11 U	0.11 U	0.11 U	0.23				
cadmium	0.38 U	0.38 U	0.38 U	0.38 U	0.51				
calcium	2220	2180	1070	5870	24100				
chromium, total	41.2	44.6	1.0 U	14.8	1.0 U				
cobalt	2.5	2.5	0.60 U	8.4	3.2				
copper	1.3	1.3	0.77 U	0.77 U	0.77 U				
cyanide	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U				
iron	4460	4740	958	706	3670				
lead	2.7	1.9	1.5 U	1.5 U	1.5 U				
magnesium	5340	5280	1000	1800	8610				
manganese	37.6	37.2	14.0	192	720				
mercury	0.077 J	0.065 J	0.077 J	0.047	0.044				
nickel	3.6	4.2	3.7	11.3	10.6				
potassium	3340	3150	639	2110	3550				
selenium	4.4 U	4.4 U	5.3 J	4.4 U	4.4 U				
silver	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U				
sodium	11700	11600	1980	7760	92500				
thallium	3.6 U	3.6 U	3.6 U	3.6 UJ	3.6 UJ				
vanadium	41.5	43.0	1.1	1.4	0.61 U				
zinc	19.5	19.8	3.7	5.0	30.9				
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**				
1,2,4-trichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U				
1,2-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U				
1,3-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U				

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGGW01		BGGW01-DUP		BGGW02		BGGW03		BGGW04		---		---		---		---	
LOCATION:	BGGW01		BGGW01		BGGW02		BGGW03		BGGW04		---		---		---		---	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI									
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**									
1,4-dichlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
2,2'-oxybis(1-chloropropane)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
2,4,5-trichlorophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U								
2,4,6-trichlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
2,4-dichlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
2,4-dimethylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
2,4-dinitrophenol	25.0	UJ	25.0	UJ	25.0	U	25.0	U	25.0	U								
2,4-dinitrotoluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
2,6-dinitrotoluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
2-chloronaphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
2-chlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
2-methylnaphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
2-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
2-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U								
2-nitrophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
3,3'-dichlorobenzidine	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
3-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U								
4,6-dinitro-2-methylphenol	25.0	UJ	25.0	UJ	25.0	U	25.0	U	25.0	U								
4-bromophenyl-phenylether	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U								
4-chloro-3-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
4-chloroaniline	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
4-chlorophenyl-phenylether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
4-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
4-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	UJ	25.0	U								
4-nitrophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U								
N-nitroso-di-n-propylamine	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
N-nitrosodiphenylamine (1)	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U								
acenaphthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGGW01		BGGW01-DUP		BGGW02		BGGW03		BGGW04		---	---	---	---
LOCATION:	BGGW01		BGGW01		BGGW02		BGGW03		BGGW04		---	---	---	---
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI					
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**					
acenaphthylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
anthracene	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U				
benzo(a)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
benzo(a)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
benzo(b)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
benzo(g,h,i)perylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
benzo(k)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
bis(2-chloroethoxy)methane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
bis(2-chloroethyl)ether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
bis(2-ethylhexyl)phthalate	10.0	U	18.0	U	10.0	U	10.0	U	10.0	U				
butylbenzylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
carbazole	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U				
chrysene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
di-n-butylphthalate	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U				
di-n-octylphthalate	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ	10.0	U				
dibenz(a,h)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
dibenzofuran	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
diethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
dimethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
fluoranthene	10.0	U	10.0	UJ	10.0	UJ	10.0	UJ	10.0	U				
fluorene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
hexachlorobenzene	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U				
hexachlorobutadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
hexachlorocyclopentadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
hexachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
indeno(1,2,3-cd)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
isophorone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
naphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGGW01		BGGW01-DUP		BGGW02		BGGW03		BGGW04		---	---	---	---
LOCATION:	BGGW01		BGGW01		BGGW02		BGGW03		BGGW04		---	---	---	---
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI					
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**					
nitrobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
pentachlorophenol	25.0	U	25.0	UJ	25.0	U	25.0	U	25.0	U				
phenanthrene	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U				
phenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ				
VOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**					
1,1,1-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
1,1,2,2-tetrachloroethane	10.0	UJ	10.0	UJ	10.0	UJ	10.0	U	10.0	U				
1,1,2-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
1,1-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
1,1-dichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
1,2-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
1,2-dichloroethene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
1,2-dichloropropane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
2-butanone	10.0	UJ	10.0	UJ	10.0	UJ	10.0	U	10.0	U				
2-hexanone	10.0	UJ	10.0	UJ	10.0	UJ	10.0	U	10.0	U				
4-methyl-2-pentanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
acetone	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ				
benzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
bromodichloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
bromoform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ				
bromomethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
carbon disulfide	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ				
carbon tetrachloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
chlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
chloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
chloroform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				
chloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U				

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGGW01		BGGW01-DUP		BGGW02		BGGW03		BGGW04		---		---		---		---	
LOCATION:	BGGW01		BGGW01		BGGW02		BGGW03		BGGW04		---		---		---		---	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI									
VOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**									
cis-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
dibromochloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
ethylbenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
methylene chloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
styrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
tetrachloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
toluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
trans-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
trichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
vinyl chloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
xylene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U								
PESTICIDES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**									
4,4'-DDD	0.10	U	0.0007	R	0.10	U	0.10	U	0.10	U								
4,4'-DDE	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U								
4,4'-DDT	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U								
Aroclor-1016	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U								
Aroclor-1221	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U								
Aroclor-1232	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U								
Aroclor-1242	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U								
Aroclor-1248	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U								
Aroclor-1254	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U								
Aroclor-1260	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U								
aldrin	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U								
alpha-BHC	0.050	U	0.050	U	0.050	U	0.0006	R	0.050	U								
alpha-chlordane	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U								
beta-BHC	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U								
delta-BHC	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U								
dieldrin	0.0014	R	0.0014	R	0.10	U	0.10	U	0.10	U								

TABLE A-a

ANALYTICAL RESULTS FOR GROUNDWATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGGW01	BGGW01-DUP	BGGW02	BGGW03	BGGW04	---	---	---	---
LOCATION:	BGGW01	BGGW01	BGGW02	BGGW03	BGGW04	---	---	---	---
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI				
PESTICIDES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**				
endosulfan I	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U				
endosulfan II	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U				
endosulfan sulfate	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U				
endrin	0.0007 R	0.10 U	0.10 U	0.10 U	0.10 U				
endrin aldehyde	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U				
endrin ketone	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U				
gamma-BHC (Lindane)	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U				
gamma-chlordane	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U				
heptachlor	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U				
heptachlor epoxide	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U				
methoxychlor	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U				
toxaphene	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U				

APPENDIX A.b.

ANALYTICAL DATABASE

ORGANIC AND INORGANIC RESULTS

SURFACE WATER SAMPLES

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	04SW01	04SW02	04SW03	04SW4B5	06SW01	06SW02	13SW02	13SW02-DUP	15SW01
LOCATION:	04SW01	04SW02	04SW03	04SW4B5	06SW01	06SW02	13SW02	13SW02	15SW01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
aluminum	1220 J	193	1000 J	353 J	500	305 J	927 J	937 J	104
antimony	2.5 U	2.7 U	2.5 U	2.5 U	17.4 U	2.5 U	2.5 U	2.5 U	2.5 U
arsenic	2.8	3.3 U	4.6	2.5 U	6.2	4.4	2.5 U	2.5 U	2.5 U
barium	34.8	52.9	29.4	23.2	468 J	45.1	28.3	28.6	34.6
beryllium	0.24	0.11 U	0.13 U	0.22	0.14 U	0.14	0.28	0.28	0.22
cadmium	0.17 U	0.38 U	0.17 U	0.17 U	2.7 J	0.17 U	0.49	0.62	0.37
calcium	3430	59500	6300	26900	20000	20300	3000	3020	22200
chromium, total	0.68	1.0 U	4.6	0.67 U	8.5 U	1.1	11.1	10.9	0.67 U
cobalt	0.60 U	0.60 U	1.1	1.0	2.7 U	1.8	2.5	2.6	5.0
copper	13.4	0.77 U	14.9	10.9	13.8	15.8	1.3	1.1	3.3
iron	2030	9600	16200	6090	13600	11400	1680	1710	7460 J
lead	11.4	1.5 U	22.6	4.6	5.0	4.1	1.6	2.1	0.74 U
magnesium	1080	15500	1060	9020	5390	5360	1930	1950	7300 J
manganese	29.7	333	19.3	383	338	337	41.0	41.6	885 J
mercury	0.10	0.093	0.28	0.035	0.043	0.055	0.013 U	0.013 U	0.11 J
nickel	2.8	0.75 U	4.4	1.0	6.5 U	4.3	8.6 J	9.3 J	5.6
potassium	940	3910	1140	4330	3610	3250	1640	1800	4180
selenium	2.5 U	4.4 U	2.5 U	2.5 U	3.9 J	4.4 J	2.5 U	2.5	2.5 U
silver	0.63 U	0.94 U	1.0	0.63 U	1.5 U	0.63 U	0.63 U	1.4	0.63 U
sodium	3530 R	3930	10800 R	3370 R	53900	54700	4390 J	4420 J	61400 J
thallium	3.0 U	8.3	3.0 U	3.0 U	5.1	3.0 U	3.0 U	3.0 U	3.0 U
vanadium	1.8	0.61 U	9.7	1.1	4.9 U	1.2	0.42	0.39	0.38 U
zinc	28.0 J	1.6 U	35.4 J	17.3	323 J	55.4 J	14.6 R	21.0 R	14.7 J
SEMIVOLATILES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,2,4-trichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,3-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,4-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	04SW01		04SW02		04SW03		04SW4B5		06SW01		06SW02		13SW02		13SW02-DUP		15SW01	
LOCATION:	04SW01		04SW02		04SW03		04SW4B5		06SW01		06SW02		13SW02		13SW02		15SW01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
2,2'-oxybis(1-chloropropane)	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	UJ
2,4,5-trichlorophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
2,4,6-trichlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2,4-dichlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2,4-dimethylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2,4-dinitrophenol	25.0	UJ	25.0	UJ	25.0	UJ	25.0	UJ	25.0	UJ	25.0	UJ	25.0	UJ	25.0	UJ	25.0	U
2,4-dinitrotoluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2,6-dinitrotoluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-chloronaphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-chlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-methylnaphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
2-nitrophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
3,3'-dichlorobenzidine	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
3-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
4,6-dinitro-2-methylphenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	UJ	25.0	UJ	25.0	U
4-bromophenyl-phenylether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-chloro-3-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-chloroaniline	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-chlorophenyl-phenylether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
4-nitrophenol	25.0	UJ	25.0	U	25.0	UJ	25.0	UJ	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
N-nitroso-di-n-propylamine	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
N-nitrosodiphenylamine (1)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
acenaphthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
acenaphthylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	04SW01		04SW02		04SW03		04SW4B5		06SW01		06SW02		13SW02		13SW02-DUP		15SW01	
LOCATION:	04SW01		04SW02		04SW03		04SW4B5		06SW01		06SW02		13SW02		13SW02		15SW01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(a)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(a)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(b)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(g,h,i)perylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(k)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bis(2-chloroethoxy)methane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bis(2-chloroethyl)ether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bis(2-ethylhexyl)phthalate	10.0	U	26.0		10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
butylbenzylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbazole	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chrysene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
di-n-butylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
di-n-octylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dibenz(a,h)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dibenzofuran	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
diethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dimethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
fluorene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachlorobutadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachlorocyclopentadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U
hexachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
indeno(1,2,3-cd)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
isophorone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
naphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
nitrobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	04SW01		04SW02		04SW03		04SW4B5		06SW01		06SW02		13SW02		13SW02-DUP		15SW01	
LOCATION:	04SW01		04SW02		04SW03		04SW4B5		06SW01		06SW02		13SW02		13SW02		15SW01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
pentachlorophenol	25.0	U	25.0	UJ	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
phenanthrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
phenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	2.0	J	10.0	U	10.0	U
pyrene	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	UJ	10.0	U
VOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
1,1,1-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1,2,2-tetrachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1,2-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1-dichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloroethene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloropropane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-butanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-hexanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-methyl-2-pentanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
acetone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromodichloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromoform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	UJ	10.0	U
bromomethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbon disulfide	10.0	UJ	10.0	U	10.0	UJ	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbon tetrachloride	10.0	UJ	10.0	U	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ	10.0	U
chlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloroform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloromethane	10.0	UJ	10.0	U	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ	10.0	U	10.0	U	10.0	U
cis-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	04SW01		04SW02		04SW03		04SW4B5		06SW01		06SW02		13SW02		13SW02-DUP		15SW01	
LOCATION:	04SW01		04SW02		04SW03		04SW4B5		06SW01		06SW02		13SW02		13SW02		15SW01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
dibromochloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
ethylbenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
methylene chloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
styrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
tetrachloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
toluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
trans-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
trichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
vinyl chloride	10.0	UJ	10.0	U	10.0	UJ	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
xylene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
PESTICIDES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
4,4'-DDD	0.10	U			0.10	U	0.10	U					0.10	U	0.10	U	0.0018	J
4,4'-DDE	0.10	U			0.10	U	0.10	U					0.10	U	0.10	U	0.10	U
4,4'-DDT	0.10	U			0.10	U	0.10	U					0.10	U	0.10	U	0.10	U
Aroclor-1016	1.0	U	1.0	U	1.0	U	1.0	U					1.0	U	1.0	U	1.0	U
Aroclor-1221	2.0	U	2.0	U	2.0	U	2.0	U					2.0	U	2.0	U	2.0	U
Aroclor-1232	1.0	U	1.0	U	1.0	U	1.0	U					1.0	U	1.0	U	1.0	U
Aroclor-1242	1.0	U	1.0	U	1.0	U	1.0	U					1.0	U	1.0	U	1.0	U
Aroclor-1248	1.0	U	1.0	U	1.0	U	1.0	U					1.0	U	1.0	U	1.0	U
Aroclor-1254	1.0	U	1.0	U	1.0	U	1.0	U					1.0	U	1.0	U	1.0	U
Aroclor-1260	1.0	U	1.0	U	1.0	U	1.0	U					1.0	U	1.0	U	1.0	U
aldrin	0.0023	JN			0.050	U	0.050	U					0.050	U	0.050	U	0.050	U
alpha-BHC	0.050	U			0.050	U	0.050	U					0.050	U	0.050	U	0.050	U
alpha-chlordane	0.050	U			0.050	U	0.050	U					0.050	U	0.050	U	0.050	U
beta-BHC	0.050	U			0.050	U	0.050	U					0.050	U	0.050	U	0.0010	R
delta-BHC	0.050	U			0.050	U	0.050	U					0.050	U	0.050	U	0.050	U
dieldrin	0.10	U			0.10	U	0.0008	JN					0.10	U	0.10	U	0.10	U
endosulfan I	0.050	U			0.050	U	0.050	U					0.050	U	0.050	U	0.050	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	04SW01	04SW02	04SW03	04SW4B5	06SW01	06SW02	13SW02	13SW02-DUP	15SW01
LOCATION:	04SW01	04SW02	04SW03	04SW4B5	06SW01	06SW02	13SW02	13SW02	15SW01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
endosulfan II	0.10 U		0.10 U	0.10 U			0.10 U	0.10 U	0.10 U
endosulfan sulfate	0.0007 R		0.10 U	0.10 U			0.10 U	0.10 U	0.10 U
endrin	0.10 U		0.10 U	0.10 U			0.10 U	0.10 U	0.10 U
endrin aldehyde	0.10 U		0.10 U	0.10 U			0.10 U	0.10 U	0.10 U
endrin ketone	0.10 U		0.10 U	0.10 U			0.10 U	0.10 U	0.10 U
gamma-BHC (Lindane)	0.050 U		0.050 U	0.050 U			0.050 U	0.050 U	0.050 U
gamma-chlordane	0.050 U		0.050 U	0.050 U			0.050 U	0.050 U	0.050 U
heptachlor	0.050 U		0.050 U	0.050 U			0.050 U	0.050 U	0.050 U
heptachlor epoxide	0.050 U		0.050 U	0.050 U			0.050 U	0.050 U	0.050 U
methoxychlor	0.050 U		0.050 U	0.050 U			0.50 U	0.50 U	0.50 U
toxaphene	5.0 U		5.0 U	5.0 U			5.0 U	5.0 U	5.0 U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	15SW02	17SW02	17SW03	17SW04	19SW01	23SW03	23SW04	23SW05	23SW05-DUP
LOCATION:	15SW02	17SW02	17SW03	17SW04	19SW01	23SW03	23SW04	23SW05	23SW05
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
aluminum	338 J	9680	6350	1510	229 J	3670 J	181	148	148
antimony	2.5 U	17.4 U	17.4 U	17.4 U	2.5 U	2.7 U	2.7 U	2.7 U	2.7 U
arsenic	2.5 U	88.6	20.0	6.8	2.5 U	3.3 U	3.3 U	3.3 U	3.3 U
barium	49.5	331 J	274 J	303 J	24.9	301	16.1	15.2	15.0
beryllium	0.88	1.3	0.14 U	0.14 U	0.15	0.11 U	0.11 U	0.11 U	0.11 U
cadmium	0.31	3.2 J	2.2 U	2.2 U	0.17 U	1.0	0.38 U	0.38 U	0.38 U
calcium	26900	21600	16500	52600	5470	6140	5920	5710	5650
chromium, total	0.67 U	20.4	13.9	8.5 U	0.67 U	29.4	1.3	1.0 U	1.0 U
cobalt	10.9	6.2	2.7 U	3.6	0.60 U	1.9	0.66	0.60 U	0.86
copper	6.8	65.1	24.5	16.9	16.4	16.1	1.6	1.3	1.3
iron	7940 J	170000	32200	42100	1140	33100	591	330	347
lead	2.0	77.1	52.2	11.8	3.1	10.3	1.5 U	1.5 U	1.5 U
magnesium	9020 J	6430	6770	19400	1490	1230	2660	2560	2540
manganese	1120 J	176	646	391	11.9	36.1	6.2	3.7	3.6
mercury	0.13 J	0.20	0.20	0.050	0.020	0.17	0.076	0.077	0.077
nickel	12.5	11.0	10.2	8.5	1.2	0.75 U	0.75 U	0.75 U	0.75 U
potassium	4870	4020	5740	11300	499	1430	524	513	545
selenium	2.5 U	15.7 J	6.1 J	2.5 U	2.5 U	4.4 U	4.4 U	4.4 U	4.4 U
silver	0.63 U	1.5 U	1.5 U	1.5 U	0.63 U	0.94 U	0.94 U	0.94 U	0.94 U
sodium	80800 J	50600	56000	3000000	12700 R	9050	3490	3520	3560
thallium	3.0 U	12.5	5.1	3.3	3.0 U	3.6 U	3.6 U	3.6 U	3.6 U
vanadium	0.38 U	73.6	24.1	7.4	0.38 U	18.8	0.61 U	0.61 U	0.61 U
zinc	68.1 J	290 J	202 J	221 J	22.0 J	253	1.6 U	1.6 U	1.6 U
SEMIVOLATILES	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,2,4-trichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,2-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,3-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
1,4-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	15SW02		17SW02		17SW03		17SW04		19SW01		23SW03		23SW04		23SW05		23SW05-DUP	
LOCATION:	15SW02		17SW02		17SW03		17SW04		19SW01		23SW03		23SW04		23SW05		23SW05	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
2,2'-oxybis(1-chloropropane)	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ
2,4,5-trichlorophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
2,4,6-trichlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2,4-dichlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2,4-dimethylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2,4-dinitrophenol	25.0	U	25.0	UJ	25.0	UJ	25.0	UJ	25.0	UJ	25.0	U	25.0	U	25.0	U	25.0	UJ
2,4-dinitrotoluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2,6-dinitrotoluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-chloronaphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-chlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-methylnaphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
2-nitrophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
3,3'-dichlorobenzidine	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
3-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
4,6-dinitro-2-methylphenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
4-bromophenyl-phenylether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-chloro-3-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-chloroaniline	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-chlorophenyl-phenylether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
4-nitrophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	UJ	25.0	U	25.0	U	25.0	U	25.0	U
N-nitroso-di-n-propylamine	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
N-nitrosodiphenylamine (1)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
acenaphthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
acenaphthylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	15SW02		17SW02		17SW03		17SW04		19SW01		23SW03		23SW04		23SW05		23SW05-DUP	
LOCATION:	15SW02		17SW02		17SW03		17SW04		19SW01		23SW03		23SW04		23SW05		23SW05	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(a)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(a)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(b)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(g,h,i)perylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(k)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bis(2-chloroethoxy)methane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bis(2-chloroethyl)ether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bis(2-ethylhexyl)phthalate	10.0	U	10.0	U	1.0	J	10.0	U	10.0	U	10.0	U	10.0	U	1.0	J	10.0	U
butylbenzylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbazole	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chrysene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
di-n-butylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
di-n-octylphthalate	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dibenz(a,h)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dibenzofuran	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
diethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dimethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
fluorene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachlorobutadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachlorocyclopentadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
indeno(1,2,3-cd)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
isophorone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
naphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
nitrobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	15SW02		17SW02		17SW03		17SW04		19SW01		23SW03		23SW04		23SW05		23SW05-DUP	
LOCATION:	15SW02		17SW02		17SW03		17SW04		19SW01		23SW03		23SW04		23SW05		23SW05	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
pentachlorophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	UJ
phenanthrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
phenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ
VOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,1,1-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1,2,2-tetrachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1,2-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1-dichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloroethene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloropropane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-butanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ
2-hexanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-methyl-2-pentanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
acetone	10.0	U	10.0	U	10.0	U	15.0	U	10.0	U	14.0	UJ	10.0	UJ	18.0	UJ	11.0	UJ
benzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromodichloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromoform	10.0	U	10.0	UJ	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromomethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbon disulfide	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U
carbon tetrachloride	10.0	U	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U
chlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloroform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloromethane	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U
cis-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	15SW02		17SW02		17SW03		17SW04		19SW01		23SW03		23SW04		23SW05		23SW05-DUP	
LOCATION:	15SW02		17SW02		17SW03		17SW04		19SW01		23SW03		23SW04		23SW05		23SW05	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
dibromochloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
ethylbenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
methylene chloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
styrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
tetrachloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
toluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
trans-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
trichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
vinyl chloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U
xylene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
PESTICIDES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
4,4'-DDD	0.0009	NJ							0.10	U	0.0012	R	0.10	U	0.10	U	0.10	U
4,4'-DDE	0.10	U							0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDT	0.10	U							0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Aroclor-1016	1.0	U							1.0	U								
Aroclor-1221	2.0	U							2.0	U								
Aroclor-1232	1.0	U							1.0	U								
Aroclor-1242	1.0	U							1.0	U								
Aroclor-1248	1.0	U							1.0	U								
Aroclor-1254	1.0	U							1.0	U								
Aroclor-1260	1.0	U							1.0	U								
aldrin	0.050	U							0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
alpha-BHC	0.050	U							0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
alpha-chlordane	0.050	U							0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
beta-BHC	0.050	U							0.0068	J	0.050	U	0.050	U	0.050	U	0.050	U
delta-BHC	0.050	U							0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
dieldrin	0.10	U							0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
endosulfan I	0.050	U							0.0010	J	0.050	U	0.050	U	0.050	U	0.050	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	15SW02	17SW02	17SW03	17SW04	19SW01	23SW03	23SW04	23SW05	23SW05-DUP
LOCATION:	15SW02	17SW02	17SW03	17SW04	19SW01	23SW03	23SW04	23SW05	23SW05
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
endosulfan II	0.10 U				0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
endosulfan sulfate	0.10 U				0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
endrin	0.10 U				0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
endrin aldehyde	0.10 U				0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
endrin ketone	0.10 U				0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
gamma-BHC (Lindane)	0.050 U				0.050 U	0.0068 J	0.050 U	0.050 U	0.050 U
gamma-chlordane	0.050 U				0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
heptachlor	0.050 U				0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
heptachlor epoxide	0.050 U				0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
methoxychlor	0.50 U				0.050 U	0.50 U	0.50 U	0.50 U	0.50 U
toxaphene	5.0 U				5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGSW01		BGSW02		BGSW04		WSSW05		WSSW06		WSSW07		WSSW08		WSSW09		WSSW09-DUP	
LOCATION:	BGSW01		BGSW02		BGSW04		WSSW05		WSSW06		WSSW07		WSSW08		WSSW09		WSSW09	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
INORGANICS	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
aluminum	265	J	409	J	384	J	373	J	490	J	516	J	234	J	328	J	336	J
antimony	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
arsenic	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
barium	30.3		16.3		34.0		24.4		21.4		25.4		23.1		386	J	18.7	J
beryllium	0.13	U	0.33		0.22		0.13	U	0.69		0.25		0.13	U	0.13	U	0.13	U
cadmium	0.18		0.17	U	0.17	U	0.17	U	0.22		0.17	U	0.17	U	0.17	U	0.17	U
calcium	10100		462		3130		3420		3740		1440		4990		3620		3210	
chromium, total	2.6		0.72		0.74		8.5	U	44.5		8.5	U	8.5	U	8.5	U	8.5	U
cobalt	1.9		0.81		1.1		1.2		1.5		1.1		0.60	U	0.60	U	0.60	U
copper	0.39	U	1.1		9.8		1.9		1.9		0.83		0.39	U	8.5		1.6	
cyanide	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
iron	702		160		698		854		5030		815		2560		1010		1040	
lead	0.74	U	0.74	U	4.4		0.74	U	0.87		1.2		0.74	U	2.8		0.74	U
magnesium	2770		369		649		834		1020		713		1220		1420		1400	
manganese	55.5		20.4		14.0		19.7	R	24.3	R	35.4	R	17.5	R	14.3		14.3	
mercury	0.013	U	0.028		0.023		0.077		0.090		0.030		0.082		0.081		0.10	
nickel	7.1		2.1		3.7		39.8		30.0		1.8		1.8		0.90		0.80	
potassium	1850		251		245	U	897		1070		724		1390		681		681	
selenium	2.5	U	3.5	J	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
silver	0.63	U	0.86		0.63	U	0.63	U	0.63	U	0.63	U	3.5		0.63	U	0.63	U
sodium	3890	R	3060	R	3600	R	4710	J	4980	J	4870	J	4820	J	6640	J	6700	J
thallium	3.5		3.0	U	5.5		3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
vanadium	0.38	U	0.89		0.90		0.73		0.78		0.38	U	0.78		0.55		1.0	
zinc	7.6		12.0		29.4	J	15.1		80.7	J	22.4	J	10.4		259	J	5.9	J
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,2,4-trichlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,3-dichlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGSW01	BGSW02	BGSW04	WSSW05	WSSW06	WSSW07	WSSW08	WSSW09	WSSW09-DUP
LOCATION:	BGSW01	BGSW02	BGSW04	WSSW05	WSSW06	WSSW07	WSSW08	WSSW09	WSSW09
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,4-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2,2'-oxybis(1-chloropropane)	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2,4,5-trichlorophenol	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
2,4,6-trichlorophenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2,4-dichlorophenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2,4-dimethylphenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2,4-dinitrophenol	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
2,4-dinitrotoluene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2,6-dinitrotoluene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-chloronaphthalene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-chlorophenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-methylnaphthalene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-methylphenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-nitroaniline	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
2-nitrophenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
3,3'-dichlorobenzidine	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
3-nitroaniline	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
4,6-dinitro-2-methylphenol	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
4-bromophenyl-phenylether	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-chloro-3-methylphenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-chloroaniline	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-chlorophenyl-phenylether	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-methylphenol	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-nitroaniline	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
4-nitrophenol	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
N-nitroso-di-n-propylamine	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
N-nitrosodiphenylamine (1)	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
acenaphthene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGSW01		BGSW02		BGSW04		WSSW05		WSSW06		WSSW07		WSSW08		WSSW09		WSSW09-DUP	
LOCATION:	BGSW01		BGSW02		BGSW04		WSSW05		WSSW06		WSSW07		WSSW08		WSSW09		WSSW09	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
acenaphthylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(a)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(a)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(b)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(g,h,i)perylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(k)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bis(2-chloroethoxy)methane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bis(2-chloroethyl)ether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bis(2-ethylhexyl)phthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
butylbenzylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbazole	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chrysene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
di-n-butylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
di-n-octylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dibenz(a,h)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dibenzofuran	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
diethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dimethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
fluorene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachlorobutadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachlorocyclopentadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
indeno(1,2,3-cd)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
isophorone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
naphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGSW01		BGSW02		BGSW04		WSSW05		WSSW06		WSSW07		WSSW08		WSSW09		WSSW09-DUP	
LOCATION:	BGSW01		BGSW02		BGSW04		WSSW05		WSSW06		WSSW07		WSSW08		WSSW09		WSSW09	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
nitrobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
pentachlorophenol	25.0	UJ	25.0	UJ	25.0	UJ	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
phenanthrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
phenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
VOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,1,1-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1,2,2-tetrachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1,2-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1-dichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloroethene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloropropane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-butanone	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	UJ	10.0	UJ	10.0	U	10.0	U	10.0	U
2-hexanone	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	UJ	10.0	UJ	10.0	U	10.0	U	10.0	U
4-methyl-2-pentanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
acetone	11.0	U	10.0	U	10.0	U	10.0	UJ	10.0	UJ	21.0	UJ	10.0	U	10.0	U	10.0	U
benzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromodichloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromoform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromomethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbon disulfide	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbon tetrachloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloroform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGSW01		BGSW02		BGSW04		WSSW05		WSSW06		WSSW07		WSSW08		WSSW09		WSSW09-DUP	
LOCATION:	BGSW01		BGSW02		BGSW04		WSSW05		WSSW06		WSSW07		WSSW08		WSSW09		WSSW09	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
cis-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dibromochloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
ethylbenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
methylene chloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
styrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
tetrachloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
toluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
trans-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
trichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
vinyl chloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
xylene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
PESTICIDES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
4,4'-DDD	0.10	U	0.10	U	0.10	U	0.10	U										
4,4'-DDE	0.10	U	0.10	U	0.10	U	0.10	U										
4,4'-DDT	0.10	U	0.10	U	0.10	U	0.10	U										
Aroclor-1016	1.0	U	1.0	U	1.0	U	1.0	U										
Aroclor-1221	2.0	U	2.0	U	2.0	U	2.0	U										
Aroclor-1232	1.0	U	1.0	U	1.0	U	1.0	U										
Aroclor-1242	1.0	U	1.0	U	1.0	U	1.0	U										
Aroclor-1248	1.0	U	1.0	U	1.0	U	1.0	U										
Aroclor-1254	1.0	U	1.0	U	1.0	U	1.0	U										
Aroclor-1260	1.0	U	1.0	U	1.0	U	1.0	U										
aldrin	0.050	U	0.050	U	0.050	U	0.050	U										
alpha-BHC	0.050	U	0.050	U	0.050	U	0.0005	R										
alpha-chlordane	0.050	U	0.050	U	0.050	U	0.050	U										
beta-BHC	0.050	U	0.050	U	0.050	U	0.050	U										
delta-BHC	0.050	U	0.050	U	0.050	U	0.050	U										
dieldrin	0.10	U	0.10	U	0.10	U	0.10	U										

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGSW01		BGSW02		BGSW04		WSSW05		WSSW06	WSSW07	WSSW08	WSSW09	WSSW09-DUP
LOCATION:	BGSW01		BGSW02		BGSW04		WSSW05		WSSW06	WSSW07	WSSW08	WSSW09	WSSW09
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
endosulfan I	0.050	U	0.050	U	0.050	U	0.050	U					
endosulfan II	0.10	U	0.10	U	0.10	U	0.10	U					
endosulfan sulfate	0.10	U	0.10	U	0.10	U	0.10	U					
endrin	0.10	U	0.10	U	0.10	U	0.10	U					
endrin aldehyde	0.10	U	0.10	U	0.10	U	0.10	U					
endrin ketone	0.10	U	0.10	U	0.10	U	0.10	U					
gamma-BHC (Lindane)	0.050	U	0.050	U	0.050	U	0.0020	R					
gamma-chlordane	0.050	U	0.050	U	0.050	U	0.050	U					
heptachlor	0.050	U	0.050	U	0.050	U	0.0010	NJ					
heptachlor epoxide	0.050	U	0.050	U	0.050	U	0.050	U					
methoxychlor	0.050	U	0.050	U	0.050	U	0.50	U					
toxaphene	5.0	U	5.0	U	5.0	U	5.0	U					

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSW10		WSSW11		WSSW12		WSSW13		WSSW14		WSSW15		WSSW16		WSSW17		WSSW17-DUP	
LOCATION:	WSSW10		WSSW11		WSSW12		WSSW13		WSSW14		WSSW15		WSSW16		WSSW17		WSSW17	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
INORGANICS	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
aluminum	195		252	J	271	J	1290	J	384	J	1020	J	373	J	1480	J	4570	J
antimony	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.8		4.4	
arsenic	2.5	U	2.5	U	3.5		2.5	U	2.5	U	4.8		3.4		9.5		18.8	
barium	17.0		21.0		22.3		26.6		29.8		9.3		33.7		39.0		79.9	
beryllium	0.13	U	0.20		0.15		0.34		0.13	U	0.13	U	0.13	U	0.40		0.79	
cadmium	0.17	U	0.17	U	0.27		0.39		0.37		0.58		0.17	U	0.17	U	0.17	U
calcium	16500		6210		4120		7020		7170		1280		2740		5970		6490	
chromium, total	8.5	U	8.5	U	8.5	U	8.5	U	9.6	J	8.5	U	8.5	U	3.4		10.1	
cobalt	0.60	U	0.63		2.5		2.5		1.8		0.60	U	0.63		2.5		4.0	
copper	5.6		0.44		0.39	U	1.9		6.4		7.1		5.3		18.7		25.4	J
cyanide	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
iron	502		848		4810		3440		6260		14700		2370		14200	J	36100	J
lead	2.0		1.0		0.74	U	1.0		4.2		8.4		0.74	U	14.2	J	33.9	J
magnesium	974		1080		1260		2000		1850		564		1670		2770		3500	
manganese	7.6		10.0		26.5	R	33.4	R	45.1	R	13.7		18.3	R	106		150	
mercury	0.078		0.062		0.023		0.035		0.035		0.10		0.043		0.051		0.10	
nickel	3.0		2.8		9.8		10.1		28.4		4.1		3.5		9.3		16.3	
potassium	1500		1400		2150		3490		3590		1390		1700		3040		4350	
selenium	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	UJ	5.3	J
silver	0.63	U	0.63	U	0.63	U	0.63	U	0.94		0.63	U	0.63	U	0.63	U	0.63	U
sodium	4550	J	3840	J	4810	J	15900	J	19300	J	2820	J	3510	J	11900	R	13100	R
thallium	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	4.1		3.0	U
vanadium	2.2		2.0		1.8		0.45		1.8		27.4		1.4		7.2		20.2	
zinc	10.6		5.5		14.4		26.0	J	31.7	J	6.9		15.1		33.2	J	64.3	J
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,2,4-trichlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,3-dichlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSW10		WSSW11		WSSW12		WSSW13		WSSW14		WSSW15		WSSW16		WSSW17		WSSW17-DUP	
LOCATION:	WSSW10		WSSW11		WSSW12		WSSW13		WSSW14		WSSW15		WSSW16		WSSW17		WSSW17	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
1,4-dichlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2,2'-oxybis(1-chloropropane)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2,4,5-trichlorophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
2,4,6-trichlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2,4-dichlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2,4-dimethylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2,4-dinitrophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	UJ	25.0	UJ
2,4-dinitrotoluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2,6-dinitrotoluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-chloronaphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-chlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-methylnaphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
2-nitrophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
3,3'-dichlorobenzidine	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
3-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
4,6-dinitro-2-methylphenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
4-bromophenyl-phenylether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-chloro-3-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-chloroaniline	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-chlorophenyl-phenylether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
4-nitrophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	UJ	25.0	UJ
N-nitroso-di-n-propylamine	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
N-nitrosodiphenylamine (1)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
acenaphthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSW10		WSSW11		WSSW12		WSSW13		WSSW14		WSSW15		WSSW16		WSSW17		WSSW17-DUP	
LOCATION:	WSSW10		WSSW11		WSSW12		WSSW13		WSSW14		WSSW15		WSSW16		WSSW17		WSSW17	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
acenaphthylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(a)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(a)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(b)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(g,h,i)perylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
benzo(k)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bis(2-chloroethoxy)methane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bis(2-chloroethyl)ether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bis(2-ethylhexyl)phthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
butylbenzylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbazole	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chrysene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
di-n-butylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
di-n-octylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dibenz(a,h)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dibenzofuran	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
diethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dimethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
fluorene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachlorobutadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachlorocyclopentadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
hexachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
indeno(1,2,3-cd)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
isophorone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
naphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSW10		WSSW11		WSSW12		WSSW13		WSSW14		WSSW15		WSSW16		WSSW17		WSSW17-DUP	
LOCATION:	WSSW10		WSSW11		WSSW12		WSSW13		WSSW14		WSSW15		WSSW16		WSSW17		WSSW17	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
nitrobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
pentachlorophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U
phenanthrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
phenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
VOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,1,1-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1,2,2-tetrachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1,2-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,1-dichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloroethene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
1,2-dichloropropane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-butanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
2-hexanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
4-methyl-2-pentanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
acetone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U	12.0	U
benzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromodichloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
bromoform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	U	10.0	U	10.0	U	10.0	U
bromomethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbon disulfide	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
carbon tetrachloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	U	10.0	U
chloroform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
chloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	UJ	10.0	U	10.0	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSW10		WSSW11		WSSW12		WSSW13		WSSW14		WSSW15		WSSW16		WSSW17		WSSW17-DUP	
LOCATION:	WSSW10		WSSW11		WSSW12		WSSW13		WSSW14		WSSW15		WSSW16		WSSW17		WSSW17	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
cis-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
dibromochloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
ethylbenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
methylene chloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
styrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
tetrachloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
toluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
trans-1,3-dichloropropene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
trichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
vinyl chloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
xylene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSW18	WSSW19	WSSW20	WSSW21	WSSW22	WSSW30	---	---	---
LOCATION:	WSSW18	WSSW19	WSSW20	WSSW21	WSSW22	WSSW30	---	---	---
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI			
INORGANICS	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**			
aluminum	7880 J	820 J	16600 J	67.7	2300 J	94.8			
antimony	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.7 U			
arsenic	18.9	6.6	25.4	2.5 U	50.2	3.3 U			
barium	89.0	41.1	133	24.1	69.2	15.4			
beryllium	0.84	0.19	2.2	0.13 U	4.6	0.11 U			
cadmium	0.34	0.17 U	0.17 U	0.17 U	2.8	0.38 U			
calcium	4640	9930	9640	11700	33900	3470			
chromium, total	14.0	2.1	37.5	0.67 U	0.67 U	1.0 U			
cobalt	4.2	1.6	17.8	0.84	22.2	0.93			
copper	28.7 J	14.4	31.7 J	0.39 U	7.5	0.77 U			
cyanide	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U			
iron	11000	17200	56400	1790	145000 J	801			
lead	50.4	5.5	49.0	0.74 U	5.1	1.5 U			
magnesium	3020	2750	6720	3590	10700 J	3450			
manganese	68.3	185	1050	110	1690 J	41.4			
mercury	0.14	0.038	0.14	0.021	0.12 J	0.069 J			
nickel	13.5	6.6	29.7	3.3	31.9	1.2			
potassium	1710	3630	6470	2640	5610	695			
selenium	3.2 J	4.9 J	3.3 J	2.6 J	9.1	4.4 U			
silver	0.74	0.63 U	0.63 U	0.63 U	0.63 U	0.94 U			
sodium	10500 R	11900 R	15100 R	9740 R	93400 J	5890			
thallium	3.0 U	3.0 U	4.3	3.0 U	3.0 U	3.6 U			
vanadium	35.4	3.5	45.2	0.38 U	13.7	0.61 U			
zinc	70.4 J	25.2 J	127 J	0.94 U	192	6.2			
SEMIVOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**			
1,2,4-trichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U			
1,2-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U			
1,3-dichlorobenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U			

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSW18		WSSW19		WSSW20		WSSW21		WSSW22		WSSW30		---		---		---	
LOCATION:	WSSW18		WSSW19		WSSW20		WSSW21		WSSW22		WSSW30		---		---		---	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI							
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**							
1,4-dichlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
2,2'-oxybis(1-chloropropane)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	U						
2,4,5-trichlorophenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U						
2,4,6-trichlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
2,4-dichlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
2,4-dimethylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
2,4-dinitrophenol	25.0	U	25.0	UJ	25.0	U	25.0	UJ	25.0	U	25.0	U						
2,4-dinitrotoluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
2,6-dinitrotoluene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
2-chloronaphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
2-chlorophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
2-methylnaphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
2-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
2-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U						
2-nitrophenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
3,3'-dichlorobenzidine	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
3-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U						
4,6-dinitro-2-methylphenol	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U						
4-bromophenyl-phenylether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
4-chloro-3-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
4-chloroaniline	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
4-chlorophenyl-phenylether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
4-methylphenol	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
4-nitroaniline	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U	25.0	U						
4-nitrophenol	25.0	U	25.0	UJ	25.0	U	25.0	UJ	25.0	U	25.0	U						
N-nitroso-di-n-propylamine	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	U						
N-nitrosodiphenylamine (1)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
acenaphthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSW18		WSSW19		WSSW20		WSSW21		WSSW22		WSSW30		---		---		---	
LOCATION:	WSSW18		WSSW19		WSSW20		WSSW21		WSSW22		WSSW30		---		---		---	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI							
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**							
acenaphthylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
benzo(a)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
benzo(a)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
benzo(b)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
benzo(g,h,i)perylene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
benzo(k)fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
bis(2-chloroethoxy)methane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
bis(2-chloroethyl)ether	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
bis(2-ethylhexyl)phthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
butylbenzylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
carbazole	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
chrysene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
di-n-butylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
di-n-octylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ	10.0	UJ						
dibenz(a,h)anthracene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
dibenzofuran	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
diethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
dimethylphthalate	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
fluoranthene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ						
fluorene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
hexachlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
hexachlorobutadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
hexachlorocyclopentadiene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
hexachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
indeno(1,2,3-cd)pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
isophorone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
naphthalene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSW18		WSSW19		WSSW20		WSSW21		WSSW22		WSSW30		---		---		---	
LOCATION:	WSSW18		WSSW19		WSSW20		WSSW21		WSSW22		WSSW30		---		---		---	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI							
SEMIVOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**							
nitrobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
pentachlorophenol	25.0	UJ	25.0	U	25.0	UJ	25.0	U	25.0	U	25.0	U						
phenanthrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
phenol	10.0	U	10.0	U	10.0	U	1.0	J	10.0	U	10.0	U						
pyrene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
VOLATILES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**							
1,1,1-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
1,1,2,2-tetrachloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ						
1,1,2-trichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
1,1-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
1,1-dichloroethene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
1,2-dichloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
1,2-dichloroethene (total)	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
1,2-dichloropropane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
2-butanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ						
2-hexanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ						
4-methyl-2-pentanone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
acetone	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	UJ						
benzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
bromodichloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
bromoform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
bromomethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
carbon disulfide	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
carbon tetrachloride	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
chlorobenzene	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
chloroethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
chloroform	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						
chloromethane	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U						

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSW18	WSSW19	WSSW20	WSSW21	WSSW22	WSSW30	---	---	---
LOCATION:	WSSW18	WSSW19	WSSW20	WSSW21	WSSW22	WSSW30	---	---	---
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI			
VOLATILES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**			
cis-1,3-dichloropropene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U			
dibromochloromethane	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U			
ethylbenzene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U			
methylene chloride	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U			
styrene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U			
tetrachloroethene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U			
toluene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U			
trans-1,3-dichloropropene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U			
trichloroethene	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U			
vinyl chloride	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U			
xylene (total)	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U			
PESTICIDES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**			
4,4'-DDD					0.0006 J	0.10 U			
4,4'-DDE					0.10 U	0.10 U			
4,4'-DDT					0.10 U	0.10 U			
Aroclor-1016					1.0 U	1.0 U			
Aroclor-1221					2.0 U	2.0 U			
Aroclor-1232					1.0 U	1.0 U			
Aroclor-1242					1.0 U	1.0 U			
Aroclor-1248					1.0 U	1.0 U			
Aroclor-1254					1.0 U	1.0 U			
Aroclor-1260					1.0 U	1.0 U			
aldrin					0.050 U	0.050 U			
alpha-BHC					0.050 U	0.050 U			
alpha-chlordane					0.050 U	0.050 U			
beta-BHC					0.050 U	0.050 U			
delta-BHC					0.050 U	0.050 U			
dieldrin					0.10 U	0.10 U			

TABLE A-b

ANALYTICAL RESULTS FOR SURFACE WATER

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSW18	WSSW19	WSSW20	WSSW21	WSSW22	WSSW30	---	---	---
LOCATION:	WSSW18	WSSW19	WSSW20	WSSW21	WSSW22	WSSW30	---	---	---
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI			
PESTICIDES	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**			
endosulfan I					0.050 U	0.050 U			
endosulfan II					0.10 U	0.10 U			
endosulfan sulfate					0.10 U	0.10 U			
endrin					0.10 U	0.10 U			
endrin aldehyde					0.10 U	0.10 U			
endrin ketone					0.10 U	0.10 U			
gamma-BHC (Lindane)					0.050 U	0.050 U			
gamma-chlordane					0.050 U	0.050 U			
heptachlor					0.050 U	0.050 U			
heptachlor epoxide					0.050 U	0.050 U			
methoxychlor					0.50 U	0.50 U			
toxaphene					5.0 U	5.0 U			

APPENDIX A.c.

ANALYTICAL DATABASE

ORGANIC AND INORGANIC RESULTS

AQUEOUS WASTE SAMPLE

TABLE A-c

ANALYTICAL RESULTS FOR AQUEOUS WASTE SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20AQW-01		26AQWCT	---	---	---	---	---	---	---
LOCATION:	20AQW-01		26AQWCT	---	---	---	---	---	---	---
DATA SOURCE:	1995 RI		1995 RI, Dec.							
INORGANICS	**ug/L**		**ug/L**							
aluminum	119									
antimony	2.7	U								
arsenic	3.3	U								
barium	17.1									
beryllium	0.11	U								
cadmium	0.94									
calcium	42800									
chromium, total	1.0									
cobalt	0.60	U								
copper	20.2									
iron	694									
lead	1.5	UJ								
magnesium	3580									
manganese	43.2									
mercury	0.025	J								
nickel	3.3									
potassium	31300									
selenium	4.4	U								
silver	0.94	U								
sodium	44600									
thallium	3.6	U								
vanadium	0.61	U								
zinc	66.6	R								
SEMIVOLATILES	**ug/L**		**ug/L**							
1,2,4-trichlorobenzene	10.0	U								
1,2-dichlorobenzene	10.0	U								
1,3-dichlorobenzene	10.0	U								
1,4-dichlorobenzene	140									

TABLE A-c

ANALYTICAL RESULTS FOR AQUEOUS WASTE SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20AQW-01		26AQWCT	---	---	---	---	---	---	---
LOCATION:	20AQW-01		26AQWCT	---	---	---	---	---	---	---
DATA SOURCE:	1995 RI		1995 RI, Dec.							
SEMIVOLATILES	**ug/L**		**ug/L**							
2,2'-oxybis(1-chloropropane)	10.0	U								
2,4,5-trichlorophenol	25.0	U								
2,4,6-trichlorophenol	10.0	U								
2,4-dichlorophenol	6.0	J								
2,4-dimethylphenol	10.0	U								
2,4-dinitrophenol	25.0	U								
2,4-dinitrotoluene	10.0	U								
2,6-dinitrotoluene	10.0	U								
2-chloronaphthalene	10.0	U								
2-chlorophenol	10.0	U								
2-methylnaphthalene	10.0	U								
2-methylphenol	2.0	J								
2-nitroaniline	25.0	U								
2-nitrophenol	10.0	U								
3,3'-dichlorobenzidine	10.0	U								
3-nitroaniline	25.0	U								
4,6-dinitro-2-methylphenol	25.0	U								
4-bromophenyl-phenylether	10.0	U								
4-chloro-3-methylphenol	10.0	U								
4-chloroaniline	10.0	U								
4-chlorophenyl-phenylether	10.0	U								
4-methylphenol	160									
4-nitroaniline	25.0	U								
4-nitrophenol	25.0	U								
N-nitroso-di-n-propylamine	10.0	U								
N-nitrosodiphenylamine (1)	10.0	U								
acenaphthene	10.0	U								
acenaphthylene	10.0	U								

TABLE A-c

ANALYTICAL RESULTS FOR AQUEOUS WASTE SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20AQW-01	26AQWCT	---	---	---	---	---	---	---
LOCATION:	20AQW-01	26AQWCT	---	---	---	---	---	---	---
DATA SOURCE:	1995 RI	1995 RI, Dec.							
SEMIVOLATILES	ug/L	ug/L							
anthracene	10.0 U								
benzo(a)anthracene	10.0 U								
benzo(a)pyrene	10.0 U								
benzo(b)fluoranthene	10.0 U								
benzo(g,h,i)perylene	10.0 U								
benzo(k)fluoranthene	10.0 U								
bis(2-chloroethoxy)methane	10.0 U								
bis(2-chloroethyl)ether	10.0 U								
bis(2-ethylhexyl)phthalate	10.0 U								
butylbenzylphthalate	10.0 U								
carbazole	10.0 U								
chrysene	10.0 U								
di-n-butylphthalate	10.0 U								
di-n-octylphthalate	10.0 U								
dibenz(a,h)anthracene	10.0 U								
dibenzofuran	10.0 U								
diethylphthalate	10.0 U								
dimethylphthalate	10.0 U								
fluoranthene	10.0 U								
fluorene	10.0 U								
hexachlorobenzene	10.0 U								
hexachlorobutadiene	10.0 U								
hexachlorocyclopentadiene	10.0 U								
hexachloroethane	10.0 U								
indeno(1,2,3-cd)pyrene	10.0 U								
isophorone	10.0 U								
naphthalene	10.0 U								
nitrobenzene	10.0 U								

TABLE A-c

ANALYTICAL RESULTS FOR AQUEOUS WASTE SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20AQW-01		26AQWCT		---	---	---	---	---	---	---
LOCATION:	20AQW-01		26AQWCT		---	---	---	---	---	---	---
DATA SOURCE:	1995 RI		1995 RI, Dec.								
SEMIVOLATILES	**ug/L**		**ug/L**								
pentachlorophenol	25.0	U									
phenanthrene	10.0	U									
phenol	75.0										
pyrene	10.0	U									
VOLATILES	**ug/L**		**ug/L**								
1,1,1-trichloroethane	10.0	U	10.0	U							
1,1,2,2-tetrachloroethane	10.0	U	10.0	U							
1,1,2-trichloroethane	10.0	U	10.0	U							
1,1-dichloroethane	10.0	U	10.0	U							
1,1-dichloroethene	10.0	U	10.0	U							
1,2-dichloroethane	10.0	U	10.0	U							
1,2-dichloroethene (total)	10.0	U	990								
1,2-dichloropropane	10.0	U	10.0	U							
2-butanone	10.0	U	10.0	U							
2-hexanone	10.0	UJ	10.0	U							
4-methyl-2-pentanone	10.0	U	10.0	U							
acetone	14.0	UJ	10.0	U							
benzene	10.0	U	10.0	U							
bromodichloromethane	10.0	U	10.0	U							
bromoform	10.0	U	10.0	U							
bromomethane	10.0	U	10.0	U							
carbon disulfide	2.0	J	10.0	U							
carbon tetrachloride	10.0	U	10.0	U							
chlorobenzene	1.0	J	10.0	U							
chloroethane	10.0	U	10.0	U							
chloroform	5.0	J	10.0	U							
chloromethane	10.0	U	10.0	U							
cis-1,3-dichloropropene	10.0	U	10.0	U							

TABLE A-c

ANALYTICAL RESULTS FOR AQUEOUS WASTE SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20AQW-01		26AQWCT		---	---	---	---	---	---	---
LOCATION:	20AQW-01		26AQWCT		---	---	---	---	---	---	---
DATA SOURCE:	1995 RI		1995 RI, Dec.								
VOLATILES	**ug/L**		**ug/L**								
dibromochloromethane	10.0	U	10.0	U							
ethylbenzene	10.0	U	10.0	U							
methylene chloride	10.0	U	3.0	J							
styrene	10.0	U	10.0	U							
tetrachloroethene	10.0	U	10.0	U							
toluene	38.0		10.0	U							
trans-1,3-dichloropropene	10.0	U	10.0	U							
trichloroethene	10.0	U	780								
vinyl chloride	10.0	U	10.0	U							
xylene (total)	10.0	U	10.0	U							

APPENDIX A.d.

ANALYTICAL DATABASE

ORGANIC AND INORGANIC RESULTS

SUBSURFACE SOIL SAMPLES

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB01-00	01SB01-02	01SB02-00	01SB02-02	01SB03-00	01SB03-02	01SB04-00	01SB04-02	01SB05-00
LOCATION:	01SB01	01SB01	01SB02	01SB02	01SB03	01SB03	01SB04	01SB04	01SB05
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	3000	2390	2650	2820	3420	2450	2700	1470	1880
antimony	4.6 U	4.8 U	4.6 U	4.6 U	4.7 U	4.5 U	4.4 U	4.5 U	4.5 U
arsenic	10.2 J	6.1 J	10.4 J	9.2 J	27.8 J	11.0 J	11.3 J	5.3	8.7 J
barium	8.9	9.0	9.4	2.7	25.1	4.3	9.8	14.1	2.1
beryllium	0.15 U	0.16 U	0.16 U	0.16 U	0.30	0.15 U	0.24	0.16	0.15 U
cadmium	0.54 U	0.57 U	0.55 U	0.55 U	0.56 U	0.54 U	0.52 U	0.53 U	0.53 U
calcium	47.2	57.4	87.9	35.2	236	81.8	1710 J	347	50.9
chromium, total	55.1	30.6	69.0	63.2	59.7	63.0	42.0	28.4	43.2
cobalt	1.0 U	1.1 U	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
copper	1.4	1.1 U	5.4	2.7	8.8	4.5	4.1	2.8	2.2
iron	12800	5820	12000	11100	13000	12500	9310	4960	8550
lead	11.5 J	2.0 J	24.6 J	2.4 J	26.9 J	14.7 J	10.6 J	5.4 J	2.7 J
magnesium	414	160	425	357	562	523	571	147	324
manganese	0.70	1.2	3.1	0.53	4.8	2.1	8.0	0.86	3.3
mercury	0.025	0.027	0.031	0.028	0.050	0.030	0.035	0.032	0.028
nickel	1.7 U	1.8 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U	1.7 U	1.7 U
potassium	1180	370	1120	968	1230	1440	1080	325	804
selenium	0.54 U	0.57 U	0.55 U	0.55 U	0.57	0.54 U	0.52 U	0.53 U	0.53 U
silver	0.89 U	0.94 U	0.90 U	0.90 U	0.92 U	0.88 U	0.86 U	0.87 U	0.86 U
sodium	35.0	10.6 U	50.0	10.2 U	60.9	10.0 U	50.9	9.9 U	9.8 U
thallium	0.65 U	0.68 U	1.1 J	0.66 U	0.67 U	0.64 U	0.63 U	0.64 U	0.70 J
vanadium	29.4	23.0	37.9	33.7	28.5	31.2	23.2	16.3	21.5
zinc	23.4 R	24.1 R	35.1 R	17.8 R	30.1 R	31.8 R	12.9 R	6.0 J	6.1 J
VOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,1,1-trichloroethane	11.0 U	11.0 U	11.0 U	11.0 U	11.0 U	11.0 U	10.0 U	11.0 U	10.0 U
1,1,2,2-tetrachloroethane	11.0 U	11.0 U	11.0 U	11.0 U	11.0 U	11.0 U	10.0 U	11.0 U	10.0 U
1,1,2-trichloroethane	11.0 U	11.0 U	11.0 U	11.0 U	11.0 U	11.0 U	10.0 U	11.0 U	10.0 U
1,1-dichloroethane	11.0 U	11.0 U	11.0 U	11.0 U	11.0 U	11.0 U	10.0 U	11.0 U	10.0 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB01-00		01SB01-02		01SB02-00		01SB02-02		01SB03-00		01SB03-02		01SB04-00		01SB04-02		01SB05-00	
LOCATION:	01SB01		01SB01		01SB02		01SB02		01SB03		01SB03		01SB04		01SB04		01SB05	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1-dichloroethene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
1,2-dichloroethane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
1,2-dichloroethene (total)	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
1,2-dichloropropane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
2-butanone	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
2-hexanone	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
4-methyl-2-pentanone	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
acetone	11.0	U	19.0	U	11.0	U	14.0	U	11.0	U	14.0	U	10.0	U	12.0	U	10.0	U
benzene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
bromodichloromethane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
bromoform	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
bromomethane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
carbon disulfide	11.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	10.0	UJ	11.0	UJ	10.0	UJ
carbon tetrachloride	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
chlorobenzene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
chloroethane	11.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	10.0	UJ	11.0	UJ	10.0	UJ
chloroform	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
chloromethane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
cis-1,3-dichloropropene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
dibromochloromethane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
ethylbenzene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
methylene chloride	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U
styrene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
tetrachloroethene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
toluene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
trans-1,3-dichloropropene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
trichloroethene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U
vinyl chloride	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	10.0	U	11.0	U	10.0	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB01-00	01SB01-02	01SB02-00	01SB02-02	01SB03-00	01SB03-02	01SB04-00	01SB04-02	01SB05-00
LOCATION:	01SB01	01SB01	01SB02	01SB02	01SB03	01SB03	01SB04	01SB04	01SB05
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
VOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
xylene (total)	11.0 U	11.0 U	11.0 U	11.0 U	11.0 U	11.0 U	10.0 U	11.0 U	10.0 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB05-02		01SB06-00		01SB06-02		01SB07-00		01SB07-00-DUP		01SB07-02		01SB08-00		01SB08-02		01SB09-00	
LOCATION:	01SB05		01SB06		01SB06		01SB07		01SB07		01SB07		01SB08		01SB08		01SB09	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
INORGANICS	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
aluminum	1060		2700		5180		2970		4210		3820		897		2200		3870	
antimony	4.4	U	4.5	U	5.1	U	4.6	U	4.6	U	5.0	U	1.3		0.56	U	0.54	U
arsenic	6.2	J	9.6	J	14.9	J	10.0	J	10.3	J	9.5	J	2.0	J	7.6	J	13.2	J
barium	1.8		3.6		4.2		86.1		78.7		3.1		121	J	12.0	J	51.9	J
beryllium	0.15	U	0.15	U	0.44		0.28		0.25		0.17	U	0.17		0.25		0.56	
cadmium	0.52	U	0.53	U	0.60	U	0.54	U	0.54	U	0.59	U	0.29		0.10		0.15	
calcium	33.3		30.1		46.6		58.1		53.0		37.7		153		145		33.4	
chromium, total	30.5		45.1		84.6		54.3		74.2		61.4		28.6		42.8		74.6	
cobalt	1.0	U	1.0	U	1.1	U	1.0	U	1.0	U	1.1	U	0.14	U	0.19		0.31	
copper	1.0	U	4.5		1.1	U	38.8		76.4		1.1	U	29.1	J	0.68		19.3	J
iron	5350		9790		18500		10900		15300		12400		2590	J	8060	J	15100	J
lead	1.3		6.9	J	2.7	J	32.6	J	93.1	J	2.4	J	6.0	J	1.7	J	45.7	J
magnesium	121		360		1130		427		993		608		174		288		653	
manganese	0.93	J	2.2	J	3.8		10.7	J	35.9	J	1.8		10.3	R	0.027	UJ	5.5	R
mercury	0.026		0.030		0.032		0.067		0.15		0.034		0.20	J	0.0065	U	0.027	J
nickel	1.7	U	1.7	U	1.9	U	1.7	U	1.7	U	1.9	U	0.54		0.70		1.6	
potassium	327		908		2930		1090		2770		1620		214		542		2010	
selenium	0.52	U	0.53	U	0.60	U	0.54	U	0.54	U	0.59	U	0.56	UJ	0.56	UJ	0.56	J
silver	0.86	U	0.87	U	1.0	U	1.3		3.1		1.0	U	0.14	U	0.14		1.3	
sodium	9.7	U	9.8	U	11.2	U	10.1	U	10.1	U	11.0	U	86.6		80.1		100	
thallium	0.63	U	0.64	U	0.73	J	0.71	J	0.69	J	0.71	U	0.68	U	0.67	U	1.2	J
vanadium	15.9		26.9		50.4		32.6		42.8		36.0		5.0		24.6		41.4	
zinc	4.7	J	11.3	R	10.9	R	56.9	R	63.7	R	16.7	R	129	J	6.7	J	19.0	J
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1,1-trichloroethane	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
1,1,2,2-tetrachloroethane	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
1,1,2-trichloroethane	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
1,1-dichloroethane	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB05-02		01SB06-00		01SB06-02		01SB07-00		01SB07-00-DUP		01SB07-02		01SB08-00		01SB08-02		01SB09-00	
LOCATION:	01SB05		01SB06		01SB06		01SB07		01SB07		01SB07		01SB08		01SB08		01SB09	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1-dichloroethene	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
1,2-dichloroethane	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
1,2-dichloroethene (total)	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
1,2-dichloropropane	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
2-butanone	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
2-hexanone	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
4-methyl-2-pentanone	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
acetone	10.0	U	11.0	U	14.0	U	11.0	U	11.0	U	14.0	U	11.0	U	12.0	UJ	11.0	UJ
benzene	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
bromodichloromethane	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
bromoform	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
bromomethane	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	UJ	11.0	UJ
carbon disulfide	10.0	UJ	11.0	UJ	12.0	UJ	11.0	UJ	11.0	UJ	12.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ
carbon tetrachloride	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
chlorobenzene	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
chloroethane	10.0	UJ	11.0	UJ	12.0	UJ	11.0	UJ	11.0	UJ	12.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ
chloroform	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
chloromethane	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	UJ	11.0	UJ
cis-1,3-dichloropropene	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
dibromochloromethane	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
ethylbenzene	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
methylene chloride	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	UJ	11.0	UJ
styrene	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
tetrachloroethene	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
toluene	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
trans-1,3-dichloropropene	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
trichloroethene	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U
vinyl chloride	10.0	U	11.0	U	12.0	U	11.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB05-02	01SB06-00	01SB06-02	01SB07-00	01SB07-00-DUP	01SB07-02	01SB08-00	01SB08-02	01SB09-00
LOCATION:	01SB05	01SB06	01SB06	01SB07	01SB07	01SB07	01SB08	01SB08	01SB09
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
VOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
xylene (total)	10.0 U	11.0 U	12.0 U	11.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB09-02	01SB10-00	01SB10-02	15SB01-01	15SB02-01	15SB03-02	15SB04-02	15SB04-02-DUP	16SB01-06
LOCATION:	01SB09	01SB10	01SB10	15SB01	15SB02	15SB03	15SB04	15SB04	16SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	3940	3320	3040	890	3600	1480	4470	9900	2980
antimony	0.60 U	4.7 U	5.1	0.72 U	0.72 U	0.68 U	0.73 U	0.80 U	3.3 U
arsenic	10.2 J	10.7 J	11.2 J	0.88 U	20.5 J	8.8 J	15.9 J	23.8 J	8.3
barium	8.1 J	6.6	2.5	6.2	6.5	3.9	7.7	14.8	2.4
beryllium	0.61	0.16 U	0.17	0.15	0.12	0.12	0.25	0.30	0.47
cadmium	0.12	0.55 U	0.61	0.10 U	1.2	1.9 J	2.1 J	3.5 J	0.92
calcium	62.3	78.6	59.9	584	70.8	95.9	155	172	216
chromium, total	67.1	66.1	62.8	2.4	9.0	4.2	11.9 J	21.7 J	111
cobalt	0.31	1.0 U	1.1	0.16 U	0.39	0.16	0.40	1.0	0.70 U
copper	1.7	1.6	1.3	3.3	1.0	0.35	2.2	3.0	2.0
iron	14000 J	13300	10900	1600	16400	28700	31000	55800	12100
lead	2.9 J	2.2 J	2.3 J	3.1	6.3	1.9	5.2	8.1	3.3
magnesium	459	599	416	68.8	227	81.8	233	696	532
manganese	6.7 R	3.1 J	2.0 J	4.4	1.9	3.1	6.7	8.0	0.67 U
mercury	0.0078 U	0.030	0.032	0.0027 U	0.0054	0.0025 U	0.0027 U	0.0029 U	0.032 J
nickel	1.3	1.7 U	1.9	1.7	1.2	0.48	0.39	2.0	1.0
potassium	1200	1660	988	55.0	334	246	553	1710 J	1730
selenium	0.60 UJ	0.55 U	0.61	1.6 J	1.3 J	1.1 U	1.2 U	1.3 U	1.0 U
silver	0.15 U	0.90 U	1.0	0.25 U	0.25 U	0.24 U	0.25 U	0.28 U	0.49 U
sodium	115	50.1	11.3	33.6	29.3	45.9	93.6	139	282
thallium	1.0 J	0.66 U	0.73 J	1.0 UJ	1.5 J	0.91 UJ	1.0 UJ	1.3 J	0.86 J
vanadium	35.8	33.7	34.8	4.5	31.6	8.3	31.7	47.1	58.7
zinc	11.6 J	12.7 R	8.3 J	3.7 J	3.2 J	0.75 J	6.1 J	11.4	7.0 J
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene				440 U	440 U	420 U	440 U	480 U	380 U
1,2-dichlorobenzene				440 U	440 U	420 U	440 U	480 U	380 U
1,3-dichlorobenzene				440 U	440 U	420 U	440 U	480 U	380 U
1,4-dichlorobenzene				440 U	440 U	420 U	440 U	480 U	380 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB09-02	01SB10-00	01SB10-02	15SB01-01	15SB02-01	15SB03-02	15SB04-02	15SB04-02-DUP	16SB01-06
LOCATION:	01SB09	01SB10	01SB10	15SB01	15SB02	15SB03	15SB04	15SB04	16SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
2,2'-oxybis(1-chloropropane)				440 U	440 U	420 U	440 U	480 U	380 U
2,4,5-trichlorophenol				1100 U	1100 U	1000 U	1100 U	1200 U	960 U
2,4,6-trichlorophenol				440 U	440 U	420 U	440 U	480 U	380 U
2,4-dichlorophenol				440 U	440 U	420 U	440 U	480 U	380 U
2,4-dimethylphenol				440 U	440 U	420 U	440 U	480 U	380 U
2,4-dinitrophenol				1100 UJ	1100 UJ	1000 UJ	1100 UJ	1200 UJ	960 U
2,4-dinitrotoluene				440 U	440 U	420 U	440 U	480 U	380 U
2,6-dinitrotoluene				440 U	440 U	420 U	440 U	480 U	380 U
2-chloronaphthalene				440 U	440 U	420 U	440 U	480 U	380 U
2-chlorophenol				440 U	440 U	420 U	440 U	480 U	380 U
2-methylnaphthalene				440 U	440 U	420 U	440 U	480 U	380 U
2-methylphenol				440 U	440 U	420 U	440 U	480 U	380 U
2-nitroaniline				1100 U	1100 U	1000 U	1100 U	1200 U	960 U
2-nitrophenol				440 U	440 U	420 U	440 U	480 U	380 U
3,3'-dichlorobenzidine				440 U	440 U	420 U	440 U	480 U	380 U
3-nitroaniline				1100 U	1100 U	1000 U	1100 U	1200 U	960 U
4,6-dinitro-2-methylphenol				1100 U	1100 U	1000 U	1100 U	1200 U	960 U
4-bromophenyl-phenylether				440 U	440 U	420 U	440 U	480 U	380 U
4-chloro-3-methylphenol				440 U	440 U	420 U	440 U	480 U	380 U
4-chloroaniline				440 U	440 U	420 U	440 U	480 U	380 U
4-chlorophenyl-phenylether				440 U	440 U	420 U	440 U	480 U	380 U
4-methylphenol				440 U	440 U	420 U	440 U	480 U	380 U
4-nitroaniline				1100 U	1100 U	1000 U	1100 U	1200 U	960 U
4-nitrophenol				1100 U	1100 UJ	1000 U	1100 UJ	1200 U	960 U
N-nitroso-di-n-propylamine				440 U	440 U	420 U	440 U	480 U	380 U
N-nitrosodiphenylamine (1)				440 U	440 U	420 U	440 U	480 U	380 U
acenaphthene				440 U	440 U	420 U	440 U	480 U	380 U
acenaphthylene				440 U	440 U	420 U	440 U	480 U	380 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB09-02	01SB10-00	01SB10-02	15SB01-01	15SB02-01	15SB03-02	15SB04-02	15SB04-02-DUP	16SB01-06
LOCATION:	01SB09	01SB10	01SB10	15SB01	15SB02	15SB03	15SB04	15SB04	16SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
anthracene				440 U	440 U	420 U	440 U	480 U	380 U
benzo(a)anthracene				440 U	440 U	420 U	440 U	480 U	380 U
benzo(a)pyrene				440 U	440 U	420 U	440 U	480 U	380 U
benzo(b)fluoranthene				440 U	440 U	420 U	440 U	480 U	380 U
benzo(g,h,i)perylene				440 U	440 U	420 U	440 U	480 U	380 U
benzo(k)fluoranthene				440 U	440 U	420 U	440 U	480 U	380 U
bis(2-chloroethoxy)methane				440 U	440 U	420 U	440 U	480 U	380 U
bis(2-chloroethyl)ether				440 U	440 U	420 U	440 U	480 U	380 U
bis(2-ethylhexyl)phthalate				260 J	240 J	59.0 J	85.0 J	110 J	380 UJ
butylbenzylphthalate				440 U	440 U	420 U	440 U	480 U	380 U
carbazole				440 U	440 U	420 U	440 U	480 U	380 U
chrysene				440 U	440 U	420 U	440 U	480 U	380 U
di-n-butylphthalate				440 U	440 U	420 U	440 U	480 U	380 U
di-n-octylphthalate				440 U	440 U	420 U	440 U	480 U	380 U
dibenz(a,h)anthracene				440 U	440 U	420 U	440 U	480 U	380 U
dibenzofuran				440 U	440 U	420 U	440 U	480 U	380 U
diethylphthalate				440 U	440 U	420 U	440 U	480 U	380 U
dimethylphthalate				440 U	440 U	420 U	440 U	480 U	380 U
fluoranthene				440 U	440 U	420 U	440 U	480 U	380 U
fluorene				440 U	440 U	420 U	440 U	480 U	380 U
hexachlorobenzene				440 U	440 U	420 U	440 U	480 U	380 U
hexachlorobutadiene				440 U	440 U	420 U	440 U	480 U	380 U
hexachlorocyclopentadiene				440 U	440 U	420 U	440 U	480 U	380 U
hexachloroethane				440 U	440 U	420 U	440 U	480 U	380 U
indeno(1,2,3-cd)pyrene				440 U	440 U	420 U	440 U	480 U	380 U
isophorone				440 U	440 U	420 U	440 U	480 U	380 U
naphthalene				440 U	440 U	420 U	440 U	480 U	380 U
nitrobenzene				440 U	440 U	420 U	440 U	480 U	380 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB09-02	01SB10-00	01SB10-02	15SB01-01	15SB02-01	15SB03-02	15SB04-02	15SB04-02-DUP	16SB01-06
LOCATION:	01SB09	01SB10	01SB10	15SB01	15SB02	15SB03	15SB04	15SB04	16SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
pentachlorophenol				1100 U	1100 U	1000 U	1100 U	1200 U	960 U
phenanthrene				440 U	440 U	420 U	440 U	480 U	380 U
phenol				440 U	440 U	420 U	440 U	480 U	380 U
pyrene				440 U	440 U	420 U	440 U	480 U	380 U
VOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,1,1-trichloroethane	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
1,1,2,2-tetrachloroethane	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
1,1,2-trichloroethane	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
1,1-dichloroethane	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
1,1-dichloroethene	12.0 U	11.0 U	12.0 U	13.0 UJ	13.0 UJ	13.0 UJ	14.0 UJ	15.0 UJ	12.0 U
1,2-dichloroethane	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
1,2-dichloroethene (total)	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
1,2-dichloropropane	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
2-butanone	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
2-hexanone	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
4-methyl-2-pentanone	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
acetone	14.0 UJ	11.0 U	12.0 U	9.0 UJ	20.0 UJ	25.0 UJ	51.0 UJ	32.0 UJ	12.0 U
benzene	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
bromodichloromethane	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
bromoform	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
bromomethane	12.0 UJ	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
carbon disulfide	12.0 UJ	11.0 UJ	12.0 UJ	13.0 UJ	13.0 UJ	13.0 UJ	14.0 UJ	15.0 UJ	12.0 UJ
carbon tetrachloride	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
chlorobenzene	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
chloroethane	12.0 UJ	11.0 UJ	12.0 UJ	13.0 UJ	13.0 UJ	13.0 UJ	14.0 UJ	15.0 UJ	12.0 U
chloroform	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
chloromethane	12.0 UJ	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U
cis-1,3-dichloropropene	12.0 U	11.0 U	12.0 U	13.0 U	13.0 U	13.0 U	14.0 U	15.0 U	12.0 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB09-02		01SB10-00		01SB10-02		15SB01-01		15SB02-01		15SB03-02		15SB04-02		15SB04-02-DUP		16SB01-06	
LOCATION:	01SB09		01SB10		01SB10		15SB01		15SB02		15SB03		15SB04		15SB04		16SB01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
dibromochloromethane	12.0	U	11.0	U	12.0	U	13.0	U	13.0	U	13.0	U	14.0	U	15.0	U	12.0	U
ethylbenzene	12.0	U	11.0	U	12.0	U	13.0	U	13.0	U	13.0	U	14.0	U	15.0	U	12.0	U
methylene chloride	12.0	UJ	11.0	U	12.0	U	13.0	UJ	13.0	UJ	13.0	UJ	14.0	UJ	15.0	UJ	12.0	U
styrene	12.0	U	11.0	U	12.0	U	13.0	U	13.0	U	13.0	U	14.0	U	15.0	U	12.0	U
tetrachloroethene	12.0	U	11.0	U	12.0	U	13.0	U	13.0	U	13.0	U	14.0	U	15.0	U	12.0	U
toluene	12.0	U	11.0	U	12.0	U	13.0	U	13.0	U	13.0	U	14.0	U	15.0	U	12.0	U
trans-1,3-dichloropropene	12.0	U	11.0	U	12.0	U	13.0	U	13.0	U	13.0	U	14.0	U	15.0	U	12.0	U
trichloroethene	12.0	U	11.0	U	12.0	U	13.0	U	13.0	U	13.0	U	14.0	U	15.0	U	12.0	U
vinyl chloride	12.0	U	11.0	U	12.0	U	13.0	U	13.0	U	13.0	U	14.0	U	15.0	U	12.0	U
xylene (total)	12.0	U	11.0	U	12.0	U	13.0	U	13.0	U	13.0	U	14.0	U	15.0	U	12.0	U
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
4,4'-DDD							4.4	U	4.4	U	4.2	U	4.5	U	4.9	U		
4,4'-DDE							4.4	U	4.4	U	4.2	U	4.5	U	4.9	U		
4,4'-DDT							4.4	U	4.4	U	4.2	U	4.5	U	4.9	U		
Aroclor-1016							44.0	U	44.0	U	42.0	U	45.0	U	49.0	U	38.0	U
Aroclor-1221							89.0	U	89.0	U	85.0	U	91.0	U	99.0	U	78.0	U
Aroclor-1232							44.0	U	44.0	U	42.0	U	45.0	U	49.0	U	38.0	U
Aroclor-1242							44.0	U	44.0	U	42.0	U	45.0	U	49.0	U	38.0	U
Aroclor-1248							44.0	U	44.0	U	42.0	U	45.0	U	49.0	U	38.0	U
Aroclor-1254							44.0	U	44.0	U	42.0	U	45.0	U	49.0	U	38.0	U
Aroclor-1260							44.0	U	44.0	U	42.0	U	45.0	U	49.0	U	38.0	U
aldrin							2.3	U	2.3	U	2.1	U	2.3	U	2.5	U		
alpha-BHC							2.3	U	2.3	U	2.1	U	2.3	U	2.5	U		
alpha-chlordane							2.3	U	2.3	U	2.1	U	2.3	U	2.5	U		
beta-BHC							2.3	U	2.3	U	2.1	U	2.3	U	2.5	U		
delta-BHC							2.3	U	2.3	U	2.1	U	2.3	U	2.5	U		
dieldrin							4.4	U	4.4	U	4.2	U	4.5	U	4.9	U		
endosulfan I							2.3	U	2.3	U	2.1	U	2.3	U	2.5	U		

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB09-02	01SB10-00	01SB10-02	15SB01-01	15SB02-01	15SB03-02	15SB04-02	15SB04-02-DUP	16SB01-06
LOCATION:	01SB09	01SB10	01SB10	15SB01	15SB02	15SB03	15SB04	15SB04	16SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
endosulfan II				4.4 U	4.4 U	4.2 U	4.5 U	4.9 U	
endosulfan sulfate				4.4 U	4.4 U	4.2 U	4.5 U	4.9 U	
endrin				4.4 U	4.4 U	4.2 U	4.5 U	4.9 U	
endrin aldehyde				4.4 U	4.4 U	4.2 U	4.5 U	4.9 U	
endrin ketone				4.4 U	4.4 U	4.2 U	4.5 U	4.9 U	
gamma-BHC (Lindane)				2.3 U	2.3 U	2.1 U	2.3 U	2.5 U	
gamma-chlordane				2.3 U	2.3 U	2.1 U	2.3 U	2.5 U	
heptachlor				2.3 U	2.3 U	2.1 U	2.3 U	2.5 U	
heptachlor epoxide				2.3 U	2.3 U	2.1 U	2.3 U	2.5 U	
methoxychlor				23.0 U	23.0 U	21.0 U	23.0 U	25.0 U	
toxaphene				230 U	230 U	210 U	230 U	250 U	

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB02-04	16SB03-02	16SB03-06	16SB04-08	16SB04-08-DUP	16SB04-10	16SB05-06	16SB05-08	16SB06-02
LOCATION:	16SB02	16SB03	16SB03	16SB04	16SB04	16SB04	16SB05	16SB05	16SB06
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	3170	378	2690	3180	2330	2480	1730	3470	1240
antimony	3.5 U	0.59 U	0.63 U	3.3 U	3.4 U	3.4 U	0.61 U	0.62 U	3.4 U
arsenic	11.3	0.73 U	6.1	7.8	8.0	9.3	8.5	20.3	2.8
barium	1.2	4.5	2.1	1.5	1.3	1.3	1.9	2.7	5.4
beryllium	0.28	0.024 U	0.19	0.37	0.22	0.17	0.081	0.34	0.11
cadmium	1.3	0.10	0.86	1.0	1.0	1.0	0.81	1.3	0.28
calcium	58.4	98.5	111	261	215	113	410	261	129
chromium, total	125	5.5	93.2	90.9	92.2	103	86.3	158	18.3
cobalt	0.72 U	0.13	0.29	0.69 U	0.70 U	0.72 U	0.22	0.36	0.70 U
copper	1.9	1.5	2.1	1.4	1.4	1.4	2.1	2.3	3.0
iron	18000	1160	11800	12700	12200	12300	11000	17800	3340
lead	4.3 J	70.7	4.0	3.8 J	4.8 J	2.7	3.1	4.0	7.8 J
magnesium	317	40.8	200	464	286	284	182	468	84.7
manganese	0.70 U	3.5	2.2	0.67 U	0.68 U	0.69 U	3.2	0.82	2.1
mercury	0.018 J	0.0022 U	0.0023 U	0.0067 UJ	0.010 J	0.0071 J	0.0051	0.0023 U	0.045 J
nickel	1.1 U	0.56	1.0	1.0 U	1.0 U	1.1 U	0.60	1.3	1.0 U
potassium	1050	91.2	615	1580	973	986	518	1470	147
selenium	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 J	1.0 U	1.0 U
silver	0.50 U	0.21 U	0.22 U	0.49 U	0.49 U	0.50 U	0.21 U	0.22 U	0.49 U
sodium	188	41.7	97.4	21.5	23.0	32.3	13.6 U	26.2	25.6
thallium	1.6 J	0.79 U	0.88	1.5 J	1.4 J	0.86 U	0.81 U	0.83 U	1.2 J
vanadium	79.6	6.0	59.2	47.4	47.0	53.4	53.3	72.7	15.3
zinc	6.7 J	3.0 J	3.8 J	6.8 J	7.0 J	5.3 J	3.2 J	7.0 J	11.4 J
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene	400 U	360 U	390 U	12000 U	12000 U	12000 U	11000 U	11000 U	390 U
1,2-dichlorobenzene	400 U	360 U	390 U	12000 U	12000 U	12000 U	11000 U	11000 U	390 U
1,3-dichlorobenzene	400 U	360 U	390 U	12000 U	12000 U	12000 U	11000 U	11000 U	390 U
1,4-dichlorobenzene	400 U	360 U	390 U	12000 U	12000 U	12000 U	11000 U	11000 U	390 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB02-04		16SB03-02		16SB03-06		16SB04-08		16SB04-08-DUP		16SB04-10		16SB05-06		16SB05-08		16SB06-02	
LOCATION:	16SB02		16SB03		16SB03		16SB04		16SB04		16SB04		16SB05		16SB05		16SB06	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
2,2'-oxybis(1-chloropropane)	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
2,4,5-trichlorophenol	1000	U	910	U	980	U	29000	U	29000	U	30000	U	28000	U	29000	U	980	U
2,4,6-trichlorophenol	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
2,4-dichlorophenol	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
2,4-dimethylphenol	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
2,4-dinitrophenol	1000	U	910	U	980	U	29000	U	29000	U	30000	U	28000	U	29000	U	980	U
2,4-dinitrotoluene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
2,6-dinitrotoluene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
2-chloronaphthalene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
2-chlorophenol	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
2-methylnaphthalene	400	U	360	U	390	U	130000		170000		220000		36000		140000		390	U
2-methylphenol	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
2-nitroaniline	1000	U	910	U	980	U	29000	U	29000	U	30000	U	28000	U	29000	U	980	U
2-nitrophenol	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
3,3'-dichlorobenzidine	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
3-nitroaniline	1000	U	910	U	980	U	29000	U	29000	U	30000	U	28000	U	29000	U	980	U
4,6-dinitro-2-methylphenol	1000	U	910	U	980	U	29000	U	29000	U	30000	U	28000	U	29000	U	980	U
4-bromophenyl-phenylether	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
4-chloro-3-methylphenol	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
4-chloroaniline	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
4-chlorophenyl-phenylether	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
4-methylphenol	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
4-nitroaniline	1000	U	910	U	980	U	29000	U	29000	U	30000	U	28000	U	29000	U	980	U
4-nitrophenol	1000	U	910	U	980	U	29000	U	29000	U	30000	U	28000	U	29000	U	980	U
N-nitroso-di-n-propylamine	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
N-nitrosodiphenylamine (1)	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
acenaphthene	400	U	360	U	390	U	6900	J	8200	J	11000	J	2200	J	8900	J	390	U
acenaphthylene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB02-04		16SB03-02		16SB03-06		16SB04-08		16SB04-08-DUP		16SB04-10		16SB05-06		16SB05-08		16SB06-02	
LOCATION:	16SB02		16SB03		16SB03		16SB04		16SB04		16SB04		16SB05		16SB05		16SB06	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
anthracene	400	U	360	U	390	U	2300	J	2800	J	3900	J	11000	U	2700	J	390	U
benzo(a)anthracene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
benzo(a)pyrene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
benzo(b)fluoranthene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
benzo(g,h,i)perylene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
benzo(k)fluoranthene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
bis(2-chloroethoxy)methane	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
bis(2-chloroethyl)ether	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
bis(2-ethylhexyl)phthalate	400	UJ	140	J	150	UJ	12000	UJ	12000	UJ	12000	U	11000	UJ	11000	UJ	390	UJ
butylbenzylphthalate	400	U	360	U	390	U	12000	UJ	12000	UJ	12000	U	11000	UJ	11000	UJ	390	U
carbazole	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
chrysene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	56.0	J
di-n-butylphthalate	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
di-n-octylphthalate	400	U	360	UJ	390	UJ	12000	UJ	12000	UJ	12000	U	11000	UJ	11000	UJ	390	U
dibenz(a,h)anthracene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
dibenzofuran	400	U	360	U	390	U	5200	J	5900	J	7800	J	1300	J	5400	J	390	U
diethylphthalate	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
dimethylphthalate	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
fluoranthene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	49.0	J
fluorene	400	U	360	U	390	U	13000		13000		18000		3300	J	13000		390	U
hexachlorobenzene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
hexachlorobutadiene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
hexachlorocyclopentadiene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
hexachloroethane	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
indeno(1,2,3-cd)pyrene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
isophorone	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
naphthalene	400	U	360	U	390	U	39000		42000		60000		8000	J	40000		390	U
nitrobenzene	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB02-04		16SB03-02		16SB03-06		16SB04-08		16SB04-08-DUP		16SB04-10		16SB05-06		16SB05-08		16SB06-02	
LOCATION:	16SB02		16SB03		16SB03		16SB04		16SB04		16SB04		16SB05		16SB05		16SB06	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
pentachlorophenol	1000	U	910	U	980	U	29000	U	29000	U	30000	U	28000	U	29000	U	980	U
phenanthrene	400	U	360	U	390	U	21000		24000		31000		6400	J	26000		50.0	J
phenol	400	U	360	U	390	U	12000	U	12000	U	12000	U	11000	U	11000	U	390	U
pyrene	400	U	360	U	390	U	1600	J	1800	J	2800	J	11000	U	1400	J	390	U
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1,1-trichloroethane	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
1,1,2,2-tetrachloroethane	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
1,1,2-trichloroethane	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
1,1-dichloroethane	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
1,1-dichloroethene	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
1,2-dichloroethane	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	UJ	12.0	U
1,2-dichloroethene (total)	12.0	U	11.0	U	12.0	U	17.0	J	5800	U	1500	U	11.0	U	1400	U	12.0	U
1,2-dichloropropane	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
2-butanone	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	5.0	J	1400	U	12.0	U
2-hexanone	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	UJ	12.0	U
4-methyl-2-pentanone	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	UJ	1500	UJ	11.0	U	1400	UJ	12.0	U
acetone	12.0	U	12.0	U	110	U	330	UJ	5800	U	1500	U	93.0	U	1400	UJ	34.0	U
benzene	12.0	U	11.0	U	12.0	U	300	J	5800	U	1300	J	11.0	U	1400	U	12.0	U
bromodichloromethane	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
bromoform	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
bromomethane	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
carbon disulfide	12.0	U	11.0	UJ	12.0	UJ	58.0	UJ	5800	U	1500	U	11.0	UJ	1400	U	12.0	U
carbon tetrachloride	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
chlorobenzene	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
chloroethane	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
chloroform	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
chloromethane	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
cis-1,3-dichloropropene	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB02-04		16SB03-02		16SB03-06		16SB04-08		16SB04-08-DUP		16SB04-10		16SB05-06		16SB05-08		16SB06-02	
LOCATION:	16SB02		16SB03		16SB03		16SB04		16SB04		16SB04		16SB05		16SB05		16SB06	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
dibromochloromethane	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
ethylbenzene	12.0	U	11.0	U	12.0	U	6300		9600		16000		24.0		4100		12.0	U
methylene chloride	12.0	U	11.0	J	12.0	J	58.0	UJ	5800	U	1500	U	11.0	J	1400	U	12.0	U
styrene	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
tetrachloroethene	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
toluene	12.0	U	11.0	U	12.0	U	620	J	5800	U	770	J	11.0	U	190	J	12.0	U
trans-1,3-dichloropropene	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
trichloroethene	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
vinyl chloride	12.0	U	11.0	U	12.0	U	58.0	UJ	5800	U	1500	U	11.0	U	1400	U	12.0	U
xylene (total)	12.0	U	11.0	U	12.0	U	36000		52000		92000		70.0		9600		12.0	U
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
4,4'-DDD	4.0	U																
4,4'-DDE	4.0	U																
4,4'-DDT	4.0	U																
Aroclor-1016	40.0	U	36.0	U	39.0	U	38.0	U	38.0	U	39.0	U	37.0	U	38.0	U	39.0	U
Aroclor-1221	80.0	U	74.0	U	79.0	U	78.0	U	78.0	U	80.0	U	76.0	U	77.0	U	79.0	U
Aroclor-1232	40.0	U	36.0	U	39.0	U	38.0	U	38.0	U	39.0	U	37.0	U	38.0	U	39.0	U
Aroclor-1242	40.0	U	36.0	U	39.0	U	38.0	U	38.0	U	39.0	U	37.0	U	38.0	U	39.0	U
Aroclor-1248	40.0	U	36.0	U	39.0	U	38.0	U	38.0	U	39.0	U	37.0	U	38.0	U	39.0	U
Aroclor-1254	40.0	U	36.0	U	39.0	U	38.0	U	38.0	U	39.0	U	37.0	U	38.0	U	39.0	U
Aroclor-1260	40.0	U	36.0	U	39.0	U	38.0	U	38.0	U	39.0	U	37.0	U	38.0	U	39.0	U
aldrin	2.0	U																
alpha-BHC	2.0	U																
alpha-chlordane	2.0	U																
beta-BHC	2.0	U																
delta-BHC	2.0	U																
dieldrin	4.0	U																
endosulfan I	2.0	U																

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB02-04	16SB03-02	16SB03-06	16SB04-08	16SB04-08-DUP	16SB04-10	16SB05-06	16SB05-08	16SB06-02
LOCATION:	16SB02	16SB03	16SB03	16SB04	16SB04	16SB04	16SB05	16SB05	16SB06
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
endosulfan II	4.0 U								
endosulfan sulfate	4.0 U								
endrin	4.0 U								
endrin aldehyde	4.0 U								
endrin ketone	4.0 U								
gamma-BHC (Lindane)	2.0 U								
gamma-chlordane	2.0 U								
heptachlor	2.0 U								
heptachlor epoxide	2.0 U								
methoxychlor	20.0 U								
toxaphene	200 U								

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB06-06	16SB07-04	16SB08-06	16SB09-00	16SB09-06	16SB10-00	16SB10-04	16SB11-09	16SB12-02
LOCATION:	16SB06	16SB07	16SB08	16SB09	16SB09	16SB10	16SB10	16SB11	16SB12
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	1310	3990	4110	914	2130	1680	1770	4180	1780
antimony	3.3 U	3.3 U	3.4 U	3.2 U	3.5 U	3.3 U	3.2 U	3.4 U	0.58 U
arsenic	1.7	7.2	11.3	1.8	3.7	2.1	3.0	5.3	1.2
barium	4.1	4.4	3.6	4.2	1.5	13.8	2.4	6.9	6.6
beryllium	0.10	0.46	0.49	0.12	0.10	0.068	0.10	0.52	0.039
cadmium	0.31	0.086 U	0.090 U	0.32	0.66	0.30	0.085 U	0.090 U	0.19
calcium	102	226	297	72.7	34.5	1570 J	105	1240 J	439
chromium, total	12.5	94.7	123	5.6	68.4	22.5	34.3	96.5	4.1
cobalt	0.69 U	0.68 U	0.71 U	0.67 U	0.74 U	0.68 U	0.67 U	0.71 U	0.40
copper	2.6	3.0	2.9	6.6	1.2	28.0	1.7	2.8	3.0
iron	2600	13500	16600	3760	8730	4450	4930	12500	1890
lead	6.6 J	5.5	3.7	6.6 J	2.4	62.2	3.3	3.6	9.1
magnesium	87.2	638	526	39.8	104	865	153	1030	175
manganese	4.6	2.8	0.69 U	4.1	0.71 U	31.8	3.5	3.9	12.1
mercury	0.033 J	0.041 J	0.0082 J	0.028 J	0.017 J	0.024 J	0.013 J	0.013 J	0.013
nickel	1.0 U	2.1	1.5	1.0 U	1.1 U	2.5	1.0 U	2.1	1.4
potassium	180	1720 J	1670 J	111	297	234	389	1990 J	74.5
selenium	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U
silver	0.48 U	0.48 U	0.50 U	0.47 U	0.51 U	0.48 U	0.47 U	0.49 U	0.31
sodium	23.9	26.8	18.3	23.1	25.6	21.1	20.0	27.9	55.9
thallium	1.3 J	0.82 U	0.85 U	0.81 U	1.4 J	0.82 U	0.80 U	0.85 U	0.78 U
vanadium	9.5	61.2	79.1	5.5	31.4	17.1	26.8	59.9	4.4
zinc	7.6 J	7.9 J	4.2 J	2.9 J	1.8 J	12.2 J	2.9 J	8.3 J	12.5 J
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene	380 U	380 U	390 U	370 U	400 U	11000 U	370 U	390 U	350 U
1,2-dichlorobenzene	380 U	380 U	390 U	370 U	400 U	11000 U	370 U	390 U	350 U
1,3-dichlorobenzene	380 U	380 U	390 U	370 U	400 U	11000 U	370 U	390 U	350 U
1,4-dichlorobenzene	380 U	380 U	390 U	370 U	400 U	11000 U	370 U	390 U	350 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB06-06		16SB07-04		16SB08-06		16SB09-00		16SB09-06		16SB10-00		16SB10-04		16SB11-09		16SB12-02	
LOCATION:	16SB06		16SB07		16SB08		16SB09		16SB09		16SB10		16SB10		16SB11		16SB12	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
2,2'-oxybis(1-chloropropane)	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
2,4,5-trichlorophenol	950	U	940	U	990	U	930	U	1000	U	28000	U	920	U	980	U	890	U
2,4,6-trichlorophenol	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
2,4-dichlorophenol	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
2,4-dimethylphenol	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
2,4-dinitrophenol	950	U	940	U	990	U	930	U	1000	U	28000	U	920	U	980	U	890	U
2,4-dinitrotoluene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
2,6-dinitrotoluene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
2-chloronaphthalene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
2-chlorophenol	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
2-methylnaphthalene	380	U	380	U	390	U	2600		400	U	5800	J	370	U	390	U	350	U
2-methylphenol	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
2-nitroaniline	950	U	940	U	990	U	930	U	1000	U	28000	U	920	U	980	U	890	U
2-nitrophenol	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
3,3'-dichlorobenzidine	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
3-nitroaniline	950	U	940	U	990	U	930	U	1000	U	28000	U	920	U	980	U	890	U
4,6-dinitro-2-methylphenol	950	U	940	U	990	U	930	U	1000	U	28000	U	920	U	980	U	890	U
4-bromophenyl-phenylether	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
4-chloro-3-methylphenol	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
4-chloroaniline	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
4-chlorophenyl-phenylether	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
4-methylphenol	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
4-nitroaniline	950	U	940	U	990	U	930	U	1000	U	28000	U	920	U	980	U	890	U
4-nitrophenol	950	U	940	U	990	U	930	U	1000	U	28000	U	920	U	980	U	890	U
N-nitroso-di-n-propylamine	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
N-nitrosodiphenylamine (1)	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
acenaphthene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
acenaphthylene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB06-06		16SB07-04		16SB08-06		16SB09-00		16SB09-06		16SB10-00		16SB10-04		16SB11-09		16SB12-02	
LOCATION:	16SB06		16SB07		16SB08		16SB09		16SB09		16SB10		16SB10		16SB11		16SB12	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
anthracene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
benzo(a)anthracene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	43.0	J
benzo(a)pyrene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	43.0	J
benzo(b)fluoranthene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	38.0	J
benzo(g,h,i)perylene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
benzo(k)fluoranthene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	46.0	J
bis(2-chloroethoxy)methane	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
bis(2-chloroethyl)ether	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
bis(2-ethylhexyl)phthalate	380	UJ	380	U	390	U	370	UJ	400	UJ	1400	J	370	U	560	U	67.0	J
butylbenzylphthalate	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
carbazole	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
chrysene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	55.0	J
di-n-butylphthalate	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
di-n-octylphthalate	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	UJ
dibenz(a,h)anthracene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
dibenzofuran	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
diethylphthalate	380	U	380	U	390	U	370	U	400	U	11000	U	38.0	J	390	U	350	U
dimethylphthalate	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
fluoranthene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	110	J
fluorene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
hexachlorobenzene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
hexachlorobutadiene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
hexachlorocyclopentadiene	380	U	380	UJ	390	UJ	370	U	400	U	11000	U	370	UJ	390	UJ	350	U
hexachloroethane	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
indeno(1,2,3-cd)pyrene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
isophorone	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U
naphthalene	380	U	380	U	390	U	430		400	U	11000	U	370	U	390	U	350	U
nitrobenzene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	350	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB06-06		16SB07-04		16SB08-06		16SB09-00		16SB09-06		16SB10-00		16SB10-04		16SB11-09		16SB12-02	
LOCATION:	16SB06		16SB07		16SB08		16SB09		16SB09		16SB10		16SB10		16SB11		16SB12	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
pentachlorophenol	950	U	940	U	990	U	930	U	1000	U	28000	U	920	U	980	U	890	U
phenanthrene	380	U	380	U	390	U	46.0	J	400	U	2000	J	370	U	390	U	65.0	J
phenol	380	U	380	U	42.0	J	370	U	400	U	11000	U	52.0	J	49.0	J	350	U
pyrene	380	U	380	U	390	U	370	U	400	U	11000	U	370	U	390	U	86.0	J
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1,1-trichloroethane	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
1,1,2,2-tetrachloroethane	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	UJ	11.0	U	12.0	U	11.0	U
1,1,2-trichloroethane	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
1,1-dichloroethane	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
1,1-dichloroethene	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
1,2-dichloroethane	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
1,2-dichloroethene (total)	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
1,2-dichloropropane	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
2-butanone	11.0	U	11.0	UJ	12.0	UJ	56.0	U	12.0	U	57.0	U	11.0	U	12.0	UJ	11.0	U
2-hexanone	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	UJ	11.0	U	12.0	U	11.0	U
4-methyl-2-pentanone	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	UJ	11.0	U	12.0	U	11.0	U
acetone	21.0	U	13.0	U	100	U	77.0	U	32.0	U	57.0	U	74.0	U	81.0	U	26.0	U
benzene	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
bromodichloromethane	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
bromoform	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
bromomethane	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
carbon disulfide	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	UJ
carbon tetrachloride	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
chlorobenzene	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	UJ	11.0	U	12.0	U	11.0	U
chloroethane	11.0	U	11.0	UJ	12.0	UJ	56.0	U	12.0	U	57.0	UJ	11.0	UJ	12.0	UJ	11.0	U
chloroform	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
chloromethane	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
cis-1,3-dichloropropene	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB06-06		16SB07-04		16SB08-06		16SB09-00		16SB09-06		16SB10-00		16SB10-04		16SB11-09		16SB12-02	
LOCATION:	16SB06		16SB07		16SB08		16SB09		16SB09		16SB10		16SB10		16SB11		16SB12	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
dibromochloromethane	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
ethylbenzene	11.0	U	11.0	U	12.0	U	97.0		12.0	U	57.0	UJ	11.0	U	12.0	U	11.0	U
methylene chloride	11.0	U	7.0	J	5.0	J	56.0	U	12.0	U	10.0	J	4.0	J	4.0	J	11.0	J
styrene	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	UJ	11.0	U	12.0	U	11.0	U
tetrachloroethene	11.0	U	6.0	J	12.0	U	56.0	U	12.0	U	7.0	J	11.0	U	12.0	U	11.0	U
toluene	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	UJ	11.0	U	12.0	U	11.0	U
trans-1,3-dichloropropene	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
trichloroethene	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
vinyl chloride	11.0	U	11.0	U	12.0	U	56.0	U	12.0	U	57.0	U	11.0	U	12.0	U	11.0	U
xylene (total)	11.0	U	11.0	U	12.0	U	96.0		12.0	U	11.0	J	11.0	U	12.0	U	11.0	U
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
4,4'-DDD							3.7	U			3.7	U					2.1	NJ
4,4'-DDE							3.7	U			8.5	R					11.0	
4,4'-DDT							6.0				3.7	U					16.0	
Aroclor-1016	38.0	U	37.0	U	39.0	U	37.0	U	40.0	U	37.0	U	37.0	U	39.0	U	35.0	U
Aroclor-1221	77.0	U	76.0	U	80.0	U	75.0	U	81.0	U	76.0	U	74.0	U	79.0	U	72.0	U
Aroclor-1232	38.0	U	37.0	U	39.0	U	37.0	U	40.0	U	68.0	U	37.0	U	39.0	U	35.0	U
Aroclor-1242	38.0	U	37.0	U	39.0	U	37.0	U	40.0	U	37.0	U	37.0	U	39.0	U	35.0	U
Aroclor-1248	38.0	U	37.0	U	39.0	U	37.0	U	40.0	U	37.0	U	37.0	U	39.0	U	35.0	U
Aroclor-1254	38.0	U	37.0	U	39.0	U	37.0	U	10.0	J	37.0	U	37.0	U	39.0	U	35.0	U
Aroclor-1260	38.0	U	37.0	U	39.0	U	37.0	U	40.0	U	37.0	U	37.0	U	39.0	U	35.0	U
aldrin							1.9	U			1.4	R					1.8	U
alpha-BHC							1.9	U			0.26	R					0.032	R
alpha-chlordane							1.9	U			1.9	U					3.7	
beta-BHC							1.9	U			1.9	U					1.8	U
delta-BHC							1.9	U			1.9	U					1.8	U
dieldrin							3.7	U			0.77	R					3.6	
endosulfan I							1.9	U			9.9						1.8	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB06-06	16SB07-04	16SB08-06	16SB09-00	16SB09-06	16SB10-00	16SB10-04	16SB11-09	16SB12-02
LOCATION:	16SB06	16SB07	16SB08	16SB09	16SB09	16SB10	16SB10	16SB11	16SB12
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
endosulfan II				3.7 U		41.0			3.5 U
endosulfan sulfate				3.7 U		3.7 U			3.5 U
endrin				3.7 U		3.7 U			3.5 U
endrin aldehyde				3.7 U		25.0 R			3.5 U
endrin ketone				3.7 U		3.7 U			3.5 U
gamma-BHC (Lindane)				0.088 R		0.40 R			1.8 U
gamma-chlordane				1.9 U		0.91 R			3.3
heptachlor				1.9 U		1.9 U			0.27 J
heptachlor epoxide				1.9 U		7.8			1.8 U
methoxychlor				19.0 U		19.0 U			18.0 U
toxaphene				190 U		190 U			180 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB12-06	16SB13-02	16SB13-06	16SB14-04	16SB15-06	16SB16-06	16SB16-06-DUP	16SB17-04	16SB17-04-DUP
LOCATION:	16SB12	16SB13	16SB13	16SB14	16SB15	16SB16	16SB16	16SB17	16SB17
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	1730	1810	1430	3600	3170	2630	2540	3360	3700
antimony	0.61 U	3.0 U	3.2 U	3.3 U	3.3 U	3.2 U	3.3 U	3.2 U	3.2 U
arsenic	1.9	1.5	2.1	5.5	9.9	4.5	5.2	4.4	4.2
barium	3.3	5.5	4.9	4.9	2.6	2.0	2.0	4.2	4.5
beryllium	0.15	0.14	0.14	0.22	0.31	0.32	0.26	0.30	0.35
cadmium	0.42	0.31	0.43	0.087 U	0.086 U	0.085 U	0.086 U	0.10	0.085 U
calcium	784	216	550	128	154	283	353	218	179
chromium, total	55.3	4.9	32.6	58.9	105	78.4	79.4	71.1	65.5
cobalt	0.14 U	0.63 U	0.67 U	0.69 U	0.68 U	0.67 U	0.68 U	0.68 U	0.67 U
copper	1.5	4.2	3.4	2.5	2.8	1.5	1.7	2.2	2.1
iron	5620	3210	4430	10200	13900	9040	8530	9830	9790
lead	3.6	8.2 J	6.9 J	5.3	3.7	2.1	2.2	3.4	3.4
magnesium	364	162	254	253	397	437	365	371	486
manganese	7.1	10.7	9.9	3.2	3.8	1.0	1.2	8.4	8.2
mercury	0.0023 U	0.025 J	0.048 J	0.014 J	0.0073 UJ	0.0073 UJ	0.0074 J	0.032 J	0.028 J
nickel	0.72	1.1	1.0 U	1.2	1.0	1.0 U	1.0 U	1.5	1.5
potassium	353	70.5	249	721	1240 J	1310 J	970	1140 J	1510 J
selenium	1.0 U	0.93 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
silver	0.21 U	0.44 U	1.1	0.48 U	0.47 U	0.47 U	0.48 U	0.47 U	0.47 U
sodium	23.7	48.4	32.7	26.4	188	25.9	26.1	27.7	27.5
thallium	1.1	1.4 J	0.81 U	0.83 U	0.81 U	0.81 U	0.82 U	0.81 U	0.81 U
vanadium	27.0	5.0	18.2	41.2	61.1	48.1	48.9	43.4	39.9
zinc	3.5 J	29.6 J	12.4 J	5.8 J	5.1 J	5.9 J	2.7 J	6.6 J	9.3 J
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene	380 U	350 U	370 U	380 U	370 U	370 U	380 U	11000 U	370 U
1,2-dichlorobenzene	380 U	350 U	370 U	380 U	370 U	370 U	380 U	11000 U	370 U
1,3-dichlorobenzene	380 U	350 U	370 U	380 U	370 U	370 U	380 U	11000 U	370 U
1,4-dichlorobenzene	380 U	350 U	370 U	380 U	370 U	370 U	380 U	11000 U	370 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB12-06		16SB13-02		16SB13-06		16SB14-04		16SB15-06		16SB16-06		16SB16-06-DUP		16SB17-04		16SB17-04-DUP	
LOCATION:	16SB12		16SB13		16SB13		16SB14		16SB15		16SB16		16SB16		16SB17		16SB17	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
2,2'-oxybis(1-chloropropane)	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	UJ	370	U
2,4,5-trichlorophenol	940	U	870	U	920	U	950	U	930	U	930	U	940	U	28000	U	930	U
2,4,6-trichlorophenol	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
2,4-dichlorophenol	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
2,4-dimethylphenol	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
2,4-dinitrophenol	940	U	870	U	920	U	950	U	930	U	930	U	940	U	28000	U	930	U
2,4-dinitrotoluene	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
2,6-dinitrotoluene	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
2-chloronaphthalene	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
2-chlorophenol	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
2-methylnaphthalene	4900		350	U	2200		380	U	370	U	370	U	380	U	6600	J	8800	
2-methylphenol	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
2-nitroaniline	940	U	870	U	920	U	950	U	930	U	930	U	940	U	28000	U	930	U
2-nitrophenol	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
3,3'-dichlorobenzidine	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
3-nitroaniline	940	U	870	U	920	U	950	U	930	U	930	U	940	U	28000	U	930	U
4,6-dinitro-2-methylphenol	940	U	870	U	920	U	950	U	930	U	930	U	940	U	28000	U	930	U
4-bromophenyl-phenylether	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
4-chloro-3-methylphenol	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
4-chloroaniline	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
4-chlorophenyl-phenylether	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
4-methylphenol	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
4-nitroaniline	940	U	870	U	920	U	950	U	930	U	930	U	940	U	28000	U	930	U
4-nitrophenol	940	U	870	U	920	U	950	U	930	U	930	U	940	U	28000	U	930	U
N-nitroso-di-n-propylamine	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
N-nitrosodiphenylamine (1)	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
acenaphthene	240	J	350	U	160	J	380	U	370	U	370	U	380	U	11000	U	370	U
acenaphthylene	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB12-06		16SB13-02		16SB13-06		16SB14-04		16SB15-06		16SB16-06		16SB16-06-DUP		16SB17-04		16SB17-04-DUP	
LOCATION:	16SB12		16SB13		16SB13		16SB14		16SB15		16SB16		16SB16		16SB17		16SB17	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
anthracene	380	U	350	U	78.0	J	380	U	370	U	370	U	380	U	11000	U	400	
benzo(a)anthracene	380	U	350	U	41.0	J	380	U	370	U	370	U	380	U	11000	U	370	U
benzo(a)pyrene	380	U	350	U	41.0	J	380	U	370	U	370	U	380	U	11000	U	370	U
benzo(b)fluoranthene	380	U	350	U	40.0	J	380	U	370	U	370	U	380	U	11000	U	370	U
benzo(g,h,i)perylene	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
benzo(k)fluoranthene	380	U	350	U	39.0	J	380	U	370	U	370	U	380	U	11000	U	370	U
bis(2-chloroethoxy)methane	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
bis(2-chloroethyl)ether	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	UJ	370	U
bis(2-ethylhexyl)phthalate	110	J	350	UJ	370	U	380	U	370	U	370	U	380	U	11000	UJ	370	U
butylbenzylphthalate	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	UJ	370	U
carbazole	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
chrysene	380	U	350	U	57.0	J	380	U	370	U	370	U	380	U	11000	U	370	U
di-n-butylphthalate	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
di-n-octylphthalate	380	UJ	350	U	370	UJ	380	U	370	U	370	U	380	U	11000	UJ	370	U
dibenz(a,h)anthracene	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
dibenzofuran	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
diethylphthalate	380	U	350	U	370	U	73.0	J	370	U	370	U	54.0	J	11000	U	370	U
dimethylphthalate	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
fluoranthene	380	U	350	U	140	J	380	U	370	U	370	U	380	U	11000	U	110	J
fluorene	610		350	U	320	J	380	U	370	U	370	U	380	U	1100	J	370	U
hexachlorobenzene	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
hexachlorobutadiene	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
hexachlorocyclopentadiene	380	U	350	U	370	U	380	UJ	370	UJ	370	UJ	380	UJ	11000	UJ	370	UJ
hexachloroethane	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
indeno(1,2,3-cd)pyrene	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
isophorone	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
naphthalene	810		350	U	290	J	380	U	370	U	370	U	380	U	11000	U	370	U
nitrobenzene	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB12-06		16SB13-02		16SB13-06		16SB14-04		16SB15-06		16SB16-06		16SB16-06-DUP		16SB17-04		16SB17-04-DUP	
LOCATION:	16SB12		16SB13		16SB13		16SB14		16SB15		16SB16		16SB16		16SB17		16SB17	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
pentachlorophenol	940	U	870	U	920	U	950	U	930	U	930	U	940	U	28000	U	930	U
phenanthrene	1000		350	U	600		380	U	370	U	370	U	380	U	2800	J	4100	
phenol	380	U	350	U	370	U	380	U	370	U	370	U	380	U	11000	U	370	U
pyrene	120	J	350	U	110	J	380	U	370	U	370	U	380	U	11000	U	220	J
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1,1-trichloroethane	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
1,1,2,2-tetrachloroethane	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
1,1,2-trichloroethane	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
1,1-dichloroethane	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
1,1-dichloroethene	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
1,2-dichloroethane	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
1,2-dichloroethene (total)	11.0	U	10.0	U	11.0	U	96.0		11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
1,2-dichloropropane	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
2-butanone	11.0	U	10.0	U	11.0	U	11.0	UJ	8.0	J	11.0	U	11.0	U	11.0	UJ	56.0	U
2-hexanone	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
4-methyl-2-pentanone	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
acetone	11.0	U	10.0	U	11.0	U	11.0	U	180	U	40.0	U	46.0	U	74.0	U	66.0	U
benzene	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
bromodichloromethane	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
bromoform	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
bromomethane	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
carbon disulfide	11.0	UJ	10.0	UJ	11.0	UJ	11.0	U	11.0	U	11.0	U	11.0	U	2.0	J	56.0	U
carbon tetrachloride	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
chlorobenzene	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
chloroethane	11.0	U	10.0	U	11.0	U	11.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	56.0	UJ
chloroform	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
chloromethane	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
cis-1,3-dichloropropene	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB12-06		16SB13-02		16SB13-06		16SB14-04		16SB15-06		16SB16-06		16SB16-06-DUP		16SB17-04		16SB17-04-DUP	
LOCATION:	16SB12		16SB13		16SB13		16SB14		16SB15		16SB16		16SB16		16SB17		16SB17	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
dibromochloromethane	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
ethylbenzene	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	42.0		47.0	J
methylene chloride	11.0	J	10.0	U	11.0	U	11.0	U	2.0	J	2.0	J	2.0	J	3.0	J	56.0	U
styrene	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
tetrachloroethene	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	4.0	J	10.0	J
toluene	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
trans-1,3-dichloropropene	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
trichloroethene	11.0	U	10.0	U	11.0	U	3.0	J	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
vinyl chloride	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	56.0	U
xylene (total)	11.0	U	10.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	93.0		110	
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
4,4'-DDD			3.5	U	3.7	U	26.0											
4,4'-DDE			5.6		7.9		1.8	J										
4,4'-DDT			6.3		20.0		8.2											
Aroclor-1016	37.0	U	35.0	U	37.0	U	38.0	U	37.0	U	37.0	U	37.0	U	37.0	U	37.0	U
Aroclor-1221	76.0	U	71.0	U	75.0	U	77.0	U	75.0	U	75.0	U	76.0	U	75.0	U	75.0	U
Aroclor-1232	37.0	U	35.0	U	37.0	U	38.0	U	37.0	U	37.0	U	37.0	U	37.0	U	37.0	U
Aroclor-1242	37.0	U	35.0	U	37.0	U	38.0	U	37.0	U	37.0	U	37.0	U	37.0	U	37.0	U
Aroclor-1248	37.0	U	35.0	U	37.0	U	38.0	U	37.0	U	37.0	U	37.0	U	37.0	U	37.0	U
Aroclor-1254	37.0	U	35.0	U	37.0	U	38.0	U	37.0	U	37.0	U	37.0	U	37.0	U	37.0	U
Aroclor-1260	37.0	U	35.0	U	37.0	U	38.0	U	37.0	U	37.0	U	37.0	U	37.0	U	37.0	U
aldrin			1.8	U	1.9	U	2.0	U										
alpha-BHC			1.8	U	1.9	U	2.0	U										
alpha-chlordane			1.8	U	1.9	U	2.0	U										
beta-BHC			1.8	U	1.9	U	2.0	U										
delta-BHC			1.8	U	1.9	U	2.0	U										
dieldrin			2.9	J	3.7	U	3.8	U										
endosulfan I			1.8	U	1.9	U	2.0	U										

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB12-06	16SB13-02	16SB13-06	16SB14-04	16SB15-06	16SB16-06	16SB16-06-DUP	16SB17-04	16SB17-04-DUP
LOCATION:	16SB12	16SB13	16SB13	16SB14	16SB15	16SB16	16SB16	16SB17	16SB17
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
endosulfan II		3.5 U	3.7 U	3.8 U					
endosulfan sulfate		3.5 U	3.7 U	3.8 U					
endrin		3.5 U	3.7 U	3.8 U					
endrin aldehyde		3.5 U	3.7 U	3.8 U					
endrin ketone		3.5 U	3.7 U	3.8 U					
gamma-BHC (Lindane)		1.8 U	0.23 R	2.0 U					
gamma-chlordane		1.1 J	1.1 J	0.39 J					
heptachlor		1.8 U	1.9 U	2.0 U					
heptachlor epoxide		1.8 U	1.9 U	2.0 U					
methoxychlor		18.0 U	19.0 U	20.0 U					
toxaphene		180 U	190 U	200 U					

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB17-06	16SB18-02	16SB18-06	16SB19-06	16SB19-08	16SB20-02	16SB20-06	19SB01-01	19SB01-03
LOCATION:	16SB17	16SB18	16SB18	16SB19	16SB19	16SB20	16SB20	19SB01	19SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	3670	1460	3000	3280	2700	3280	3800	1430	980
antimony	3.4 U	3.1 U	3.1 U	3.3 U	3.4 U	3.2 U	3.4 U	0.57 U	0.57 U
arsenic	10.2	1.2	3.0	7.8	10.4	2.9	8.2	1.1 J	0.57 UJ
barium	1.4	6.0	2.8	3.3	1.7	2.9	3.0	151 J	104 J
beryllium	0.61	0.11	0.19	0.52	0.35	0.16	0.53	0.14	0.16
cadmium	0.090 U	0.083 U	0.082 U	0.086	0.091 U	0.084 U	0.090 U	0.069	0.063
calcium	122	62.6	113	318	573	157	172	385	178
chromium, total	115	6.8	39.4	138	103	48.9	166	7.4	8.6
cobalt	0.71 U	0.75	0.64 U	0.68 U	0.72 U	0.66 U	0.71 U	0.14 U	0.14 U
copper	1.4	2.6	3.4	2.4	2.3	1.5	3.0	4.7	4.8
iron	15700	2860	8230	12900	14800	6580	15200	2500 J	3110 J
lead	2.6	7.1	6.4	2.4	3.9	3.0	2.6	3.1 J	2.7 J
magnesium	727	52.4	226	659	348	155	614	222	107
manganese	2.2	5.5	2.8	0.77	1.0	2.4	0.68 U	3.7 R	1.7 J
mercury	0.0088 J	0.011 J	0.020 J	0.014 J	0.0077 UJ	0.0072 UJ	0.0076 J	0.015 J	0.0073 U
nickel	1.9	3.3	1.2	1.4	1.1 U	1.1	1.9	0.56	0.36
potassium	2530 J	141	595	2310 J	1310 J	361	2060 J	147	194
selenium	1.0 U	1.0 U	0.94 U	1.0 U	1.1 U	1.0 U	1.0 U	0.57 UJ	0.57 UJ
silver	0.49 U	0.46 U	0.45 U	0.48 U	0.50 U	0.46 U	0.50 U	0.14 U	0.14 U
sodium	22.1	22.4	20.1	230	292	20.7	30.0	153	66.3
thallium	0.85 U	0.78 U	0.77 U	0.82 U	0.86 U	0.79 U	0.85 U	0.69 U	0.68 U
vanadium	63.6	5.7	29.0	67.4	59.6	29.6	69.6	6.2	6.1
zinc	3.8 J	5.2 J	3.5 J	2.2 J	3.8 J	3.3 J	2.6 J	101 J	83.2 J
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
1,2-dichlorobenzene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
1,3-dichlorobenzene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
1,4-dichlorobenzene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB17-06	16SB18-02	16SB18-06	16SB19-06	16SB19-08	16SB20-02	16SB20-06	19SB01-01	19SB01-03
LOCATION:	16SB17	16SB18	16SB18	16SB19	16SB19	16SB20	16SB20	19SB01	19SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
2,2'-oxybis(1-chloropropane)	12000 UJ	11000 UJ	11000 UJ	11000 UJ	12000 UJ	11000 UJ	390 U		
2,4,5-trichlorophenol	29000 U	27000 U	27000 U	28000 U	30000 U	28000 U	980 U		
2,4,6-trichlorophenol	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
2,4-dichlorophenol	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
2,4-dimethylphenol	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
2,4-dinitrophenol	29000 U	27000 U	27000 U	28000 U	30000 U	28000 U	980 U		
2,4-dinitrotoluene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
2,6-dinitrotoluene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
2-chloronaphthalene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
2-chlorophenol	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
2-methylnaphthalene	74000	11000 U	29000	78000	130000	28000	7700		
2-methylphenol	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
2-nitroaniline	29000 U	27000 U	27000 U	28000 U	30000 U	28000 U	980 U		
2-nitrophenol	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
3,3'-dichlorobenzidine	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
3-nitroaniline	29000 U	27000 U	27000 U	28000 U	30000 U	28000 U	980 U		
4,6-dinitro-2-methylphenol	29000 U	27000 U	27000 U	28000 U	30000 U	28000 U	980 U		
4-bromophenyl-phenylether	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
4-chloro-3-methylphenol	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
4-chloroaniline	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
4-chlorophenyl-phenylether	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
4-methylphenol	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
4-nitroaniline	29000 U	27000 U	27000 U	28000 U	30000 U	28000 U	980 U		
4-nitrophenol	29000 U	27000 U	27000 U	28000 U	30000 U	28000 U	980 U		
N-nitroso-di-n-propylamine	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
N-nitrosodiphenylamine (1)	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
acenaphthene	3000 J	1300 J	2000 J	3500 J	4800 J	1900 J	390 U		
acenaphthylene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB17-06	16SB18-02	16SB18-06	16SB19-06	16SB19-08	16SB20-02	16SB20-06	19SB01-01	19SB01-03
LOCATION:	16SB17	16SB18	16SB18	16SB19	16SB19	16SB20	16SB20	19SB01	19SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
anthracene	1600 J	11000 U	11000 U	1400 J	1600 J	11000 U	390 U		
benzo(a)anthracene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
benzo(a)pyrene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
benzo(b)fluoranthene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
benzo(g,h,i)perylene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
benzo(k)fluoranthene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
bis(2-chloroethoxy)methane	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
bis(2-chloroethyl)ether	12000 UJ	11000 UJ	11000 UJ	11000 UJ	12000 UJ	11000 UJ	390 U		
bis(2-ethylhexyl)phthalate	12000 UJ	11000 UJ	11000 UJ	11000 UJ	12000 UJ	11000 UJ	390 U		
butylbenzylphthalate	12000 UJ	11000 UJ	11000 UJ	11000 UJ	12000 UJ	11000 UJ	390 U		
carbazole	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
chrysene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
di-n-butylphthalate	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
di-n-octylphthalate	12000 UJ	11000 UJ	11000 UJ	11000 UJ	12000 UJ	11000 UJ	390 U		
dibenz(a,h)anthracene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
dibenzofuran	2200 J	11000 U	2000 J	3500 J	3900 J	11000 U	390 U		
diethylphthalate	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
dimethylphthalate	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
fluoranthene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	82.0 J		
fluorene	5900 J	1600 J	4000 J	7600 J	9100 J	2500 J	390 U		
hexachlorobenzene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
hexachlorobutadiene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
hexachlorocyclopentadiene	12000 UJ	11000 UJ	11000 UJ	11000 UJ	12000 UJ	11000 UJ	390 UJ		
hexachloroethane	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
indeno(1,2,3-cd)pyrene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
isophorone	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
naphthalene	13000	11000 U	3000 J	21000	30000	5000 J	1200		
nitrobenzene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB17-06	16SB18-02	16SB18-06	16SB19-06	16SB19-08	16SB20-02	16SB20-06	19SB01-01	19SB01-03
LOCATION:	16SB17	16SB18	16SB18	16SB19	16SB19	16SB20	16SB20	19SB01	19SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
pentachlorophenol	29000 U	27000 U	27000 U	28000 U	30000 U	28000 U	980 U		
phenanthrene	12000	2800 J	5500 J	13000	16000	4900 J	1400		
phenol	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	390 U		
pyrene	12000 U	11000 U	11000 U	11000 U	12000 U	11000 U	98.0 J		
VOLATILES	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
1,1,1-trichloroethane	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U
1,1,2,2-tetrachloroethane	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U
1,1,2-trichloroethane	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U
1,1-dichloroethane	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U
1,1-dichloroethene	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U
1,2-dichloroethane	1500 UJ	54.0 U	54.0 U	1400 UJ	1500 UJ	11.0 U	12.0 U	11.0 U	11.0 U
1,2-dichloroethene (total)	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U
1,2-dichloropropane	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U
2-butanone	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 UJ	12.0 UJ	11.0 U	11.0 U
2-hexanone	1500 UJ	54.0 U	54.0 U	1400 UJ	1500 UJ	11.0 U	12.0 U	11.0 U	11.0 U
4-methyl-2-pentanone	1500 UJ	54.0 U	54.0 U	1400 UJ	1500 UJ	11.0 U	12.0 U	11.0 U	11.0 U
acetone	1500 UJ	54.0 U	59.0 U	1400 UJ	1500 UJ	34.0 U	72.0 U	11.0 U	17.0 U
benzene	1500 U	54.0 U	54.0 U	1400 U	330 J	11.0 U	12.0 U	11.0 U	11.0 U
bromodichloromethane	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U
bromoform	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U
bromomethane	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U
carbon disulfide	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 UJ	11.0 UJ
carbon tetrachloride	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U
chlorobenzene	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U
chloroethane	1500 U	54.0 UJ	54.0 UJ	1400 U	1500 U	11.0 UJ	12.0 UJ	11.0 UJ	11.0 UJ
chloroform	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U
chloromethane	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U
cis-1,3-dichloropropene	1500 U	54.0 U	54.0 U	1400 U	1500 U	11.0 U	12.0 U	11.0 U	11.0 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB17-06		16SB18-02		16SB18-06		16SB19-06		16SB19-08		16SB20-02		16SB20-06		19SB01-01		19SB01-03	
LOCATION:	16SB17		16SB18		16SB18		16SB19		16SB19		16SB20		16SB20		19SB01		19SB01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
dibromochloromethane	1500	U	54.0	U	54.0	U	1400	U	1500	U	11.0	U	12.0	U	11.0	U	11.0	U
ethylbenzene	2100		13.0	J	120		5400		10000		150		57.0		11.0	U	11.0	U
methylene chloride	150	J	54.0	U	6.0	J	1400	U	1500	U	3.0	J	5.0	J	11.0	U	11.0	U
styrene	1500	U	54.0	U	54.0	U	1400	U	1500	U	11.0	U	12.0	U	11.0	U	11.0	U
tetrachloroethene	1500	U	45.0	J	17.0	J	1400	U	1500	U	11.0	U	9.0	J	4.0	J	11.0	U
toluene	1500	U	54.0	U	54.0	U	1400	U	260	J	11.0	U	12.0	U	11.0	U	11.0	U
trans-1,3-dichloropropene	1500	U	54.0	U	54.0	U	1400	U	1500	U	11.0	U	12.0	U	11.0	U	11.0	U
trichloroethene	1500	U	54.0	U	54.0	U	1400	U	1500	U	11.0	U	12.0	U	11.0	U	11.0	U
vinyl chloride	1500	U	54.0	U	54.0	U	1400	U	1500	U	11.0	U	12.0	U	11.0	U	11.0	U
xylene (total)	2000		8.0	J	120		5700		47000		540		310		11.0	U	11.0	U
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
4,4'-DDD			3.6	U	3.6	U												
4,4'-DDE			3.6	U	3.6	U												
4,4'-DDT			7.4		9.9													
Aroclor-1016	39.0	U	36.0	U	36.0	U	37.0	U	39.0	U	37.0	U	39.0	U				
Aroclor-1221	79.0	U	73.0	U	74.0	U	76.0	U	80.0	U	74.0	U	79.0	U				
Aroclor-1232	39.0	U	36.0	U	36.0	U	37.0	U	39.0	U	37.0	U	39.0	U				
Aroclor-1242	39.0	U	36.0	U	36.0	U	37.0	U	39.0	U	37.0	U	39.0	U				
Aroclor-1248	39.0	U	36.0	U	36.0	U	37.0	U	39.0	U	37.0	U	39.0	U				
Aroclor-1254	39.0	U	36.0	U	36.0	U	37.0	U	39.0	U	37.0	U	39.0	U				
Aroclor-1260	39.0	U	36.0	U	36.0	U	37.0	U	39.0	U	37.0	U	39.0	U				
aldrin			1.8	U	0.16	R												
alpha-BHC			0.20	R	0.29	R												
alpha-chlordane			1.8	U	1.9	U												
beta-BHC			1.8	U	1.9	U												
delta-BHC			1.8	U	1.9	U												
dieldrin			3.6	U	3.6	U												
endosulfan I			1.8	U	0.092	R												

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB17-06	16SB18-02		16SB18-06		16SB19-06	16SB19-08	16SB20-02	16SB20-06	19SB01-01	19SB01-03
LOCATION:	16SB17	16SB18		16SB18		16SB19	16SB19	16SB20	16SB20	19SB01	19SB01
DATA SOURCE:	1995 RI	1995 RI		1995 RI		1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/kg**	**ug/kg**		**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
endosulfan II		3.6	U	3.6	U						
endosulfan sulfate		3.6	U	3.6	U						
endrin		0.29	R	3.6	U						
endrin aldehyde		3.6	U	3.6	U						
endrin ketone		3.6	U	3.6	U						
gamma-BHC (Lindane)		1.8	U	0.57	R						
gamma-chlordane		0.31	R	1.9	U						
heptachlor		1.8	U	1.9	U						
heptachlor epoxide		0.37	R	0.49	J						
methoxychlor		18.0	U	19.0	U						
toxaphene		180	U	190	U						

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	19SB02-00	19SB02-03	19SB03-00	19SB03-00-DUP	19SB03-03	19SB04-00	19SB04-03	19SB05-02	20SB01-03
LOCATION:	19SB02	19SB02	19SB03	19SB03	19SB03	19SB04	19SB04	19SB05	20SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	562	790	3000	1430	3610	1470	1690	1220	1730
antimony	0.54 U	0.56 U	21.5	42.8	0.59 U	0.54 U	0.54 U	0.70	4.1 U
arsenic	0.66 J	0.56 UJ	4.9 J	5.2 J	2.8 J	1.1 J	1.0 J	1.1 J	0.59 U
barium	157 J	129 J	283 J	323 J	8.2 J	5.0 J	241 J	3.3 J	9.2
beryllium	0.13	0.12	0.29	0.20	0.19	0.12	0.15	0.17	0.033 UJ
cadmium	0.12	0.090	5.0	6.8	0.11	0.052	0.074	0.10	0.52 U
calcium	453	321	412	652	129	524	380	68.6	84.8
chromium, hexavalent	10.0 J	0.90 J	320 J	530 J	7.0 J				
chromium, total	45.3	9.4	460	596	34.0	6.8	6.4	13.7	3.7
cobalt	0.18	0.14 U	5.6	6.8	0.16	0.15	0.17	0.14 U	0.64 U
copper	5.6 J	2.4	11.1 J	18.4 J	4.6	1.8	3.7	1.2	1.7
iron	1450 J	874 J	6090 J	3120 J	2900 J	2750 J	1730 J	1890 J	1690
lead	7.4 J	3.4 J	1220 J	1470 J	27.4 J	6.9 J	5.8 J	2.9 J	4.4
magnesium	147	95.0	387	485	158	186	184	61.3	55.1
manganese	2.9 J	1.4 J	16.5 R	19.8 R	1.6 J	3.7 R	3.4 R	2.7 J	9.2 J
mercury	0.018 J	0.0073 U	0.20 J	0.18 J	0.049 J	0.023 J	0.027 J	0.014 J	0.052 J
nickel	0.64	0.32	1.7	2.2	0.58	0.68	0.69	0.42	1.5 U
potassium	58.0	174	377	302	495	98.6	320	179	136
selenium	0.54 UJ	0.56 UJ	0.71 J	0.56 UJ	0.59 UJ	0.54 UJ	0.54 UJ	0.58 UJ	0.59 U
silver	0.14 U	0.14 U	0.17	0.29	0.15 U	0.14 U	0.14	0.15 U	0.36 U
sodium	145	153	192	193	162	154	144	138	61.5
thallium	0.65 U	0.68 U	1.1 J	0.67 U	0.80 J	0.64 U	0.77 J	0.70 U	0.71 U
vanadium	3.9	4.2	12.0	10.3	8.2	6.1	7.2	4.4	3.7
zinc	138 J	76.9 J	6730 J	8790 J	89.1 J	2.2 J	100 J	24.4 J	1.3 J
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene									390 U
1,2-dichlorobenzene									390 U
1,3-dichlorobenzene									390 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	19SB02-00	19SB02-03	19SB03-00	19SB03-00-DUP	19SB03-03	19SB04-00	19SB04-03	19SB05-02	20SB01-03	
LOCATION:	19SB02	19SB02	19SB03	19SB03	19SB03	19SB04	19SB04	19SB05	20SB01	
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
1,4-dichlorobenzene									390	U
2,2'-oxybis(1-chloropropane)									390	U
2,4,5-trichlorophenol									990	U
2,4,6-trichlorophenol									390	U
2,4-dichlorophenol									390	U
2,4-dimethylphenol									390	U
2,4-dinitrophenol									990	U
2,4-dinitrotoluene									390	U
2,6-dinitrotoluene									390	U
2-chloronaphthalene									390	U
2-chlorophenol									390	U
2-methylnaphthalene									390	U
2-methylphenol									390	U
2-nitroaniline									990	U
2-nitrophenol									390	U
3,3'-dichlorobenzidine									390	U
3-nitroaniline									990	U
4,6-dinitro-2-methylphenol									990	U
4-bromophenyl-phenylether									390	U
4-chloro-3-methylphenol									390	U
4-chloroaniline									390	U
4-chlorophenyl-phenylether									390	U
4-methylphenol									390	U
4-nitroaniline									990	U
4-nitrophenol									990	U
N-nitroso-di-n-propylamine									390	U
N-nitrosodiphenylamine (1)									390	U
acenaphthene									390	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	19SB02-00	19SB02-03	19SB03-00	19SB03-00-DUP	19SB03-03	19SB04-00	19SB04-03	19SB05-02	20SB01-03	
LOCATION:	19SB02	19SB02	19SB03	19SB03	19SB03	19SB04	19SB04	19SB05	20SB01	
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
acenaphthylene									390	U
anthracene									390	U
benzo(a)anthracene									390	U
benzo(a)pyrene									390	U
benzo(b)fluoranthene									390	U
benzo(g,h,i)perylene									390	U
benzo(k)fluoranthene									390	U
bis(2-chloroethoxy)methane									390	U
bis(2-chloroethyl)ether									390	U
bis(2-ethylhexyl)phthalate									390	U
butylbenzylphthalate									390	U
carbazole									390	U
chrysene									390	U
di-n-butylphthalate									390	U
di-n-octylphthalate									390	U
dibenz(a,h)anthracene									390	U
dibenzofuran									390	U
diethylphthalate									390	U
dimethylphthalate									390	U
fluoranthene									390	U
fluorene									390	U
hexachlorobenzene									390	U
hexachlorobutadiene									390	U
hexachlorocyclopentadiene									390	U
hexachloroethane									390	U
indeno(1,2,3-cd)pyrene									390	U
isophorone									390	U
naphthalene									390	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	19SB02-00	19SB02-03	19SB03-00	19SB03-00-DUP	19SB03-03	19SB04-00	19SB04-03	19SB05-02	20SB01-03
LOCATION:	19SB02	19SB02	19SB03	19SB03	19SB03	19SB04	19SB04	19SB05	20SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
nitrobenzene									390 U
pentachlorophenol									990 U
phenanthrene									390 U
phenol									390 U
pyrene									390 U
VOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,1,1-trichloroethane	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
1,1,2,2-tetrachloroethane	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
1,1,2-trichloroethane	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
1,1-dichloroethane	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
1,1-dichloroethene	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
1,2-dichloroethane	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
1,2-dichloroethene (total)	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
1,2-dichloropropane	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
2-butanone	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
2-hexanone	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
4-methyl-2-pentanone	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
acetone	11.0 U	34.0 U	15.0 U	24.0 UJ	17.0 U	11.0 U	11.0 U		65.0 U
benzene	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
bromodichloromethane	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
bromoform	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
bromomethane	11.0 U	11.0 U	12.0 U	11.0 UJ	12.0 U	11.0 U	11.0 U		12.0 U
carbon disulfide	11.0 UJ	11.0 UJ	12.0 UJ	11.0 UJ	12.0 UJ	11.0 UJ	11.0 UJ		12.0 UJ
carbon tetrachloride	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
chlorobenzene	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
chloroethane	11.0 UJ	11.0 UJ	12.0 UJ	11.0 UJ	12.0 UJ	11.0 UJ	11.0 UJ		12.0 UJ
chloroform	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U		12.0 U
chloromethane	11.0 U	11.0 U	12.0 U	11.0 UJ	12.0 U	11.0 U	11.0 U		12.0 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	19SB02-00		19SB02-03		19SB03-00		19SB03-00-DUP		19SB03-03		19SB04-00		19SB04-03		19SB05-02		20SB01-03	
LOCATION:	19SB02		19SB02		19SB03		19SB03		19SB03		19SB04		19SB04		19SB05		20SB01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
cis-1,3-dichloropropene	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U			12.0	U
dibromochloromethane	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U			12.0	U
ethylbenzene	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U			12.0	U
methylene chloride	11.0	U	11.0	U	12.0	U	11.0	UJ	12.0	U	11.0	U	11.0	U			12.0	U
styrene	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U			12.0	U
tetrachloroethene	4.0	J	11.0	U	4.0	J	11.0	U	12.0	U	4.0	J	11.0	U			12.0	U
toluene	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U			1.0	J
trans-1,3-dichloropropene	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U			12.0	U
trichloroethene	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U			12.0	U
vinyl chloride	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U			12.0	U
xylene (total)	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U			12.0	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SB02-03	20SB03-03	22-007-S001	22-007-S002	22-008-S001	22-008-S001-DU	22-008-S002	22-009-S001	22-009-S002
LOCATION:	20SB02	20SB03	22-007-S001	22-007-S002	22-008-S001	22-008-S001	22-008-S002	22-009-S001	22-009-S002
DATA SOURCE:	1995 RI	1995 RI	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS
			Unvalidated Data	Unvalidated Data	Unvalidated Data	Unvalidated Data	Unvalidated Data	Unvalidated Data	Unvalidated Data
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	4560	2780	1370		3070			4350	
antimony	6.1 U	4.5 U							
arsenic	5.1	2.9	3.3		2.7			1.9	
barium	47.5	17.8	7.2		5.3			9.6	
beryllium	0.13 UJ	0.037 UJ	0.22		0.45			0.30	
cadmium	0.77 U	0.58 U	0.75 U		0.81 U			0.84 U	
calcium	810	279	55.2		39.4			9.7	
chromium, total	11.1	9.9	17.1		48.2			46.8	
cobalt	1.0	0.71 U	0.75 U		0.81 U			0.84 U	
copper	8.1	6.5	4.7		17.2			2.5	
iron	10500	8270	8340		9480			5520	
lead	14.0	10.1	29.8		6.3			8.0	
magnesium	287	121	131		661			452	
manganese	16.2 J	12.2 J	11.2		6.0			5.0	
mercury	0.14 J	0.10 J							
nickel	2.6	1.7	0.80 U		2.8			0.89 U	
potassium	391	222	530		2270			1710	
selenium	1.4 J	1.3 J	0.31 U		0.30 U			0.35	
silver	0.52 U	0.39 U							
sodium	127	40.7	97.4		31.8			21.7	
thallium	1.0 U	0.78 U							
vanadium	13.5	10.6	12.6		36.1			25.8	
zinc	4.1 J	1.3 J	5.6		33.3			5.3	
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene	570 U	430 U			450 U	440 U		480 U	
1,2-dichlorobenzene	570 U	430 U			450 U	440 U		480 U	
1,3-dichlorobenzene	570 U	430 U			450 U	440 U		480 U	
1,4-dichlorobenzene	570 U	430 U			450 U	440 U		480 U	

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SB02-03		20SB03-03		22-007-S001		22-007-S002	22-008-S001		22-008-S001-DUP		22-008-S002	22-009-S001		22-009-S002
LOCATION:	20SB02		20SB03		22-007-S001		22-007-S002	22-008-S001		22-008-S001		22-008-S002	22-009-S001		22-009-S002
DATA SOURCE:	1995 RI		1995 RI		1992 RI/FS		1992 RI/FS	1992 RI/FS		1992 RI/FS		1992 RI/FS	1992 RI/FS		1992 RI/FS
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	**ug/kg**		**ug/kg**		**ug/kg**	**ug/kg**		**ug/kg**
2,2'-oxybis(1-chloropropane)	570	U	430	U	440	U		450	U	440	U		480	U	
2,4,5-trichlorophenol	1400	U	1100	U	1110	U		1130	U	1110	U		1210	U	
2,4,6-trichlorophenol	570	U	430	U	440	U		450	U	440	U		480	U	
2,4-dichlorophenol	570	U	430	U	440	U		450	U	440	U		480	U	
2,4-dimethylphenol	570	U	430	U	440	U		450	U	440	U		480	U	
2,4-dinitrophenol	1400	U	1100	U	1110	U		1130	U	1110	U		1210	U	
2,4-dinitrotoluene	570	U	430	U	440	U		450	U	440	U		480	U	
2,6-dinitrotoluene	570	U	430	U	440	U		450	U	440	U		480	U	
2-chloronaphthalene	570	U	430	U	440	U		450	U	440	U		480	U	
2-chlorophenol	570	U	430	U	440	U		450	U	440	U		480	U	
2-methylnaphthalene	570	U	430	U	440	U		450	U	440	U		480	U	
2-methylphenol	570	U	430	U	440	U		450	U	440	U		480	U	
2-nitroaniline	1400	U	1100	U	1110	U		1130	U	1110	U		1210	U	
2-nitrophenol	570	U	430	U	440	U		450	U	440	U		480	U	
3,3'-dichlorobenzidine	570	U	430	U	440	U		450	U	440	U		480	U	
3-nitroaniline	1400	U	1100	U	1110	U		1130	U	1110	U		1210	U	
4,6-dinitro-2-methylphenol	1400	U	1100	U	1110	U		1130	U	1110	U		1210	U	
4-bromophenyl-phenylether	570	U	430	U	440	U		450	U	440	U		480	U	
4-chloro-3-methylphenol	570	U	430	U	440	U		450	U	440	U		480	U	
4-chloroaniline	570	U	430	U	440	U		450	U	440	U		480	U	
4-chlorophenyl-phenylether	570	U	430	U	440	U		450	U	440	U		480	U	
4-methylphenol	72.0	J	430	U	440	U		450	U	440	U		480	U	
4-nitroaniline	1400	U	1100	U	1110	U		1130	U	1110	U		1210	U	
4-nitrophenol	1400	U	1100	U	1110	U		1130	U	1110	U		1210	U	
N-nitroso-di-n-propylamine	570	U	430	U	440	U		450	U	440	U		480	U	
N-nitrosodiphenylamine (1)	570	U	430	U	440	U		450	U	440	U		480	U	
acenaphthene	570	U	430	U	440	U		450	U	440	U		480	U	
acenaphthylene	570	U	430	U	440	U		450	U	440	U		480	U	

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SB02-03	20SB03-03	22-007-S001	22-007-S002	22-008-S001	22-008-S001-DUP	22-008-S002	22-009-S001	22-009-S002
LOCATION:	20SB02	20SB03	22-007-S001	22-007-S002	22-008-S001	22-008-S001	22-008-S002	22-009-S001	22-009-S002
DATA SOURCE:	1995 RI	1995 RI	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
anthracene	570 U	430 U	440 U		82.0 J	440 U		480 U	
benzo(a)anthracene	570 U	430 U	440 U		280 J	64.0 J		480 U	
benzo(a)pyrene	570 U	430 U	440 U		210 J	440 U		480 U	
benzo(b)fluoranthene	570 U	430 U	71.0 J		260 J	62.0 J		480 U	
benzo(g,h,i)perylene	570 U	430 U	440 U		100 J	440 U		480 U	
benzo(k)fluoranthene	570 U	430 U	52.0 J		200 J	60.0 J		480 U	
benzoic acid			2200 U		54.0 J	2200 U		2400 U	
bis(2-chloroethoxy)methane	570 U	430 U	440 U		450 U	440 U		480 U	
bis(2-chloroethyl)ether	570 U	430 U	440 U		450 U	440 U		480 U	
bis(2-ethylhexyl)phthalate	570 U	430 U	440 U		450 U	97.0 J		480 U	
butylbenzylphthalate	570 U	430 U	440 U		450 U	440 U		480 U	
carbazole	570 U	430 U	440 U		450 U	440 U		480 U	
chrysene	570 U	430 U	440 U		270 J	73.0 J		480 U	
di-n-butylphthalate	570 U	430 U	58.0 J		450 U	71.0 J		60.0 J	
di-n-octylphthalate	570 U	430 U	440 U		450 U	440 U		480 U	
dibenz(a,h)anthracene	570 U	430 U	440 U		450 U	440 U		480 U	
dibenzofuran	570 U	430 U	440 U		450 U	440 U		480 U	
diethylphthalate	570 U	430 U	440 U		450 U	440 U		480 U	
dimethylphthalate	570 U	430 U	440 U		450 U	440 U		480 U	
fluoranthene	570 U	430 U	110 J		580	190 J		480 U	
fluorene	570 U	430 U	440 U		450 U	440 U		480 U	
hexachlorobenzene	570 U	430 U	440 U		450 U	440 U		480 U	
hexachlorobutadiene	570 U	430 U	440 U		450 U	440 U		480 U	
hexachlorocyclopentadiene	570 U	430 U	440 U		450 U	440 U		480 U	
hexachloroethane	570 U	430 U	440 U		450 U	440 U		480 U	
indeno(1,2,3-cd)pyrene	570 U	430 U	440 U		97.0 J	440 U		480 U	
isophorone	570 U	430 U	440 U		450 U	440 U		480 U	
naphthalene	570 U	430 U	440 U		450 U	440 U		480 U	

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SB02-03		20SB03-03		22-007-S001		22-007-S002		22-008-S001		22-008-S001-DUP		22-008-S002		22-009-S001		22-009-S002	
LOCATION:	20SB02		20SB03		22-007-S001		22-007-S002		22-008-S001		22-008-S001		22-008-S002		22-009-S001		22-009-S002	
DATA SOURCE:	1995 RI		1995 RI		1992 RI/FS		1992 RI/FS		1992 RI/FS		1992 RI/FS		1992 RI/FS		1992 RI/FS		1992 RI/FS	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
nitrobenzene	570	U	430	U	440	U			450	U	440	U			480	U		
pentachlorophenol	1400	U	1100	U	1110	U			1130	U	1110	U			1210	U		
phenanthrene	570	U	430	U	440	U			230	J	81.0	J			480	U		
phenol	570	U	430	U	440	U			450	U	440	U			480	U		
pyrene	570	U	430	U	74.0	J			570		120	J			480	U		
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1,1-trichloroethane	17.0	U	13.0	U			6.0	U					6.0	U			2.0	J
1,1,2,2-tetrachloroethane	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
1,1,2-trichloroethane	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
1,1-dichloroethane	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
1,1-dichloroethene	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
1,2-dichloroethane	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
1,2-dichloroethene (total)	15.0	J	8.0	J			6.0	U					6.0	U			6.0	U
1,2-dichloropropane	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
2-butanone	71.0		38.0				6.0	U					6.0	U			6.0	U
2-hexanone	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
4-methyl-2-pentanone	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
acetone	410	U	250	U			130	U					140	U			130	U
benzene	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
bromodichloromethane	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
bromoform	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
bromomethane	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
carbon disulfide	17.0	UJ	13.0	UJ			6.0	U					6.0	U			6.0	U
carbon tetrachloride	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
chlorobenzene	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
chloroethane	17.0	UJ	13.0	UJ			6.0	U					6.0	U			6.0	U
chloroform	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U
chloromethane	17.0	U	13.0	U			6.0	U					6.0	U			6.0	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SB02-03	20SB03-03	22-007-S001	22-007-S002	22-008-S001	22-008-S001-DUP	22-008-S002	22-009-S001	22-009-S002
LOCATION:	20SB02	20SB03	22-007-S001	22-007-S002	22-008-S001	22-008-S001	22-008-S002	22-009-S001	22-009-S002
DATA SOURCE:	1995 RI	1995 RI	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS
VOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
cis-1,3-dichloropropene	17.0 U	13.0 U		6.0 U			6.0 U		6.0 U
dibromochloromethane	17.0 U	13.0 U		6.0 U			6.0 U		6.0 U
ethylbenzene	5.0 J	13.0 U		6.0 U			6.0 U		6.0 U
methylene chloride	17.0 U	13.0 U		44.0 U			50.0 U		49.0 U
styrene	17.0 U	13.0 U		6.0 U			6.0 U		6.0 U
tetrachloroethene	17.0 U	13.0 U		6.0 U			6.0 U		6.0 U
toluene	13.0 J	6.0 J		6.0 U			6.0 U		6.0 U
trans-1,3-dichloropropene	17.0 U	13.0 U		6.0 U			6.0 U		6.0 U
trichloroethene	17.0 U	13.0 U		6.0 U			6.0 U		6.0 U
vinyl chloride	17.0 U	13.0 U		6.0 U			6.0 U		6.0 U
xylene (total)	17.0 U	13.0 U		6.0 U			6.0 U		6.0 U
PESTICIDES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
4,4'-DDT			4.0 J		20.0 U	19.0 U		5.2 J	

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	22-009-S002-DU	23SB01-04	23SB01-16	23SB02-02	23SB02-16	23SB03-06	23SB03-14	23SB04-02	24SB01-05
LOCATION:	22-009-S002	23SB01	23SB01	23SB02	23SB02	23SB03	23SB03	23SB04	24SB01
DATA SOURCE:	1992 RI/FS	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum		2450	3040	1430	1270	2790	2510	1300	497
antimony		3.4 U	3.2 U	3.4 U	3.2 U	3.1 U	3.3 U	2.6 U	0.56 U
arsenic		6.7	16.2	2.2	10.4	7.9	11.1	5.3	1.8
barium		6.1	0.66	2.5	2.3	1.3	1.9	4.0	0.70
beryllium		0.26	0.69	0.049	0.17	0.51	0.39	0.20 U	0.044
cadmium		0.87	1.5	0.35	1.1	0.86	0.85	0.57 U	0.27
calcium		718	424	68.1	31.9	76.0	60.3	243	14.9
chromium, total		53.8	91.2	13.1	45.7	67.3	69.9	152	4.9 J
cobalt		0.71 U	0.67 U	0.71 U	0.66 U	0.65 U	0.68 U	0.88 U	0.13 U
copper		1.6	1.1 U	5.6	1.0 U	1.0 U	1.1 U	1.2	3.4
iron		10900	22300	3620	15200	11400	11500	3420	7350
lead		8.7 J	9.8 J	4.8 J	4.5 J	2.4	4.3 J	12.0	6.0
magnesium		734	1080	75.5	230	706	516	77.9	3.8
manganese		1.3	0.65 U	3.7	0.64 U	0.63 U	0.66 U	3.6	0.50
mercury		0.012 J	0.0068 UJ	0.019 J	0.0069 UJ	0.0067 UJ	0.0080 J	0.0022 U	0.026
nickel		1.0 U	1.8	1.0 U	1.0 U	1.1	1.0 U	1.3 U	0.16 U
potassium		1510	3210	298	880	2530	1850	237	57.4
selenium		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	0.92 U
silver		0.50 U	0.47 U	0.49 U	0.46 U	0.46 U	0.48 U	1.1 U	0.20 U
sodium		28.1	24.2	26.9	18.2	22.5	21.1	28.0	19.0
thallium		1.6 J	1.2 J	1.9 J	0.91 J	0.90 J	1.2 J	0.79 UJ	0.75 U
vanadium		79.8	178	13.9	86.5	103	103	16.4	2.3
zinc		8.8 J	10.7 J	23.8 J	8.1 J	6.8 J	8.0 J	42.0	3.9 J
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
1,2-dichlorobenzene		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
1,3-dichlorobenzene		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
1,4-dichlorobenzene		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	22-009-S002-DU	23SB01-04	23SB01-16	23SB02-02	23SB02-16	23SB03-06	23SB03-14	23SB04-02	24SB01-05
LOCATION:	22-009-S002	23SB01	23SB01	23SB02	23SB02	23SB03	23SB03	23SB04	24SB01
DATA SOURCE:	1992 RI/FS	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
2,2'-oxybis(1-chloropropane)		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
2,4,5-trichlorophenol		980 U	930 U	980 U	910 U	900 U	940 U	9100 U	
2,4,6-trichlorophenol		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
2,4-dichlorophenol		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
2,4-dimethylphenol		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
2,4-dinitrophenol		980 U	930 U	980 U	910 U	900 U	940 U	9100 U	
2,4-dinitrotoluene		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
2,6-dinitrotoluene		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
2-chloronaphthalene		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
2-chlorophenol		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
2-methylnaphthalene		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
2-methylphenol		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
2-nitroaniline		980 U	930 U	980 U	910 U	900 U	940 U	9100 U	
2-nitrophenol		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
3,3'-dichlorobenzidine		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
3-nitroaniline		980 U	930 U	980 U	910 U	900 U	940 U	9100 U	
4,6-dinitro-2-methylphenol		980 U	930 U	980 U	910 U	900 U	940 U	9100 U	
4-bromophenyl-phenylether		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
4-chloro-3-methylphenol		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
4-chloroaniline		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
4-chlorophenyl-phenylether		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
4-methylphenol		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
4-nitroaniline		980 U	930 U	980 U	910 U	900 U	940 U	9100 U	
4-nitrophenol		980 U	930 U	980 U	910 U	900 U	940 U	9100 U	
N-nitroso-di-n-propylamine		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
N-nitrosodiphenylamine (1)		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
acenaphthene		390 U	370 U	390 U	360 U	360 U	380 U	2700 J	
acenaphthylene		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	22-009-S002-DU	23SB01-04	23SB01-16	23SB02-02	23SB02-16	23SB03-06	23SB03-14	23SB04-02	24SB01-05
LOCATION:	22-009-S002	23SB01	23SB01	23SB02	23SB02	23SB03	23SB03	23SB04	24SB01
DATA SOURCE:	1992 RI/FS	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
anthracene		390 U	370 U	390 U	360 U	360 U	380 U	5400	
benzo(a)anthracene		390 U	370 U	390 U	360 U	360 U	380 U	19000	
benzo(a)pyrene		390 U	370 U	390 U	360 U	360 U	380 U	13000	
benzo(b)fluoranthene		390 U	370 U	390 U	360 U	360 U	380 U	14000	
benzo(g,h,i)perylene		390 U	370 U	390 U	360 U	360 U	380 U	6800	
benzo(k)fluoranthene		390 U	370 U	390 U	360 U	360 U	380 U	5000	
bis(2-chloroethoxy)methane		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
bis(2-chloroethyl)ether		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
bis(2-ethylhexyl)phthalate		590	370 U	390 U	360 U	360 U	380 U	380 J	
butylbenzylphthalate		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
carbazole		390 U	370 U	390 U	360 U	360 U	380 U	2800 J	
chrysene		390 U	370 U	390 U	360 U	360 U	380 U	19000	
di-n-butylphthalate		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
di-n-octylphthalate		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
dibenz(a,h)anthracene		390 U	370 U	390 U	360 U	360 U	380 U	2100 J	
dibenzofuran		390 U	370 U	390 U	360 U	360 U	380 U	1500 J	
diethylphthalate		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
dimethylphthalate		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
fluoranthene		390 U	370 U	390 U	360 U	360 U	380 U	38000	
fluorene		390 U	370 U	390 U	360 U	360 U	380 U	2900 J	
hexachlorobenzene		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
hexachlorobutadiene		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
hexachlorocyclopentadiene		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
hexachloroethane		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
indeno(1,2,3-cd)pyrene		390 U	370 U	390 U	360 U	360 U	380 U	5600	
isophorone		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
naphthalene		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
nitrobenzene		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	22-009-S002-DU	23SB01-04	23SB01-16	23SB02-02	23SB02-16	23SB03-06	23SB03-14	23SB04-02	24SB01-05
LOCATION:	22-009-S002	23SB01	23SB01	23SB02	23SB02	23SB03	23SB03	23SB04	24SB01
DATA SOURCE:	1992 RI/FS	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
pentachlorophenol		980 U	930 U	980 U	910 U	900 U	940 U	9100 U	
phenanthrene		390 U	370 U	390 U	360 U	360 U	380 U	20000	
phenol		390 U	370 U	390 U	360 U	360 U	380 U	3600 U	
pyrene		390 U	370 U	390 U	360 U	360 U	380 U	32000 J	
VOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,1,1-trichloroethane	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
1,1,2,2-tetrachloroethane	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
1,1,2-trichloroethane	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
1,1-dichloroethane	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
1,1-dichloroethene	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
1,2-dichloroethane	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
1,2-dichloroethene (total)	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
1,2-dichloropropane	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
2-butanone	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 UJ	
2-hexanone	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
4-methyl-2-pentanone	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
acetone	220 U	12.0 UJ	11.0 UJ	19.0 UJ	11.0 UJ	11.0 UJ	11.0 UJ	11.0 UJ	
benzene	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
bromodichloromethane	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
bromoform	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
bromomethane	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
carbon disulfide	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 UJ	
carbon tetrachloride	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
chlorobenzene	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
chloroethane	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
chloroform	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
chloromethane	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	
cis-1,3-dichloropropene	6.0 U	12.0 U	11.0 U	12.0 U	11.0 U	11.0 U	11.0 U	11.0 U	

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	22-009-S002-DU		23SB01-04		23SB01-16		23SB02-02		23SB02-16		23SB03-06		23SB03-14		23SB04-02		24SB01-05
LOCATION:	22-009-S002		23SB01		23SB01		23SB02		23SB02		23SB03		23SB03		23SB04		24SB01
DATA SOURCE:	1992 RI/FS		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**
dibromochloromethane	6.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	
ethylbenzene	6.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	
methylene chloride	53.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U	11.0	UJ	
styrene	6.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	
tetrachloroethene	6.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	
toluene	6.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	
trans-1,3-dichloropropene	6.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	
trichloroethene	6.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	
vinyl chloride	6.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	
xylene (total)	6.0	U	12.0	U	11.0	U	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**
4,4'-DDD			3.9	U	3.7	U	3.9	U	3.6	U	3.6	U	3.7	U	3.6	U	
4,4'-DDE			3.9	U	3.7	U	3.9	U	3.6	U	3.6	U	3.7	U	3.6	U	
4,4'-DDT			3.9	U	3.7	U	3.9	U	3.6	U	3.6	U	3.7	U	3.6	U	
aldrin			2.0	U	1.9	U	2.0	U	1.9	U	1.8	U	1.9	U	1.9	U	
alpha-BHC			2.0	U	1.9	U	2.0	U	1.9	U	1.8	U	1.9	U	1.9	U	
alpha-chlordane			2.0	U	1.9	U	2.0	U	1.9	U	1.8	U	1.9	U	1.9	U	
beta-BHC			2.0	U	1.9	U	2.0	U	1.9	U	1.8	U	1.9	U	1.9	U	
delta-BHC			2.0	U	1.9	U	2.0	U	1.9	U	1.8	U	1.9	U	1.9	U	
dieldrin			3.9	U	3.7	U	3.9	U	3.6	U	3.6	U	3.7	U	3.6	U	
endosulfan I			2.0	U	1.9	U	2.0	U	1.9	U	1.8	U	1.9	U	1.9	U	
endosulfan II			3.9	U	3.7	U	3.9	U	3.6	U	3.6	U	3.7	U	3.6	U	
endosulfan sulfate			3.9	U	3.7	U	3.9	U	3.6	U	3.6	U	3.7	U	3.6	U	
endrin			3.9	U	3.7	U	3.9	U	3.6	U	3.6	U	3.7	U	3.6	U	
endrin aldehyde			3.9	U	3.7	U	3.9	U	3.6	U	3.6	U	3.7	U	3.6	U	
endrin ketone			3.9	U	3.7	U	3.9	U	3.6	U	3.6	U	3.7	U	3.6	U	
gamma-BHC (Lindane)			2.0	U	1.9	U	0.039	JN	1.9	U	1.8	U	1.9	U	1.9	U	
gamma-chlordane			2.0	U	1.9	U	2.0	U	1.9	U	1.8	U	1.9	U	1.9	U	

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	22-009-S002-DU	23SB01-04	23SB01-16	23SB02-02	23SB02-16	23SB03-06	23SB03-14	23SB04-02	24SB01-05
LOCATION:	22-009-S002	23SB01	23SB01	23SB02	23SB02	23SB03	23SB03	23SB04	24SB01
DATA SOURCE:	1992 RI/FS	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
PESTICIDES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
heptachlor		2.0 U	1.9 U	2.0 U	1.9 U	1.8 U	1.9 U	1.9 U	
heptachlor epoxide		2.0 U	1.9 U	2.0 U	1.9 U	1.8 U	1.9 U	1.9 U	
methoxychlor		20.0 U	19.0 U	20.0 U	19.0 U	18.0 U	19.0 U	19.0 U	
toxaphene		200 U	190 U	200 U	190 U	180 U	190 U	190 U	

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	24SB01-08	24SB01-08-DUP	24SB02-03	24SB02-06	25SB01-05	25SB01-08	25SB02-03	25SB02-06	26SB01-02
LOCATION:	24SB01	24SB01	24SB02	24SB02	25SB01	25SB01	25SB02	25SB02	26SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	168 J	911	102	381	472	540	247	116	3350
antimony	0.56 U	2.6 U	0.54 U	2.5 U	0.79	0.59 U	0.56	0.56 U	0.56 U
arsenic	0.68 U	1.6	0.66 U	0.70 U	0.67 U	1.2	0.69 U	0.68 U	1.0 J
barium	0.51	1.8	0.23	0.52	0.65	1.6	0.41	0.24	3.4 J
beryllium	0.035	0.20 U	0.022 U	0.19 U	0.022 U	0.050	0.025	0.023 U	0.13
cadmium	0.079 U	0.56 U	0.076 U	0.62 J	0.078 U	0.083 U	0.079 U	0.079 U	0.040
calcium	23.5	22.9	22.6	27.3	22.9	21.8	26.2	22.3	163
chromium, total	1.0	4.7	0.36	1.2	1.5	1.4	0.41	0.64	6.4
cobalt	0.12 U	0.87 U	0.12 U	0.85 U	0.12 U	0.13 U	0.12 U	0.12 U	0.13 U
copper	0.52	1.3	0.39	1.0 U	4.5	1.6	0.53	0.41	0.59
iron	662 J	7830 J	238	743 J	1300	2580	74.4	242	3270 J
lead	0.77	1.8	0.47	0.80	39.7	11.1	1.0	1.4	2.3 J
magnesium	6.0	13.2	7.6	11.8	6.5	6.5	6.7	4.3	59.0
manganese	0.33	3.5	0.57	1.5	5.7	2.0	2.4	1.7	1.9 J
mercury	0.024	0.0027 J	0.0065	0.0021 U	0.013	0.023	0.011	0.015	0.064 J
nickel	0.22	1.3 U	0.15 U	1.3 U	0.30	0.16 U	0.28	0.16 U	0.78
potassium	77.1	88.7	48.4	34.7	31.4 U	113	43.8	31.9 U	95.2
selenium	0.91 U	1.0 UJ	0.88 U	0.93 UJ	0.90 U	1.0 U	0.92 U	0.91 U	0.56 UJ
silver	0.19 U	1.0 U	0.19 U	1.0 U	0.19 U	0.21 U	0.20 U	0.19 U	0.14 U
sodium	643	15.1	22.4	24.0	699	26.0	19.4	772	160
thallium	0.75 U	0.78 UJ	0.72 U	0.76 UJ	0.74 U	0.79 U	0.75 U	0.75 U	0.67 U
vanadium	0.54	2.9	0.56	2.1	1.8	2.7	0.26	0.30	5.7
zinc	4.8 R	1.4 J	24.3 R	1.0 J	3.4 J	9.3 R	6.2 R	1.2 J	3.1 J
VOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,1,1-trichloroethane									11.0 U
1,1,2,2-tetrachloroethane									11.0 U
1,1,2-trichloroethane									11.0 U
1,1-dichloroethane									11.0 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	24SB01-08	24SB01-08-DUP	24SB02-03	24SB02-06	25SB01-05	25SB01-08	25SB02-03	25SB02-06	26SB01-02	
LOCATION:	24SB01	24SB01	24SB02	24SB02	25SB01	25SB01	25SB02	25SB02	26SB01	
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	
VOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
1,1-dichloroethene									11.0	U
1,2-dichloroethane									11.0	U
1,2-dichloroethene (total)									11.0	U
1,2-dichloropropane									11.0	U
2-butanone									11.0	U
2-hexanone									11.0	U
4-methyl-2-pentanone									11.0	U
acetone									17.0	UJ
benzene									11.0	U
bromodichloromethane									11.0	U
bromoform									11.0	U
bromomethane									11.0	UJ
carbon disulfide									11.0	UJ
carbon tetrachloride									11.0	U
chlorobenzene									11.0	U
chloroethane									11.0	UJ
chloroform									11.0	U
chloromethane									11.0	UJ
cis-1,3-dichloropropene									11.0	U
dibromochloromethane									11.0	U
ethylbenzene									11.0	U
methylene chloride									11.0	UJ
styrene									11.0	U
tetrachloroethene									11.0	U
toluene									11.0	U
trans-1,3-dichloropropene									11.0	U
trichloroethene									11.0	U
vinyl chloride									11.0	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	24SB01-08	24SB01-08-DUP	24SB02-03	24SB02-06	25SB01-05	25SB01-08	25SB02-03	25SB02-06	26SB01-02
LOCATION:	24SB01	24SB01	24SB02	24SB02	25SB01	25SB01	25SB02	25SB02	26SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
VOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
xylene (total)									11.0 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	26SB02-04	26SB03-04	26SB03-06	26SB04-02	26SB04-06	26SBDEC95-01	26SBDEC95-02	27SB01-01	27SB01-03
LOCATION:	26SB02	26SB03	26SB03	26SB04	26SB04	26SBDEC95-01	26SBDEC95-02	27SB01	27SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	668	1780	557	2300	1280			5090	1690
antimony	0.55 U	0.55 U	0.66	0.61	0.59 U			2.5 U	2.4 U
arsenic	0.59 J	3.1 J	0.56 UJ	2.7 J	0.59 UJ			2.8	1.1
barium	213 J	2.3 J	1.1 J	2.2 J	2.3 J			21.5	4.2
beryllium	0.25	0.16	0.13	0.16	0.14			0.10	0.078 U
cadmium	0.068	1.2	0.077	0.81	0.20			2.1 J	0.67 J
calcium	169	63.7	28.7	76.2	32.9			156	46.3
chromium, total	2.7	7.8	2.2	6.6	3.3			191	18.8
cobalt	0.13 U	0.13 U	0.14 U	0.14 U	0.14 U			1.4	0.80 U
copper	1.6	2.3	0.088 U	0.94	0.52			11.6	3.0
iron	2240 J	6550 J	961 J	4560 J	1740 J			10100	3850
lead	1.7 J	1.4 J	0.55 J	1.2 J	1.0 J			105 J	9.9 J
magnesium	31.1	52.9	17.3	58.2	29.7			424	162
manganese	1.2 J	1.6 J	1.1 J	1.0 J	1.4 J			18.4 J	18.0 J
mercury	0.0070 U	0.0072 U	0.0073 U	0.0068 U	0.0077 U			0.044	0.029
nickel	0.24	0.50	0.38	0.32	0.29			3.0	0.91
potassium	77.7	185	55.2 U	185	118			280	186
selenium	0.55 UJ	0.55 UJ	0.56 UJ	0.57 UJ	0.59 UJ			0.74	0.53 U
silver	0.14 U	2.4	1.0	1.3	0.64			0.62 U	15.0
sodium	146	103	144	98.6	131			19.6	18.8
thallium	0.92 J	0.87 J	0.70 J	0.68 U	0.71 U			0.77 U	0.74 U
vanadium	2.5	8.1	1.2	6.2	1.9			18.6 J	7.2
zinc	89.3 J	12.8 J	0.50 UJ	1.6 J	0.52 UJ			323	14.0
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene								350 U	340 U
1,2-dichlorobenzene								350 U	340 U
1,3-dichlorobenzene								350 U	340 U
1,4-dichlorobenzene								350 U	340 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	26SB02-04	26SB03-04	26SB03-06	26SB04-02	26SB04-06	26SBDEC95-01	26SBDEC95-02	27SB01-01	27SB01-03
LOCATION:	26SB02	26SB03	26SB03	26SB04	26SB04	26SBDEC95-01	26SBDEC95-02	27SB01	27SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
2,2'-oxybis(1-chloropropane)								350 U	340 U
2,4,5-trichlorophenol								880 U	860 U
2,4,6-trichlorophenol								350 U	340 U
2,4-dichlorophenol								350 U	340 U
2,4-dimethylphenol								350 U	340 U
2,4-dinitrophenol								880 U	860 U
2,4-dinitrotoluene								350 U	340 U
2,6-dinitrotoluene								350 U	340 U
2-chloronaphthalene								350 U	340 U
2-chlorophenol								350 U	340 U
2-methylnaphthalene								350 U	340 U
2-methylphenol								350 U	340 U
2-nitroaniline								880 U	860 U
2-nitrophenol								350 U	340 U
3,3'-dichlorobenzidine								350 U	340 U
3-nitroaniline								880 U	860 U
4,6-dinitro-2-methylphenol								880 U	860 U
4-bromophenyl-phenylether								350 U	340 U
4-chloro-3-methylphenol								350 U	340 U
4-chloroaniline								350 U	340 U
4-chlorophenyl-phenylether								350 U	340 U
4-methylphenol								350 U	340 U
4-nitroaniline								880 U	860 U
4-nitrophenol								880 U	860 U
N-nitroso-di-n-propylamine								350 U	340 U
N-nitrosodiphenylamine (1)								350 U	340 U
acenaphthene								350 U	340 U
acenaphthylene								350 U	340 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	26SB02-04	26SB03-04	26SB03-06	26SB04-02	26SB04-06	26SBDEC95-01	26SBDEC95-02	27SB01-01	27SB01-03
LOCATION:	26SB02	26SB03	26SB03	26SB04	26SB04	26SBDEC95-01	26SBDEC95-02	27SB01	27SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
anthracene								350 U	340 U
benzo(a)anthracene								350 U	340 U
benzo(a)pyrene								350 U	340 U
benzo(b)fluoranthene								350 U	340 U
benzo(g,h,i)perylene								350 U	340 U
benzo(k)fluoranthene								350 U	340 U
bis(2-chloroethoxy)methane								350 U	340 U
bis(2-chloroethyl)ether								350 U	340 U
bis(2-ethylhexyl)phthalate								840	340 U
butylbenzylphthalate								350 U	340 U
carbazole								350 U	340 U
chrysene								350 U	340 U
di-n-butylphthalate								350 U	340 U
di-n-octylphthalate								350 U	340 U
dibenz(a,h)anthracene								350 U	340 U
dibenzofuran								350 U	340 U
diethylphthalate								350 U	340 U
dimethylphthalate								350 U	340 U
fluoranthene								350 U	340 U
fluorene								350 U	340 U
hexachlorobenzene								350 U	340 U
hexachlorobutadiene								350 U	340 U
hexachlorocyclopentadiene								350 U	340 U
hexachloroethane								350 U	340 U
indeno(1,2,3-cd)pyrene								350 U	340 U
isophorone								350 U	340 U
naphthalene								89.0 J	340 U
nitrobenzene								350 U	340 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	26SB02-04	26SB03-04	26SB03-06	26SB04-02	26SB04-06	26SBDEC95-01	26SBDEC95-02	27SB01-01	27SB01-03
LOCATION:	26SB02	26SB03	26SB03	26SB04	26SB04	26SBDEC95-01	26SBDEC95-02	27SB01	27SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
pentachlorophenol								880 U	860 U
phenanthrene								350 U	340 U
phenol								350 U	340 U
pyrene								350 U	340 U
VOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,1,1-trichloroethane	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	10.0 U
1,1,2,2-tetrachloroethane	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	10.0 U
1,1,2-trichloroethane	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	10.0 U
1,1-dichloroethane	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	10.0 U
1,1-dichloroethene	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	10.0 U
1,2-dichloroethane	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	10.0 U
1,2-dichloroethene (total)	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	3.0 J	140	11.0 U	10.0 U
1,2-dichloropropane	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	10.0 U
2-butanone	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 UJ	12.0 UJ	11.0 UJ	10.0 UJ
2-hexanone	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 UJ	12.0 UJ	11.0 UJ	10.0 UJ
4-methyl-2-pentanone	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 UJ	12.0 UJ	11.0 UJ	10.0 UJ
acetone	18.0 UJ	15.0 UJ	12.0 UJ	15.0 UJ	12.0 UJ	11.0 U	12.0 U	11.0 U	10.0 U
benzene	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	10.0 U
bromodichloromethane	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	10.0 U
bromoform	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	10.0 U
bromomethane	11.0 UJ	11.0 UJ	11.0 UJ	11.0 UJ	12.0 UJ	11.0 UJ	12.0 UJ	11.0 UJ	10.0 UJ
carbon disulfide	11.0 UJ	11.0 UJ	11.0 UJ	11.0 UJ	12.0 UJ	11.0 U	12.0 U	11.0 U	10.0 U
carbon tetrachloride	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	10.0 U
chlorobenzene	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	10.0 U
chloroethane	11.0 UJ	11.0 UJ	11.0 UJ	11.0 UJ	12.0 UJ	11.0 U	12.0 U	11.0 U	10.0 U
chloroform	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	10.0 U
chloromethane	11.0 UJ	11.0 UJ	11.0 UJ	11.0 UJ	12.0 UJ	11.0 U	12.0 U	11.0 U	10.0 U
cis-1,3-dichloropropene	11.0 U	11.0 U	11.0 U	11.0 U	12.0 U	11.0 U	12.0 U	11.0 U	10.0 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	26SB02-04		26SB03-04		26SB03-06		26SB04-02		26SB04-06		26SBDEC95-01		26SBDEC95-02		27SB01-01		27SB01-03	
LOCATION:	26SB02		26SB03		26SB03		26SB04		26SB04		26SBDEC95-01		26SBDEC95-02		27SB01		27SB01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
dibromochloromethane	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	10.0	U
ethylbenzene	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	10.0	U
methylene chloride	11.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	12.0	UJ	11.0	U	2.0	J	11.0	U	10.0	U
styrene	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	10.0	U
tetrachloroethene	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	10.0	U
toluene	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	10.0	U
trans-1,3-dichloropropene	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	10.0	U
trichloroethene	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U	2.0	J	74.0		11.0	U	10.0	U
vinyl chloride	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	10.0	U
xylene (total)	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U	11.0	U	12.0	U	11.0	U	10.0	U
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
4,4'-DDD															33.0		3.4	U
4,4'-DDE															15.0	J	3.4	U
4,4'-DDT															1.7	NJ	0.67	R
Aroclor-1016															35.0	U	34.0	U
Aroclor-1221															71.0	U	69.0	U
Aroclor-1232															35.0	U	34.0	U
Aroclor-1242															35.0	U	34.0	U
Aroclor-1248															35.0	U	34.0	U
Aroclor-1254															35.0	U	30.0	J
Aroclor-1260															35.0	U	12.0	J
aldrin															1.8	U	1.8	U
alpha-BHC															1.8	U	1.8	U
alpha-chlordane															1.8	U	0.26	NJ
beta-BHC															1.8	U	1.8	U
delta-BHC															1.8	U	1.8	U
dieldrin															3.5	U	3.4	U
endosulfan I															1.8	U	1.8	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	26SB02-04	26SB03-04	26SB03-06	26SB04-02	26SB04-06	26SBDEC95-01	26SBDEC95-02	27SB01-01	27SB01-03
LOCATION:	26SB02	26SB03	26SB03	26SB04	26SB04	26SBDEC95-01	26SBDEC95-02	27SB01	27SB01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.
PESTICIDES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
endosulfan II								3.5 U	3.4 U
endosulfan sulfate								3.5 U	3.4 U
endrin								3.5 U	3.4 U
endrin aldehyde								3.5 U	3.4 U
endrin ketone								3.5 U	3.4 U
gamma-BHC (Lindane)								1.8 U	1.8 U
gamma-chlordane								1.8 U	1.8 U
heptachlor								1.8 U	1.8 U
heptachlor epoxide								1.8 U	1.8 U
methoxychlor								18.0 U	18.0 U
toxaphene								180 U	180 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	27SB01-10	27SB02-01	27SB02-03	27SB02-10	27SB03-01	27SB03-03	27SB03-06	29SB01-02	29SB02-02
LOCATION:	27SB01	27SB02	27SB02	27SB02	27SB03	27SB03	27SB03	29SB01	29SB02
DATA SOURCE:	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	7530	3680	3350	2500	1370	2660	4520		
antimony	2.7 U	2.5 U	2.5 U	2.6 U	3.0	2.5 U	2.7 U		
arsenic	0.73	1.8	1.6	0.61 U	3.9	1.2	0.79		
barium	23.1	19.7	5.3	11.0	109	10.0	21.6		
beryllium	0.42	0.083 U	0.081 U	0.13	0.16	0.18	0.32		
cadmium	0.62 U	4.0 J	0.57 U	0.61 U	52.4	1.5	1.3		
calcium	179	502	232	176	572	168	161		
chromium, total	10.4	26.7	9.3	5.8	146	10.4	14.5		
cobalt	1.6	0.85 U	0.83 U	0.89 U	4.1	0.89	1.2		
copper	4.2	39.9	1.7	4.5	150 J	4.8	9.8 J		
iron	6250	7320	5300	2750	11800	4660	4970		
lead	4.6 J	46.4 J	2.9	4.6 J	369	11.9	21.4		
magnesium	1090	341	216	364	180	323	673		
manganese	45.6 J	31.3 J	19.1 J	20.7 J	104	37.2	38.1		
mercury	0.033	0.053	0.037	0.033	0.12	0.030	0.033		
nickel	5.0	3.4	1.8	1.0	10.6	2.2	3.5		
potassium	392	176	121	113	149	278	246		
selenium	0.60 U	0.57 U	0.55 U	0.59 U	0.74 J	0.56 UJ	0.60 UJ		
silver	0.67 U	0.63 U	0.62 U	0.66 U	0.072 U	0.068 U	0.074 U		
sodium	34.2	19.2	11.8	33.2	48.0	23.3	44.8		
thallium	0.83 U	0.78 U	0.76 U	0.82 U	0.81 U	0.77 U	0.83 U		
vanadium	12.2 J	12.5 J	10.1	7.3	8.4	8.8	12.5		
zinc	16.7	258	5.2	18.5	320 J	16.1 J	23.3 J		
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
1,2-dichlorobenzene	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
1,3-dichlorobenzene	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
1,4-dichlorobenzene	380 U	360 U	350 U	380 U	370 U	350 U	380 U		

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	27SB01-10	27SB02-01	27SB02-03	27SB02-10	27SB03-01	27SB03-03	27SB03-06	29SB01-02	29SB02-02
LOCATION:	27SB01	27SB02	27SB02	27SB02	27SB03	27SB03	27SB03	29SB01	29SB02
DATA SOURCE:	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
2,2'-oxybis(1-chloropropane)	380 U	360 U	350 U	380 U	370 UJ	350 UJ	380 UJ		
2,4,5-trichlorophenol	960 U	910 U	890 U	940 U	930 U	880 U	960 U		
2,4,6-trichlorophenol	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
2,4-dichlorophenol	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
2,4-dimethylphenol	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
2,4-dinitrophenol	960 U	910 U	890 U	940 U	930 U	880 U	960 U		
2,4-dinitrotoluene	380 U	360 U	350 U	380 U	370 UJ	350 UJ	380 UJ		
2,6-dinitrotoluene	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
2-chloronaphthalene	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
2-chlorophenol	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
2-methylnaphthalene	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
2-methylphenol	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
2-nitroaniline	960 U	910 U	890 U	940 U	930 U	880 U	960 U		
2-nitrophenol	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
3,3'-dichlorobenzidine	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
3-nitroaniline	960 U	910 U	890 U	940 U	930 U	880 U	960 U		
4,6-dinitro-2-methylphenol	960 U	910 U	890 U	940 U	930 U	880 U	960 U		
4-bromophenyl-phenylether	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
4-chloro-3-methylphenol	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
4-chloroaniline	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
4-chlorophenyl-phenylether	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
4-methylphenol	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
4-nitroaniline	960 U	910 U	890 U	940 U	930 U	880 U	960 U		
4-nitrophenol	960 U	910 U	890 U	940 U	930 U	880 U	960 U		
N-nitroso-di-n-propylamine	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
N-nitrosodiphenylamine (1)	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
acenaphthene	380 U	360 U	350 U	380 U	370 U	350 U	380 U		
acenaphthylene	380 U	360 U	350 U	380 U	370 U	350 U	380 U		

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	27SB01-10		27SB02-01		27SB02-03		27SB02-10		27SB03-01		27SB03-03		27SB03-06		29SB01-02	29SB02-02
LOCATION:	27SB01		27SB02		27SB02		27SB02		27SB03		27SB03		27SB03		29SB01	29SB02
DATA SOURCE:	1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	**ug/kg**
anthracene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
benzo(a)anthracene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
benzo(a)pyrene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
benzo(b)fluoranthene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
benzo(g,h,i)perylene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
benzo(k)fluoranthene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
bis(2-chloroethoxy)methane	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
bis(2-chloroethyl)ether	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
bis(2-ethylhexyl)phthalate	380	U	360	U	350	U	380	U	5600		350	U	430	U		
butylbenzylphthalate	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
carbazole	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
chrysene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
di-n-butylphthalate	380	U	360	U	350	U	380	U	58.0	J	350	U	380	U		
di-n-octylphthalate	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
dibenz(a,h)anthracene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
dibenzofuran	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
diethylphthalate	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
dimethylphthalate	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
fluoranthene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
fluorene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
hexachlorobenzene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
hexachlorobutadiene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
hexachlorocyclopentadiene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
hexachloroethane	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
indeno(1,2,3-cd)pyrene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
isophorone	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
naphthalene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
nitrobenzene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	27SB01-10		27SB02-01		27SB02-03		27SB02-10		27SB03-01		27SB03-03		27SB03-06		29SB01-02	29SB02-02
LOCATION:	27SB01		27SB02		27SB02		27SB02		27SB03		27SB03		27SB03		29SB01	29SB02
DATA SOURCE:	1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	**ug/kg**
pentachlorophenol	960	U	910	U	890	U	940	U	930	U	880	U	960	U		
phenanthrene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
phenol	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
pyrene	380	U	360	U	350	U	380	U	370	U	350	U	380	U		
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	**ug/kg**
1,1,1-trichloroethane	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
1,1,2,2-tetrachloroethane	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
1,1,2-trichloroethane	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
1,1-dichloroethane	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
1,1-dichloroethene	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
1,2-dichloroethane	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
1,2-dichloroethene (total)	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
1,2-dichloropropane	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
2-butanone	12.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	11.0	U	11.0	U	12.0	U		
2-hexanone	12.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	11.0	U	11.0	U	12.0	U		
4-methyl-2-pentanone	12.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	11.0	U	11.0	U	12.0	U		
acetone	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U		
benzene	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
bromodichloromethane	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
bromoform	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
bromomethane	12.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	12.0	UJ		
carbon disulfide	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
carbon tetrachloride	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
chlorobenzene	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
chloroethane	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
chloroform	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
chloromethane	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		
cis-1,3-dichloropropene	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U		

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	27SB01-10		27SB02-01		27SB02-03		27SB02-10		27SB03-01		27SB03-03		27SB03-06		29SB01-02		29SB02-02	
LOCATION:	27SB01		27SB02		27SB02		27SB02		27SB03		27SB03		27SB03		29SB01		29SB02	
DATA SOURCE:	1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
dibromochloromethane	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U				
ethylbenzene	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U				
methylene chloride	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U				
styrene	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U				
tetrachloroethene	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U				
toluene	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U				
trans-1,3-dichloropropene	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U				
trichloroethene	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U				
vinyl chloride	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U				
xylene (total)	12.0	U	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U				
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
4,4'-DDD	3.8	U	3.6	U	3.5	U	6.7		3.7	U	0.34	J	0.28	J	35.6		38.0	J
4,4'-DDE	3.8	U	4.3		3.5	U	1.8	J	16.0		3.6	U	3.9	U	28.9		34.0	
4,4'-DDT	3.8	U	14.0	J	3.5	U	3.7	U	47.0		1.5	J	1.5	J	28.6		39.0	
Aroclor-1016	38.0	U	36.0	U	35.0	U	37.0	U	37.0	U	35.0	U	38.0	U	37.0	U	39.0	U
Aroclor-1221	78.0	U	73.0	U	72.0	U	76.0	U	75.0	U	71.0	U	78.0	U	75.0	U	79.0	U
Aroclor-1232	38.0	U	36.0	U	35.0	U	37.0	U	37.0	U	35.0	U	38.0	U	37.0	U	39.0	U
Aroclor-1242	38.0	U	36.0	U	35.0	U	37.0	U	37.0	U	35.0	U	38.0	U	37.0	U	39.0	U
Aroclor-1248	38.0	U	36.0	U	35.0	U	37.0	U	37.0	U	35.0	U	38.0	U	37.0	U	39.0	U
Aroclor-1254	38.0	U	79.0		35.0	U	150		37.0	U	35.0	U	38.0	U	37.0	U	39.0	U
Aroclor-1260	38.0	U	94.0		35.0	U	37.0	U	300		15.0	J	16.0	J	37.0	U	39.0	U
aldrin	2.0	U	1.9	U	1.8	U	1.9	U	1.9	U	1.8	U	2.0	U	1.9	U	2.0	U
alpha-BHC	2.0	U	1.9	U	1.8	U	0.14	R	1.9	U	1.8	U	2.0	U	1.9	U	0.067	J
alpha-chlordane	2.0	U	0.80	J	1.8	U	2.5	J	3.2		1.8	U	0.20	J	1.9	U	0.64	NJ
beta-BHC	2.0	U	1.9	U	1.8	U	1.9	U	1.9	U	1.8	U	2.0	U	1.9	U	2.0	U
delta-BHC	2.0	U	1.9	U	1.8	U	1.9	U	1.9	U	1.8	U	2.0	U	1.9	U	2.0	U
dieldrin	3.8	U	3.6	U	3.5	U	3.7	U	1.6	NJ	3.5	U	3.8	U	3.7	U	3.9	U
endosulfan I	2.0	U	1.9	U	1.8	U	1.9	U	1.9	U	1.8	U	2.0	U	1.9	U	2.0	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	27SB01-10		27SB02-01		27SB02-03		27SB02-10		27SB03-01		27SB03-03		27SB03-06		29SB01-02		29SB02-02	
LOCATION:	27SB01		27SB02		27SB02		27SB02		27SB03		27SB03		27SB03		29SB01		29SB02	
DATA SOURCE:	1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI		1995 RI	
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
endosulfan II	3.8	U	3.6	U	3.5	U	3.7	U	3.7	U	3.5	U	3.8	U	3.7	U	3.9	U
endosulfan sulfate	3.8	U	3.6	U	3.5	U	3.8	U	3.7	U	3.5	U	3.8	U	3.7	U	3.9	U
endrin	3.8	U	3.6	U	3.5	U	3.7	U	3.7	U	3.5	U	3.8	U	3.7	U	0.36	R
endrin aldehyde	3.8	U	3.6	U	3.5	U	3.8	U	15.0	J	3.6	U	3.9	U	3.7	U	3.9	U
endrin ketone	3.8	U	3.6	U	3.5	U	3.8	U	3.7	U	3.5	U	3.8	U	3.7	U	3.9	U
gamma-BHC (Lindane)	2.0	U	1.9	U	1.8	U	1.9	U	0.22	R	1.8	U	2.0	U	1.9	U	2.0	U
gamma-chlordane	2.0	U	0.33	R	1.8	U	0.41	R	1.4	R	1.8	U	2.0	U	1.9	U	0.84	J
heptachlor	0.27	J	1.9	U	1.8	U	1.9	U	1.9	U	1.8	U	2.0	U	1.9	U	2.0	U
heptachlor epoxide	2.0	U	1.9	U	1.8	U	0.45	R	0.17	R	1.8	U	2.0	U	1.9	U	2.0	U
methoxychlor	20.0	U	19.0	U	18.0	U	19.0	U	19.0	U	18.0	U	20.0	U	19.0	U	20.0	U
toxaphene	200	U	190	U	180	U	190	U	190	U	180	U	200	U	190	U	200	U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	86SB01	BGSB01-00	BGSB01-05	BGSB02-00	BGSB02-00-DUP	BGSB02-05	BGSB03-00	BGSB03-05	BGSB04-00
LOCATION:	86SB01	BGSB01	BGSB01	BGSB02	BGSB02	BGSB02	BGSB03	BGSB03	BGSB04
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum		1710	1810	1980	1710	675	3440	4520	5310
antimony		3.6 U	3.7 U	3.5 U	3.5 U	3.6 U	4.2 U	3.8 U	4.1 U
arsenic		2.1	2.8	1.4	1.3	1.7	9.0	11.2	14.4
barium		2.6	0.92	2.1	1.6	1.4	9.6	9.5	31.0
beryllium		0.22 UJ	0.12 J	0.028 UJ	0.029 UJ	0.029 UJ	0.28 J	0.031 UJ	0.74 UJ
cadmium		0.46 U	0.47 U	0.57	0.45 U	0.46 U	0.54 U	0.48 U	0.52 U
calcium		40.5	147	39.3	40.9	28.6	504	232	519
chromium, total		59.5	45.3	8.2	7.4	4.7	13.4	19.6	57.4
cobalt		0.56 U	0.58 U	0.55 U	0.55 U	0.56 U	0.75	2.0	5.0
copper		1.0	1.2	2.7	2.4	2.2	8.4	2.5	8.2
cyanide		0.25 U	0.26 U	0.25 U	0.25 U	0.25 U	0.30 U	0.27 U	0.29 U
iron		9760	9590	3790	3700	4190	28800	19000	62500
lead		1.8	1.7	10.9	9.3	1.4	39.4	3.5	23.3
magnesium		231	137	79.0	64.4	18.5	236	337	619
manganese		7.5 J	4.8	3.8	3.1	2.6	31.7 J	50.1 J	214 J
mercury		0.035 J	0.030 J	0.040 J	0.037 J	0.030 J	0.17 J	0.033 J	0.12 J
nickel		1.4 U	1.4 U	1.3 U	1.3 U	1.3 U	1.8	2.3	7.2
potassium		514	352	121	69.0	50.8 U	424	540	792
selenium		0.52 U	0.53 U	0.57 J	0.51 U	0.52 U	0.61 U	0.55 U	0.93 J
silver		0.37	0.32 U	0.31 U	0.31 U	0.31 U	0.37 U	0.33 U	0.67
sodium		20.7	23.1	17.9	17.1	20.5	32.2	22.4	86.2
thallium		0.63 U	0.64 U	0.61 U	0.70	0.76	0.73 U	0.77	1.9
vanadium		35.8	45.0	11.5	10.6	13.7	29.4	42.0	64.0
zinc		2.0 UJ	19.8	1.1 J	0.46 UJ	4.0 UJ	15.9 J	50.7	27.6
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
1,2-dichlorobenzene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
1,3-dichlorobenzene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	86SB01	BGSB01-00	BGSB01-05	BGSB02-00	BGSB02-00-DUP	BGSB02-05	BGSB03-00	BGSB03-05	BGSB04-00
LOCATION:	86SB01	BGSB01	BGSB01	BGSB02	BGSB02	BGSB02	BGSB03	BGSB03	BGSB04
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,4-dichlorobenzene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
2,2'-oxybis(1-chloropropane)		340 UJ	350 UJ	340 U	340 U	340 U	400 U	360 U	390 U
2,4,5-trichlorophenol		860 U	880 U	850 U	850 U	860 U	1000 U	910 U	980 U
2,4,6-trichlorophenol		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
2,4-dichlorophenol		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
2,4-dimethylphenol		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
2,4-dinitrophenol		860 UJ	880 U	850 UR	850 UR	860 U	1000 U	910 U	980 U
2,4-dinitrotoluene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
2,6-dinitrotoluene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
2-chloronaphthalene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
2-chlorophenol		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
2-methylnaphthalene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
2-methylphenol		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
2-nitroaniline		860 U	880 U	850 U	850 U	860 U	1000 U	910 U	980 U
2-nitrophenol		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
3,3'-dichlorobenzidine		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
3-nitroaniline		860 U	880 U	850 U	850 U	860 U	1000 U	910 U	980 U
4,6-dinitro-2-methylphenol		860 U	880 U	850 U	850 U	860 U	1000 U	910 U	980 U
4-bromophenyl-phenylether		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
4-chloro-3-methylphenol		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
4-chloroaniline		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
4-chlorophenyl-phenylether		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
4-methylphenol		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
4-nitroaniline		860 U	880 U	850 U	850 U	860 U	1000 U	910 U	980 U
4-nitrophenol		860 U	880 U	850 U	850 U	860 U	1000 U	910 U	980 U
N-nitroso-di-n-propylamine		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
N-nitrosodiphenylamine (1)		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
acenaphthene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	86SB01	BGSB01-00	BGSB01-05	BGSB02-00	BGSB02-00-DUP	BGSB02-05	BGSB03-00	BGSB03-05	BGSB04-00
LOCATION:	86SB01	BGSB01	BGSB01	BGSB02	BGSB02	BGSB02	BGSB03	BGSB03	BGSB04
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
acenaphthylene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
anthracene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
benzo(a)anthracene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
benzo(a)pyrene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
benzo(b)fluoranthene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
benzo(g,h,i)perylene		340 U	350 UJ	340 U	340 U	340 U	400 U	360 U	390 U
benzo(k)fluoranthene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
bis(2-chloroethoxy)methane		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
bis(2-chloroethyl)ether		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
bis(2-ethylhexyl)phthalate		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
butylbenzylphthalate		340 U	350 U	340 U	340 U	340 U	400 U	360 U	220
carbazole		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
chrysene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
di-n-butylphthalate		340 U	350 U	340 U	48.0 J	340 U	400 U	360 U	45.0 J
di-n-octylphthalate		340 U	350 UJ	340 U	340 U	340 U	400 U	360 U	390 U
dibenz(a,h)anthracene		340 U	350 UJ	340 U	340 U	340 U	400 U	360 U	390 U
dibenzofuran		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
diethylphthalate		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
dimethylphthalate		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
fluoranthene		340 UJ	350 U	340 U	340 U	340 U	84.0 J	360 U	40.0 J
fluorene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
hexachlorobenzene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
hexachlorobutadiene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
hexachlorocyclopentadiene		340 UJ	350 UJ	340 U	340 U	340 U	400 U	360 U	390 U
hexachloroethane		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
indeno(1,2,3-cd)pyrene		340 U	350 UJ	340 U	340 U	340 U	400 U	360 U	390 U
isophorone		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
naphthalene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	86SB01	BGSB01-00	BGSB01-05	BGSB02-00	BGSB02-00-DUP	BGSB02-05	BGSB03-00	BGSB03-05	BGSB04-00
LOCATION:	86SB01	BGSB01	BGSB01	BGSB02	BGSB02	BGSB02	BGSB03	BGSB03	BGSB04
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
nitrobenzene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
pentachlorophenol		860 U	880 U	850 U	850 UJ	860 UJ	1000 U	910 U	980 U
phenanthrene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
phenol		340 U	350 U	340 U	340 U	340 U	400 U	360 U	390 U
pyrene		340 U	350 U	340 U	340 U	340 U	400 U	360 U	46.0 J
VOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,1,1-trichloroethane		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
1,1,2,2-tetrachloroethane		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
1,1,2-trichloroethane		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
1,1-dichloroethane		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
1,1-dichloroethene		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
1,2-dichloroethane		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
1,2-dichloroethene (total)		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
1,2-dichloropropane		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
2-butanone		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
2-hexanone		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
4-methyl-2-pentanone		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
acetone		12.0 U	14.0 U	10.0 U	10.0 U	10.0 U	16.0 U	82.0 U	12.0 U
benzene		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
bromodichloromethane		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
bromoform		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
bromomethane		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
carbon disulfide		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 UJ	11.0 UJ	12.0 UJ
carbon tetrachloride		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
chlorobenzene		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
chloroethane		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 UJ	11.0 UJ	12.0 UJ
chloroform		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U
chloromethane		10.0 U	11.0 U	10.0 U	10.0 U	10.0 U	12.0 U	11.0 U	12.0 U

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	86SB01		BGSB01-00		BGSB01-05		BGSB02-00		BGSB02-00-DUP		BGSB02-05		BGSB03-00		BGSB03-05		BGSB04-00	
LOCATION:	86SB01		BGSB01		BGSB01		BGSB02		BGSB02		BGSB02		BGSB03		BGSB03		BGSB04	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
cis-1,3-dichloropropene			10.0	U	11.0	U	10.0	U	10.0	U	10.0	U	12.0	U	11.0	U	12.0	U
dibromochloromethane			10.0	U	11.0	U	10.0	U	10.0	U	10.0	U	12.0	U	11.0	U	12.0	U
ethylbenzene			10.0	U	11.0	U	10.0	U	10.0	U	10.0	U	12.0	U	11.0	U	12.0	U
methylene chloride			10.0	U	11.0	U	10.0	U	10.0	U	10.0	U	12.0	U	11.0	U	12.0	U
styrene			10.0	U	11.0	U	10.0	U	10.0	U	10.0	U	12.0	U	11.0	U	12.0	U
tetrachloroethene			10.0	U	11.0	U	10.0	U	10.0	U	10.0	U	12.0	U	11.0	U	12.0	U
toluene			10.0	U	11.0	U	10.0	U	10.0	U	10.0	U	12.0	U	11.0	U	12.0	U
trans-1,3-dichloropropene			10.0	U	11.0	U	10.0	U	10.0	U	10.0	U	12.0	U	11.0	U	12.0	U
trichloroethene			10.0	U	11.0	U	10.0	U	10.0	U	10.0	U	12.0	U	11.0	U	12.0	U
vinyl chloride			10.0	U	11.0	U	10.0	U	10.0	U	10.0	U	12.0	U	11.0	U	12.0	U
xylene (total)			10.0	U	11.0	U	10.0	U	10.0	U	10.0	U	12.0	U	11.0	U	12.0	U
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
4,4'-DDD	4.6	R	3.4	U	3.5	U	3.4	U	3.4	U	3.4	U	4.4	R	3.6	U	3.9	UJ
4,4'-DDE	3.5	U	3.4	U	3.5	U	3.4	U	3.4	U	3.4	U	330		3.6	U	16.0	J
4,4'-DDT	1.6	JN	3.4	U	3.5	U	3.4	U	3.4	U	3.4	U	420		3.6	U	43.0	J
Aroclor-1016	35.0	U	34.0	U	35.0	U	34.0	U	34.0	U	34.0	U	40.0	U	36.0	U	39.0	UJ
Aroclor-1221	72.0	U	70.0	U	71.0	U	68.0	U	68.0	U	70.0	U	82.0	U	74.0	U	79.0	UJ
Aroclor-1232	35.0	U	34.0	U	35.0	U	34.0	U	34.0	U	34.0	U	40.0	U	36.0	U	39.0	UJ
Aroclor-1242	35.0	U	34.0	U	35.0	U	34.0	U	34.0	U	34.0	U	40.0	U	36.0	U	39.0	UJ
Aroclor-1248	35.0	U	34.0	U	35.0	U	34.0	U	34.0	U	34.0	U	40.0	U	36.0	U	39.0	UJ
Aroclor-1254	35.0	U	34.0	U	35.0	U	34.0	U	34.0	U	34.0	U	40.0	U	36.0	U	39.0	UJ
Aroclor-1260	35.0	U	34.0	U	35.0	U	34.0	U	34.0	U	34.0	U	40.0	U	36.0	U	39.0	UJ
aldrin	0.13	R	1.8	U	1.8	U	1.7	U	1.7	U	1.8	U	2.1	U	1.9	U	2.0	UJ
alpha-BHC	1.8	U	1.8	U	1.8	U	1.7	U	1.7	U	1.8	U	2.1	U	1.9	U	2.0	UJ
alpha-chlordane	1.8	UJ	1.8	U	1.8	U	1.7	U	1.7	U	1.8	U	2.1	U	1.9	U	2.0	UJ
beta-BHC	1.8	U	1.8	U	1.8	U	1.7	U	1.7	U	1.8	U	2.1	U	1.9	U	2.0	UJ
delta-BHC	1.8	U	1.8	U	1.8	U	1.7	U	1.7	U	1.8	U	2.1	U	1.9	U	2.0	UJ
dieldrin	0.33	J	3.4	U	3.5	U	3.4	U	3.4	U	3.4	U	0.49	NJ	3.6	U	3.9	UJ

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	86SB01		BGSB01-00		BGSB01-05		BGSB02-00		BGSB02-00-DUP		BGSB02-05		BGSB03-00		BGSB03-05		BGSB04-00	
LOCATION:	86SB01		BGSB01		BGSB01		BGSB02		BGSB02		BGSB02		BGSB03		BGSB03		BGSB04	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
endosulfan I	1.8	U	1.8	U	1.8	U	1.7	U	1.7	U	1.8	U	2.1	U	1.9	U	2.0	UJ
endosulfan II	3.5	U	3.4	U	3.5	U	3.4	U	3.4	U	3.4	U	4.0	U	3.6	U	3.9	UJ
endosulfan sulfate	3.5	U	3.4	U	3.5	U	3.4	U	3.4	U	3.4	U	4.0	U	3.6	U	3.9	UJ
endrin	3.5	U	0.076	JN	0.049	J	3.4	U	3.4	U	3.4	U	4.0	U	3.6	U	3.9	UJ
endrin aldehyde	3.5	U	3.4	U	3.5	U	3.4	U	3.4	U	3.4	U	4.0	U	3.6	U	3.9	UJ
endrin ketone	3.5	U	3.4	U	3.5	U	3.4	U	3.4	U	3.4	U	4.0	U	3.6	U	3.9	UJ
gamma-BHC (Lindane)	1.8	U	1.8	U	1.8	U	1.7	U	1.7	U	1.8	U	2.1	U	1.9	U	2.0	UJ
gamma-chlordane	1.8	UJ	1.8	U	1.8	U	1.7	U	1.7	U	1.8	U	2.1	U	1.9	U	2.0	UJ
heptachlor	1.8	UJ	1.8	U	1.8	U	1.7	U	1.7	U	1.8	U	2.1	U	1.9	U	2.0	UJ
heptachlor epoxide	1.8	U	1.8	U	1.8	U	1.7	U	1.7	U	1.8	U	2.1	U	1.9	U	2.0	UJ
methoxychlor	18.0	U	18.0	U	18.0	U	17.0	U	17.0	U	18.0	U	3.6	R	19.0	U	20.0	UJ
toxaphene	180	U	180	U	180	U	170	U	170	U	180	U	210	U	190	U	200	UJ

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGSB04-05	_QSB02-02	_QSB02-04	_QSB03-01	---	---	---	---	---
LOCATION:	BGSB04	_QSB02	_QSB02	_QSB03	---	---	---	---	---
DATA SOURCE:	1995 RI	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.					
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
aluminum	2170								
antimony	4.3 U								
arsenic	10.6								
barium	14.8								
beryllium	0.41 UJ								
cadmium	0.54 U								
calcium	799								
chromium, total	11.2								
cobalt	2.2								
copper	8.6								
cyanide	0.29 U								
iron	25900								
lead	16.1								
magnesium	366								
manganese	55.9 J								
mercury	0.062 J								
nickel	5.0								
potassium	431								
selenium	0.62 U								
silver	0.37 U								
sodium	94.8								
thallium	0.74 U								
vanadium	17.9								
zinc	7.3 J								
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**					
1,2,4-trichlorobenzene	410 U	400 U	400 U	390 U					
1,2-dichlorobenzene	410 U	400 U	400 U	390 U					
1,3-dichlorobenzene	410 U	400 U	400 U	390 U					

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGSB04-05		_QSB02-02		_QSB02-04		_QSB03-01		---		---		---		---		---
LOCATION:	BGSB04		_QSB02		_QSB02		_QSB03		---		---		---		---		---
DATA SOURCE:	1995 RI		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.										
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**										
1,4-dichlorobenzene	410	U	400	U	400	U	390	U									
2,2'-oxybis(1-chloropropane)	410	U	400	U	400	U	390	U									
2,4,5-trichlorophenol	1000	U	1000	U	1000	U	980	U									
2,4,6-trichlorophenol	410	U	400	U	400	U	390	U									
2,4-dichlorophenol	410	U	400	U	400	U	390	U									
2,4-dimethylphenol	410	U	400	U	400	U	390	U									
2,4-dinitrophenol	1000	U	1000	U	1000	U	980	U									
2,4-dinitrotoluene	410	U	400	U	400	U	390	U									
2,6-dinitrotoluene	410	U	400	U	400	U	390	U									
2-chloronaphthalene	410	U	400	U	400	U	390	U									
2-chlorophenol	410	U	400	U	400	U	390	U									
2-methylnaphthalene	410	U	600		700		390	U									
2-methylphenol	410	U	400	U	400	U	390	U									
2-nitroaniline	1000	U	1000	U	1000	U	980	U									
2-nitrophenol	410	U	400	U	400	U	390	U									
3,3'-dichlorobenzidine	410	U	400	U	400	U	390	U									
3-nitroaniline	1000	U	1000	U	1000	U	980	U									
4,6-dinitro-2-methylphenol	1000	U	1000	U	1000	U	980	U									
4-bromophenyl-phenylether	410	U	400	U	400	U	390	U									
4-chloro-3-methylphenol	410	U	400	U	400	U	390	U									
4-chloroaniline	410	U	400	U	400	U	390	U									
4-chlorophenyl-phenylether	410	U	400	U	400	U	390	U									
4-methylphenol	410	U	400	U	400	U	390	U									
4-nitroaniline	1000	U	1000	U	1000	U	980	U									
4-nitrophenol	1000	U	1000	U	1000	U	980	U									
N-nitroso-di-n-propylamine	410	U	400	U	400	U	390	U									
N-nitrosodiphenylamine (1)	410	U	400	U	400	U	390	U									
acenaphthene	410	U	56.0	J	63.0	J	390	U									

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGSB04-05		_QSB02-02		_QSB02-04		_QSB03-01		---		---		---		---		---	
LOCATION:	BGSB04		_QSB02		_QSB02		_QSB03		---		---		---		---		---	
DATA SOURCE:	1995 RI		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.											
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**											
acenaphthylene	410	U	400	U	400	U	390	U										
anthracene	410	U	400	U	400	U	390	U										
benzo(a)anthracene	410	U	400	U	400	U	390	U										
benzo(a)pyrene	410	U	400	U	400	U	390	U										
benzo(b)fluoranthene	410	U	400	U	400	U	390	U										
benzo(g,h,i)perylene	410	U	400	U	400	U	390	U										
benzo(k)fluoranthene	410	U	400	U	400	U	390	U										
bis(2-chloroethoxy)methane	410	U	400	U	400	U	390	U										
bis(2-chloroethyl)ether	410	U	400	U	400	U	390	U										
bis(2-ethylhexyl)phthalate	410	U	400	U	400	U	390	U										
butylbenzylphthalate	410	U	400	U	400	U	390	U										
carbazole	410	U	400	U	400	U	390	U										
chrysene	410	U	400	U	400	U	390	U										
di-n-butylphthalate	410	U	400	U	400	U	390	U										
di-n-octylphthalate	410	U	400	U	400	U	390	U										
dibenz(a,h)anthracene	410	U	400	U	400	U	390	U										
dibenzofuran	410	U	74.0	J	77.0	J	390	U										
diethylphthalate	410	U	400	U	400	U	390	U										
dimethylphthalate	410	U	400	U	400	U	390	U										
fluoranthene	410	U	400	U	400	U	390	U										
fluorene	410	U	110	J	120	J	390	U										
hexachlorobenzene	410	U	400	U	400	U	390	U										
hexachlorobutadiene	410	U	400	U	400	U	390	U										
hexachlorocyclopentadiene	410	U	400	U	400	U	390	U										
hexachloroethane	410	U	400	U	400	U	390	U										
indeno(1,2,3-cd)pyrene	410	U	400	U	400	U	390	U										
isophorone	410	U	400	U	400	U	390	U										
naphthalene	410	U	44.0	J	400	U	390	U										

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGSB04-05		_QSB02-02		_QSB02-04		_QSB03-01		---		---		---		---		---	
LOCATION:	BGSB04		_QSB02		_QSB02		_QSB03		---		---		---		---		---	
DATA SOURCE:	1995 RI		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.											
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**											
nitrobenzene	410	U	400	U	400	U	390	U										
pentachlorophenol	1000	U	1000	U	1000	U	980	U										
phenanthrene	410	U	260	J	250	J	390	U										
phenol	410	U	400	U	400	U	390	U										
pyrene	410	U	400	U	400	U	390	U										
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**											
1,1,1-trichloroethane	12.0	U	12.0	U	12.0	U	12.0	U										
1,1,2,2-tetrachloroethane	12.0	U	12.0	U	12.0	U	12.0	U										
1,1,2-trichloroethane	12.0	U	12.0	U	12.0	U	12.0	U										
1,1-dichloroethane	12.0	U	12.0	U	12.0	U	12.0	U										
1,1-dichloroethene	12.0	U	12.0	U	12.0	U	12.0	U										
1,2-dichloroethane	12.0	U	12.0	U	12.0	U	12.0	U										
1,2-dichloroethene (total)	12.0	U	12.0	U	12.0	U	12.0	U										
1,2-dichloropropane	12.0	U	12.0	U	12.0	U	12.0	U										
2-butanone	12.0	U	12.0	U	12.0	U	12.0	U										
2-hexanone	12.0	U	12.0	U	12.0	U	12.0	U										
4-methyl-2-pentanone	12.0	U	12.0	U	12.0	U	12.0	U										
acetone	12.0	U	67.0	U	17.0	U	12.0	U										
benzene	12.0	U	12.0	U	12.0	U	12.0	U										
bromodichloromethane	12.0	U	12.0	U	12.0	U	12.0	U										
bromoform	12.0	U	12.0	U	12.0	U	12.0	U										
bromomethane	12.0	U	12.0	U	12.0	U	12.0	U										
carbon disulfide	12.0	UJ	12.0	U	12.0	U	12.0	U										
carbon tetrachloride	12.0	U	12.0	U	12.0	U	12.0	U										
chlorobenzene	12.0	U	12.0	U	12.0	U	12.0	U										
chloroethane	12.0	UJ	12.0	U	12.0	U	12.0	U										
chloroform	12.0	U	12.0	U	12.0	U	12.0	U										
chloromethane	12.0	U	12.0	U	12.0	U	12.0	U										

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGSB04-05		_QSB02-02		_QSB02-04		_QSB03-01		---	---	---	---	---
LOCATION:	BGSB04		_QSB02		_QSB02		_QSB03		---	---	---	---	---
DATA SOURCE:	1995 RI		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.						
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**						
cis-1,3-dichloropropene	12.0	U	12.0	U	12.0	U	12.0	U					
dibromochloromethane	12.0	U	12.0	U	12.0	U	12.0	U					
ethylbenzene	12.0	U	12.0	U	12.0	U	12.0	U					
methylene chloride	12.0	U	12.0	U	12.0	U	12.0	U					
styrene	12.0	U	12.0	U	12.0	U	12.0	U					
tetrachloroethene	12.0	U	12.0	U	12.0	U	12.0	U					
toluene	12.0	U	12.0	U	12.0	U	12.0	U					
trans-1,3-dichloropropene	12.0	U	12.0	U	12.0	U	12.0	U					
trichloroethene	12.0	U	2.0	J	55.0		9.0	J					
vinyl chloride	12.0	U	12.0	U	12.0	U	12.0	U					
xylene (total)	12.0	U	12.0	U	12.0	U	12.0	U					
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**						
4,4'-DDD	4.1	UJ											
4,4'-DDE	4.1	UJ											
4,4'-DDT	4.1	UJ											
Aroclor-1016	41.0	UJ											
Aroclor-1221	83.0	UJ											
Aroclor-1232	41.0	UJ											
Aroclor-1242	41.0	UJ											
Aroclor-1248	41.0	UJ											
Aroclor-1254	41.0	UJ											
Aroclor-1260	41.0	UJ											
aldrin	2.1	UJ											
alpha-BHC	2.1	UJ											
alpha-chlordane	2.1	UJ											
beta-BHC	2.1	UJ											
delta-BHC	2.1	UJ											
dieldrin	4.1	UJ											

TABLE A-d

ANALYTICAL RESULTS FOR SUBSURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGSB04-05	_QSB02-02	_QSB02-04	_QSB03-01	---	---	---	---	---
LOCATION:	BGSB04	_QSB02	_QSB02	_QSB03	---	---	---	---	---
DATA SOURCE:	1995 RI	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.					
PESTICIDES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**					
endosulfan I	2.1 UJ								
endosulfan II	4.1 UJ								
endosulfan sulfate	4.1 UJ								
endrin	4.1 UJ								
endrin aldehyde	4.1 UJ								
endrin ketone	4.1 UJ								
gamma-BHC (Lindane)	2.1 UJ								
gamma-chlordane	2.1 UJ								
heptachlor	2.1 UJ								
heptachlor epoxide	2.1 UJ								
methoxychlor	21.0 UJ								
toxaphene	210 UJ								

APPENDIX A.e.

ANALYTICAL DATABASE

ORGANIC AND INORGANIC RESULTS

SURFACE SOIL SAMPLES

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	02SS01	02SS02	02SS03	02SS04	02SS05	02SS06	02SS07	02SS08	12SS01
LOCATION:	02SS01	02SS02	02SS03	02SS04	02SS05	02SS06	02SS07	02SS08	12SS01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	120	140	463	778	162	1690	819	243	3530
antimony	0.84	0.89	0.55 U	0.57 U	0.56 U	0.65 U	0.56 U	0.68	0.76
arsenic	0.69 U	1.0	1.9	2.5	0.68 U	3.4	3.4	0.75	10.7
barium	2.3	2.2	3.6	3.6	2.1	9.8	1.9	1.4	28.7
beryllium	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.026 U	0.023 U	0.023 U	0.47
cadmium	0.079 U	0.080 U	0.14	0.13	0.078 U	0.49	0.24	0.078 U	1.4
calcium	44.5	115	75.6	137	64.9	117	34.8	22.6	1610
chromium, hexavalent	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	4.0	2.0 U	
chromium, total	2.2 J	2.6 J	15.8 J	21.5 J	2.3 J	40.5 J	39.2 J	3.9 J	53.3 J
cobalt	0.13 U	0.13 U	0.12 U	0.13 U	0.12 U	0.24	0.12 U	0.12 U	4.6
copper	2.6	2.7	4.2	5.2	2.5	6.4	2.5	2.2	23.2
iron	420	592	2490	2780	352	10300	5380	1130	20300
lead	12.6	11.7	14.8	20.0	14.0	22.1	9.0	5.0	68.6
magnesium	25.0	33.8	66.9	101	19.1	220	106	50.0	413
manganese	1.8	7.1	6.4	3.6	1.3	2.5	2.6	1.4	133
mercury	0.030	0.023	0.049	0.039	0.028	0.052	0.023	0.016	0.42
nickel	0.18	0.28	0.38	0.74	0.34	1.7	0.48	0.59	6.8
potassium	67.5	64.7	159	241	56.7	392	266	127	649
selenium	1.3 R	0.93 U	0.90 U	0.94 U	0.91 U	1.1 U	0.91 U	0.91 U	1.0 U
silver	0.24	0.20 U	0.19 U	0.20 U	0.19 U	0.23 U	0.20 U	0.19 U	0.21 U
sodium	44.0	24.6	44.1	38.4	610	20.9	33.5	29.2	76.3
thallium	0.75 U	0.76 U	0.74 U	0.77 U	0.74 U	0.86 U	0.75 U	0.74 U	0.82 U
vanadium	6.0	7.5	18.4	26.1	4.8	49.3	49.3	9.9	18.0
zinc	1.5 J	4.4 R	8.7 R	10.4 R	14.6 R	9.4 R	3.8 J	24.5 R	214 R
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
1,2-dichlorobenzene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
1,3-dichlorobenzene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	02SS01		02SS02		02SS03		02SS04		02SS05		02SS06		02SS07		02SS08		12SS01	
LOCATION:	02SS01		02SS02		02SS03		02SS04		02SS05		02SS06		02SS07		02SS08		12SS01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,4-dichlorobenzene	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
2,2'-oxybis(1-chloropropane)	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
2,4,5-trichlorophenol	860	U	870	U	860	U	880	U	900	U	1000	U	860	U	870	U	960	U
2,4,6-trichlorophenol	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
2,4-dichlorophenol	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
2,4-dimethylphenol	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
2,4-dinitrophenol	860	U	870	U	860	U	880	U	900	U	1000	U	860	U	870	U	960	U
2,4-dinitrotoluene	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
2,6-dinitrotoluene	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
2-chloronaphthalene	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
2-chlorophenol	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
2-methylnaphthalene	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	170	J
2-methylphenol	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
2-nitroaniline	860	U	870	U	860	U	880	U	900	U	1000	U	860	U	870	U	960	U
2-nitrophenol	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
3,3'-dichlorobenzidine	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
3-nitroaniline	860	U	870	U	860	U	880	U	900	U	1000	U	860	U	870	U	960	U
4,6-dinitro-2-methylphenol	860	U	870	U	860	U	880	U	900	U	1000	U	860	U	870	U	960	U
4-bromophenyl-phenylether	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
4-chloro-3-methylphenol	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
4-chloroaniline	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
4-chlorophenyl-phenylether	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
4-methylphenol	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
4-nitroaniline	860	U	870	U	860	U	880	U	900	U	1000	U	860	U	870	U	960	U
4-nitrophenol	860	U	870	U	860	U	880	U	900	U	1000	U	860	U	870	U	960	U
N-nitroso-di-n-propylamine	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
N-nitrosodiphenylamine (1)	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U
acenaphthene	340	U	350	U	340	U	350	U	360	U	400	U	340	U	350	U	380	U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	02SS01	02SS02	02SS03	02SS04	02SS05	02SS06	02SS07	02SS08	12SS01
LOCATION:	02SS01	02SS02	02SS03	02SS04	02SS05	02SS06	02SS07	02SS08	12SS01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
acenaphthylene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
anthracene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	44.0 J
benzo(a)anthracene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	210 J
benzo(a)pyrene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	250 J
benzo(b)fluoranthene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	610
benzo(g,h,i)perylene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	800
benzo(k)fluoranthene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
bis(2-chloroethoxy)methane	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
bis(2-chloroethyl)ether	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
bis(2-ethylhexyl)phthalate	320 J	84.0 J	74.0 J	140 J	73.0 J	84.0 J	300 J	60.0 J	87.0 J
butylbenzylphthalate	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
carbazole	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	45.0 J
chrysene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	320 J
di-n-butylphthalate	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
di-n-octylphthalate	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
dibenz(a,h)anthracene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	59.0 J
dibenzofuran	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
diethylphthalate	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
dimethylphthalate	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
fluoranthene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	320 J
fluorene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
hexachlorobenzene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
hexachlorobutadiene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
hexachlorocyclopentadiene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
hexachloroethane	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
indeno(1,2,3-cd)pyrene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	340 J
isophorone	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
naphthalene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	83.0 J

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	02SS01	02SS02	02SS03	02SS04	02SS05	02SS06	02SS07	02SS08	12SS01
LOCATION:	02SS01	02SS02	02SS03	02SS04	02SS05	02SS06	02SS07	02SS08	12SS01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
nitrobenzene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
pentachlorophenol	860 U	870 U	860 U	880 U	900 U	1000 U	860 U	870 U	960 U
phenanthrene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	140 J
phenol	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 U
pyrene	340 U	350 U	340 U	350 U	360 U	400 U	340 U	350 U	380 J
VOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,1,1-trichloroethane									12.0 U
1,1,2,2-tetrachloroethane									12.0 U
1,1,2-trichloroethane									12.0 U
1,1-dichloroethane									12.0 U
1,1-dichloroethene									12.0 U
1,2-dichloroethane									12.0 U
1,2-dichloroethene (total)									12.0 U
1,2-dichloropropane									12.0 U
2-butanone									12.0 U
2-hexanone									12.0 U
4-methyl-2-pentanone									12.0 U
acetone									18.0 UJ
benzene									12.0 U
bromodichloromethane									12.0 U
bromoform									12.0 U
bromomethane									12.0 U
carbon disulfide									12.0 U
carbon tetrachloride									12.0 U
chlorobenzene									12.0 U
chloroethane									12.0 U
chloroform									12.0 U
chloromethane									12.0 U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	02SS01	02SS02	02SS03	02SS04	02SS05	02SS06	02SS07	02SS08	12SS01	
LOCATION:	02SS01	02SS02	02SS03	02SS04	02SS05	02SS06	02SS07	02SS08	12SS01	
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	
VOLATILES	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	
cis-1,3-dichloropropene									12.0	U
dibromochloromethane									12.0	U
ethylbenzene									12.0	U
methylene chloride									12.0	U
styrene									12.0	U
tetrachloroethene									3.0	J
toluene									12.0	U
trans-1,3-dichloropropene									12.0	U
trichloroethene									12.0	U
vinyl chloride									12.0	U
xylene (total)									12.0	U
PESTICIDES	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	
4,4'-DDD									19.0	JN
4,4'-DDE									3.9	U
4,4'-DDT									51.0	
aldrin									2.0	U
alpha-BHC									2.0	U
alpha-chlordane									2.0	U
beta-BHC									2.0	U
delta-BHC									2.0	U
dieldrin									3.8	U
endosulfan I									2.0	U
endosulfan II									3.8	U
endosulfan sulfate									3.8	U
endrin									3.8	U
endrin aldehyde									3.9	U
endrin ketone									3.8	U
gamma-BHC (Lindane)									0.072	R

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	02SS01	02SS02	02SS03	02SS04	02SS05	02SS06	02SS07	02SS08	12SS01	
LOCATION:	02SS01	02SS02	02SS03	02SS04	02SS05	02SS06	02SS07	02SS08	12SS01	
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	
PESTICIDES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
gamma-chlordane									1.8	J
heptachlor									2.0	U
heptachlor epoxide									0.60	R
methoxychlor									8.4	R
toxaphene									200	U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	12SS02	12SS03	12SS03-DUP	15SS01	15SS02	16SS01	16SS02	16SS03	17SS01
LOCATION:	12SS02	12SS03	12SS03	15SS01	15SS02	16SS01	16SS02	16SS03	17SS01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	4330	7980	7670	897	9250	2570	4160	4190	525
antimony	71.5	3.6	4.4	1.8	0.84 U	28.0	0.75	7.0	0.55 U
arsenic	5.1	6.6	7.8	10.1	19.2 J	5.2	10.5 J	5.4	2.3
barium	187	188	189	7.8	18.0	78.3	133	109	3.2
beryllium	0.050	0.37	0.23	0.035 U	1.0	0.13	0.25	0.19	0.049
cadmium	4.0	7.8	8.7	0.85	3.4 J	6.1 J	8.1 J	10.2 J	0.10
calcium	21400	20000	27100	828	407	4230 J	2280 J	3050 J	129
chromium, total	39.6 J	85.6 J	107 J	3.7	37.7	40.9	124	171	5.4 J
cobalt	3.1	7.5	8.3	1.1	2.8	4.0	7.7	4.5	0.27
copper	66.9	226	339	33.2	14.3	49.8	196	231	2.2
iron	17500	34600	40300	10900	52300	26100	57500	28800	3060
lead	1130	978	1070	110	56.8	1030	359	675	7.5
magnesium	1950 J	3250 J	10400 J	118	2260	1350	1300	1530	95.5
manganese	140	295	373	92.9	60.7	138	307	94.8	9.9
mercury	0.87	0.42	0.37	0.16	0.051	0.018	0.12	0.28	0.019
nickel	11.4	49.1	50.7	3.0	7.5	10.3	13.4	16.5	1.3
potassium	723	893	810	122	6790 J	342	537	445	104
selenium	1.1 U	1.2 U	1.2 U	1.4 U	1.4 U	1.0 U	1.0 U	1.3 U	0.90 UJ
silver	1.7	1.1	1.1	0.30 U	0.29 U	1.8	9.2	25.3	0.19 U
sodium	167	200	1170	47.4	195	155	123	173	444
thallium	0.86 U	2.1	1.0 U	1.1 UJ	1.5 J	0.82 UJ	0.83 UJ	1.1 UJ	0.74 U
vanadium	19.2	245	259	14.9	36.0	15.5	23.6	32.1	6.0
zinc	835 R	1500 R	1570 R	7.2 J	52.4	111	235	1180	10.4 J
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene	410 U	460 U	460 U	520 U	510 U	380 U	380 U	1000 U	340 U
1,2-dichlorobenzene	410 U	460 U	460 U	520 U	510 U	380 U	380 U	1000 U	340 U
1,3-dichlorobenzene	410 U	460 U	460 U	520 U	510 U	380 U	380 U	1000 U	340 U
1,4-dichlorobenzene	410 U	460 U	460 U	520 U	510 U	380 U	380 U	1000 U	340 U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	12SS02		12SS03		12SS03-DUP		15SS01		15SS02		16SS01		16SS02		16SS03		17SS01	
LOCATION:	12SS02		12SS03		12SS03		15SS01		15SS02		16SS01		16SS02		16SS03		17SS01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
2,2'-oxybis(1-chloropropane)	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
2,4,5-trichlorophenol	1000	U	1200	U	1200	U	1300	U	1300	U	940	U	950	U	2600	U	850	U
2,4,6-trichlorophenol	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
2,4-dichlorophenol	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
2,4-dimethylphenol	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
2,4-dinitrophenol	1000	U	1200	U	1200	U	1300	UJ	1300	UJ	940	UJ	950	UJ	2600	UJ	850	U
2,4-dinitrotoluene	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
2,6-dinitrotoluene	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
2-chloronaphthalene	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
2-chlorophenol	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
2-methylnaphthalene	150	J	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
2-methylphenol	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
2-nitroaniline	1000	U	1200	U	1200	U	1300	U	1300	U	940	U	950	U	2600	U	850	U
2-nitrophenol	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
3,3'-dichlorobenzidine	410	UJ	460	UJ	460	UJ	520	U	510	U	380	U	380	UJ	1000	UJ	340	U
3-nitroaniline	1000	U	1200	U	1200	U	1300	U	1300	U	940	U	950	U	2600	U	850	U
4,6-dinitro-2-methylphenol	1000	U	1200	U	1200	U	1300	U	1300	U	940	U	950	U	2600	U	850	U
4-bromophenyl-phenylether	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
4-chloro-3-methylphenol	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
4-chloroaniline	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
4-chlorophenyl-phenylether	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
4-methylphenol	410	U	460	U	460	U	520	U	510	U	380	U	380	U	110	J	340	U
4-nitroaniline	1000	U	1200	U	1200	U	1300	U	1300	U	940	U	950	U	2600	U	850	U
4-nitrophenol	1000	U	1200	U	1200	U	1300	UJ	1300	UJ	940	UJ	950	UJ	2600	UJ	850	U
N-nitroso-di-n-propylamine	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
N-nitrosodiphenylamine (1)	410	U	460	U	460	U	520	U	510	U	380	U	63.0	J	1000	U	340	U
acenaphthene	64.0	J	57.0	J	49.0	J	520	U	510	U	380	U	380	U	1000	U	340	U
acenaphthylene	110	J	140	J	130	J	520	U	510	U	380	U	380	U	100	J	340	U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	12SS02		12SS03		12SS03-DUP		15SS01		15SS02		16SS01		16SS02		16SS03		17SS01	
LOCATION:	12SS02		12SS03		12SS03		15SS01		15SS02		16SS01		16SS02		16SS03		17SS01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
anthracene	350	J	490		1400		520	U	510	U	380	U	57.0	J	170	J	340	U
benzo(a)anthracene	1600	J	2300	J	5500	J	71.0	J	510	U	160	J	240	J	450	J	340	U
benzo(a)pyrene	1100	J	1700	J	2800	J	69.0	J	58.0	J	160	J	260	J	1200	J	340	U
benzo(b)fluoranthene	4600	J	8700	J	12000	J	160	J	120	J	350	J	700	J	1000	J	340	U
benzo(g,h,i)perylene	1700	J	2200	J	2400	J	520	U	510	U	150	J	200	J	340	J	340	U
benzo(k)fluoranthene	410	UJ	460	UJ	460	UJ	520	U	510	U	86.0	J	380	U	1000	UJ	340	U
bis(2-chloroethoxy)methane	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
bis(2-chloroethyl)ether	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
bis(2-ethylhexyl)phthalate	960	J	1700	J	740	J	110	J	100	J	1800		7000	J	12000	J	340	U
butylbenzylphthalate	410	UJ	150	J	110	J	520	U	510	U	160	J	380	UJ	1000	UJ	340	U
carbazole	600		1100		860		520	U	510	U	54.0	J	42.0	J	1000	U	340	U
chrysene	2800	J	6400	J	10000	J	90.0	J	68.0	J	250	J	360	J	810	J	340	U
di-n-butylphthalate	100	J	70.0	J	150	J	520	U	510	U	100	J	44.0	J	1000	U	340	U
di-n-octylphthalate	410	UJ	460	UJ	460	UJ	520	U	510	U	380	UJ	380	UJ	1000	UJ	340	U
dibenz(a,h)anthracene	300	J	490	J	590	J	520	U	510	U	380	UJ	380	UJ	1000	UJ	340	U
dibenzofuran	63.0	J	48.0	J	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
diethylphthalate	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
dimethylphthalate	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
fluoranthene	4600		9600		17000		180	J	130	J	510		340	J	480	J	340	U
fluorene	94.0	J	80.0	J	94.0	J	520	U	510	U	380	U	380	U	1000	U	340	U
hexachlorobenzene	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
hexachlorobutadiene	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
hexachlorocyclopentadiene	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
hexachloroethane	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
indeno(1,2,3-cd)pyrene	1300	J	2300	J	2700	J	520	U	510	U	120	J	200	J	1000	UJ	340	U
isophorone	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
naphthalene	130	J	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
nitrobenzene	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	12SS02		12SS03		12SS03-DUP		15SS01		15SS02		16SS01		16SS02		16SS03		17SS01	
LOCATION:	12SS02		12SS03		12SS03		15SS01		15SS02		16SS01		16SS02		16SS03		17SS01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
pentachlorophenol	1000	U	1200	U	1200	U	1300	U	1300	U	940	U	950	U	2600	U	850	U
phenanthrene	1400		1900		1900		100	J	69.0	J	210	J	230	J	370	J	340	U
phenol	410	U	460	U	460	U	520	U	510	U	380	U	380	U	1000	U	340	U
pyrene	6000	J	12000	J	19000	J	210	J	140	J	670		1100	J	4400	J	340	U
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1,1-trichloroethane	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
1,1,2,2-tetrachloroethane	12.0	UJ	14.0	UJ	14.0	U	16.0	U	15.0	U	11.0	U	11.0	UJ	15.0	U	10.0	U
1,1,2-trichloroethane	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
1,1-dichloroethane	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
1,1-dichloroethene	12.0	U	14.0	U	14.0	U	16.0	UJ	15.0	UJ	11.0	UJ	11.0	UJ	15.0	UJ	10.0	U
1,2-dichloroethane	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
1,2-dichloroethene (total)	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
1,2-dichloropropane	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
2-butanone	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
2-hexanone	12.0	UJ	14.0	UJ	14.0	U	16.0	U	15.0	U	11.0	U	11.0	UJ	15.0	U	10.0	U
4-methyl-2-pentanone	12.0	UJ	14.0	UJ	14.0	U	16.0	U	15.0	U	11.0	UJ	11.0	UJ	15.0	UJ	10.0	U
acetone	24.0	UJ	26.0	UJ	14.0	UJ	13.0	UJ	18.0	UJ	14.0	UJ	18.0	UJ	20.0	UJ	10.0	U
benzene	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
bromodichloromethane	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
bromoform	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
bromomethane	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	UJ
carbon disulfide	12.0	U	14.0	U	14.0	U	16.0	UJ	15.0	UJ	11.0	UJ	11.0	UJ	15.0	UJ	10.0	UJ
carbon tetrachloride	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
chlorobenzene	12.0	UJ	14.0	UJ	14.0	U	16.0	U	15.0	U	11.0	U	11.0	UJ	15.0	U	10.0	U
chloroethane	12.0	U	14.0	U	14.0	U	16.0	UJ	15.0	UJ	11.0	UJ	11.0	UJ	15.0	UJ	10.0	U
chloroform	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
chloromethane	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
cis-1,3-dichloropropene	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	12SS02		12SS03		12SS03-DUP		15SS01		15SS02		16SS01		16SS02		16SS03		17SS01	
LOCATION:	12SS02		12SS03		12SS03		15SS01		15SS02		16SS01		16SS02		16SS03		17SS01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
dibromochloromethane	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
ethylbenzene	12.0	UJ	14.0	UJ	14.0	U	16.0	U	15.0	U	11.0	U	11.0	UJ	15.0	U	10.0	U
methylene chloride	12.0	U	14.0	U	14.0	U	16.0	UJ	15.0	UJ	11.0	UJ	11.0	UJ	15.0	UJ	10.0	U
styrene	12.0	UJ	14.0	UJ	14.0	U	16.0	U	15.0	U	11.0	U	11.0	UJ	15.0	U	10.0	U
tetrachloroethene	12.0	UJ	14.0	UJ	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
toluene	12.0	UJ	14.0	UJ	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
trans-1,3-dichloropropene	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
trichloroethene	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
vinyl chloride	12.0	U	14.0	U	14.0	U	16.0	U	15.0	U	11.0	U	11.0	U	15.0	U	10.0	U
xylene (total)	12.0	UJ	14.0	UJ	14.0	U	16.0	U	15.0	U	11.0	U	11.0	UJ	15.0	U	10.0	U
PESTICIDES	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
4,4'-DDD	23.0	R	4.6	U	8.0	U	5.2	U	5.2	U	3.9	U	7.6	R	360	J	3.4	U
4,4'-DDE	29.0	J	7.6	R	14.0	R	43.0		13.0		3.9	R	15.0		120		3.4	U
4,4'-DDT	460		190	J	200	JN	12.0		6.2	R	38.0		230		43.0		1.2	J
Aroclor-1016							52.0	U	52.0	U	37.0	U	38.0	U	50.0	U	34.0	U
Aroclor-1221							110	U	100	U	76.0	U	77.0	U	100	U	68.0	U
Aroclor-1232							52.0	U	52.0	U	37.0	U	38.0	U	50.0	U	34.0	U
Aroclor-1242							52.0	U	52.0	U	37.0	U	38.0	U	50.0	U	34.0	U
Aroclor-1248							52.0	U	52.0	U	37.0	U	38.0	U	50.0	U	34.0	U
Aroclor-1254							52.0	U	52.0	U	37.0	U	38.0	U	50.0	U	34.0	U
Aroclor-1260							52.0	U	52.0	U	37.0	U	38.0	U	50.0	U	34.0	U
aldrin	2.1	U	2.0	J	0.89	R	2.7	U	2.7	U	1.9	U	2.0	U	2.6	U	1.7	U
alpha-BHC	0.17	R	0.26	R	0.23	R	2.7	U	0.13	J	0.047	J	0.13	J	2.6	U	1.7	U
alpha-chlordane	4.7	JN	7.1		11.0		2.7	U	2.7	U	1.9	U	7.0	U	33.0		1.7	U
beta-BHC	2.1	U	2.4	U	2.4	U	2.7	U	2.7	U	1.9	U	2.0	U	2.6	U	1.7	U
delta-BHC	2.1	U	2.4	U	2.4	U	2.7	U	2.7	U	1.9	U	2.0	U	2.6	U	1.7	U
dieldrin	4.1	U	4.6	U	4.6	U	5.2	U	5.2	U	3.7	U	3.8	U	5.0	U	0.085	R
endosulfan I	2.1	U	2.4	U	2.4	U	2.7	U	2.7	U	1.9	U	2.0	U	2.6	U	1.7	U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	12SS02		12SS03		12SS03-DUP		15SS01		15SS02		16SS01		16SS02		16SS03		17SS01	
LOCATION:	12SS02		12SS03		12SS03		15SS01		15SS02		16SS01		16SS02		16SS03		17SS01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
endosulfan II	4.1	U	4.6	U	4.6	U	5.2	U	5.2	U	3.7	U	3.8	U	5.0	U	3.4	U
endosulfan sulfate	4.1	U	4.6	U	27.0	R	5.2	U	5.2	U	3.7	U	3.8	U	5.0	U	3.4	U
endrin	4.2	U	4.6	U	4.6	U	5.2	U	5.2	U	3.7	U	3.8	U	5.0	U	3.4	U
endrin aldehyde	25.0		46.0	J	74.0	JN	5.2	U	5.2	U	3.8	U	3.8	U	5.0	U	3.4	U
endrin ketone	4.2	U	4.6	U	4.6	U	5.2	U	5.2	U	3.7	U	3.8	U	5.0	U	3.4	U
gamma-BHC (Lindane)	0.067	R	2.4	U	2.4	U	2.7	U	2.7	U	1.9	U	0.13	R	0.13	R	1.7	U
gamma-chlordane	12.0	JN	14.0	J	22.0	R	2.7	U	2.7	U	1.7	J	7.0	J	35.0		1.7	U
heptachlor	0.40	R	0.62	R	0.43	R	2.7	U	2.7	U	1.9	U	1.5	JN	2.6	U	1.7	U
heptachlor epoxide	2.5	R	2.4	U	2.4	U	2.7	U	2.7	U	0.39	J	2.0	U	2.6	U	1.7	U
methoxychlor	21.0	U	24.0	U	24.0	U	27.0	U	27.0	U	19.0	U	19.0	U	25.0	U	17.0	U
toxaphene	210	U	240	U	240	U	270	U	270	U	190	U	200	U	260	U	170	U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SS01	20SS02	20SS02-DUP	20SS03	20SS04	20SS05	86SS01	_LSS01	_LSS02
LOCATION:	20SS01	20SS02	20SS02	20SS03	20SS04	20SS05	86SS01	_LSS01	_LSS02
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI, Dec.
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	2000	3520	3720	3670	2740	904		612	1450
antimony	0.57 U	0.55 U	0.55 U	2.4	1.0	0.58 U		2.8 U	2.6 U
arsenic	1.5	2.5	2.8	5.4	1.9	1.3		2.7	2.7
barium	5.1	14.1	15.3	58.0	39.4	7.9		2.4	24.3
beryllium	0.072	0.21	0.23	2.7	1.4	0.085		0.061 U	0.10
cadmium	0.081 U	0.11	0.11	0.26	0.19	0.11		0.075 U	0.51
calcium	209	2400	2240	1690	1120	118		59.1	255
chromium, total	7.6 J	13.0 J	13.9 J	97.1 J	44.1 J	4.2 J		24.0	5.8
cobalt	0.47	2.3	2.5	18.4	6.9	0.63		0.14 U	0.31
copper	8.2	20.9	20.4	447	119	10.4		3.5	37.8 J
iron	4850	7480	7990	16500	8880	1740		5000	3280
lead	3.6	16.1	16.9	252	115	45.0		12.0	78.6
magnesium	188	1200	1170	806	524	53.5		88.1	66.0
manganese	6.4	57.4	58.4	126	57.9	11.3		6.0	17.1
mercury	0.025	0.044	0.047	0.030	0.025	0.034		0.041	0.036
nickel	4.3	7.4	8.2 R	162 R	54.8 R	4.6		0.61	1.8
potassium	163	225	253	410	365	72.2		211	49.2
selenium	1.2 J	0.89 UJ	0.89 UJ	1.4 J	0.89 UJ	0.94 UJ		0.63 UJ	0.58 UJ
silver	0.20 U	0.19 U	0.19 U	0.83	0.19 U	0.20 U		0.077 U	0.071 U
sodium	75.8	206	206	206	123	19.1		30.9	24.5
thallium	0.76 U	0.75	0.73 U	1.0	0.73 U	0.77 U		0.87 U	0.80 U
vanadium	8.5	15.2	16.3	23.8	14.7	5.4		24.4	7.8
zinc	4.2	42.0 J	52.9 J	972 J	402 J	45.0 J		8.1 J	162 J
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
1,2-dichlorobenzene	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
1,3-dichlorobenzene	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
1,4-dichlorobenzene	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SS01	20SS02	20SS02-DUP	20SS03	20SS04	20SS05	86SS01	_LSS01	_LSS02
LOCATION:	20SS01	20SS02	20SS02	20SS03	20SS04	20SS05	86SS01	_LSS01	_LSS02
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI, Dec.
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
2,2'-oxybis(1-chloropropane)	350 U	330 U	340 U	340 UJ	330 U	350 U		400 UJ	370 UJ
2,4,5-trichlorophenol	880 U	840 U	850 U	850 U	840 U	880 U		1000 U	920 U
2,4,6-trichlorophenol	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
2,4-dichlorophenol	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
2,4-dimethylphenol	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
2,4-dinitrophenol	880 U	840 U	850 U	850 U	840 U	880 U		1000 U	920 U
2,4-dinitrotoluene	350 U	330 U	340 U	340 U	330 U	350 U		400 UJ	370 UJ
2,6-dinitrotoluene	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
2-chloronaphthalene	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
2-chlorophenol	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
2-methylnaphthalene	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
2-methylphenol	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
2-nitroaniline	880 U	840 U	850 U	850 U	840 U	880 U		1000 U	920 U
2-nitrophenol	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
3,3'-dichlorobenzidine	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
3-nitroaniline	880 U	840 U	850 U	850 U	840 U	880 U		1000 U	920 U
4,6-dinitro-2-methylphenol	880 U	840 U	850 U	850 U	840 U	880 U		1000 U	920 U
4-bromophenyl-phenylether	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
4-chloro-3-methylphenol	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
4-chloroaniline	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
4-chlorophenyl-phenylether	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
4-methylphenol	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
4-nitroaniline	880 U	840 U	850 U	850 U	840 U	880 U		1000 U	920 U
4-nitrophenol	880 U	840 U	850 U	850 U	840 U	880 U		1000 U	920 U
N-nitroso-di-n-propylamine	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
N-nitrosodiphenylamine (1)	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
acenaphthene	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U
acenaphthylene	350 U	330 U	340 U	340 U	330 U	350 U		400 U	370 U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SS01		20SS02		20SS02-DUP		20SS03		20SS04		20SS05		86SS01	_LSS01		_LSS02	
LOCATION:	20SS01		20SS02		20SS02		20SS03		20SS04		20SS05		86SS01	_LSS01		_LSS02	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	1995 RI, Dec.		1995 RI, Dec.	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	**ug/kg**		**ug/kg**	
anthracene	350	U	47.0	J	80.0	J	340	U	330	U	350	U		400	U	370	U
benzo(a)anthracene	350	U	320	J	500		55.0	J	41.0	J	350	U		400	U	370	U
benzo(a)pyrene	350	U	240	J	390	J	340	U	330	U	350	U		400	U	370	U
benzo(b)fluoranthene	350	U	500		780	J	340	U	80.0	J	350	U		400	U	370	U
benzo(g,h,i)perylene	350	U	170	J	300	J	340	UJ	330	U	350	U		400	U	370	U
benzo(k)fluoranthene	350	U	160	J	250	J	340	U	330	U	350	U		400	U	370	U
bis(2-chloroethoxy)methane	350	U	330	U	340	U	340	U	330	U	350	U		400	U	370	U
bis(2-chloroethyl)ether	350	U	330	U	340	U	340	U	330	U	350	U		400	U	370	U
bis(2-ethylhexyl)phthalate	350	U	330	U	880	U	340	U	330	U	480	U		400	U	370	U
butylbenzylphthalate	350	U	330	U	340	U	340	U	66.0	J	350	U		400	U	370	U
carbazole	350	U	330	U	54.0	J	340	U	330	U	350	U		400	U	370	U
chrysene	350	U	380		600		71.0	J	57.0	J	350	U		400	U	370	U
di-n-butylphthalate	350	U	330	U	340	U	340	U	330	U	350	U		400	U	370	U
di-n-octylphthalate	350	U	330	U	340	UJ	340	UJ	330	U	350	U		400	U	370	U
dibenz(a,h)anthracene	350	U	330	U	340	UJ	340	U	330	U	350	U		400	U	370	U
dibenzofuran	350	U	330	U	45.0	J	340	U	330	U	350	U		400	U	370	U
diethylphthalate	350	U	330	U	340	U	340	U	330	U	350	U		400	U	370	U
dimethylphthalate	350	U	330	U	340	U	340	U	330	U	350	U		400	U	370	U
fluoranthene	350	U	670		830		140	J	78.0	J	350	U		400	U	46.0	J
fluorene	350	U	330	U	340	U	340	U	330	U	350	U		400	U	370	U
hexachlorobenzene	350	U	330	U	340	U	340	U	330	U	350	U		400	U	370	U
hexachlorobutadiene	350	U	330	U	340	U	340	U	330	U	350	U		400	U	370	U
hexachlorocyclopentadiene	350	U	330	U	340	U	340	U	330	U	350	U		400	U	370	U
hexachloroethane	350	U	330	U	340	U	340	U	330	U	350	U		400	U	370	U
indeno(1,2,3-cd)pyrene	350	U	190	J	300	J	340	U	330	U	350	U		400	U	370	U
isophorone	350	U	330	U	340	U	340	U	330	U	350	U		400	U	370	U
naphthalene	350	U	330	U	340	U	340	U	330	U	350	U		400	U	370	U
nitrobenzene	350	U	330	U	340	U	340	U	330	U	350	U		400	U	370	U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SS01		20SS02		20SS02-DUP		20SS03		20SS04		20SS05		86SS01		_LSS01		_LSS02	
LOCATION:	20SS01		20SS02		20SS02		20SS03		20SS04		20SS05		86SS01		_LSS01		_LSS02	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI, Dec.		1995 RI, Dec.	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
pentachlorophenol	880	U	840	U	850	U	850	U	840	U	880	U			1000	U	920	U
phenanthrene	350	U	380		660		100	J	39.0	J	350	U			400	U	370	U
phenol	350	U	330	U	340	U	340	U	330	U	350	U			400	U	370	U
pyrene	350	U	620		1000		120	J	96.0	J	350	U			400	U	370	U
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1,1-trichloroethane	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
1,1,2,2-tetrachloroethane	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
1,1,2-trichloroethane	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
1,1-dichloroethane	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
1,1-dichloroethene	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
1,2-dichloroethane	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
1,2-dichloroethene (total)	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
1,2-dichloropropane	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
2-butanone	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
2-hexanone	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
4-methyl-2-pentanone	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
acetone	11.0	U	10.0	U	10.0	U	92.0	U	14.0	U	11.0	U			12.0	U	11.0	U
benzene	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
bromodichloromethane	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
bromoform	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
bromomethane	11.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ	10.0	UJ	11.0	UJ			12.0	UJ	11.0	UJ
carbon disulfide	11.0	UJ	10.0	UJ	10.0	U	10.0	UJ	10.0	UJ	11.0	UJ			12.0	U	11.0	U
carbon tetrachloride	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
chlorobenzene	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
chloroethane	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
chloroform	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
chloromethane	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
cis-1,3-dichloropropene	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SS01		20SS02		20SS02-DUP		20SS03		20SS04		20SS05		86SS01		_LSS01		_LSS02	
LOCATION:	20SS01		20SS02		20SS02		20SS03		20SS04		20SS05		86SS01		_LSS01		_LSS02	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI, Dec.		1995 RI, Dec.	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
dibromochloromethane	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
ethylbenzene	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
methylene chloride	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
styrene	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
tetrachloroethene	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
toluene	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
trans-1,3-dichloropropene	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
trichloroethene	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
vinyl chloride	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
xylene (total)	11.0	U	10.0	U	10.0	U	10.0	U	10.0	U	11.0	U			12.0	U	11.0	U
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
4,4'-DDD													12000	JN	82.0	NJ	3.7	U
4,4'-DDE													370	U	120	J	3.7	U
4,4'-DDT													8800	J	1500		2.3	J
Aroclor-1016													3700	U	40.0	U	37.0	U
Aroclor-1221													7400	U	82.0	U	74.0	U
Aroclor-1232													3700	U	40.0	U	37.0	U
Aroclor-1242													3700	U	40.0	U	37.0	U
Aroclor-1248													3700	U	40.0	U	37.0	U
Aroclor-1254													3700	U	40.0	U	37.0	U
Aroclor-1260													3700	U	40.0	U	37.0	U
aldrin													270	R	2.1	U	1.9	U
alpha-BHC													190	U	2.1	U	1.9	U
alpha-chlordane													150000		2.1	U	1.9	U
beta-BHC													190	U	2.1	U	1.9	U
delta-BHC													190	U	2.1	U	1.9	U
dieldrin													1000	JN	4.0	U	0.30	J
endosulfan I													7600	JN	2.1	U	1.9	U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SS01	20SS02	20SS02-DUP	20SS03	20SS04	20SS05	86SS01	_LSS01	_LSS02
LOCATION:	20SS01	20SS02	20SS02	20SS03	20SS04	20SS05	86SS01	_LSS01	_LSS02
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI, Dec.
PESTICIDES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
endosulfan II							370 U	4.0 U	3.7 U
endosulfan sulfate							370 U	4.1 U	3.7 U
endrin							370 U	4.0 U	3.7 U
endrin aldehyde							370 U	4.0 U	3.7 U
endrin ketone							370 U	4.4 U	3.7 U
gamma-BHC (Lindane)							190 U	2.1 U	1.9 U
gamma-chlordane							140000	0.60 R	1.9 U
heptachlor							5400	2.1 U	0.17 J
heptachlor epoxide							190 U	2.1 U	1.9 U
methoxychlor							1900 U	20.0 U	19.0 U
toxaphene							19000 U	210 U	190 U

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	_LSS03	_LSS03-DUP	_LSS04	_LSS05	_LSS06	_LSS07	---	---	---
LOCATION:	_LSS03	_LSS03	_LSS04	_LSS05	_LSS06	_LSS07	---	---	---
DATA SOURCE:	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.			
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**			
aluminum	977	1100	1710	879	1470	3000			
antimony	2.6 U	2.6 U	2.6 U	2.5 U	2.6 U	2.8 U			
arsenic	1.6	1.8	4.5	0.58 U	0.93	5.9			
barium	1.6	2.2	10.4	5.6	17.1	18.2			
beryllium	0.084 U	0.084 U	0.19	0.073	0.15	0.12			
cadmium	1.0 J	0.59 U	0.16	0.069	0.27	0.52			
calcium	76.8	86.8	1720	417	1850	10800			
chromium, total	6.7	7.4	26.7	4.6	9.2	17.2			
cobalt	0.86 U	0.86 U	0.41	0.15	0.39	2.0			
copper	3.0	2.2	5.8 J	5.2	8.4 J	19.3 J			
iron	7060	7390	8860	2390	3880	7700			
lead	6.2 J	6.9 J	15.6	45.9	21.8	31.2			
magnesium	42.9	49.4	423	236	776	1520			
manganese	6.5 J	7.7 J	25.7	18.6	61.5	65.1			
mercury	0.031	0.038	0.040	0.043	0.042	0.068			
nickel	0.80 U	0.79 U	1.9	1.0	2.0	5.4			
potassium	63.2	73.7	642	60.8	195	552			
selenium	0.58 U	0.57 U	0.59 UJ	0.56 UJ	0.59 UJ	0.62 UJ			
silver	0.64 U	0.64 U	0.073 U	0.069 U	0.18	0.077 U			
sodium	19.8	13.5	33.0	27.4	54.1	278			
thallium	0.80 U	0.79 U	0.82 U	0.78 U	0.82 U	0.86 U			
vanadium	15.4 J	16.3 J	16.9	7.6	14.3	18.6			
zinc	5.3	5.3	22.0 J	7.5 J	19.6 J	35.6 J			
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**			
1,2,4-trichlorobenzene	370 U	370 U	380 U	350 U	380 U	400 U			
1,2-dichlorobenzene	370 U	370 U	380 U	350 U	380 U	400 U			
1,3-dichlorobenzene	63.0 J	370 U	380 U	350 U	380 U	400 U			
1,4-dichlorobenzene	63.0 J	370 U	380 U	350 U	380 U	400 U			

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	_LSS03		_LSS03-DUP		_LSS04		_LSS05		_LSS06		_LSS07		---	---	---
LOCATION:	_LSS03		_LSS03		_LSS04		_LSS05		_LSS06		_LSS07		---	---	---
DATA SOURCE:	1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.				
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**				
2,2'-oxybis(1-chloropropane)	370	UJ	370	UJ	380	UJ	350	UJ	380	UJ	400	UJ			
2,4,5-trichlorophenol	920	U	920	U	940	U	890	U	940	U	1000	U			
2,4,6-trichlorophenol	370	U	370	U	380	U	350	U	380	U	400	U			
2,4-dichlorophenol	370	U	370	U	380	U	350	U	380	U	400	U			
2,4-dimethylphenol	370	U	370	U	380	U	350	U	380	U	400	U			
2,4-dinitrophenol	920	U	920	U	940	U	890	U	940	U	1000	U			
2,4-dinitrotoluene	370	U	370	UJ	380	UJ	350	UJ	380	UJ	400	U			
2,6-dinitrotoluene	370	U	370	U	380	U	350	U	380	U	400	U			
2-chloronaphthalene	370	U	370	U	380	U	350	U	380	U	400	U			
2-chlorophenol	370	U	370	U	380	U	350	U	380	U	400	U			
2-methylnaphthalene	370	U	370	U	380	U	350	U	380	U	400	U			
2-methylphenol	370	U	370	U	380	U	350	U	380	U	400	U			
2-nitroaniline	920	U	920	U	940	U	890	U	940	U	1000	U			
2-nitrophenol	370	U	370	U	380	U	350	U	380	U	400	U			
3,3'-dichlorobenzidine	370	U	370	U	380	U	350	U	380	U	400	U			
3-nitroaniline	920	U	920	U	940	U	890	U	940	U	1000	U			
4,6-dinitro-2-methylphenol	920	U	920	U	940	U	890	U	940	U	1000	U			
4-bromophenyl-phenylether	370	U	370	U	380	U	350	U	380	U	400	U			
4-chloro-3-methylphenol	370	U	370	U	380	U	350	U	380	U	400	U			
4-chloroaniline	370	U	370	U	380	U	350	U	380	U	400	U			
4-chlorophenyl-phenylether	370	U	370	U	380	U	350	U	380	U	400	U			
4-methylphenol	370	U	370	U	380	U	350	U	380	U	400	U			
4-nitroaniline	920	U	920	U	940	U	890	U	940	U	1000	U			
4-nitrophenol	920	U	920	U	940	U	890	U	940	U	1000	U			
N-nitroso-di-n-propylamine	370	U	370	U	380	U	350	U	380	U	400	U			
N-nitrosodiphenylamine (1)	370	U	370	U	380	U	350	U	380	U	400	U			
acenaphthene	370	U	47.0	J	380	U	350	U	380	U	66.0	J			
acenaphthylene	370	U	370	U	380	U	350	U	380	U	42.0	J			

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	_LSS03		_LSS03-DUP		_LSS04		_LSS05		_LSS06		_LSS07		---	---	---
LOCATION:	_LSS03		_LSS03		_LSS04		_LSS05		_LSS06		_LSS07		---	---	---
DATA SOURCE:	1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.				
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**				
anthracene	77.0	J	97.0	J	380	U	350	U	380	U	170	J			
benzo(a)anthracene	160	J	220	J	71.0	J	350	U	380	U	630				
benzo(a)pyrene	85.0	J	110	J	80.0	J	350	U	70.0	J	700				
benzo(b)fluoranthene	1100		1200		160	J	350	U	160	J	960				
benzo(g,h,i)perylene	98.0	J	110	J	380	U	350	U	380	U	520				
benzo(k)fluoranthene	370	U	370	U	380	U	350	U	380	U	400	U			
bis(2-chloroethoxy)methane	370	U	370	U	380	U	350	U	380	U	400	U			
bis(2-chloroethyl)ether	43.0	J	370	U	380	U	350	U	380	U	400	U			
bis(2-ethylhexyl)phthalate	370	U	370	U	380	U	350	U	380	U	400	U			
butylbenzylphthalate	370	U	370	U	380	U	350	U	380	U	400	U			
carbazole	190	J	240	J	380	U	350	U	380	U	55.0	J			
chrysene	990		1200		90.0	J	350	U	110	J	680				
di-n-butylphthalate	370	U	370	U	380	U	350	U	380	U	400	U			
di-n-octylphthalate	370	U	370	U	380	U	350	U	380	U	400	U			
dibenz(a,h)anthracene	370	U	370	U	380	U	350	U	380	U	190	J			
dibenzofuran	63.0	J	85.0	J	380	U	350	U	380	U	56.0	J			
diethylphthalate	370	U	370	U	380	U	350	U	380	U	400	U			
dimethylphthalate	370	U	370	U	380	U	350	U	380	U	400	U			
fluoranthene	2500		3800		160	J	350	U	170	J	1000				
fluorene	370	U	53.0	J	380	U	350	U	380	U	120	J			
hexachlorobenzene	370	U	370	U	380	U	350	U	380	U	400	U			
hexachlorobutadiene	370	U	370	U	380	U	350	U	380	U	400	U			
hexachlorocyclopentadiene	370	UJ	370	U	380	U	350	U	380	U	400	U			
hexachloroethane	47.0	J	370	U	380	U	350	U	380	U	400	U			
indeno(1,2,3-cd)pyrene	120	J	140	J	50.0	J	350	U	380	U	530				
isophorone	370	U	370	U	380	U	350	U	380	U	400	U			
naphthalene	43.0	J	370	U	380	U	350	U	380	U	45.0	J			
nitrobenzene	370	U	370	U	380	U	350	U	380	U	400	U			

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	_LSS03		_LSS03-DUP		_LSS04		_LSS05		_LSS06		_LSS07		---	---	---
LOCATION:	_LSS03		_LSS03		_LSS04		_LSS05		_LSS06		_LSS07		---	---	---
DATA SOURCE:	1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.				
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**				
pentachlorophenol	920	U	920	U	940	U	890	U	940	U	1000	UJ			
phenanthrene	1400		2400		91.0	J	350	U	65.0	J	710				
phenol	43.0	J	370	U	380	U	350	U	380	U	400	U			
pyrene	1600		2200		150	J	350	U	170	J	1200				
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**				
1,1,1-trichloroethane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
1,1,2,2-tetrachloroethane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
1,1,2-trichloroethane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
1,1-dichloroethane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
1,1-dichloroethene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
1,2-dichloroethane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
1,2-dichloroethene (total)	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
1,2-dichloropropane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
2-butanone	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
2-hexanone	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
4-methyl-2-pentanone	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
acetone	11.0	U	11.0	U	11.0	U	11.0	U	11.0	UJ	12.0	U			
benzene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
bromodichloromethane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
bromoform	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
bromomethane	11.0	UJ	11.0	UJ	11.0	UJ	11.0	UJ	11.0	U	12.0	UJ			
carbon disulfide	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
carbon tetrachloride	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
chlorobenzene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
chloroethane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	UJ	12.0	U			
chloroform	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
chloromethane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	UJ	12.0	U			
cis-1,3-dichloropropene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	_LSS03		_LSS03-DUP		_LSS04		_LSS05		_LSS06		_LSS07		---	---	---
LOCATION:	_LSS03		_LSS03		_LSS04		_LSS05		_LSS06		_LSS07		---	---	---
DATA SOURCE:	1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.				
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**				
dibromochloromethane	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
ethylbenzene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
methylene chloride	11.0	U	11.0	U	11.0	U	11.0	U	8.0	J	12.0	U			
styrene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
tetrachloroethene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
toluene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
trans-1,3-dichloropropene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
trichloroethene	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
vinyl chloride	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
xylene (total)	11.0	U	11.0	U	11.0	U	11.0	U	11.0	U	12.0	U			
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**				
4,4'-DDD	3.7	U	3.7	U	9.8		3.5	U	0.48	R	4.9	NJ			
4,4'-DDE	3.7	U	3.7	U	96.0		3.6	U	1.6	J	28.0				
4,4'-DDT	2.1	NJ	2.2	R	39.0		1.6	J	7.2		14.0				
Aroclor-1016	37.0	U	37.0	U	37.0	U	35.0	U	37.0	U	40.0	U			
Aroclor-1221	74.0	U	74.0	U	76.0	U	72.0	U	76.0	U	81.0	U			
Aroclor-1232	37.0	U	37.0	U	37.0	U	35.0	U	37.0	U	40.0	U			
Aroclor-1242	37.0	U	37.0	U	37.0	U	35.0	U	37.0	U	40.0	U			
Aroclor-1248	37.0	U	37.0	U	37.0	U	35.0	U	37.0	U	40.0	U			
Aroclor-1254	37.0	U	37.0	U	37.0	U	35.0	U	37.0	U	40.0	U			
Aroclor-1260	37.0	U	37.0	U	37.0	U	35.0	U	37.0	U	40.0	U			
aldrin	1.8	U	1.9	U	1.9	U	1.8	U	1.9	U	2.0	U			
alpha-BHC	1.9	U	1.9	U	1.9	U	1.8	U	1.9	U	2.0	U			
alpha-chlordane	1.9	U	1.9	U	9.7	NJ	1.8	U	0.42	NJ	2.6	J			
beta-BHC	1.9	U	1.9	U	1.9	U	1.8	U	1.9	U	2.0	U			
delta-BHC	1.9	U	1.9	U	1.9	U	1.8	U	1.9	U	2.0	U			
dieldrin	3.7	U	3.7	U	3.7	U	0.21	R	0.38	R	4.0	U			
endosulfan I	1.9	U	1.9	U	1.9	U	1.8	U	1.9	U	2.0	U			

TABLE A-e

ANALYTICAL RESULTS FOR SURFACE SOIL

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	_LSS03		_LSS03-DUP		_LSS04		_LSS05		_LSS06		_LSS07		---	---	---
LOCATION:	_LSS03		_LSS03		_LSS04		_LSS05		_LSS06		_LSS07		---	---	---
DATA SOURCE:	1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.		1995 RI, Dec.				
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**				
endosulfan II	3.7	U	6.7	R	3.7	U	3.5	U	3.7	U	4.0	U			
endosulfan sulfate	3.7	U	3.7	U	3.7	U	3.5	U	3.7	U	4.0	U			
endrin	3.7	U	3.7	U	3.7	U	3.5	U	3.7	U	4.0	U			
endrin aldehyde	3.7	U	3.7	U	3.7	U	3.5	U	3.7	U	4.0	U			
endrin ketone	3.7	U	3.7	U	3.8	U	3.5	U	3.8	U	4.0	U			
gamma-BHC (Lindane)	0.35	R	0.57	R	1.9	U	1.8	U	1.9	U	0.14	R			
gamma-chlordane	1.9	U	1.9	U	8.0		1.8	U	0.38	J	3.1				
heptachlor	1.9	U	1.9	U	0.27	NJ	1.8	U	1.9	U	2.0	U			
heptachlor epoxide	1.9	U	1.9	U	1.0	J	1.8	U	1.9	U	2.0	U			
methoxychlor	5.8	NJ	8.5	R	19.0	U	18.0	U	19.0	U	20.0	U			
toxaphene	190	U	190	U	190	U	180	U	190	U	200	U			

APPENDIX A.f.

ANALYTICAL DATABASE

ORGANIC AND INORGANIC RESULTS

SEDIMENT SAMPLES

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	03SDWET3A-1	04SD4B5	06SD01	06SD02	06SD03	06SD04	07SDWET7-B2	12SD01	12SD02
LOCATION:	03SDWET3A-1	04SD4B5	06SD01	06SD02	06SD03	06SD04	07SDWET7-B2	12SD01	12SD02
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	9870	1030	7610 J	6370	3980	3660 J	2770	7690	5850
antimony	1.3	6.7 U	9.3 UJ	5.2 U	5.5 U	12.4 J	2.9 U	2.6 U	2.9 U
arsenic	6.2	0.81	21.4 J	3.0	33.1	36.3 J	11.7	9.8	14.4
barium	60.8	10.8	94.5 J	138 J	13.7	114 J	8.6	51.0	31.5
beryllium	0.26	0.23 U	1.0 J	0.57	0.21	0.30 UJ	0.22 U	0.66	0.72
cadmium	2.1	0.79 U	1.5 J	0.61 U	0.65 U	1.8 J	0.63 U	0.57 U	0.63 U
calcium	2570	334	4880 J	1170	1080	8820 J	568	4670	10900
chromium, total	22.1 J	1.8	44.5 J	18.0	22.5	77.2 J	13.2	26.7	28.8
cobalt	2.3	1.5 U	8.2 J	4.3	1.2 U	7.7 J	1.0 U	1.9	2.4
copper	24.3	1.6	111 J	20.9	13.1	228 J	3.6	25.6	19.6
iron	15000	1710	52200 J	13800	15300	46000 J	10000	39000	27100
lead	89.1	9.3 J	221 J	41.0 J	28.7 J	445 J	19.6	67.0	45.0
magnesium	545	65.2	2460 J	1180	401	2330 J	243	2880	3520
manganese	42.3	24.2 J	134 J	27.1 J	32.3 J	451 J	38.1	127	120
mercury	0.26	0.010 U	0.38 J	0.027	0.060	0.63 J	0.0023 U	0.012 J	0.045 J
nickel	9.5	2.5 U	21.7 J	8.1	2.3	43.8 J	1.5 U	4.0	6.0
potassium	406	77.9 U	956 J	1770	542	1530 J	332	2360	2150
selenium	2.1 R	0.79 U	3.2 J	1.3 J	1.2 J	3.4 J	1.1 UJ	1.0 UJ	1.1 UJ
silver	0.44	1.3 U	1.8 UJ	1.0 U	1.1 U	1.7 UJ	1.2 U	1.1 U	1.2 U
sodium	85.3	50.1	335 J	191	28.6	420 J	28.7	119	147
thallium	1.1 U	1.0 U	2.1 J	0.73 U	0.78 U	1.3 UJ	0.87 UJ	0.79 UJ	0.87 UJ
vanadium	31.7	3.0	48.7 J	18.2	43.3	87.8 J	19.3	23.6	31.9
zinc	104 R	4.4 J	486 J	87.4 J	61.1 J	1720 J	33.7	34.1	59.2
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene	510 U	520 U	740 UJ	410 U	430 U	690 UJ		360 U	400 U
1,2-dichlorobenzene	510 U	520 U	740 UJ	410 U	430 U	690 UJ		360 U	400 U
1,3-dichlorobenzene	510 U	520 U	740 UJ	410 U	430 U	690 UJ		360 U	400 U
1,4-dichlorobenzene	510 U	520 U	740 UJ	410 U	430 U	690 UJ		360 U	400 U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	03SDWET3A-1		04SD4B5		06SD01		06SD02		06SD03		06SD04		07SDWET7-B2	12SD01		12SD02	
LOCATION:	03SDWET3A-1		04SD4B5		06SD01		06SD02		06SD03		06SD04		07SDWET7-B2	12SD01		12SD02	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	**ug/kg**		**ug/kg**	
2,2'-oxybis(1-chloropropane)	510	U	520	U	740	UR	410	UR	430	UR	690	UR		360	U	400	U
2,4,5-trichlorophenol	1300	U	1300	U	1800	UJ	1000	U	1100	U	1700	UJ		910	U	1000	U
2,4,6-trichlorophenol	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
2,4-dichlorophenol	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
2,4-dimethylphenol	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
2,4-dinitrophenol	1300	U	1300	UJ	1800	UJ	1000	U	1100	U	1700	UJ		910	U	1000	U
2,4-dinitrotoluene	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
2,6-dinitrotoluene	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
2-chloronaphthalene	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
2-chlorophenol	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
2-methylnaphthalene	140	J	520	U	740	UJ	410	U	430	U	690	UJ		360	U	53.0	J
2-methylphenol	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
2-nitroaniline	1300	U	1300	U	1800	UJ	1000	U	1100	U	1700	UJ		910	U	1000	U
2-nitrophenol	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
3,3'-dichlorobenzidine	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
3-nitroaniline	1300	U	1300	U	1800	UJ	1000	U	1100	U	1700	UJ		910	U	1000	U
4,6-dinitro-2-methylphenol	1300	U	1300	U	1800	UJ	1000	U	1100	U	1700	UJ		910	U	1000	U
4-bromophenyl-phenylether	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
4-chloro-3-methylphenol	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
4-chloroaniline	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
4-chlorophenyl-phenylether	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
4-methylphenol	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
4-nitroaniline	1300	U	1300	U	1800	UJ	1000	U	1100	U	1700	UJ		910	U	1000	U
4-nitrophenol	1300	U	1300	UJ	1800	UJ	1000	U	1100	U	1700	UJ		910	U	1000	U
N-nitroso-di-n-propylamine	510	U	520	U	740	UJ	410	UJ	430	UJ	690	UJ		360	U	400	U
N-nitrosodiphenylamine (1)	510	U	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
acenaphthene	52.0	J	520	U	740	UJ	410	U	430	U	690	UJ		360	U	400	U
acenaphthylene	130	J	520	U	740	UJ	410	U	430	U	160	J		360	U	400	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	03SDWET3A-1		04SD4B5		06SD01		06SD02		06SD03		06SD04		07SDWET7-B2		12SD01		12SD02	
LOCATION:	03SDWET3A-1		04SD4B5		06SD01		06SD02		06SD03		06SD04		07SDWET7-B2		12SD01		12SD02	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
anthracene	140	J	520	U	740	UJ	88.0	J	430	U	260	J			360	U	400	U
benzo(a)anthracene	1300		520	U	170	J	580		75.0	J	1700	J			250	J	460	
benzo(a)pyrene	1400		520	U	160	J	460		110	J	2400	J			320	J	540	
benzo(b)fluoranthene	2000		520	U	340	J	700		190	J	4800	J			520		890	
benzo(g,h,i)perylene	1000		520	U	170	J	440		430	U	2600	J			240	J	400	J
benzo(k)fluoranthene	510	U	520	U	89.0	J	170	J	66.0	J	1100	J			180	J	340	J
bis(2-chloroethoxy)methane	510	U	520	U	740	UJ	410	U	430	U	690	UJ			360	U	400	U
bis(2-chloroethyl)ether	510	U	520	U	740	UJ	410	U	430	U	690	UJ			360	U	400	U
bis(2-ethylhexyl)phthalate	82.0	J	520	UJ	740	U	880		430	U	1700	U			67.0	J	80.0	J
butylbenzylphthalate	64.0	J	520	UJ	740	UJ	410	U	430	U	690	UJ			360	U	400	U
carbazole	70.0	J	520	U	740	UJ	410	U	430	U	140	J			360	U	400	U
chrysene	1800		520	U	240	J	570		130	J	2400	J			280	J	580	
di-n-butylphthalate	510	U	520	U	740	UJ	410	U	430	U	690	UJ			360	U	400	U
di-n-octylphthalate	510	U	520	U	740	UJ	410	UJ	430	UJ	690	UJ			360	U	400	U
dibenz(a,h)anthracene	240	J	520	U	740	UJ	150	J	430	U	720	J			60.0	J	97.0	J
dibenzofuran	510	U	520	U	740	UJ	410	U	430	U	78.0	J			360	U	400	U
diethylphthalate	510	U	520	U	740	UJ	410	U	430	U	690	UJ			360	U	400	U
dimethylphthalate	510	U	520	U	740	UJ	410	U	430	U	690	UJ			360	U	400	U
fluoranthene	2200		520	U	380	J	1200		110	J	1600	J			350	J	680	
fluorene	260	J	520	U	740	UJ	83.0	J	430	U	690	UJ			360	U	400	U
hexachlorobenzene	510	U	520	U	740	UJ	410	U	430	U	690	UJ			360	U	400	U
hexachlorobutadiene	510	U	520	U	740	UJ	410	U	430	U	690	UJ			360	U	400	U
hexachlorocyclopentadiene	510	U	520	U	740	UJ	410	U	430	U	690	UJ			360	U	400	U
hexachloroethane	510	U	520	U	740	UJ	410	U	430	U	690	UJ			360	U	400	U
indeno(1,2,3-cd)pyrene	880		520	U	130	J	290		69.0	J	2300	J			240	J	410	
isophorone	510	U	520	U	740	UJ	410	U	430	U	690	UJ			360	U	400	U
naphthalene	130	J	520	U	740	UJ	410	U	430	U	90.0	J			360	U	51.0	J
nitrobenzene	510	U	66.0	J	740	UJ	410	U	430	U	690	UJ			360	U	400	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	03SDWET3A-1		04SD4B5		06SD01		06SD02		06SD03		06SD04		07SDWET7-B2		12SD01		12SD02	
LOCATION:	03SDWET3A-1		04SD4B5		06SD01		06SD02		06SD03		06SD04		07SDWET7-B2		12SD01		12SD02	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
pentachlorophenol	1300	U	1300	U	1800	UJ	1000	U	1100	U	1700	UJ			910	U	1000	U
phenanthrene	2400		520	U	210	J	490		430	U	740	J			110	J	210	J
phenol	510	U	520	U	740	UJ	410	U	430	U	690	UJ			360	U	400	U
pyrene	3400		520	UJ	380	J	1000		130	J	2000	J			310	J	600	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1,1-trichloroethane	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
1,1,2,2-tetrachloroethane	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
1,1,2-trichloroethane	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
1,1-dichloroethane	15.0	U	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
1,1-dichloroethene	15.0	U	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
1,2-dichloroethane	15.0	U	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
1,2-dichloroethene (total)	15.0	U	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
1,2-dichloropropane	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
2-butanone	15.0	U	16.0	U	49.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
2-hexanone	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
4-methyl-2-pentanone	15.0	UJ	16.0	U	2.0	J	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
acetone	25.0	UJ	17.0	U	100	UJ	12.0	U	13.0	U	21.0	UJ	13.0	UJ	11.0	UJ	12.0	UJ
benzene	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
bromodichloromethane	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
bromoform	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
bromomethane	15.0	U	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
carbon disulfide	15.0	U	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
carbon tetrachloride	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
chlorobenzene	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
chloroethane	15.0	U	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
chloroform	15.0	U	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
chloromethane	15.0	U	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
cis-1,3-dichloropropene	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	03SDWET3A-1		04SD4B5		06SD01		06SD02		06SD03		06SD04		07SDWET7-B2		12SD01		12SD02	
LOCATION:	03SDWET3A-1		04SD4B5		06SD01		06SD02		06SD03		06SD04		07SDWET7-B2		12SD01		12SD02	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
dibromochloromethane	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
ethylbenzene	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
methylene chloride	15.0	U	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
styrene	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
tetrachloroethene	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
toluene	15.0	UJ	16.0	U	31.0	J	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
trans-1,3-dichloropropene	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
trichloroethene	15.0	UJ	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
vinyl chloride	15.0	U	16.0	U	22.0	UJ	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
xylene (total)	15.0	UJ	16.0	U	3.0	J	12.0	U	13.0	U	21.0	UJ	12.0	U	11.0	U	12.0	U
PESTICIDES	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
4,4'-DDD	5.1	U			230	J	43.0		2.4	JN	5.4	R			3.6	R	5.3	JN
4,4'-DDE	16.0	R			66.0	J	10.0		5.2		30.0	J			11.0		19.0	
4,4'-DDT	4.0	J			89.0	JN	9.3	J	14.0		110	J			35.0		35.0	
aldrin	2.6	U			38.0	UJ	0.077	R	2.2	U	0.35	R			1.9	U	2.0	U
alpha-BHC	0.082	JN			3.8	UJ	2.1	U	2.2	U	3.5	UJ			1.9	U	0.19	J
alpha-chlordane	2.1	J			48.0	J	22.0		0.39	R	3.5	UJ			1.0	J	1.2	J
beta-BHC	2.6	U			3.8	UJ	2.1	U	2.2	U	3.5	UJ			1.9	U	2.0	U
delta-BHC	2.6	U			38.0	UJ	2.1	U	2.2	U	3.5	UJ			1.9	U	2.0	U
dieldrin	5.1	U			7.3	UJ	4.0	U	0.31	J	1.6	J			3.6	U	4.0	U
endosulfan I	0.89	R			3.8	UJ	2.1	U	2.2	U	3.5	UJ			1.9	U	2.0	U
endosulfan II	5.1	U			24.0	J	2.6	J	4.3	U	5.6	JN			3.6	U	4.0	U
endosulfan sulfate	5.1	U			7.3	UJ	4.0	U	4.3	U	6.9	UJ			3.6	U	4.0	U
endrin	5.1	U			7.3	UJ	4.0	U	1.6	JN	6.9	UJ			3.6	U	4.0	U
endrin aldehyde	5.1	U			7.3	UJ	4.0	U	4.3	U	6.9	UJ			3.6	U	4.0	U
endrin ketone	5.1	U			73.0	UJ	4.0	U	4.3	U	7.3	J			3.6	U	4.0	U
gamma-BHC (Lindane)	0.61	R			3.8	UJ	2.1	U	2.2	U	3.5	UJ			1.9	U	0.070	R
gamma-chlordane	2.6	U			56.0	J	23.0		0.34	JN	3.5	UJ			0.54	J	0.79	J

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	03SDWET3A-1		04SD4B5	06SD01		06SD02		06SD03		06SD04		07SDWET7-B2	12SD01		12SD02	
LOCATION:	03SDWET3A-1		04SD4B5	06SD01		06SD02		06SD03		06SD04		07SDWET7-B2	12SD01		12SD02	
DATA SOURCE:	1995 RI		1995 RI	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	1995 RI		1995 RI	
PESTICIDES	**ug/kg**		**ug/kg**	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	**ug/kg**		**ug/kg**	
heptachlor	0.49	R		0.35	J	0.16	J	2.2	U	3.5	UJ		1.9	U	2.0	U
heptachlor epoxide	2.2	J		2.3	J	0.24	J	0.20	J	1.0	J		1.9	U	2.0	U
methoxychlor	26.0	U		38.0	UJ	21.0	U	22.0	U	35.0	UJ		19.0	U	20.0	U
toxaphene	260	U		380	UJ	210	U	220	U	350	UJ		190	U	200	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	12SD02-DUP	13SD01	13SD02	13SD02-DUP	13SD03	15SD01	15SD02	15SD03	16SD01
LOCATION:	12SD02	13SD01	13SD02	13SD02	13SD03	15SD01	15SD02	15SD03	16SD01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	4590	2170	1920	1810	1150	10600 J	5110	2550 J	1220
antimony	2.8 U	0.56	6.6 U	6.2 U	2.5	11.3 UJ	4.9 U	8.9 UJ	1.5
arsenic	12.4	4.1	1.1	3.5	4.2	25.5 J	10.5	17.2 J	2.2
barium	28.2	5.6	15.9	2.7	6.9	43.2 J	28.9	45.4 J	20.7
beryllium	0.43	0.32	0.22 U	0.21 U	0.12	1.7 J	0.32 J	0.072 UJ	0.12
cadmium	0.62 U	0.35	0.78 U	0.73 U	0.47	1.9 J	0.62 U	1.1 UJ	2.8 J
calcium	7200	176	610	84.5	81.1	1050 J	5100	282 J	443
chromium, total	30.5	72.5 J	6.6 J	59.8 J	23.2 J	32.5 J	58.7	8.6 J	18.3
cobalt	1.5	0.43	1.5 U	1.4 U	0.57	5.6 J	7.1	1.4 UJ	0.89
copper	28.9	7.6	2.9	2.9	32.7	85.8 J	269	11.3 J	21.2
iron	23600	7230	2330	6380	9180	84000 J	20800	44700 J	11400
lead	106	32.3	6.4 J	13.8 J	94.3	187 J	62.5	42.5 J	51.0
magnesium	1360	441	185	139	156	1130 J	1530	251 J	176
manganese	103	10.9	9.0 J	14.1 J	21.9	72.8 J	52.9 J	12.0 J	41.3
mercury	0.026 J	0.092	0.037	0.022	0.19	0.67 J	0.11 J	0.16 J	0.072
nickel	4.9	2.4	2.5 U	2.3 U	3.0	15.5 J	11.1	3.3 UJ	3.4
potassium	1210	1530	264	352	451	576 J	395	458 J	110
selenium	1.1 UJ	0.90 UJ	0.78 U	0.73 U	0.90 UJ	2.2 J	0.71 U	1.5 J	1.2 U
silver	1.1 U	2.4	1.3 U	1.2 U	22.7	3.1 J	0.52	0.77 UJ	0.41
sodium	103	23.5	36.3	42.6	18.1	317 J	222	291 J	29.8
thallium	0.86 UJ	0.74 U	0.93 U	0.87 U	0.74 U	2.4 J	1.0	2.8 J	1.0 UJ
vanadium	29.8	37.9	5.8	32.4	20.0	48.7 J	35.2	20.1 J	9.3
zinc	65.8	30.5 J	10.8 J	6.7 J	54.7 J	176 J	136	464 J	132
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene	390 U		520 U	480 U		1100 U	470 U	850 U	440 U
1,2-dichlorobenzene	390 U		520 U	480 U		1100 U	470 U	850 U	440 U
1,3-dichlorobenzene	390 U		520 U	480 U		1100 U	470 U	850 U	440 U
1,4-dichlorobenzene	390 U		520 U	480 U		1100 U	470 U	850 U	440 U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	12SD02-DUP		13SD01	13SD02		13SD02-DUP		13SD03	15SD01		15SD02		15SD03		16SD01	
LOCATION:	12SD02		13SD01	13SD02		13SD02		13SD03	15SD01		15SD02		15SD03		16SD01	
DATA SOURCE:	1995 RI		1995 RI	1995 RI		1995 RI		1995 RI	1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**	**ug/kg**		**ug/kg**		**ug/kg**	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
2,2'-oxybis(1-chloropropane)	390	U		520	U	480	U		1100	UR	470	UR	850	UR	440	U
2,4,5-trichlorophenol	990	U		1300	U	1200	U		2700	U	1200	U	2100	U	1100	U
2,4,6-trichlorophenol	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
2,4-dichlorophenol	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
2,4-dimethylphenol	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
2,4-dinitrophenol	990	U		1300	UJ	1200	UJ		2700	UJ	1200	UJ	2100	UJ	1100	UJ
2,4-dinitrotoluene	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
2,6-dinitrotoluene	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
2-chloronaphthalene	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
2-chlorophenol	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
2-methylnaphthalene	50.0	J		520	U	480	U		300	J	470	U	850	U	160	J
2-methylphenol	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
2-nitroaniline	990	U		1300	U	1200	U		2700	U	1200	U	2100	U	1100	U
2-nitrophenol	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
3,3'-dichlorobenzidine	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
3-nitroaniline	990	U		1300	U	1200	U		2700	U	1200	U	2100	U	1100	U
4,6-dinitro-2-methylphenol	990	U		1300	U	1200	U		2700	U	1200	U	2100	U	1100	U
4-bromophenyl-phenylether	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
4-chloro-3-methylphenol	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
4-chloroaniline	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
4-chlorophenyl-phenylether	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
4-methylphenol	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
4-nitroaniline	990	U		1300	U	1200	U		2700	U	1200	U	2100	U	1100	U
4-nitrophenol	990	U		1300	UJ	1200	UJ		2700	U	1200	U	2100	U	1100	UJ
N-nitroso-di-n-propylamine	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
N-nitrosodiphenylamine (1)	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
acenaphthene	390	U		520	U	480	U		140	J	470	U	850	U	160	J
acenaphthylene	390	U		520	U	480	U		1100	U	470	U	850	U	440	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	12SD02-DUP		13SD01	13SD02		13SD02-DUP		13SD03	15SD01		15SD02		15SD03		16SD01	
LOCATION:	12SD02		13SD01	13SD02		13SD02		13SD03	15SD01		15SD02		15SD03		16SD01	
DATA SOURCE:	1995 RI		1995 RI	1995 RI		1995 RI		1995 RI	1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**	**ug/kg**		**ug/kg**		**ug/kg**	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
anthracene	390	U		520	U	480	U		240	J	52.0	J	850	U	210	J
benzo(a)anthracene	340	J		520	U	480	U		1400		270		850	U	410	J
benzo(a)pyrene	430	J		520	U	480	U		1500		260		850	U	360	J
benzo(b)fluoranthene	790	J		520	U	48.0	J		2700		400		130	J	590	J
benzo(g,h,i)perylene	310	J		520	U	480	U		1200		170	J	850	U	260	J
benzo(k)fluoranthene	250	J		520	U	480	U		930		140	J	850	U	200	J
bis(2-chloroethoxy)methane	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
bis(2-chloroethyl)ether	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
bis(2-ethylhexyl)phthalate	110	J		520	UJ	480	UJ		2500	U	750	U	1300	U	330	J
butylbenzylphthalate	390	U		520	UJ	480	UJ		910		470	U	850	U	440	U
carbazole	390	U		520	U	480	U		250	J	470	U	850	U	170	J
chrysene	460			520	U	56.0	J		2200		330		120	J	430	J
di-n-butylphthalate	390	U		520	U	480	U		160	J	470	U	850	U	440	U
di-n-octylphthalate	390	UJ		520	U	480	U		1100	U	470	U	850	U	440	UJ
dibenz(a,h)anthracene	62.0	J		520	U	480	U		340	J	470	U	850	U	60.0	J
dibenzofuran	390	U		520	U	480	U		130	J	470	U	850	U	100	J
diethylphthalate	390	U		520	U	51.0	J		1100	U	470	U	850	U	440	U
dimethylphthalate	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
fluoranthene	500			520	U	81.0	J		3600		630		200	J	1100	
fluorene	390	U		520	U	480	U		180	J	470	U	850	U	150	J
hexachlorobenzene	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
hexachlorobutadiene	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
hexachlorocyclopentadiene	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
hexachloroethane	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
indeno(1,2,3-cd)pyrene	320	J		520	U	480	U		1100		150	J	850	U	210	J
isophorone	390	U		520	U	480	U		1100	U	470	U	850	U	440	U
naphthalene	47.0	J		520	U	480	U		140	J	470	U	850	U	98.0	J
nitrobenzene	390	U		520	U	480	U		1100	U	470	U	850	U	440	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	12SD02-DUP		13SD01		13SD02		13SD02-DUP		13SD03		15SD01		15SD02		15SD03		16SD01	
LOCATION:	12SD02		13SD01		13SD02		13SD02		13SD03		15SD01		15SD02		15SD03		16SD01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
pentachlorophenol	990	U			1300	U	1200	U			2700	UJ	1200	UJ	2100	UJ	1100	U
phenanthrene	180	J			520	U	480	U			1800		320		120	J	940	
phenol	390	U			520	U	480	U			1100	UJ	470	UJ	850	UJ	440	U
pyrene	490				53.0	J	82.0	J			3400		560		180	J	1500	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1,1-trichloroethane	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
1,1,2,2-tetrachloroethane	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
1,1,2-trichloroethane	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
1,1-dichloroethane	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
1,1-dichloroethene	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	UJ
1,2-dichloroethane	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
1,2-dichloroethene (total)	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
1,2-dichloropropane	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
2-butanone	12.0	U	10.0	UJ	16.0	U	14.0	U	10.0	UJ	36.0	UJ	14.0	U	86.0	J	14.0	U
2-hexanone	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
4-methyl-2-pentanone	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	UJ
acetone	12.0	UJ	11.0	U	16.0	U	14.0	U	10.0	U	120	UJ	16.0	U	470	UJ	19.0	UJ
benzene	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
bromodichloromethane	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
bromoform	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
bromomethane	12.0	U	10.0	UJ	16.0	U	14.0	U	10.0	UJ	32.0	UJ	14.0	U	26.0	UJ	14.0	U
carbon disulfide	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	UJ
carbon tetrachloride	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
chlorobenzene	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
chloroethane	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	UJ
chloroform	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
chloromethane	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
cis-1,3-dichloropropene	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	12SD02-DUP		13SD01		13SD02		13SD02-DUP		13SD03		15SD01		15SD02		15SD03		16SD01	
LOCATION:	12SD02		13SD01		13SD02		13SD02		13SD03		15SD01		15SD02		15SD03		16SD01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
dibromochloromethane	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
ethylbenzene	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
methylene chloride	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	UJ
styrene	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	11.0	J	14.0	U
tetrachloroethene	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
toluene	12.0	U	10.0	UJ	16.0	U	14.0	U	10.0	UJ	32.0	UJ	14.0	U	26.0	UJ	14.0	U
trans-1,3-dichloropropene	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
trichloroethene	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
vinyl chloride	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
xylene (total)	12.0	U	10.0	U	16.0	U	14.0	U	10.0	U	32.0	UJ	14.0	U	26.0	UJ	14.0	U
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
4,4'-DDD	5.5	JN	3.4	U	5.1	U	4.8	U	3.4	U	43.0		13.0		45.0		72.0	
4,4'-DDE	18.0		3.8	R	2.3	JN	2.6	J	1.9	R	31.0		2.1	NJ	59.0		16.0	
4,4'-DDT	35.0		16.0	R	6.2		6.6		25.0	R	46.0	NJ	7.2	NJ	8.4	U	36.0	J
Aroclor-1016			34.0	U	51.0	U	48.0	U	34.0	U	110	U	46.0	U	84.0	U	45.0	U
Aroclor-1221			68.0	U	100	U	97.0	U	69.0	U	220	U	94.0	U	170	U	91.0	U
Aroclor-1232			34.0	U	51.0	U	48.0	U	34.0	U	110	U	46.0	U	84.0	U	45.0	U
Aroclor-1242			34.0	U	51.0	U	48.0	U	34.0	U	110	U	46.0	U	84.0	U	45.0	U
Aroclor-1248			34.0	U	51.0	U	48.0	U	34.0	U	110	U	46.0	U	84.0	U	45.0	U
Aroclor-1254			2200		60.0		56.0		3900		110	U	46.0	U	84.0	U	45.0	U
Aroclor-1260			34.0	U	35.0	J	31.0	J	1200		100	J	16.0	J	84.0	U	45.0	U
aldrin	2.0	U	1.7	U	2.6	U	2.5	U	1.8	U	5.5	U	2.4	U	4.3	U	2.3	U
alpha-BHC	2.0	U	1.7	U	2.6	UJ	2.5	UJ	1.8	U	5.5	UJ	2.4	UJ	4.3	UJ	2.3	U
alpha-chlordane	1.2	J	11.0		2.6	U	2.5	U	20.0	J	31.0	J	3.8	NJ	2.0	R	2.3	U
beta-BHC	2.0	U	1.7	U	2.6	U	2.5	U	1.8	U	0.35	R	0.072	R	0.39	R	2.3	U
delta-BHC	2.0	U	1.7	U	2.6	U	2.5	U	1.8	U	5.5	U	2.4	U	4.3	U	2.3	U
dieldrin	3.9	U	3.4	U	5.1	U	4.8	U	3.4	U	11.0	U	4.6	U	5.0	R	4.5	U
endosulfan I	2.0	U	1.7	U	2.6	U	2.5	U	1.8	U	5.5	U	2.4	U	4.3	U	2.3	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	12SD02-DUP		13SD01		13SD02		13SD02-DUP		13SD03		15SD01		15SD02		15SD03		16SD01	
LOCATION:	12SD02		13SD01		13SD02		13SD02		13SD03		15SD01		15SD02		15SD03		16SD01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
endosulfan II	3.9	U	3.4	U	5.1	U	4.8	U	3.4	U	11.0	U	4.6	U	8.4	U	4.5	U
endosulfan sulfate	4.0	U	3.4	U	5.1	U	0.30	J	3.4	U	11.0	U	4.6	U	8.4	U	4.5	U
endrin	3.9	U	3.4	U	5.1	U	4.8	U	3.4	U	11.0	U	4.6	U	10.0	J	4.5	U
endrin aldehyde	3.9	U	31.0	J	5.1	U	4.8	U	90.0	J	11.0	U	4.6	U	8.4	U	4.5	U
endrin ketone	3.9	U	3.4	U	5.1	U	4.8	U	3.4	U	11.0	U	4.6	U	8.4	U	4.5	U
gamma-BHC (Lindane)	2.0	U	1.7	U	2.6	U	2.5	U	1.8	U	5.5	U	2.4	U	4.3	U	2.3	U
gamma-chlordane	1.0	J	1.7	U	0.11	R	0.16	J	1.8	U	29.0	J	5.1	NJ	4.3	U	2.8	J
heptachlor	2.0	U	1.7	U	2.6	U	2.5	U	1.8	U	5.5	U	2.4	U	4.3	U	2.3	U
heptachlor epoxide	0.57	JN	1.7	U	2.6	U	2.5	U	1.8	U	3.2	J	0.47	J	4.3	U	2.3	U
methoxychlor	20.0	U	17.0	U	26.0	U	25.0	U	18.0	U	55.0	U	24.0	U	43.0	U	23.0	U
toxaphene	200	U	170	U	260	U	250	U	180	U	550	U	240	U	430	U	230	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SD01-DUP	16SD02	16SD02-DUP	16SD03	17SD01	17SD02	17SD03	17SD04	19SD01
LOCATION:	16SD01	16SD02	16SD02	16SD03	17SD01	17SD02	17SD03	17SD04	19SD01
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	1580	4250	4340	2820	1410	19300 J	7770 J	745	12600 J
antimony	0.74 U	0.81 U	0.81 U	0.73 U	0.58 U	25.6 UJ	9.4 UJ	5.2 U	31.9 UJ
arsenic	2.8	8.9	6.0	5.7	11.4 J	36.3 J	13.2 J	4.0	26.0 J
barium	24.0	19.4	22.1	16.5	3.3	71.8 J	32.2 J	2.4	11.9 J
beryllium	0.13	0.39	0.33	0.23	0.11	1.2 J	0.72 J	0.17 U	1.3 J
cadmium	2.0 J	1.9 J	2.5 J	1.9 J	0.23	3.1 J	1.1 UJ	0.62 U	3.8 UJ
calcium	458	1690 J	2010 J	1160	336	4660 J	1260 J	125	427 J
chromium, total	18.6	59.7	57.7	56.3	10.8 J	53.5 J	20.2 J	6.8	430 J
cobalt	0.83	1.9	2.6	1.8	0.58	6.4 J	2.8 J	1.2 U	7.1 UJ
copper	17.7	21.9	29.3	26.7	4.0	99.1 J	26.1 J	2.0	14.2 J
iron	10900	12900	14900	11000	7790	49700 J	20500 J	5640	45200 J
lead	53.3	39.5	50.3	57.9	10.9	126 J	75.9 J	5.2 J	60.3 J
magnesium	187	1340	1740	1120	241	3120 J	898 J	117	1820 J
manganese	36.1	79.1	107	57.4	15.7	74.8 J	33.8 J	4.0	54.2 J
mercury	0.051	0.063	0.055	0.021	0.020	0.32 J	0.16 J	0.0080 U	0.076 J
nickel	3.7	4.9	6.1	4.6	2.9	27.6 J	7.2 J	1.9 U	11.9 UJ
potassium	147	1080	804	519	606	3350 J	1320 J	235	5500 J
selenium	1.2 U	1.3 U	1.3 U	1.2 U	1.1 J	7.4 J	2.2 J	0.93 J	3.8 UJ
silver	0.33	0.52	0.45	0.63	0.20 U	5.0 UJ	1.8 UJ	1.0 U	6.2 UJ
sodium	49.9	112	159	110	50.2	695 J	165 J	870	109 J
thallium	1.0 UJ	1.1 UJ	1.6 J	1.3 J	1.5	3.6 UJ	1.3 UJ	0.74 U	4.5 UJ
vanadium	8.4	38.2	43.3	37.2	16.9	101 J	42.7 J	9.4	210 J
zinc	81.1	111	146	132	12.0 J	242 J	57.4 J	7.3 J	36.9 J
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene	460 U	490 U	500 U	440 U	360 U	2100 UJ	740 UJ	410 U	2500 UJ
1,2-dichlorobenzene	460 U	490 U	500 U	440 U	360 U	2100 UJ	740 UJ	410 U	2500 UJ
1,3-dichlorobenzene	460 U	490 U	500 U	440 U	360 U	2100 UJ	740 UJ	410 U	2500 UJ
1,4-dichlorobenzene	460 U	490 U	500 U	440 U	360 U	2100 UJ	740 UJ	410 U	2500 UJ

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SD01-DUP		16SD02		16SD02-DUP		16SD03		17SD01		17SD02		17SD03		17SD04		19SD01	
LOCATION:	16SD01		16SD02		16SD02		16SD03		17SD01		17SD02		17SD03		17SD04		19SD01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
2,2'-oxybis(1-chloropropane)	460	U	490	U	500	U	440	U	360	U	2100	UR	740	UR	410	UJ	2500	UJ
2,4,5-trichlorophenol	1200	U	1200	U	1200	U	1100	U	900	U	5200	UJ	1800	UJ	1000	U	6400	UJ
2,4,6-trichlorophenol	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
2,4-dichlorophenol	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
2,4-dimethylphenol	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
2,4-dinitrophenol	1200	UJ	1200	UJ	1200	UJ	1100	UJ	900	U	5200	UJ	1800	UJ	1000	U	6400	UJ
2,4-dinitrotoluene	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
2,6-dinitrotoluene	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
2-chloronaphthalene	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
2-chlorophenol	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
2-methylnaphthalene	79.0	J	490	U	500	U	440	U	360	U	2100	UJ	170	J	410	U	2500	UJ
2-methylphenol	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
2-nitroaniline	1200	U	1200	U	1200	U	1100	U	900	U	5200	UJ	1800	UJ	1000	U	6400	UJ
2-nitrophenol	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
3,3'-dichlorobenzidine	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
3-nitroaniline	1200	U	1200	U	1200	U	1100	U	900	U	5200	UJ	1800	UJ	1000	U	6400	UJ
4,6-dinitro-2-methylphenol	1200	U	1200	U	1200	U	1100	U	900	U	5200	UJ	1800	UJ	1000	U	6400	UJ
4-bromophenyl-phenylether	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
4-chloro-3-methylphenol	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
4-chloroaniline	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
4-chlorophenyl-phenylether	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
4-methylphenol	460	U	490	U	500	U	440	U	360	U	420	J	820	J	410	U	2500	UJ
4-nitroaniline	1200	U	1200	U	1200	U	1100	U	900	U	5200	UJ	1800	UJ	1000	U	6400	UJ
4-nitrophenol	1200	U	1200	U	1200	U	1100	U	900	U	5200	UJ	1800	UJ	1000	U	6400	UJ
N-nitroso-di-n-propylamine	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
N-nitrosodiphenylamine (1)	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
acenaphthene	130	J	490	U	500	U	440	U	360	U	2100	UJ	340	J	410	U	2500	UJ
acenaphthylene	460	U	490	U	500	U	440	U	360	U	2100	UJ	89.0	J	410	U	2500	UJ

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SD01-DUP		16SD02		16SD02-DUP		16SD03		17SD01		17SD02		17SD03		17SD04		19SD01	
LOCATION:	16SD01		16SD02		16SD02		16SD03		17SD01		17SD02		17SD03		17SD04		19SD01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
anthracene	220	J	490	U	500	U	440	U	360	U	2100	UJ	1000	J	410	U	2500	UJ
benzo(a)anthracene	660		81.0	J	160	J	63.0	J	360	U	500	J	2600	J	410	U	490	J
benzo(a)pyrene	590		92.0	J	130	J	75.0	J	360	U	490	J	2600	J	41.0	J	560	J
benzo(b)fluoranthene	750		180	J	320	J	150	J	360	U	1000	J	5000	J	62.0	J	580	J
benzo(g,h,i)perylene	440	J	59.0	J	140	J	71.0	J	360	U	530	J	3100	J	410	U	400	J
benzo(k)fluoranthene	300	J	490	U	96.0	J	440	UJ	360	U	260	J	1300	J	410	U	580	J
bis(2-chloroethoxy)methane	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
bis(2-chloroethyl)ether	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
bis(2-ethylhexyl)phthalate	360	J	250	J	220	J	460		360	U	4400	J	9400	J	410	U	2500	UJ
butylbenzylphthalate	460	U	65.0	J	500	U	440	U	360	U	2100	UJ	610	J	410	U	2500	UJ
carbazole	160	J	490	U	500	U	440	U	360	U	2100	UJ	630	J	410	U	2500	UJ
chrysene	690		140	J	250	J	120	J	68.0	J	690	J	3100	J	52.0	J	860	J
di-n-butylphthalate	460	U	490	U	500	U	440	U	360	U	2100	UJ	140	J	410	U	2500	UJ
di-n-octylphthalate	460	U	490	U	500	UJ	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
dibenz(a,h)anthracene	120	J	490	U	500	UJ	440	UJ	360	U	2100	UJ	820	J	410	U	2500	UJ
dibenzofuran	59.0	J	490	U	500	U	440	U	360	U	2100	UJ	220	J	410	U	2500	UJ
diethylphthalate	460	U	490	U	500	U	440	U	360	U	2100	UJ	100	J	43.0	J	2500	UJ
dimethylphthalate	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
fluoranthene	1400		190	J	360	J	110	J	130	J	930	J	4700	J	96.0	J	2000	J
fluorene	110	J	490	U	500	U	440	U	360	U	2100	UJ	590	J	410	U	2500	UJ
hexachlorobenzene	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
hexachlorobutadiene	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
hexachlorocyclopentadiene	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
hexachloroethane	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
indeno(1,2,3-cd)pyrene	370	J	81.0	J	110	J	71.0	J	360	U	420	J	2200	J	410	U	360	J
isophorone	460	U	490	U	500	U	440	U	360	U	2100	UJ	75.0	J	410	U	2500	UJ
naphthalene	47.0	J	490	U	500	U	440	U	360	U	2100	UJ	160	J	410	U	2500	UJ
nitrobenzene	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SD01-DUP		16SD02		16SD02-DUP		16SD03		17SD01		17SD02		17SD03		17SD04		19SD01	
LOCATION:	16SD01		16SD02		16SD02		16SD03		17SD01		17SD02		17SD03		17SD04		19SD01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
pentachlorophenol	1200	U	1200	U	1200	U	1100	U	900	U	5200	UJ	1800	UJ	1000	U	6400	UJ
phenanthrene	990		81.0	J	90.0	J	59.0	J	360	U	510	J	4200	J	410	U	730	J
phenol	460	U	490	U	500	U	440	U	360	U	2100	UJ	740	UJ	410	U	2500	UJ
pyrene	2100		280	J	410	J	220	J	120	J	1100	J	7000	J	80.0	J	1600	J
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1,1-trichloroethane	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
1,1,2,2-tetrachloroethane	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
1,1,2-trichloroethane	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
1,1-dichloroethane	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
1,1-dichloroethene	14.0	UJ	15.0	UJ	15.0	UJ	14.0	UJ	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
1,2-dichloroethane	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
1,2-dichloroethene (total)	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
1,2-dichloropropane	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
2-butanone	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	120	UJ	54.0	UJ	12.0	U	77.0	UJ
2-hexanone	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
4-methyl-2-pentanone	14.0	UJ	15.0	UJ	15.0	UJ	14.0	UJ	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
acetone	41.0	UJ	130	UJ	28.0	UJ	24.0	UJ	11.0	U	360	UJ	140	UJ	12.0	U	200	UJ
benzene	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
bromodichloromethane	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
bromoform	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
bromomethane	14.0	U	15.0	U	15.0	U	14.0	U	11.0	UJ	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
carbon disulfide	14.0	UJ	15.0	UJ	15.0	UJ	14.0	UJ	11.0	UJ	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
carbon tetrachloride	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
chlorobenzene	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
chloroethane	14.0	UJ	15.0	UJ	15.0	UJ	14.0	UJ	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
chloroform	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
chloromethane	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
cis-1,3-dichloropropene	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SD01-DUP		16SD02		16SD02-DUP		16SD03		17SD01		17SD02		17SD03		17SD04		19SD01	
LOCATION:	16SD01		16SD02		16SD02		16SD03		17SD01		17SD02		17SD03		17SD04		19SD01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
dibromochloromethane	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
ethylbenzene	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
methylene chloride	14.0	UJ	15.0	UJ	15.0	UJ	14.0	UJ	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
styrene	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
tetrachloroethene	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
toluene	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	4.0	J	12.0	U	17.0	J
trans-1,3-dichloropropene	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
trichloroethene	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
vinyl chloride	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
xylene (total)	14.0	U	15.0	U	15.0	U	14.0	U	11.0	U	62.0	UJ	22.0	UJ	12.0	U	77.0	UJ
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
4,4'-DDD	61.0		8.3	U	8.3	U	4.5	U	1.6	R	58.0	J	26.0	J	4.1	U	330	J
4,4'-DDE	17.0		5.0		5.1		4.9		27.0		98.0	J	98.0	J	0.36	R	32.0	R
4,4'-DDT	41.0		19.0		20.0		8.1		59.0		30.0	J	13.0	J	4.1	U	38.0	J
Aroclor-1016	46.0	U	49.0	U	50.0	U	45.0	U			210	UJ	73.0	UJ	41.0	U		
Aroclor-1221	93.0	U	100	U	100	U	91.0	U			420	UJ	150	UJ	82.0	U		
Aroclor-1232	46.0	U	49.0	U	50.0	U	45.0	U			210	UJ	73.0	UJ	41.0	U		
Aroclor-1242	46.0	U	49.0	U	50.0	U	45.0	U			210	UJ	73.0	UJ	41.0	U		
Aroclor-1248	46.0	U	49.0	U	50.0	U	45.0	U			210	UJ	73.0	UJ	41.0	U		
Aroclor-1254	46.0	U	49.0	U	50.0	U	45.0	U			210	UJ	73.0	UJ	41.0	U		
Aroclor-1260	46.0	U	49.0	U	50.0	U	45.0	U			80.0	J	31.0	J	41.0	U		
aldrin	2.4	U	2.5	U	2.6	U	2.3	U	1.8	U	11.0	UJ	3.8	UJ	2.1	U	13.0	UJ
alpha-BHC	2.4	U	2.5	U	0.045	J	2.3	U	1.8	U	11.0	UJ	3.8	UJ	2.1	U	13.0	UJ
alpha-chlordane	2.4	U	2.8	U	3.3	U	2.6	U	1.8	U	8.1	JN	2.2	R	4.5	J	2.6	R
beta-BHC	2.4	U	2.5	U	2.6	U	2.3	U	1.8	U	11.0	UJ	3.8	UJ	2.1	U	13.0	UJ
delta-BHC	2.4	U	2.5	U	2.6	U	2.3	U	1.8	U	11.0	UJ	3.8	UJ	0.094	R	13.0	UJ
dieldrin	4.6	U	4.9	U	5.0	U	4.5	U	3.6	U	21.0	UJ	7.3	UJ	0.026	R	25.0	UJ
endosulfan I	2.4	U	2.5	U	2.6	U	2.3	U	1.8	U	11.0	UJ	3.8	UJ	2.1	U	13.0	UJ

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SD01-DUP		16SD02		16SD02-DUP		16SD03		17SD01		17SD02		17SD03		17SD04		19SD01	
LOCATION:	16SD01		16SD02		16SD02		16SD03		17SD01		17SD02		17SD03		17SD04		19SD01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
endosulfan II	4.6	U	4.9	U	5.0	U	4.5	U	3.6	U	21.0	UJ	7.3	UJ	0.21	JN	0.79	R
endosulfan sulfate	4.6	U	4.9	U	5.0	U	8.8	U	3.6	U	21.0	UJ	7.3	UJ	4.1	U	25.0	UJ
endrin	4.6	U	4.9	U	5.0	U	4.5	U	3.6	U	21.0	UJ	7.3	UJ	4.1	U	25.0	UJ
endrin aldehyde	4.6	U	4.9	U	5.0	U	4.5	U	3.6	U	21.0	UJ	7.3	UJ	4.1	U	25.0	UJ
endrin ketone	4.6	U	4.9	U	5.0	U	4.5	U	3.6	U	21.0	UJ	7.3	UJ	4.1	U	1.2	R
gamma-BHC (Lindane)	2.4	U	2.5	U	2.6	U	0.036	R	0.037	R	11.0	UJ	3.8	UJ	2.1	U	13.0	UJ
gamma-chlordane	3.4	J	2.9		2.8		3.0		1.8	U	7.8	JN	2.0	R	5.0		1.4	J
heptachlor	2.4	U	2.5	U	2.6	U	2.3	U	1.8	U	11.0	UJ	3.8	UJ	2.1	U	13.0	UJ
heptachlor epoxide	2.4	U	2.5	U	2.6	U	2.3	U	1.8	U	0.63	R	3.8	UJ	2.1	U	0.92	R
methoxychlor	24.0	U	25.0	U	25.0	U	9.6	J	18.0	U	3.9	J	1.6	J	21.0	U	130	UJ
toxaphene	240	U	250	U	260	U	230	U	180	U	1100	UJ	380	UJ	210	U	1300	UJ

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SD01	22-001-D001	22-003-D001	22-004-D001	22-005-D001	22-006-D001	22-006-D001-DU	23SD01	23SD02
LOCATION:	20SD01	22-001-D001	22-003-D001	22-004-D001	22-005-D001	22-006-D001	22-006-D001	23SD01	23SD02
DATA SOURCE:	1995 RI	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	1720	3930	2220	3010	1300	2360	0.031	1970	2660
antimony	0.58 U							4.3 U	2.7 U
arsenic	2.6	2.9	2.5	2.8	1.2	0.94	18.0 U	4.7	3.1
barium	12.3	16.5	8.0	9.2	1.1	6.6	4.0 U	11.1	6.4
beryllium	0.10	0.26	0.27	0.16	0.13	0.22	0.50	0.33 U	0.21 U
cadmium	0.14	2.7	0.90 U	1.8	0.75 U	0.93	0.34 U	1.2 J	0.60 U
calcium	878	1260	422	671	56.6	944	0.10	410	187
chromium, total	6.1 J	14.3	31.8	24.0	11.6	13.6	6.3 U	15.6	18.1
cobalt	0.26	5.2	1.1	0.93 U	0.75 U	0.93 U	3.4 U	1.5 U	0.92 U
copper	5.0	18.3	4.6	5.3	0.77	4.0		4.9	6.7
iron	2960	13400	7090	3970	2550	3010	0.051	8130	5400
lead	9.2	42.9	106	26.9	6.4	11.9	0.014	11.3	13.8
magnesium	227	641	558	318	171	405	0.058	172	115
manganese	9.9	155	23.7	9.5	2.4	8.3	0.90 U	8.5	5.5
mercury	0.046							0.018 J	0.057 J
nickel	2.2	8.6	0.94 U	1.0 U	0.79 U	1.0 U	3.6 U	4.0	1.4
potassium	155	342	678	678	450	465	142 U	351	207
selenium	0.94 UJ	0.38	0.34 U	0.37	0.31 U	0.35 U	1.3 U	1.6 UJ	1.0 UJ
silver	0.20 U							1.8 U	1.1 U
sodium	35.5	67.1	36.6	57.6	10.3	42.9	0.26	36.3	24.9
thallium	0.77 U							1.3 UJ	0.83 UJ
vanadium	7.2	21.4	29.0	12.5	9.5	10.1	2.6 U	20.1	16.5
zinc	11.7 J	119	20.9	35.6	4.0	36.8	0.0048	35.0	15.9 J
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene	350 U		500 U			520 U		600 U	380 U
1,2-dichlorobenzene	350 U		500 U			520 U		600 U	380 U
1,3-dichlorobenzene	350 U		500 U			520 U		600 U	380 U
1,4-dichlorobenzene	350 U		500 U			520 U		600 U	380 U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SD01		22-001-D001	22-003-D001		22-004-D001	22-005-D001	22-006-D001		22-006-D001-DU	23SD01		23SD02	
LOCATION:	20SD01		22-001-D001	22-003-D001		22-004-D001	22-005-D001	22-006-D001		22-006-D001	23SD01		23SD02	
DATA SOURCE:	1995 RI		1992 RI/FS	1992 RI/FS		1992 RI/FS	1992 RI/FS	1992 RI/FS		1992 RI/FS	1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**	**ug/kg**		**ug/kg**	**ug/kg**	**ug/kg**		**ug/kg**	**ug/kg**		**ug/kg**	
2,2'-oxybis(1-chloropropane)	350	U		500	U			520	U		600	U	380	U
2,4,5-trichlorophenol	890	U		1260	U			1310	U		1500	U	950	U
2,4,6-trichlorophenol	350	U		500	U			520	U		600	U	380	U
2,4-dichlorophenol	350	U		500	U			520	U		600	U	380	U
2,4-dimethylphenol	350	U		500	U			520	U		600	U	380	U
2,4-dinitrophenol	890	U		1260	U			1310	U		1500	U	950	U
2,4-dinitrotoluene	350	U		500	U			520	U		600	U	380	U
2,6-dinitrotoluene	350	U		500	U			520	U		600	U	380	U
2-chloronaphthalene	350	U		500	U			520	U		600	U	380	U
2-chlorophenol	350	U		500	U			520	U		600	U	380	U
2-methylnaphthalene	350	U		500	U			520	U		600	U	380	U
2-methylphenol	350	U		500	U			520	U		600	U	380	U
2-nitroaniline	890	U		1260	U			1310	U		1500	U	950	U
2-nitrophenol	350	U		500	U			520	U		600	U	380	U
3,3'-dichlorobenzidine	350	U		500	U			520	U		600	U	380	U
3-nitroaniline	890	U		1260	U			1310	U		1500	U	950	U
4,6-dinitro-2-methylphenol	890	U		1260	U			1310	U		1500	U	950	U
4-bromophenyl-phenylether	350	U		500	U			520	U		600	U	380	U
4-chloro-3-methylphenol	350	U		500	U			520	U		600	U	380	U
4-chloroaniline	350	U		500	U			520	U		600	U	380	U
4-chlorophenyl-phenylether	350	U		500	U			520	U		600	U	380	U
4-methylphenol	350	U		500	U			520	U		600	U	380	U
4-nitroaniline	890	U		1260	U			1310	U		1500	U	950	U
4-nitrophenol	890	U		1260	U			1310	U		1500	U	950	U
N-nitroso-di-n-propylamine	350	U		500	U			520	U		600	U	380	U
N-nitrosodiphenylamine (1)	350	U		500	U			520	U		600	U	380	U
acenaphthene	350	U		500	U			300	J		600	U	380	U
acenaphthylene	350	U		500	U			520	U		600	U	380	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SD01	22-001-D001	22-003-D001	22-004-D001	22-005-D001	22-006-D001	22-006-D001-DU	23SD01	23SD02
LOCATION:	20SD01	22-001-D001	22-003-D001	22-004-D001	22-005-D001	22-006-D001	22-006-D001	23SD01	23SD02
DATA SOURCE:	1995 RI	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
anthracene	350 U		71.0 J			880		600 U	380 U
benzo(a)anthracene	90.0 J		490 J			1800		600 U	380 U
benzo(a)pyrene	100 J		460 J			970		600 U	380 U
benzo(b)fluoranthene	160 J		630			1200		600 U	380 U
benzo(g,h,i)perylene	54.0 J		440 J			830		600 U	380 U
benzo(k)fluoranthene	50.0 J		550			1200		600 U	380 U
benzoic acid			250 U			2600 U			
bis(2-chloroethoxy)methane	350 U		500 U			520 U		600 U	380 U
bis(2-chloroethyl)ether	350 U		500 U			520 U		600 U	380 U
bis(2-ethylhexyl)phthalate	350 U		500 U			77.0 J		62.0 J	52.0 J
butylbenzylphthalate	350 U		500 U			520 U		600 U	380 U
carbazole	350 U		500 U			520 U		600 U	380 U
chrysene	130 J		730			1700		600 U	380 U
di-n-butylphthalate	350 U		69.0 J			68.0 J		600 U	380 U
di-n-octylphthalate	350 U		500 U			520 U		600 U	380 U
dibenz(a,h)anthracene	350 U		64.0 J			220 J		600 U	380 U
dibenzofuran	350 U		500 U			520 U		600 U	380 U
diethylphthalate	350 U		500 U			520 U		600 U	380 U
dimethylphthalate	350 U		500 U			520 U		600 U	380 U
fluoranthene	150 J		1500			5000		600 U	380 U
fluorene	350 U		500 U			150 J		600 U	380 U
hexachlorobenzene	350 U		500 U			520 U		600 U	380 U
hexachlorobutadiene	350 U		500 U			520 U		600 U	380 U
hexachlorocyclopentadiene	350 U		500 U			520 U		600 U	380 U
hexachloroethane	350 U		500 U			520 U		600 U	380 U
indeno(1,2,3-cd)pyrene	350 U		390 J			780		600 U	380 U
isophorone	350 U		500 U			520 U		600 U	380 U
naphthalene	350 U		500 U			520 U		600 U	380 U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SD01		22-001-D001	22-003-D001		22-004-D001	22-005-D001	22-006-D001		22-006-D001-DU	23SD01		23SD02	
LOCATION:	20SD01		22-001-D001	22-003-D001		22-004-D001	22-005-D001	22-006-D001		22-006-D001	23SD01		23SD02	
DATA SOURCE:	1995 RI		1992 RI/FS	1992 RI/FS		1992 RI/FS	1992 RI/FS	1992 RI/FS		1992 RI/FS	1995 RI		1995 RI	
SEMIVOLATILES	ug/kg		ug/kg	ug/kg		ug/kg	ug/kg	ug/kg		ug/kg	ug/kg		ug/kg	
nitrobenzene	350	U		500	U			520	U		600	U	380	U
pentachlorophenol	890	U		1260	U			1310	U		1500	U	950	U
phenanthrene	120	J		610				6300			600	U	380	U
phenol	350	U		500	U			520	U		600	U	380	U
pyrene	230	J		1100				3300			600	U	380	U
VOLATILES	ug/kg		ug/kg	ug/kg		ug/kg	ug/kg	ug/kg		ug/kg	ug/kg		ug/kg	
1,1,1-trichloroethane	11.0	U									18.0	U	11.0	U
1,1,2,2-tetrachloroethane	11.0	U									18.0	U	11.0	U
1,1,2-trichloroethane	11.0	U									18.0	U	11.0	U
1,1-dichloroethane	11.0	U									18.0	U	11.0	U
1,1-dichloroethene	11.0	U									18.0	U	11.0	U
1,2-dichloroethane	11.0	U									18.0	U	11.0	U
1,2-dichloroethene (total)	11.0	U									18.0	U	11.0	U
1,2-dichloropropane	11.0	U									18.0	U	11.0	U
2-butanone	11.0	UJ									18.0	UJ	11.0	UJ
2-hexanone	11.0	U									18.0	U	11.0	U
4-methyl-2-pentanone	11.0	U									18.0	U	11.0	U
acetone	11.0	U									48.0	UJ	11.0	UJ
benzene	11.0	U									18.0	U	11.0	U
bromodichloromethane	11.0	U									18.0	U	11.0	U
bromoform	11.0	U									18.0	U	11.0	U
bromomethane	11.0	UJ									18.0	U	11.0	U
carbon disulfide	11.0	U									18.0	UJ	11.0	UJ
carbon tetrachloride	11.0	U									18.0	U	11.0	U
chlorobenzene	11.0	U									18.0	U	11.0	U
chloroethane	11.0	U									18.0	U	11.0	U
chloroform	11.0	U									18.0	U	11.0	U
chloromethane	11.0	U									18.0	U	11.0	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SD01	22-001-D001	22-003-D001	22-004-D001	22-005-D001	22-006-D001	22-006-D001-DU	23SD01	23SD02
LOCATION:	20SD01	22-001-D001	22-003-D001	22-004-D001	22-005-D001	22-006-D001	22-006-D001	23SD01	23SD02
DATA SOURCE:	1995 RI	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1995 RI	1995 RI
VOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
cis-1,3-dichloropropene	11.0 U							18.0 U	11.0 U
dibromochloromethane	11.0 U							18.0 U	11.0 U
ethylbenzene	11.0 U							18.0 U	11.0 U
methylene chloride	11.0 U							18.0 UJ	11.0 UJ
styrene	11.0 U							18.0 U	11.0 U
tetrachloroethene	11.0 U							18.0 U	11.0 U
toluene	11.0 UJ							18.0 U	11.0 U
trans-1,3-dichloropropene	11.0 U							18.0 U	11.0 U
trichloroethene	11.0 U							18.0 U	11.0 U
vinyl chloride	11.0 U							18.0 U	11.0 U
xylene (total)	11.0 U							18.0 U	11.0 U
PESTICIDES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
4,4'-DDD								0.80 J	3.8 U
4,4'-DDE								6.0 U	3.8 U
4,4'-DDT			13.0 J			110 U		6.0 U	3.8 U
aldrin								3.1 U	2.0 U
alpha-BHC								3.1 U	2.0 U
alpha-chlordane								0.66 R	0.37 J
beta-BHC								3.1 U	2.0 U
delta-BHC								1.0 R	2.0 U
dieldrin								6.0 U	3.8 U
endosulfan I								3.1 U	2.0 U
endosulfan II								6.0 U	3.8 U
endosulfan sulfate								6.0 U	3.8 U
endrin								6.0 U	3.8 U
endrin aldehyde								6.0 U	3.8 U
endrin ketone								6.0 U	3.8 U
gamma-BHC (Lindane)								3.1 U	2.0 U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	20SD01	22-001-D001	22-003-D001	22-004-D001	22-005-D001	22-006-D001	22-006-D001-DU	23SD01		23SD02	
LOCATION:	20SD01	22-001-D001	22-003-D001	22-004-D001	22-005-D001	22-006-D001	22-006-D001	23SD01		23SD02	
DATA SOURCE:	1995 RI	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1995 RI		1995 RI	
PESTICIDES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**		**ug/kg**	
gamma-chlordane								3.1	U	2.0	U
heptachlor								3.1	U	2.0	U
heptachlor epoxide								3.1	U	2.0	U
methoxychlor								30.0	U	20.0	U
toxaphene								310	U	200	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	23SD03	23SD04	23SD05	23SD05-DUP	BGSD01	BGSD02	BGSD04	WSSD05	WSSD06
LOCATION:	23SD03	23SD04	23SD05	23SD05	BGSD01	BGSD02	BGSD04	WSSD05	WSSD06
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
INORGANICS	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
aluminum	2590	1260	1950	1980	3940	3460 J	839	2970 J	1820
antimony	3.5 U	3.2 U	3.1 U	3.2 U	5.7 U	20.2 UJ	5.5 U	10.5 UJ	7.6 U
arsenic	1.6	2.0	1.8	1.7	2.4	6.2 J	0.65 U	2.6 J	1.4
barium	16.7	6.3	4.6	3.6	10.6	6.6 J	3.9	16.4 J	3.2
beryllium	0.27 U	0.25 U	0.24 U	0.25 U	0.57	0.68 UJ	0.18 U	0.35 UJ	0.26 U
cadmium	0.77 U	0.71 J	0.68 U	0.71 U	0.68 U	2.4 UJ	0.65 U	1.2 UJ	0.91 U
calcium	191	269	249	294	518	179 J	331	627 J	124
chromium, total	120	18.2	15.7	12.4	56.0	4.4 J	4.3	5.3 J	5.4
cobalt	1.2 U	1.1 U	1.0 U	1.1 U	2.1	4.5 UJ	1.2 U	2.3 UJ	1.7 U
copper	2.2	2.4	5.9	5.4	1.5	13.0 J	4.2	5.3 J	4.3
cyanide					0.33 UJ	1.2 UJ	0.32 UJ	0.59 UJ	0.41 UJ
iron	8940	13200	7830	7250	7650	228 J	1990	5580 J	2580
lead	72.5	4.1	5.0	4.4	4.6 J	34.3 J	7.0 J	16.3 J	10.4
magnesium	138	203	257	282	256	60.7 J	143	100 J	109
manganese	3.7	6.6	10.5	9.4	9.2 J	4.6 J	6.9 J	5.1	1.6
mercury	0.0028 U	0.0027 U	0.0041 J	0.0025 U	0.0088 U	0.068 J	0.0084 U	0.044 J	0.016
nickel	4.5	1.6 U	2.5	2.4	6.0	7.6 UJ	2.1	3.9 UJ	2.9
potassium	348	458	321	145	681	234 UJ	86.1	191 J	88.8 U
selenium	1.3 UJ	1.2 UJ	1.2 UJ	1.2 UJ	0.68 U	2.4 UJ	0.65 U	1.2 UJ	0.91 UJ
silver	1.4 U	1.3 U	1.3 U	1.3 U	1.1 U	3.9 UJ	1.1 U	2.0 UJ	1.5 U
sodium	40.7	28.6	24.6	32.3	30.3	116 J	26.6	74.7 J	60.7
thallium	1.1 UJ	1.0 UJ	0.94 UJ	1.0 UJ	0.81 U	2.9 UJ	0.78 U	1.5 UJ	1.1 UJ
vanadium	14.1	20.8	12.8	11.2	42.7	5.9 J	6.8	13.2 J	8.9
zinc	71.3	9.7 J	17.7 J	23.6	26.9 J	14.9 J	14.2 J	22.8 R	11.9
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
1,2,4-trichlorobenzene	75.0 J	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
1,2-dichlorobenzene	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
1,3-dichlorobenzene	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	23SD03		23SD04		23SD05		23SD05-DUP		BGSD01		BGSD02		BGSD04		WSSD05		WSSD06	
LOCATION:	23SD03		23SD04		23SD05		23SD05		BGSD01		BGSD02		BGSD04		WSSD05		WSSD06	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,4-dichlorobenzene	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
2,2'-oxybis(1-chloropropane)	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
2,4,5-trichlorophenol	1200	U	1100	U	1100	U	1100	U	1100	U	4000	UJ	1100	U	2100	UJ	1500	U
2,4,6-trichlorophenol	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
2,4-dichlorophenol	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
2,4-dimethylphenol	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
2,4-dinitrophenol	1200	U	1100	U	1100	U	1100	UJ	1100	UJ	4000	UJ	1100	UJ	2100	UJ	1500	UJ
2,4-dinitrotoluene	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
2,6-dinitrotoluene	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
2-chloronaphthalene	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
2-chlorophenol	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
2-methylnaphthalene	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
2-methylphenol	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
2-nitroaniline	1200	U	1100	U	1100	U	1100	U	1100	U	4000	UJ	1100	U	2100	UJ	1500	U
2-nitrophenol	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
3,3'-dichlorobenzidine	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
3-nitroaniline	1200	U	1100	U	1100	U	1100	U	1100	U	4000	UJ	1100	U	2100	UJ	1500	UJ
4,6-dinitro-2-methylphenol	1200	U	1100	U	1100	U	1100	U	1100	U	4000	UJ	1100	U	2100	UJ	1500	U
4-bromophenyl-phenylether	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
4-chloro-3-methylphenol	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
4-chloroaniline	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
4-chlorophenyl-phenylether	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
4-methylphenol	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
4-nitroaniline	1200	U	1100	U	1100	U	1100	U	1100	U	4000	UJ	1100	U	2100	UJ	1500	UJ
4-nitrophenol	1200	U	1100	U	1100	U	1100	U	1100	UJ	4000	UJ	1100	UJ	2100	UJ	1500	UJ
N-nitroso-di-n-propylamine	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
N-nitrosodiphenylamine (1)	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
acenaphthene	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	23SD03	23SD04	23SD05	23SD05-DUP	BGSD01	BGSD02	BGSD04	WSSD05	WSSD06
LOCATION:	23SD03	23SD04	23SD05	23SD05	BGSD01	BGSD02	BGSD04	WSSD05	WSSD06
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
SEMIVOLATILES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
acenaphthylene	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
anthracene	490 U	450 U	54.0 J	76.0 J	450 U	1600 UJ	430 U	820 UJ	600 U
benzo(a)anthracene	490 U	110 J	320 J	590	450 U	560 J	140 J	820 UJ	67.0 J
benzo(a)pyrene	490 U	110 J	320 J	480	450 U	590 J	160 J	820 UJ	77.0 J
benzo(b)fluoranthene	490 U	220 J	590	1200	450 U	490 J	150 J	89.0 J	93.0 J
benzo(g,h,i)perylene	490 U	99.0 J	220 J	110 J	450 U	380 J	130 J	820 UJ	600 U
benzo(k)fluoranthene	490 U	71.0 J	150 J	440 U	450 U	470 J	150 J	820 UJ	86.0 J
bis(2-chloroethoxy)methane	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
bis(2-chloroethyl)ether	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
bis(2-ethylhexyl)phthalate	400 J	50.0 J	50.0 J	440 U	450 U	1600 U	430 U	820 UJ	600 U
butylbenzylphthalate	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
carbazole	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
chrysene	490 U	180 J	460	800	450 U	940 J	250	95.0 J	99.0 J
di-n-butylphthalate	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
di-n-octylphthalate	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
dibenz(a,h)anthracene	490 U	450 U	54.0 J	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
dibenzofuran	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
diethylphthalate	490 U	450 U	180 J	440 U	450 U	1600 UJ	44.0 J	820 UJ	83.0 J
dimethylphthalate	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
fluoranthene	490 U	240 J	700	1300	450 U	1800 J	300	140 J	160 J
fluorene	490 U	450 U	50.0 J	440 U	450 U	190 J	430 U	820 UJ	600 U
hexachlorobenzene	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
hexachlorobutadiene	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
hexachlorocyclopentadiene	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
hexachloroethane	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
indeno(1,2,3-cd)pyrene	490 U	99.0 J	230 J	170 J	450 U	310 J	110 J	820 UJ	600 U
isophorone	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U
naphthalene	490 U	450 U	430 U	440 U	450 U	1600 UJ	430 U	820 UJ	600 U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	23SD03		23SD04		23SD05		23SD05-DUP		BGSD01		BGSD02		BGSD04		WSSD05		WSSD06	
LOCATION:	23SD03		23SD04		23SD05		23SD05		BGSD01		BGSD02		BGSD04		WSSD05		WSSD06	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
nitrobenzene	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
pentachlorophenol	1200	U	1100	U	1100	U	1100	UJ	1100	U	4000	UJ	1100	U	2100	UJ	1500	U
phenanthrene	490	U	180	J	540		910		450	U	1900	J	200	J	820	UJ	600	U
phenol	490	U	450	U	430	U	440	U	450	U	1600	UJ	430	U	820	UJ	600	U
pyrene	490	U	350	J	770		950	J	450	UJ	1900	J	350	J	120	J	110	J
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1,1-trichloroethane	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
1,1,2,2-tetrachloroethane	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
1,1,2-trichloroethane	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
1,1-dichloroethane	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
1,1-dichloroethene	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
1,2-dichloroethane	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
1,2-dichloroethene (total)	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
1,2-dichloropropane	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
2-butanone	15.0	UJ	14.0	UJ	13.0	UJ	14.0	UJ	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
2-hexanone	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
4-methyl-2-pentanone	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
acetone	49.0	UJ	14.0	UJ	13.0	UJ	14.0	UJ	17.0	U	81.0	UJ	13.0	U	82.0	UJ	22.0	U
benzene	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
bromodichloromethane	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
bromoform	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
bromomethane	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
carbon disulfide	15.0	UJ	14.0	UJ	13.0	UJ	14.0	UJ	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
carbon tetrachloride	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
chlorobenzene	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
chloroethane	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	UJ
chloroform	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
chloromethane	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	23SD03		23SD04		23SD05		23SD05-DUP		BGSD01		BGSD02		BGSD04		WSSD05		WSSD06	
LOCATION:	23SD03		23SD04		23SD05		23SD05		BGSD01		BGSD02		BGSD04		WSSD05		WSSD06	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
cis-1,3-dichloropropene	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
dibromochloromethane	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
ethylbenzene	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
methylene chloride	15.0	UJ	14.0	UJ	13.0	UJ	14.0	UJ	14.0	U	48.0	UJ	13.0	U	3.0	J	2.0	J
styrene	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
tetrachloroethene	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	50.0	J	3.0	J	25.0	UJ	18.0	U
toluene	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	480	J	13.0	U	25.0	UJ	4.0	J
trans-1,3-dichloropropene	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
trichloroethene	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
vinyl chloride	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
xylene (total)	15.0	U	14.0	U	13.0	U	14.0	U	14.0	U	48.0	UJ	13.0	U	25.0	UJ	18.0	U
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
4,4'-DDD	0.20	R	0.38	JN	4.8		4.9		4.4	U	21.0	J	4.9		85.0	J	30.0	
4,4'-DDE	4.9	U	4.5	U	2.4	JN	2.3	R	4.4	U	16.0	UJ	1.7	J	5.6	U	6.0	J
4,4'-DDT	4.9	U	4.5	U	5.2		8.3		4.4	U	19.0	J	4.3	U	770		7.7	
Aroclor-1016									44.0	U	160	UJ	43.0	U	56.0	U	62.0	U
Aroclor-1221									90.0	U	320	UJ	87.0	U	110	U	130	U
Aroclor-1232									44.0	U	160	UJ	43.0	U	56.0	U	62.0	U
Aroclor-1242									44.0	U	160	UJ	43.0	U	56.0	U	62.0	U
Aroclor-1248									5.8	J	160	UJ	43.0	U	56.0	U	62.0	U
Aroclor-1254									44.0	U	160	UJ	43.0	U	56.0	U	62.0	U
Aroclor-1260									44.0	U	160	UJ	43.0	U	56.0	U	62.0	U
aldrin	2.5	U	2.3	U	2.2	U	1.2	JN	2.3	U	1.8	R	0.17	R	2.9	U	3.2	U
alpha-BHC	2.5	U	2.3	U	2.2	U	2.3	U	2.3	U	8.1	UJ	2.2	U	2.9	U	3.2	U
alpha-chlordane	0.55	J	2.3	U	2.2	U	2.3	U	2.3	U	8.1	UJ	2.2	U	2.9	U	3.2	U
beta-BHC	2.5	U	2.3	U	2.2	U	2.3	U	2.3	U	8.1	UJ	2.2	U	2.9	U	3.2	U
delta-BHC	2.5	U	2.3	U	2.2	U	2.3	U	2.3	U	8.1	UJ	2.2	U	2.9	U	3.2	U
dieldrin	4.9	U	4.5	U	4.3	U	4.5	U	4.4	U	16.0	UJ	4.3	U	5.6	U	6.3	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	23SD03		23SD04		23SD05		23SD05-DUP		BGSD01		BGSD02		BGSD04		WSSD05		WSSD06	
LOCATION:	23SD03		23SD04		23SD05		23SD05		BGSD01		BGSD02		BGSD04		WSSD05		WSSD06	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
endosulfan I	2.5	U	2.3	U	2.2	U	2.3	U	2.3	U	0.45	J	2.2	U	2.9	U	3.2	U
endosulfan II	4.9	U	4.5	U	4.3	U	4.5	U	0.11	R	0.65	R	0.079	R	5.6	U	6.2	U
endosulfan sulfate	4.9	U	4.5	U	4.3	U	4.5	U	4.4	U	16.0	UJ	4.3	U	63.0		6.0	J
endrin	4.9	U	4.5	U	4.3	U	4.5	U	0.062	R	0.78	R	0.093	R	16.0		0.85	J
endrin aldehyde	4.9	U	4.5	U	4.3	U	4.5	U	4.4	U	16.0	UJ	4.3	U	5.6	U	6.3	U
endrin ketone	4.9	U	4.5	U	4.3	U	4.5	U	4.4	U	1.6	J	0.22	R	9.7		6.3	U
gamma-BHC (Lindane)	2.5	U	2.3	U	2.2	U	2.3	U	2.3	U	8.1	UJ	2.2	U	2.9	U	3.2	U
gamma-chlordane	0.38	JN	2.3	U	2.2	U	2.3	U	2.3	U	8.1	UJ	0.10	J	2.9	U	3.2	U
heptachlor	2.5	U	2.3	U	2.2	U	2.3	U	2.3	U	8.1	UJ	2.2	U	2.9	U	3.2	U
heptachlor epoxide	2.5	U	2.3	U	0.36	JN	1.3	R	2.3	U	0.16	R	2.2	U	2.9	U	3.2	U
methoxychlor	25.0	U	23.0	U	22.0	U	3.8	R	23.0	U	81.0	UJ	22.0	U	77.0		32.0	U
toxaphene	250	U	230	U	220	U	230	U	230	U	810	UJ	220	U	290	U	320	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSD07		WSSD08		WSSD09		WSSD09-DUP		WSSD10		WSSD11		WSSD12		WSSD13		WSSD14	
LOCATION:	WSSD07		WSSD08		WSSD09		WSSD09		WSSD10		WSSD11		WSSD12		WSSD13		WSSD14	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
INORGANICS	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
aluminum	2210		3170	J	1010		1750		3500	J	6130	J	1320		2530		1650	
antimony	6.1	U	9.4	UJ	7.7	U	8.0	U	21.5	UJ	30.4	UJ	6.0	U	6.6	U	6.0	U
arsenic	1.2		5.2	J	0.92	U	1.0		3.2	J	3.6	UJ	14.1		13.6		5.0	
barium	8.1		23.4	J	10.5		16.4		51.3	J	77.9	J	9.6		15.6		55.3	
beryllium	0.20	U	0.54	J	0.26	U	0.27	U	1.3	J	1.0	UJ	0.40		0.58		0.56	
cadmium	0.72	U	1.1	UJ	0.92	U	1.0	U	3.2	J	3.6	UJ	0.71	U	0.78	U	0.71	U
calcium	122		1710	J	418		680		10000	J	4070	J	203		374		825	
chromium, total	6.5		9.9	J	4.1		5.7		63.4	J	59.8	J	21.7		32.4		19.8	
cobalt	1.4	U	2.1	UJ	1.7	U	1.8	U	4.8	UJ	6.8	UJ	1.3	U	1.5	U	1.3	U
copper	5.4		5.3	J	3.0		3.4		14.7	J	13.8	J	1.3	U	2.7		2.3	
cyanide	0.36	UJ	0.54	UJ	0.45	UJ	0.47	UJ	1.2	UJ	1.8	UJ	0.35	UJ	0.47	J	0.35	UJ
iron	3380		32800	J	1350		2240		6970	J	5330	J	14400		20700		21900	
lead	23.4		23.0	J	9.2		12.7		61.1	J	64.8	J	7.0		10.1		8.1	
magnesium	222		105	J	92.0		152		293	J	882	J	68.1		137		261	
manganese	7.2	R	10.1	R	3.9		7.5		20.5	R	21.2	R	1.4		4.0		18.9	R
mercury	0.017		0.026	J	0.014		0.013		0.075	J	0.047	UJ	0.0092	U	0.010	U	0.0093	U
nickel	2.3	U	3.5	UJ	2.9	U	3.0	U	9.4	J	11.4	UJ	2.2	U	2.5	U	2.3	U
potassium	170		164	J	112		243		291	J	852	J	122		351		452	
selenium	0.72	UJ	1.1	UJ	0.92	UJ	1.0	UJ	2.6	UJ	3.6	UJ	0.71	UJ	0.78	UJ	0.71	UJ
silver	1.2	U	1.8	UJ	1.5	U	1.6	U	4.2	UJ	5.9	UJ	1.2	U	1.3	U	1.2	U
sodium	54.6		58.9	J	68.2		40.8		153	J	243	J	30.1		65.3		57.5	
thallium	0.86	UJ	1.3	UJ	1.1	UJ	1.1	UJ	3.1	UJ	4.3	UJ	0.85	UJ	0.94	UJ	0.85	UJ
vanadium	9.2		31.0	J	5.6		7.4		29.1	J	84.0	J	22.5		27.1		12.8	
zinc	22.4	R	39.0	R	15.0	R	20.3	R	130	R	118	R	13.2	R	21.8	R	61.0	R
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,2,4-trichlorobenzene	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
1,2-dichlorobenzene	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
1,3-dichlorobenzene	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSD07		WSSD08		WSSD09		WSSD09-DUP		WSSD10		WSSD11		WSSD12		WSSD13		WSSD14	
LOCATION:	WSSD07		WSSD08		WSSD09		WSSD09		WSSD10		WSSD11		WSSD12		WSSD13		WSSD14	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,4-dichlorobenzene	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
2,2'-oxybis(1-chloropropane)	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	UJ
2,4,5-trichlorophenol	1200	U	1800	UJ	1500	U	1600	U	4200	UJ	5900	UJ	1200	U	1300	U	1200	U
2,4,6-trichlorophenol	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
2,4-dichlorophenol	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
2,4-dimethylphenol	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
2,4-dinitrophenol	1200	UJ	1800	UJ	1500	UJ	1600	UJ	4200	UJ	5900	UJ	1200	UJ	1300	UJ	1200	UJ
2,4-dinitrotoluene	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
2,6-dinitrotoluene	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
2-chloronaphthalene	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
2-chlorophenol	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
2-methylnaphthalene	470	U	220	J	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
2-methylphenol	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
2-nitroaniline	1200	U	1800	UJ	1500	U	1600	U	4200	UJ	5900	UJ	1200	U	1300	U	1200	U
2-nitrophenol	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
3,3'-dichlorobenzidine	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
3-nitroaniline	1200	UJ	1800	UJ	1500	U	1600	U	4200	UJ	5900	UJ	1200	U	1300	U	1200	U
4,6-dinitro-2-methylphenol	1200	U	1800	UJ	1500	U	1600	U	4200	UJ	5900	UJ	1200	U	1300	U	1200	U
4-bromophenyl-phenylether	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	UJ
4-chloro-3-methylphenol	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
4-chloroaniline	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
4-chlorophenyl-phenylether	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
4-methylphenol	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
4-nitroaniline	1200	UJ	1800	UJ	1500	U	1600	U	4200	UJ	5900	UJ	1200	U	1300	U	1200	UJ
4-nitrophenol	1200	UJ	1800	UJ	1500	U	1600	U	4200	UJ	5900	UJ	1200	U	1300	U	1200	UJ
N-nitroso-di-n-propylamine	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
N-nitrosodiphenylamine (1)	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
acenaphthene	470	U	730	UJ	610	U	620	U	310	J	2400	UJ	460	U	520	U	470	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSD07		WSSD08		WSSD09		WSSD09-DUP		WSSD10		WSSD11		WSSD12		WSSD13		WSSD14	
LOCATION:	WSSD07		WSSD08		WSSD09		WSSD09		WSSD10		WSSD11		WSSD12		WSSD13		WSSD14	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
acenaphthylene	470	U	74.0	J	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
anthracene	470	U	160	J	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
benzo(a)anthracene	49.0	J	400	J	120	J	86.0	J	440	J	2400	UJ	460	U	520	U	470	U
benzo(a)pyrene	69.0	J	280	J	120	J	93.0	J	240	J	2400	UJ	460	U	520	U	470	U
benzo(b)fluoranthene	88.0	J	170	J	120	J	88.0	J	610	J	2400	UJ	460	U	520	U	470	U
benzo(g,h,i)perylene	61.0	J	140	J	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
benzo(k)fluoranthene	65.0	J	180	J	120	J	90.0	J	480	J	2400	UJ	460	U	520	U	470	U
bis(2-chloroethoxy)methane	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
bis(2-chloroethyl)ether	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
bis(2-ethylhexyl)phthalate	480	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
butylbenzylphthalate	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
carbazole	470	U	730	UJ	610	U	620	U	300	J	2400	UJ	460	U	520	U	470	U
chrysene	82.0	J	510	J	190	J	150	J	1200	J	2400	UJ	460	U	520	U	470	U
di-n-butylphthalate	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
di-n-octylphthalate	71.0	J	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
dibenz(a,h)anthracene	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
dibenzofuran	470	U	730	UJ	610	U	620	U	220	J	2400	UJ	460	U	520	U	470	U
diethylphthalate	470	U	82.0	J	610	U	620	U	1600	UJ	250	J	460	U	520	U	470	U
dimethylphthalate	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
fluoranthene	140	J	670	J	270	J	210	J	3400	J	2400	UJ	460	U	520	U	470	U
fluorene	470	U	260	J	610	U	620	U	310	J	2400	UJ	460	U	520	U	470	U
hexachlorobenzene	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
hexachlorobutadiene	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
hexachlorocyclopentadiene	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	UJ
hexachloroethane	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
indeno(1,2,3-cd)pyrene	52.0	J	110	J	66.0	J	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
isophorone	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
naphthalene	470	U	110	J	610	U	620	U	360	J	2400	UJ	460	U	520	U	470	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSD07		WSSD08		WSSD09		WSSD09-DUP		WSSD10		WSSD11		WSSD12		WSSD13		WSSD14	
LOCATION:	WSSD07		WSSD08		WSSD09		WSSD09		WSSD10		WSSD11		WSSD12		WSSD13		WSSD14	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
nitrobenzene	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
pentachlorophenol	1200	U	1800	UJ	1500	U	1600	U	4200	UJ	5900	UJ	1200	U	1300	U	1200	U
phenanthrene	52.0	J	1400	J	170	J	140	J	2300	J	2400	UJ	460	U	520	U	470	U
phenol	470	U	730	UJ	610	U	620	U	1600	UJ	2400	UJ	460	U	520	U	470	U
pyrene	110	J	940	J	270	J	230	J	2400	J	2400	UJ	460	U	520	U	470	U
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1,1-trichloroethane	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
1,1,2,2-tetrachloroethane	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
1,1,2-trichloroethane	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
1,1-dichloroethane	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
1,1-dichloroethene	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
1,2-dichloroethane	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
1,2-dichloroethene (total)	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
1,2-dichloropropane	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
2-butanone	11.0	J	70.0	J	33.0		72.0		110	J	71.0	UJ	14.0	U	6.0	J	14.0	U
2-hexanone	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
4-methyl-2-pentanone	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
acetone	55.0	U	320	UJ	160	U	310	U	490	UJ	310	UJ	76.0	U	61.0	U	26.0	U
benzene	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
bromodichloromethane	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
bromoform	14.0	U	22.0	UJ	18.0	UJ	19.0	UJ	50.0	UJ	71.0	UJ	14.0	UJ	16.0	UJ	14.0	UJ
bromomethane	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
carbon disulfide	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
carbon tetrachloride	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
chlorobenzene	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
chloroethane	14.0	UJ	22.0	UJ	18.0	UJ	19.0	UJ	50.0	UJ	71.0	UJ	14.0	UJ	16.0	UJ	14.0	UJ
chloroform	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
chloromethane	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSD07		WSSD08		WSSD09		WSSD09-DUP		WSSD10		WSSD11		WSSD12		WSSD13		WSSD14	
LOCATION:	WSSD07		WSSD08		WSSD09		WSSD09		WSSD10		WSSD11		WSSD12		WSSD13		WSSD14	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
cis-1,3-dichloropropene	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
dibromochloromethane	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
ethylbenzene	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
methylene chloride	14.0	U	4.0	J	2.0	J	2.0	J	50.0	UJ	9.0	J	2.0	J	16.0	U	14.0	U
styrene	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
tetrachloroethene	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
toluene	14.0	U	22.0	UJ	22.0		120		22.0	J	54.0	J	14.0	U	16.0	U	14.0	U
trans-1,3-dichloropropene	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
trichloroethene	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
vinyl chloride	14.0	U	22.0	UJ	18.0	U	19.0	U	50.0	UJ	71.0	UJ	14.0	U	16.0	U	14.0	U
xylene (total)	14.0	U	22.0	UJ	18.0	U	19.0	U	17.0	J	71.0	UJ	14.0	U	16.0	U	14.0	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSD15		WSSD16		WSSD17		WSSD17-DUP		WSSD18		WSSD19		WSSD20		WSSD21		WSSD22	
LOCATION:	WSSD15		WSSD16		WSSD17		WSSD17		WSSD18		WSSD19		WSSD20		WSSD21		WSSD22	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
INORGANICS	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	
aluminum	3440	J	1570		10300	J	10500	J	1530		3010		8680		4120		8470	J
antimony	9.6	UJ	5.9	U	11.3	UJ	12.0	UJ	6.1	U	5.6	U	6.5	U	5.4	U	19.7	UJ
arsenic	2.9	J	17.3		32.9	J	26.2	J	3.2		12.2		11.7		11.5		192	J
barium	9.0	J	25.3		69.9	J	92.2	J	7.4		40.9		42.7		24.8		26.5	J
beryllium	0.32	UJ	0.35		1.2	J	1.3	J	0.21	U	0.64		1.3		0.77		6.0	J
cadmium	1.1	UJ	0.70	U	1.3	UJ	1.4	UJ	0.73	U	0.66	U	0.77	U	0.64	U	7.1	J
calcium	194	J	295		765	J	927	J	143		638		821		578		1790	J
chromium, total	21.7	J	17.0		47.5	J	41.2	J	4.4		7.9		25.8		18.3		9.6	UJ
cobalt	2.1	UJ	1.3	U	4.2	J	5.1	J	1.4	U	1.5		7.2		2.8		29.7	J
copper	5.0	J	1.3	U	20.7	J	21.5	J	2.4		1.5		7.6		1.4		9.2	J
cyanide	0.56	UJ	0.32	UJ	0.65	UJ	0.71	UJ	0.36	UJ	0.33	UJ	0.37	UJ	0.32	UJ	1.7	J
iron	4850	J	18600		61500	J	52600	J	3130		37200		28200		32700		505000	J
lead	14.1	J	12.2		46.3	J	55.9	J	9.6	J	6.6	J	19.3	J	4.6	J	13.2	J
magnesium	362	J	117		1780	J	1470	J	182		504		1780	J	1140	J	363	J
manganese	3.0		1.5		56.9	J	73.8	J	4.7		74.6	J	172	J	65.8	J	231	J
mercury	0.045	J	0.0090	U	0.11	J	0.14	J	0.0094	U	0.0086	U	0.032		0.0083	U	0.19	J
nickel	3.6	UJ	2.2	U	8.3	J	10.9	J	2.3	U	2.9		12.0		5.7		28.7	J
potassium	862	J	272		3960	J	2620	J	317		1140		3850		3260		277	UJ
selenium	1.1	UJ	0.70	UJ	5.4	J	5.6	J	0.73	U	1.8	J	1.4	J	2.0	J	32.7	J
silver	1.9	UJ	1.1	U	2.2	UJ	2.3	UJ	1.2	U	1.1	U	1.3	U	1.0	U	4.1	J
sodium	78.4	J	24.2		120	J	79.8	J	13.9		36.8		63.2		47.6		673	J
thallium	1.4	UJ	0.83	UJ	3.4	J	1.9	J	0.87	U	0.79	U	0.92	U	0.77	U	23.4	J
vanadium	41.3	J	12.7		57.7	J	54.9	J	8.0		11.2		28.3		16.4		54.4	J
zinc	9.8		9.1		58.0	J	73.1	J	6.0	J	38.7	J	49.5	J	41.8	J	1.8	J
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,2,4-trichlorobenzene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
1,2-dichlorobenzene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
1,3-dichlorobenzene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSD15		WSSD16		WSSD17		WSSD17-DUP		WSSD18		WSSD19		WSSD20		WSSD21		WSSD22	
LOCATION:	WSSD15		WSSD16		WSSD17		WSSD17		WSSD18		WSSD19		WSSD20		WSSD21		WSSD22	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,4-dichlorobenzene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
2,2'-oxybis(1-chloropropane)	750	UJ	460	UJ	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	UR
2,4,5-trichlorophenol	1900	UJ	1200	U	2200	UJ	2400	UJ	1200	U	1100	U	1300	U	1100	U	4600	U
2,4,6-trichlorophenol	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
2,4-dichlorophenol	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
2,4-dimethylphenol	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
2,4-dinitrophenol	1900	UJ	1200	UJ	2200	UJ	2400	UJ	1200	UJ	1100	UJ	1300	UJ	1100	UJ	4600	UJ
2,4-dinitrotoluene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
2,6-dinitrotoluene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
2-chloronaphthalene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
2-chlorophenol	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
2-methylnaphthalene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
2-methylphenol	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
2-nitroaniline	1900	UJ	1200	U	2200	UJ	2400	UJ	1200	U	1100	U	1300	U	1100	U	4600	U
2-nitrophenol	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
3,3'-dichlorobenzidine	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
3-nitroaniline	1900	UJ	1200	U	2200	UJ	2400	UJ	1200	U	1100	U	1300	U	1100	U	4600	U
4,6-dinitro-2-methylphenol	1900	UJ	1200	U	2200	UJ	2400	UJ	1200	U	1100	U	1300	U	1100	U	4600	U
4-bromophenyl-phenylether	750	UJ	460	UJ	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
4-chloro-3-methylphenol	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
4-chloroaniline	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
4-chlorophenyl-phenylether	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
4-methylphenol	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
4-nitroaniline	1900	UJ	1200	UJ	2200	UJ	2400	UJ	1200	U	1100	U	1300	U	1100	U	4600	U
4-nitrophenol	1900	UJ	1200	UJ	2200	UJ	2400	UJ	1200	UJ	1100	UJ	1300	UJ	1100	UJ	4600	U
N-nitroso-di-n-propylamine	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
N-nitrosodiphenylamine (1)	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
acenaphthene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSD15		WSSD16		WSSD17		WSSD17-DUP		WSSD18		WSSD19		WSSD20		WSSD21		WSSD22	
LOCATION:	WSSD15		WSSD16		WSSD17		WSSD17		WSSD18		WSSD19		WSSD20		WSSD21		WSSD22	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
acenaphthylene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
anthracene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
benzo(a)anthracene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
benzo(a)pyrene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
benzo(b)fluoranthene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
benzo(g,h,i)perylene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
benzo(k)fluoranthene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
bis(2-chloroethoxy)methane	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
bis(2-chloroethyl)ether	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
bis(2-ethylhexyl)phthalate	750	UJ	460	U	900	U	950	U	480	U	440	U	510	U	430	UJ	1800	U
butylbenzylphthalate	750	UJ	460	U	900	UJ	97.0	J	480	U	440	U	510	U	430	UJ	1800	U
carbazole	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
chrysene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
di-n-butylphthalate	750	UJ	460	U	900	UJ	950	UJ	480	U	66.0	J	1300		430	U	1800	U
di-n-octylphthalate	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
dibenz(a,h)anthracene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
dibenzofuran	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
diethylphthalate	750	UJ	64.0	J	900	UJ	110	J	480	U	45.0	J	52.0	J	430	U	1800	U
dimethylphthalate	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
fluoranthene	750	UJ	460	U	130	J	130	J	480	U	440	U	510	U	430	U	1800	U
fluorene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
hexachlorobenzene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
hexachlorobutadiene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
hexachlorocyclopentadiene	750	UJ	460	UJ	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
hexachloroethane	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	55.0	J	430	U	1800	U
indeno(1,2,3-cd)pyrene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
isophorone	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
naphthalene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSD15		WSSD16		WSSD17		WSSD17-DUP		WSSD18		WSSD19		WSSD20		WSSD21		WSSD22	
LOCATION:	WSSD15		WSSD16		WSSD17		WSSD17		WSSD18		WSSD19		WSSD20		WSSD21		WSSD22	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
SEMIVOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
nitrobenzene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
pentachlorophenol	1900	UJ	1200	U	2200	UJ	2400	UJ	1200	U	1100	U	1300	U	1100	U	4600	UJ
phenanthrene	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	510	U	430	U	1800	U
phenol	750	UJ	460	U	900	UJ	950	UJ	480	U	440	U	120	J	430	U	1800	UJ
pyrene	98.0	J	460	U	900	UJ	110	J	480	UJ	440	UJ	510	UJ	430	UJ	1800	U
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,1,1-trichloroethane	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
1,1,2,2-tetrachloroethane	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
1,1,2-trichloroethane	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
1,1-dichloroethane	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
1,1-dichloroethene	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
1,2-dichloroethane	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
1,2-dichloroethene (total)	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
1,2-dichloropropane	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
2-butanone	30.0	J	14.0	U	45.0	UJ	51.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	270	J
2-hexanone	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
4-methyl-2-pentanone	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
acetone	190	UJ	97.0	U	100	UJ	130	UJ	14.0	U	13.0	U	24.0	U	13.0	U	960	UJ
benzene	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
bromodichloromethane	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
bromoform	23.0	UJ	14.0	UJ	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
bromomethane	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
carbon disulfide	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
carbon tetrachloride	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
chlorobenzene	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
chloroethane	23.0	UJ	14.0	UJ	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
chloroform	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
chloromethane	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSD15		WSSD16		WSSD17		WSSD17-DUP		WSSD18		WSSD19		WSSD20		WSSD21		WSSD22	
LOCATION:	WSSD15		WSSD16		WSSD17		WSSD17		WSSD18		WSSD19		WSSD20		WSSD21		WSSD22	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
VOLATILES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
cis-1,3-dichloropropene	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
dibromochloromethane	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
ethylbenzene	3.0	J	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
methylene chloride	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
styrene	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
tetrachloroethene	23.0	UJ	14.0	U	27.0	UJ	24.0	J	14.0	U	13.0	U	46.0		18.0		56.0	UJ
toluene	2.0	J	14.0	U	27.0	UJ	28.0	UJ	2.0	J	13.0	U	15.0	U	13.0	U	56.0	UJ
trans-1,3-dichloropropene	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
trichloroethene	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
vinyl chloride	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
xylene (total)	23.0	UJ	14.0	U	27.0	UJ	28.0	UJ	14.0	U	13.0	U	15.0	U	13.0	U	56.0	UJ
PESTICIDES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
4,4'-DDD																	18.0	U
4,4'-DDE																	26.0	
4,4'-DDT																	18.0	U
Aroclor-1016																	180	U
Aroclor-1221																	370	U
Aroclor-1232																	180	U
Aroclor-1242																	180	U
Aroclor-1248																	180	U
Aroclor-1254																	180	U
Aroclor-1260																	180	U
aldrin																	9.4	U
alpha-BHC																	9.4	U
alpha-chlordane																	2.4	J
beta-BHC																	0.41	R
delta-BHC																	9.4	U
dieldrin																	18.0	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSD15	WSSD16	WSSD17	WSSD17-DUP	WSSD18	WSSD19	WSSD20	WSSD21	WSSD22	
LOCATION:	WSSD15	WSSD16	WSSD17	WSSD17	WSSD18	WSSD19	WSSD20	WSSD21	WSSD22	
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	
PESTICIDES	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	
endosulfan I									9.4	U
endosulfan II									18.0	U
endosulfan sulfate									18.0	U
endrin									3.1	R
endrin aldehyde									18.0	U
endrin ketone									18.0	U
gamma-BHC (Lindane)									9.4	U
gamma-chlordane									9.4	U
heptachlor									9.4	U
heptachlor epoxide									9.4	U
methoxychlor									94.0	U
toxaphene									940	U

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	_QSDO1	---	---	---	---	---	---	---	---
LOCATION:	_QSDO1	---	---	---	---	---	---	---	---
DATA SOURCE:	1995 RI, Dec.								
SEMIVOLATILES	**ug/kg**								
1,2,4-trichlorobenzene	12000 U								
1,2-dichlorobenzene	12000 U								
1,3-dichlorobenzene	12000 U								
1,4-dichlorobenzene	12000 U								
2,2'-oxybis(1-chloropropane)	12000 U								
2,4,5-trichlorophenol	30000 U								
2,4,6-trichlorophenol	12000 U								
2,4-dichlorophenol	12000 U								
2,4-dimethylphenol	12000 U								
2,4-dinitrophenol	30000 U								
2,4-dinitrotoluene	12000 U								
2,6-dinitrotoluene	12000 U								
2-chloronaphthalene	12000 U								
2-chlorophenol	12000 U								
2-methylnaphthalene	12000 U								
2-methylphenol	12000 U								
2-nitroaniline	30000 U								
2-nitrophenol	12000 U								
3,3'-dichlorobenzidine	12000 U								
3-nitroaniline	30000 U								
4,6-dinitro-2-methylphenol	30000 U								
4-bromophenyl-phenylether	12000 U								
4-chloro-3-methylphenol	12000 U								
4-chloroaniline	12000 U								
4-chlorophenyl-phenylether	12000 U								
4-methylphenol	12000 U								
4-nitroaniline	30000 U								
4-nitrophenol	30000 U								

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	_QSDO1	---	---	---	---	---	---	---	---
LOCATION:	_QSDO1	---	---	---	---	---	---	---	---
DATA SOURCE:	1995 RI, Dec.								
SEMIVOLATILES	**ug/kg**								
N-nitroso-di-n-propylamine	12000 U								
N-nitrosodiphenylamine (1)	12000 U								
acenaphthene	12000 U								
acenaphthylene	12000 U								
anthracene	12000 U								
benzo(a)anthracene	12000 U								
benzo(a)pyrene	12000 U								
benzo(b)fluoranthene	1600 J								
benzo(g,h,i)perylene	12000 U								
benzo(k)fluoranthene	12000 U								
bis(2-chloroethoxy)methane	12000 U								
bis(2-chloroethyl)ether	12000 U								
bis(2-ethylhexyl)phthalate	12000 U								
butylbenzylphthalate	12000 U								
carbazole	12000 U								
chrysene	1300 J								
di-n-butylphthalate	12000 U								
di-n-octylphthalate	12000 U								
dibenz(a,h)anthracene	12000 U								
dibenzofuran	12000 U								
diethylphthalate	12000 U								
dimethylphthalate	12000 U								
fluoranthene	1500 J								
fluorene	12000 U								
hexachlorobenzene	12000 U								
hexachlorobutadiene	12000 U								
hexachlorocyclopentadiene	12000 U								
hexachloroethane	12000 U								

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	_QSDO1	---	---	---	---	---	---	---	---
LOCATION:	_QSDO1	---	---	---	---	---	---	---	---
DATA SOURCE:	1995 RI, Dec.								
SEMIVOLATILES	**ug/kg**								
indeno(1,2,3-cd)pyrene	12000 U								
isophorone	12000 U								
naphthalene	12000 U								
nitrobenzene	12000 U								
pentachlorophenol	30000 U								
phenanthrene	12000 U								
phenol	12000 U								
pyrene	3300 J								
VOLATILES	**ug/kg**								
1,1,1-trichloroethane	180 U								
1,1,2,2-tetrachloroethane	180 U								
1,1,2-trichloroethane	180 U								
1,1-dichloroethane	180 U								
1,1-dichloroethene	180 U								
1,2-dichloroethane	180 U								
1,2-dichloroethene (total)	180 U								
1,2-dichloropropane	180 U								
2-butanone	180 U								
2-hexanone	180 U								
4-methyl-2-pentanone	180 U								
acetone	390 U								
benzene	180 U								
bromodichloromethane	180 U								
bromoform	180 U								
bromomethane	180 U								
carbon disulfide	180 U								
carbon tetrachloride	180 U								
chlorobenzene	180 U								

TABLE A-f

ANALYTICAL RESULTS FOR SEDIMENT

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	_QSDO1		---	---	---	---	---	---	---	---
LOCATION:	_QSDO1		---	---	---	---	---	---	---	---
DATA SOURCE:	1995 RI, Dec.									
VOLATILES	**ug/kg**									
chloroethane	180	U								
chloroform	180	U								
chloromethane	180	U								
cis-1,3-dichloropropene	180	U								
dibromochloromethane	180	U								
ethylbenzene	180	U								
methylene chloride	180	U								
styrene	180	U								
tetrachloroethene	180	U								
toluene	180	U								
trans-1,3-dichloropropene	180	U								
trichloroethene	180	U								
vinyl chloride	180	U								
xylene (total)	93.0	J								

APPENDIX A.g.

ANALYTICAL DATABASE

ORGANIC AND INORGANIC RESULTS

FLOOR SWEEPINGS SAMPLE

TABLE A-g

ANALYTICAL RESULTS FOR FLOOR SWEEPING SAMPLE

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	14FS01	---	---	---	---	---	---	---	---
LOCATION:	14FS01	---	---	---	---	---	---	---	---
DATA SOURCE:	1995 RI, Dec.								
INORGANICS	**mg/kg**								
mercury	8.6								

APPENDIX A.h.

ANALYTICAL DATABASE

MISCELLANEOUS PARAMETERS RESULTS

AQUEOUS

TABLE A-h

MISCELLANEOUS PARAMETERS RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01GW01	01GW02	01GW02-DUP	01GW03	01GW04	01GW05	04GW01	04GW02	04GW04
LOCATION:	01GW01	01GW02	01GW02	01GW03	01GW04	01GW05	04GW01	04GW02	04GW04
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
MISCELLANEOUS PARAMETERS	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ammonia nitrogen							1.0 U	0.20 J	1.0 U
biochemical oxygen demand	0.40 J	3.0	3.0	1.0 J	1.1 J	1.8 J	4.0	4.0	1.3 J
chemical oxygen demand	2.0 J	5.0 J	5.0 J	3.0 J	5.0 J	5.0 J	9.0	24.0	3.0 J
chloride							7.0	10.0	9.0
nitrate nitrogen	0.80	1.2	1.1	0.28 J	1.5	0.80	0.50 U	0.50 U	0.50 U
nitrite nitrogen	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
petroleum hydrocarbons	0.30 U	0.20 J	0.20 J	0.20 J	0.30 U	0.30 U			
sulfate							20.0	40.0	12.0
total organic carbon	1.0	1.0	0.90 J	0.70 J	2.0	1.0	1.0	8.0	1.0
total phosphorus as PO4							0.10 J	0.20 U	0.20 U

TABLE A-h

MISCELLANEOUS PARAMETERS RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		04GW05		04GW06		04GW07		04SW01		04SW02		04SW03		04SW4B5		05GW01		05GW02	
LOCATION:		04GW05		04GW06		04GW07		04SW01		04SW02		04SW03		04SW4B5		05GW01		05GW02	
DATA SOURCE:		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
MISCELLANEOUS PARAMETERS																			
ammonia nitrogen	mg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.20	J	1.0	U	1.0	U	1.0	U
biochemical oxygen demand	mg/L	3.0		1.6	J	1.3	J	7.0		5.0	J	5.0		1.1	J	0.50	J	0.80	J
chemical oxygen demand	mg/L	8.0		7.0	U	4.0	J	80.0		18.0		120		41.0		7.0	U	3.0	J
chloride	mg/L	5.0		7.0		8.0		8.0	R	6.0		6.0	R	5.0	R	14.0		6.0	
nitrate nitrogen	mg/L	0.16	J	0.50	U	0.15	J	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
nitrite nitrogen	mg/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
sulfate	mg/L	12.0		10.0		11.0				40.0						11.0		43.0	
total organic carbon	mg/L	2.0		1.0		0.60	J	6.0		6.0		12.0		4.0		1.0		1.0	
total phosphorus as PO4	mg/L	0.40		0.20	U	0.20	U	0.50	R	0.20	U	0.90	R	0.40	R	0.20	U	0.10	J
turbidity	ntu							7.0				25.0		2.3		20.0		5.0	

TABLE A-h

MISCELLANEOUS PARAMETERS RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		05GW03		05GW04		05GW05		05GW06		05GW07		05GW08		06GW01		06GW02		06GW03	
LOCATION:		05GW03		05GW04		05GW05		05GW06		05GW07		05GW08		06GW01		06GW02		06GW03	
DATA SOURCE:		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
MISCELLANEOUS PARAMETERS																			
ammonia nitrogen	mg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U			3.0		0.20	J	1.0	U
biochemical oxygen demand	mg/L	0.80	J	8.0		7.0		13.0		17.0		0.70	J	12.0		2.0		2.0	
chemical oxygen demand	mg/L	2.0	J	15.0		9.0		31.0		23.0		4.0	J	48.0		10.0		12.0	
chloride	mg/L	8.0		8.0		9.0		50.0		50.0		9.0		210		80.0		49.0	
nitrate nitrogen	mg/L	0.26	J	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.12	J	0.50	U
nitrite nitrogen	mg/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
sulfate	mg/L	53.0		13.0		61.0		130		280		11.0		21.0		25.0		39.0	
total organic carbon	mg/L	1.0		3.0		2.0		8.0		9.0		0.80	J	13.0		3.0		3.0	
total phosphorus as PO4	mg/L	0.20	U	0.20	U	0.20		0.20	U	0.20	U	0.10	J	0.20	J	0.20	U	0.20	U
turbidity	ntu	11.0		11.0		1.6		6.4		8.3		3.8		288		5.8		26.0	

TABLE A-h

MISCELLANEOUS PARAMETERS RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		06GW04	06SW01	06SW02	07GW01	07GW02	07GW03	07GW04	07GW05	10GW01
LOCATION:		06GW04	06SW01	06SW02	07GW01	07GW02	07GW03	07GW04	07GW05	10GW01
DATA SOURCE:		1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
MISCELLANEOUS PARAMETERS										
ammonia nitrogen	mg/L	6.0	0.40 J	0.40 J	1.0 U	0.90 J	1.0 U	1.0 U	1.0 U	1.0 U
biochemical oxygen demand	mg/L	12.0	4.0	4.0	1.3 J	2.0	0.80 J	0.70 J	0.90 J	4.0
chemical oxygen demand	mg/L	64.0	23.0	19.0	2.0 J	28.0	5.0 J	11.0	4.0 J	6.0 J
chloride	mg/L	45.0	100	101	9.0	27.0	8.0	13.0	25.0	60.0
nitrate nitrogen	mg/L	0.50 U	1.1	0.50	0.50 U	0.15 J	1.3	0.50 U	0.50 U	0.50 U
nitrite nitrogen	mg/L	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
sulfate	mg/L	3.0			7.0	25.0	10.0	13.0	44.0	33.0
total hardness	mg/L		65.0	65.0						
total organic carbon	mg/L	21.0	6.0	6.0	1.0 U	9.0	0.80 J	0.90 J	2.0	2.0
total phosphorus as PO4	mg/L	0.20	0.80	0.70 R	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
turbidity	ntu	460	57.0	48.0	3.0	0.90	4.2	5.7	0.50	3.1

TABLE A-h

MISCELLANEOUS PARAMETERS RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		10GW01-DUP		10GW02		10GW03		10GW04		10GW05		10GW06		10GW07		13GW01		13GW02	
LOCATION:		10GW01		10GW02		10GW03		10GW04		10GW05		10GW06		10GW07		13GW01		13GW02	
DATA SOURCE:		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
MISCELLANEOUS PARAMETERS																			
ammonia nitrogen	mg/L	1.0	U	1.0	U	1.0	U	1.0	U	0.40	J	0.10	J	0.20	J	1.0	U	0.70	J
biochemical oxygen demand	mg/L	4.0		2.0		3.0		5.0		6.0		4.0		4.0		3.0		6.0	
chemical oxygen demand	mg/L	3.0	J	2.0	J	5.0	J	3.0	J	22.0		31.0		12.0		12.0		24.0	
chloride	mg/L	64.0		3.0		8.0		18.0		34.0		10.0		9.0		6.0		5.0	
nitrate nitrogen	mg/L	0.50	U	0.90		0.28	J	0.50	U	0.50	U	0.50	U	0.50	U	0.24	J	0.50	U
nitrite nitrogen	mg/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
petroleum hydrocarbons	mg/L																	0.30	U
sulfate	mg/L	32.0		15.0		19.0		7.0	U	10.0		28.0		58.0		33.0		33.0	
total organic carbon	mg/L	2.0		0.90	J	2.0		2.0		6.0		13.0		5.0		1.0		4.0	
total phosphorus as PO4	mg/L	0.20	U	0.20	U	0.20	U	0.20	U	0.40		0.20	U	0.20	U	0.40		0.20	U
turbidity	ntu	3.2		1.6		3.2		2.9		41.0		20.0		2.8					

TABLE A-h

MISCELLANEOUS PARAMETERS RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		13GW03		13GW04		13GW05		13SW02		13SW02-DUP		15SW01		15SW02		16GW01		16GW02	
LOCATION:		13GW03		13GW04		13GW05		13SW02		13SW02		15SW01		15SW02		16GW01		16GW02	
DATA SOURCE:		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
MISCELLANEOUS PARAMETERS																			
ammonia nitrogen	mg/L	0.90	J	1.0	U	1.0	U	1.0	U	1.0	U								
biochemical oxygen demand	mg/L	5.0		3.0		0.80	J	2.0	R	4.0	R								
chemical oxygen demand	mg/L	39.0		22.0		4.0	J	7.0		8.0									
chloride	mg/L	5.0		5.0		6.0		9.0		10.0									
nitrate nitrogen	mg/L	0.50	U	0.50	U	2.3		0.18	J	0.21	J								
nitrite nitrogen	mg/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U								
petroleum hydrocarbons	mg/L							0.10	J	0.10	J	0.30	U	0.30	U	0.30	U	0.30	U
sulfate	mg/L	22.0		19.0		24.0													
total organic carbon	mg/L	4.0		5.0		1.0		2.0		2.0									
total phosphorus as PO4	mg/L	0.30		0.40		0.20	U	0.40	R	0.40	R								
turbidity	ntu			290	J			1.6		1.7									

TABLE A-h

MISCELLANEOUS PARAMETERS RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		16GW03	16GW04	16GW04-OIL	16GW05	16GW05-OIL	16GW06	16MW01	17GW01	17GW03
LOCATION:		16GW03	16GW04	16GW04	16GW05	16GW05	16GW06	16MW01	17GW01	17GW03
DATA SOURCE:		1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
			Unvalidated Data	Unvalidated Data	Unvalidated Data	Unvalidated Data				
MISCELLANEOUS PARAMETERS										
ammonia nitrogen	mg/L								1.0 U	1.0 U
biochemical oxygen demand	mg/L								1.3 J	1.4 J
chemical oxygen demand	mg/L								7.0 U	4.0 J
chloride	mg/L								120	80.0
nitrate nitrogen	mg/L								0.50 U	0.50 U
nitrite nitrogen	mg/L								0.50 U	0.50 U
petroleum hydrocarbons	mg/L	0.30 U	190		20.0		0.20 J	0.10 J		
sulfate	mg/L								180	41.0
total organic carbon	mg/L								0.50 J	0.90 J
total phosphorus as PO4	mg/L								0.20 U	0.20 U
turbidity	ntu									14.4
CHARACTERISTICS										
hydrocarbon fingerprint				NO. 2		NO. 2				
specific gravity				0.85		0.86				

TABLE A-h

MISCELLANEOUS PARAMETERS RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		17GW04		17GW05		17SW02		17SW03		17SW04		BGGW01		BGGW01-DUP		BGGW02		BGGW03	
LOCATION:		17GW04		17GW05		17SW02		17SW03		17SW04		BGGW01		BGGW01		BGGW02		BGGW03	
DATA SOURCE:		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
MISCELLANEOUS PARAMETERS																			
ammonia nitrogen	mg/L	5.0		1.0	U	2.0		2.0		3.0		1.0	U	1.0	U	1.0	U	1.0	U
biochemical oxygen demand	mg/L	4.0		4.0		15.0		12.0		14.0		1.6	J	1.6	J	1.6	J	1.9	J
chemical oxygen demand	mg/L	150		18.0		250		80.0		130		2.0	J	7.0	U	7.0	U	4.0	J
chloride	mg/L	31000		9.0		70.0		112		4200		44.0		35.0		4.0		10.0	
nitrate nitrogen	mg/L	3.0	U	0.50	U	0.50	U	0.19	J	1.9		0.60		0.60		0.50	U	1.6	
nitrite nitrogen	mg/L	30.0	U	0.50	U	0.50	U	0.50	U	10.0	U	0.50	U	0.50	U	0.50	U	0.50	U
petroleum hydrocarbons	mg/L											0.30	U	0.30	U	0.30	U	0.30	UJ
sulfate	mg/L	550		16.0								8.0		8.0		6.0		9.0	
total hardness	mg/L					46.0		54.0		193									
total organic carbon	mg/L	14.0		2.0		39.0		13.0		39.0		1.0	U	1.0	U	0.30	J	0.80	J
total phosphorus as PO4	mg/L	1.2		0.20		3.1		1.4		0.90		0.20	U	0.20	U	0.20	U	0.20	U
turbidity	ntu	645				146		90.0		74.0									

TABLE A-h

MISCELLANEOUS PARAMETERS RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		BGGW04		BGSW01		BGSW02		BGSW04		WSSW05		WSSW06		WSSW07		WSSW08		WSSW09	
LOCATION:		BGGW04		BGSW01		BGSW02		BGSW04		WSSW05		WSSW06		WSSW07		WSSW08		WSSW09	
DATA SOURCE:		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
MISCELLANEOUS PARAMETERS																			
ammonia nitrogen	mg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
biochemical oxygen demand	mg/L	4.0		1.9	J	3.0		3.0		0.40		1.8		0.90		3.0		3.0	
chemical oxygen demand	mg/L	4.0	J	4.0	J	13.0		29.0		16.0		14.0		20.0		12.0		27.0	
chloride	mg/L	230		6.0	R	7.0	R	7.0	R	8.0		9.0		8.0		11.0		11.0	
nitrate nitrogen	mg/L	1.2		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
nitrite nitrogen	mg/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
petroleum hydrocarbons	mg/L	0.30	UJ	0.30	U	0.30	U	0.30	U										
sulfate	mg/L	28.0																	
total hardness	mg/L			38.0		4.0		6.0		13.0		15.0		10.0		18.0		19.0	
total organic carbon	mg/L	0.90	J	0.40	J	4.0		9.0		7.0	J	1.0	U	7.0	J	13.0	J	8.0	J
total phosphorus as PO4	mg/L	0.20	U	0.30	R	0.30	R	0.30	R	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
turbidity	ntu			1.8		0.70		0.70		2.5		4.6		0.90		7.2		5.9	

TABLE A-h

MISCELLANEOUS PARAMETERS RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		WSSW09-DUP		WSSW10		WSSW11		WSSW12		WSSW13		WSSW14		WSSW15		WSSW16		WSSW17	
LOCATION:		WSSW09		WSSW10		WSSW11		WSSW12		WSSW13		WSSW14		WSSW15		WSSW16		WSSW17	
DATA SOURCE:		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
MISCELLANEOUS PARAMETERS																			
ammonia nitrogen	mg/L	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	0.10		0.60		1.0	U	0.30	J
biochemical oxygen demand	mg/L	3.0		3.0		4.0		2.0		2.0		4.0		4.0		0.60		4.0	
chemical oxygen demand	mg/L	28.0		15.0		21.0		11.0		11.0		25.0		100		22.0		56.0	J
chloride	mg/L	12.0		9.0		7.0		9.0		23.0		26.0		6.0		7.0		13.0	
nitrate nitrogen	mg/L	0.16		0.18		0.25		0.50	U	1.4		2.0		0.50	U	0.70		0.50	U
nitrite nitrogen	mg/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
total hardness	mg/L	16.0		44.0		22.0		17.0		27.0		29.0		22.0		13.0		18.0	
total organic carbon	mg/L	8.0	J	3.0	J	8.0	J	4.0	J	4.0	J	8.0	J	25.0	J	8.0	J	9.0	
total phosphorus as PO4	mg/L	0.20	U	0.20	U	0.20	U	0.40		0.70		1.9		0.60		0.30		6.3	J
turbidity	ntu	5.9		3.2		1.4		11.8		12.5		18.8		6.6		3.7		15.3	

TABLE A-h

MISCELLANEOUS PARAMETERS RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		WSSW17-DUP		WSSW18		WSSW19		WSSW20		WSSW21		WSSW22		WSSW30		---	---
LOCATION:		WSSW17		WSSW18		WSSW19		WSSW20		WSSW21		WSSW22		WSSW30		---	---
DATA SOURCE:		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI			
MISCELLANEOUS PARAMETERS																	
ammonia nitrogen	mg/L	0.40	J	0.70	J	1.0	U	0.30	J	1.0	U	0.60	J	1.0	U		
biochemical oxygen demand	mg/L	4.0		5.0		1.8	J	3.0		1.4	J	5.0	R	3.0			
chemical oxygen demand	mg/L	150	J	390		32.0		70.0		7.0	J	21.0		4.0	J		
chloride	mg/L	13.0		11.0		12.0		17.0		20.0		200	J	11.0			
nitrate nitrogen	mg/L	0.26	J	0.32	J	0.38	J	0.43	J	0.32	J	0.50	U	0.50	U		
nitrite nitrogen	mg/L	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U		
petroleum hydrocarbons	mg/L											0.20	J	0.30	U		
sulfate	mg/L													16.0			
total hardness	mg/L	17.0		19.0		6.0		27.0		42.0		111		25.0			
total organic carbon	mg/L	10.0										3.0		0.90	J		
total phosphorus as PO4	mg/L	2.9	J	3.8		3.1		3.4		0.60	R	0.50	R	0.20	U		
turbidity	ntu	22.0		66.0		37.0		175		8.7		79.0					

APPENDIX A.i.

ANALYTICAL DATABASE

MISCELLANEOUS PARAMETERS RESULTS

SOLIDS

TABLE A-I

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		01SB01-00		01SB01-02		01SB02-00		01SB02-02		01SB03-00		01SB03-02		01SB04-00		01SB04-02		01SB05-00	
LOCATION:		01SB01		01SB01		01SB02		01SB02		01SB03		01SB03		01SB04		01SB04		01SB05	
DATA SOURCE:		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
MISCELLANEOUS PARAMETERS																			
moisture	%	7.9		12.4		8.8		8.6		11.0		7.6		4.6		5.6		5.2	
nitrate nitrogen	mg/kg	0.54	J	0.50	J	4.0		0.43	J	0.50	J	0.46	J	0.44	J	0.53	J	0.53	J
nitrite nitrogen	mg/kg	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ
petroleum hydrocarbons	mg/kg	19.0	J	21.0	J	40.0		19.0	J	60.0		16.0	J	240		18.0	J	13.0	J

TABLE A-I

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		01SB05-02		01SB06-00		01SB06-02		01SB07-00		01SB07-00-DUP		01SB07-02		01SB08-00		01SB08-02		01SB09-00	
LOCATION:		01SB05		01SB06		01SB06		01SB07		01SB07		01SB07		01SB08		01SB08		01SB09	
DATA SOURCE:		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
MISCELLANEOUS PARAMETERS																			
moisture	%	4.3		9.2		16.9		10.0		10.0		16.2		11.3		10.3		8.1	
nitrate nitrogen	mg/kg	0.32	J	0.35	J	0.40	J	0.70	J	0.70	J	0.60	J	0.60	J	0.30	J	1.0	U
nitrite nitrogen	mg/kg	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	U	1.0	U	1.0	U
petroleum hydrocarbons	mg/kg	17.0	J	17.0	J	21.0	J	30.0		30.0		23.0	J	30.0		20.0		12.0	J

TABLE A-I

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		01SB09-02		01SB10-00		01SB10-02		02SS01	02SS02	02SS03	02SS04	02SS05	02SS06
LOCATION:		01SB09		01SB10		01SB10		02SS01	02SS02	02SS03	02SS04	02SS05	02SS06
DATA SOURCE:		1995 RI		1995 RI		1995 RI		1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
MISCELLANEOUS PARAMETERS													
moisture	%	16.2		9.3		17.5		4.2	5.0	4.3	6.0	7.6	18.2
nitrate nitrogen	mg/kg	0.40	J	0.48	J	0.40	J						
nitrite nitrogen	mg/kg	1.0	U	1.0	UJ	1.0	UJ						
petroleum hydrocarbons	mg/kg	21.0	J	21.0	J	20.0							

TABLE A-I

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		02SS07	02SS08	04SD4B5	06SD01	06SD02	06SD03	06SD04	07SDWET7-B2	13SD01
LOCATION:		02SS07	02SS08	04SD4B5	06SD01	06SD02	06SD03	06SD04	07SDWET7-B2	13SD01
DATA SOURCE:		1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
MISCELLANEOUS PARAMETERS										
ammonia nitrogen	mg/kg			200 U					600 U	
chemical oxygen demand	mg/kg			41000					15000	
chloride	mg/kg			10.0 J					1.6 J	
moisture	%	3.8	5.0	37.1	54.8	18.3	23.1	52.3	17.3	2.1
nitrate nitrogen	mg/kg			0.80 J					2.0	
nitrite nitrogen	mg/kg			2.0 U					1.0 U	
pH					6.6 J	4.6	5.1	6.7 J		
petroleum hydrocarbons	mg/kg									80.0
sulfate	mg/kg								7.0	
total organic carbon	mg/kg			2400	33000 J	2000	8200	80000 J	2600	1100
total phosphorus as PO4	mg/kg			330					500	

TABLE A-i

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		13SD02	13SD02-DUP	13SD03	14FS01	15SB01-01	15SB02-01	15SB03-02	15SB04-02	15SB04-02-DUP
LOCATION:		13SD02	13SD02	13SD03	14FS01	15SB01	15SB02	15SB03	15SB04	15SB04
DATA SOURCE:		1995 RI	1995 RI	1995 RI	1995 RI, Dec.	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
MISCELLANEOUS PARAMETERS										
moisture	%	35.6	31.4	2.7	2.9	25.2	25.3	20.9	25.6	32.1
pH		4.2	4.4	4.7		4.4	4.1	5.0	6.1	6.2
petroleum hydrocarbons	mg/kg			90.0		110 J	40.0 J	22.0 J	20.0 J	40.0 J
total organic carbon	mg/kg	2700	3600	800						

TABLE A-i

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	15SD01	15SD02	15SD03	15SS01	15SS02	16SB01-06	16SB02-04	16SB03-02	16SB03-06
LOCATION:	15SD01	15SD02	15SD03	15SS01	15SS02	16SB01	16SB02	16SB03	16SB03
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
MISCELLANEOUS PARAMETERS									
moisture %	69.1	29.1	61.1	37.2	35.5	13.7	16.8	9.1	14.6
pH	6.1 J	5.7	3.7 J	4.0	3.4	8.2	6.1	5.6	5.9
petroleum hydrocarbons **mg/kg**	3100 J	1200	370 J	200 J	120 J	110	20.0 U	50.0	15.0 J

TABLE A-i

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB04-08	16SB04-08-DUP	16SB04-10	16SB05-06	16SB05-08	16SB06-02	16SB06-06	16SB07-04	16SB08-06
LOCATION:	16SB04	16SB04	16SB04	16SB05	16SB05	16SB06	16SB06	16SB07	16SB08
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
MISCELLANEOUS PARAMETERS									
moisture %	13.6	14.2	16.2	11.5	13.2	14.7	13.3	11.7	15.6
pH	5.0	4.9	4.9	6.3	5.8	5.4	5.5	5.9	5.6
petroleum hydrocarbons mg/kg	18000	17000	33000	1800	7600	700	70.0	20.0 U	17.0 J

TABLE A-i

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB09-00	16SB09-06	16SB10-00	16SB10-04	16SB11-09	16SB12-02	16SB12-06	16SB13-02	16SB13-06
LOCATION:	16SB09	16SB09	16SB10	16SB10	16SB11	16SB12	16SB12	16SB13	16SB13
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
MISCELLANEOUS PARAMETERS									
moisture %	10.8	18.4	11.8	10.3	15.1	7.2	11.7	5.4	10.6
pH	5.2	5.7	5.4	6.1	7.4	7.0	7.5	6.2	7.6
petroleum hydrocarbons **mg/kg**	1600	40.0	4900	320	90.0	40.0	800	11.0 J	700

TABLE A-i

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	16SB14-04	16SB15-06	16SB16-06	16SB16-06-DUP	16SB17-04	16SB17-04-DUP	16SB17-06	16SB18-02	16SB18-06
LOCATION:	16SB14	16SB15	16SB16	16SB16	16SB17	16SB17	16SB17	16SB18	16SB18
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
MISCELLANEOUS PARAMETERS									
moisture %	13.1	11.4	11.1	12.0	11.3	11.1	15.1	7.9	6.8
pH	5.4	6.1	7.4	7.5	5.5	5.5	5.4	5.3	5.8
petroleum hydrocarbons mg/kg	160	30.0	20.0	22.0 J	20.0 UJ	1900 J	3400	1700	2400

TABLE A-i

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		16SB19-06	16SB19-08	16SB20-02	16SB20-06	16SD01	16SD01-DUP	16SD02	16SD02-DUP	16SD03
LOCATION:		16SB19	16SB19	16SB20	16SB20	16SD01	16SD01	16SD02	16SD02	16SD03
DATA SOURCE:		1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
MISCELLANEOUS PARAMETERS										
moisture	%	11.9	16.4	10.1	15.2	25.5	28.2	33.3	33.5	26.1
pH		7.1	6.7	6.2	5.2	6.6	6.7	6.8	6.8	6.9
petroleum hydrocarbons	mg/kg	5400	5900	2200	600	1300 J	1300 J	1300 J	900 J	1400 J
total organic carbon	mg/kg					2500 J		7600 J		3200 J

TABLE A-i

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		16SS01	16SS02	16SS03	17SD01	17SD02	17SD03	17SD04	19SB02-00	19SB02-03
LOCATION:		16SS01	16SS02	16SS03	17SD01	17SD02	17SD03	17SD04	19SB02	19SB02
DATA SOURCE:		1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
MISCELLANEOUS PARAMETERS										
moisture	%	12.2	12.9	34.3	7.5	83.5	54.9	18.7	8.1	11.5
pH		7.9	5.4	6.6	7.0	5.7 J	6.0 J	6.6		
petroleum hydrocarbons	mg/kg	1300 J	2900 J	20000 J						
total organic carbon	mg/kg				740	110000 J	30000 J	680		

TABLE A-i

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	19SB03-00	19SB03-00-DUP	19SB03-03	19SD01	20SD01	20SS03	20SS04	22-001-D001	22-002-D001
LOCATION:	19SB03	19SB03	19SB03	19SD01	20SD01	20SS03	20SS04	22-001-D001	22-002-D001
DATA SOURCE:	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1992 RI/FS Unvalidated Data	1992 RI/FS Unvalidated Data
MISCELLANEOUS PARAMETERS									
moisture %	13.5	11.1	14.7	86.9					
pH				6.5 J					
petroleum hydrocarbons mg/kg								27.0	5.9
total organic carbon mg/kg					5200	2100	1900		

TABLE A-I

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	22-003-D001	22-004-D001	22-005-D001	22-006-D001	23SB01-04	23SB01-16	23SB02-02	23SB02-16	23SB03-06
LOCATION:	22-003-D001	22-004-D001	22-005-D001	22-006-D001	23SB01	23SB01	23SB02	23SB02	23SB03
DATA SOURCE:	1992 RI/FS	1992 RI/FS	1992 RI/FS	1992 RI/FS	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
	Unvalidated Data	Unvalidated Data	Unvalidated Data	Unvalidated Data					
MISCELLANEOUS PARAMETERS									
moisture %					15.2	11.0	15.1	9.0	8.1
pH					7.0	6.9	4.7	4.0	4.3
petroleum hydrocarbons **mg/kg**	12.0	15.0	13.0	48.0					

TABLE A-i

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		23SB03-14	24SB01-05	24SB01-08	24SB01-08-DUP	24SB02-03	24SB02-06	25SB01-05	25SB01-08	25SB02-03
LOCATION:		23SB03	24SB01	24SB01	24SB01	24SB02	24SB02	25SB01	25SB01	25SB02
DATA SOURCE:		1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
MISCELLANEOUS PARAMETERS										
moisture	%	12.2	7.0	7.2	7.8	4.5	5.7	4.9	8.5	7.6
nitrate nitrogen	mg/kg		1.0 U	0.26 J	0.28 J	0.26 J	0.33 J	0.32 J	1.0 U	1.0 U
nitrite nitrogen	mg/kg		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
pH		4.2								

TABLE A-i

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		25SB02-06	26SBDEC95-01	26SBDEC95-02	27SB01-01	27SB01-03	27SB01-10	27SB02-01	27SB02-03	27SB02-10
LOCATION:		25SB02	26SBDEC95-01	26SBDEC95-02	27SB01	27SB01	27SB01	27SB02	27SB02	27SB02
DATA SOURCE:		1995 RI	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.
MISCELLANEOUS PARAMETERS										
moisture	%	4.4	12.8	19.5	6.0	3.3	14.1	9.1	6.7	12.1
nitrate nitrogen	mg/kg	1.0 U								
nitrite nitrogen	mg/kg	1.0 U								
pH					5.6	5.2	5.7	7.7	7.7	7.1

TABLE A-I

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		27SB03-01	27SB03-03	27SB03-06	29SB01-02	29SB02-02	BGSB01-00	BGSB01-05	BGSB02-00	BGSB02-00-DUP
LOCATION:		27SB03	27SB03	27SB03	29SB01	29SB02	BGSB01	BGSB01	BGSB02	BGSB02
DATA SOURCE:		1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI	1995 RI
MISCELLANEOUS PARAMETERS										
ammonia nitrogen	mg/kg						500 U	500 U	100 U	100 U
chemical oxygen demand	mg/kg						1000	1000 J	17000	16000
chloride	mg/kg						1.3 J	1.8 J	2.0	1.9 J
moisture	%	11.2	6.4	14.2	10.1	15.1	4.4	6.1	1.7	1.8
nitrate nitrogen	mg/kg						0.57 J	0.48 J	1.0	1.0
nitrite nitrogen	mg/kg						1.0 U	1.0 U	1.0 U	1.0 U
pH		6.6	7.0	5.7	6.3		5.2	5.6	4.4	4.4
petroleum hydrocarbons	mg/kg				130	90.0	9.0 J	17.0 J	12.0 J	70.0
sulfate	mg/kg						7.0	6.0	10.0	9.0
total organic carbon	mg/kg						420	310	2700	2500
total phosphorus as PO4	mg/kg						240	250	350	320

TABLE A-i

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		BGSB02-05		BGSB03-00		BGSB03-05		BGSB04-00		BGSB04-05		BGSD01		BGSD02		BGSD04		WSSD05	
LOCATION:		BGSB02		BGSB03		BGSB03		BGSB04		BGSB04		BGSD01		BGSD02		BGSD04		WSSD05	
DATA SOURCE:		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
MISCELLANEOUS PARAMETERS																			
ammonia nitrogen	mg/kg	100	U	600	U	500	U	600	U	600	U	100	U	500	UJ	100	U	100	UJ
biochemical oxygen demand	mg/kg			147		22.0	U	272		25.0	U								
chemical oxygen demand	mg/kg	1000	U	44000		300	J	31000		21000									
chloride	mg/kg	1.5	J	7.0		2.0	J	5.0		43.0		5.0	J	33.0	J	10.0	J	14.0	J
moisture	%	3.6		18.1		9.0		14.6		18.9		26.0		79.3		23.0		59.7	
nitrate nitrogen	mg/kg	0.42	J	6.0		0.63	J	6.0		1.0	J	1.0	U	2.3	J	0.60	J	1.3	J
nitrite nitrogen	mg/kg	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	5.0	UJ	1.0	U	2.0	UJ
pH		5.5		5.0		5.7		5.5		6.9		6.2		3.9	J	6.0			
petroleum hydrocarbons	mg/kg	30.0		110		12.0	J	70.0		220		50.0		660	J	120			
sulfate	mg/kg	14.0		30.0		29.0		29.0		57.0									
total organic carbon	mg/kg	180		7000		280		6600		1600		2000		52000	J	1100		16000	J
total phosphorus as PO4	mg/kg	250		2100		750		3800		1100		390		1100	J	220		280	J

TABLE A-i

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		WSSD06		WSSD07		WSSD08		WSSD09		WSSD09-DUP		WSSD10		WSSD11		WSSD12		WSSD13	
LOCATION:		WSSD06		WSSD07		WSSD08		WSSD09		WSSD09		WSSD10		WSSD11		WSSD12		WSSD13	
DATA SOURCE:		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
MISCELLANEOUS PARAMETERS																			
ammonia nitrogen	**mg/kg**	70.0	U	60.0	U	120	J	90.0	J	200	U	400	J	300	J	100	U	70.0	
chloride	**mg/kg**	12.0		6.0		15.0	J	12.0		20.0		40.0	J	30.0	J	7.0		15.0	
moisture	**%**	44.8		30.4		55.1		45.5		47.3		80.4		86.1		29.3		36.0	
nitrate nitrogen	**mg/kg**	0.90	J	0.70	J	1.1	J	0.60	J	1.4		2.0	J	3.5	J	0.30		0.60	J
nitrite nitrogen	**mg/kg**	2.0	UJ	1.0	UJ	2.0	UJ	0.20	UJ	2.0	UJ	5.0	UJ	7.0	UJ	1.0	UJ	2.0	UJ
total organic carbon	**mg/kg**	8400	J	8300	J	16000	J	7000	J	7400	J	54000	J	23000	J	10000	J	12000	J
total phosphorus as PO4	**mg/kg**	430		280		1200	J	270		290		1200	J	1600	J	2000		3300	J

TABLE A-I

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		WSSD14		WSSD15		WSSD16		WSSD17		WSSD17-DUP		WSSD18		WSSD19		WSSD20		WSSD21	
LOCATION:		WSSD14		WSSD15		WSSD16		WSSD17		WSSD17		WSSD18		WSSD19		WSSD20		WSSD21	
DATA SOURCE:		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
MISCELLANEOUS PARAMETERS																			
ammonia nitrogen	mg/kg	100	U	200	J	100	U	300	J	400	J	100	U	100	U	100	J	100	U
chloride	mg/kg	12.0		19.0	J	6.0		22.0	J	25.0	J	24.0	J	4.0	J	9.0	J	7.0	J
moisture	%	29.8		56.1		28.1		62.8		64.9		31.3		24.3		34.9		21.6	
nitrate nitrogen	mg/kg	0.30	J	1.0	J	0.40	J	1.2	J	1.5	J	0.90	J	1.2	J	0.80	J	1.0	
nitrite nitrogen	mg/kg	1.0	UJ	2.0	UJ	1.0	UJ	3.0	UJ	3.0	UJ	1.0	U	1.0	U	2.0	U	1.0	U
total organic carbon	mg/kg	5300	J	38000	J	9500	J	27000	J	47000	J								
total phosphorus as PO4	mg/kg	5200		740	J	4600		13000	J	13000	J	1800		6900		5500		4300	

TABLE A-i

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:		WSSD22		_LSS01	_LSS02	_LSS03	_LSS04	_LSS05	_LSS06	_LSS07	_LSS08
LOCATION:		WSSD22		_LSS01	_LSS02	_LSS03	_LSS04	_LSS05	_LSS06	_LSS07	_LSS08
DATA SOURCE:		1995 RI		1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.
MISCELLANEOUS PARAMETERS											
ammonia nitrogen	mg/kg	200	J								
chemical oxygen demand	mg/kg	250000	J								
chloride	mg/kg	1000	J								
moisture	%	82.3	J	18.2	10.1	9.6	12.4	7.1	11.7	17.3	9.6
nitrate nitrogen	mg/kg	2.3	J								
nitrite nitrogen	mg/kg	6.0	UJ								
pH		6.0	J	3.9	5.7	4.4	7.7	7.2	7.1	10.2	4.4
petroleum hydrocarbons	mg/kg	1300	J	80.0	40.0		60.0	40.0	130	2300	30.0
total organic carbon	mg/kg	40000	J								
total phosphorus as PO4	mg/kg	2500	J								

TABLE A-i

MISCELLANEOUS PARAMETERS RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	_QSB02-02	_QSB02-04	_QSB03-01	_QSD01	---	---	---	---	---
LOCATION:	_QSB02	_QSB02	_QSB03	_QSD01	---	---	---	---	---
DATA SOURCE:	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.	1995 RI, Dec.					
MISCELLANEOUS PARAMETERS									
moisture %	17.6	16.8	15.4	72.4 J					
petroleum hydrocarbons mg/kg			50.0	17000 J					

APPENDIX A.j.

ANALYTICAL DATABASE

EXPLOSIVES RESULTS

AQUEOUS

TABLE A-j

EXPLOSIVES RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01GW01		01GW02		01GW02-DUP		01GW03		01GW04		01GW05		02GW01		02GW02		02GW03	
LOCATION:	01GW01		01GW02		01GW02		01GW03		01GW04		01GW05		02GW01		02GW02		02GW03	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
EXPLOSIVES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,3,5-trinitrobenzene	0.51	U	0.45	U	0.40	U	0.42	U	0.46	U	0.34	U	0.48	U	0.40	U	0.42	U
1,3-dinitrobenzene	0.51	U	0.45	U	0.40	U	0.42	U	0.46	U	0.34	U	0.48	U	0.40	U	0.42	U
2,4,6-trinitrotoluene	0.51	U	0.45	U	0.40	U	0.42	U	0.46	U	0.34	U	0.48	U	0.40	U	0.42	U
2,4-dinitrotoluene	0.51	U	0.64		0.79		0.42	U	1.0		0.34	U	0.48	U	0.40	U	0.42	U
2,6-dinitrotoluene	0.51	U	0.45	U	0.40	U	0.42	U	0.46	U	0.34	U	0.48	U	0.40	U	0.42	U
2-amino-4,6-dinitrotoluene	1.5		0.45	U	0.40	U	0.42	U	0.46	U	0.34	U	0.48	U	0.40	U	0.42	U
2-nitrotoluene	1.0	U	0.91	U	0.79	U	0.85	U	0.91	U	0.68	U	1.0	U	0.79	U	0.85	U
3-nitrotoluene	1.0	U	0.91	U	0.79	U	0.85	U	0.91	U	0.68	U	1.0	U	0.79	U	0.85	U
4-amino-2,6-dinitrotoluene	0.51	U	0.45	U	0.40	U	0.42	U	0.46	U	0.34	U	0.48	U	0.40	U	0.42	U
4-nitrotoluene	1.0	U	0.91	U	0.79	U	0.85	UJ	0.91	U	0.68	U	1.0	U	0.79	U	0.85	UJ
HMX	1.0	U	0.91	U	0.79	U	0.85	U	0.91	U	0.68	U	1.0	U	0.79	U	0.85	U
RDX	1.0	U	5.7		6.9		0.85	U	11.5		0.68	U	1.0	UJ	0.79	U	0.85	U
nitrobenzene	0.51	U	0.45	U	0.40	U	0.42	U	0.46	U	0.34	U	0.48	U	0.40	U	0.42	U
nitrocellulose	180	U	180	U	180	U	180	U	180	U	360	U	180	U	180	U	180	U
nitroglycerin	20.3	U	18.2	U	15.8	U	16.9	U	18.2	U	13.5	U	19.2	U	15.8	U	16.9	U
picric acid	0.51	U	0.45	U	0.40	U	0.42	U	0.46	U	0.34	U	0.48	U	0.40	U	0.42	U
tetryl	1.0	U	0.91	U	0.79	U	0.85	U	0.91	U	0.68	U	1.0	U	0.79	U	0.85	U

TABLE A-j

EXPLOSIVES RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	02GW04		02GW05		02GW06		02GW07		06GW01		06GW02		06GW03		06GW04		13GW01	
LOCATION:	02GW04		02GW05		02GW06		02GW07		06GW01		06GW02		06GW03		06GW04		13GW01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
EXPLOSIVES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,3,5-trinitrobenzene	0.42	U	0.40	U	0.40	U	0.51	U	0.48	U	0.45	U	0.42	U	0.45	U	0.48	U
1,3-dinitrobenzene	0.42	U	0.40	U	0.40	U	0.51	U	0.48	U	0.45	U	0.42	U	0.45	U	0.48	U
2,4,6-trinitrotoluene	0.42	U	0.40	U	44.6		0.51	U	0.48	U	0.45	U	0.42	U	0.45	U	0.48	U
2,4-dinitrotoluene	0.42	U	0.40	U	5.6		0.51	U	0.48	U	0.45	U	0.42	U	0.45	U	0.48	U
2,6-dinitrotoluene	0.42	U	0.40	U	0.40	U	0.51	U	0.48	U	0.45	U	0.42	U	0.45	U	0.48	U
2-amino-4,6-dinitrotoluene	0.42	U	0.40	U	0.40	U	0.51	U	0.48	U	0.45	U	0.42	U	0.45	U	0.48	U
2-nitrotoluene	0.85	U	0.79	U	0.79	U	1.0	U	1.0	U	0.91	U	0.85	U	0.91	U	1.0	U
3-nitrotoluene	0.85	U	0.79	U	0.79	U	1.0	U	1.0	U	0.91	U	0.85	U	0.91	U	1.0	U
4-amino-2,6-dinitrotoluene	0.42	U	0.40	U	15.3		0.51	U	0.48	U	0.45	U	0.42	U	0.45	U	0.48	U
4-nitrotoluene	0.85	U	0.79	U	0.79	U	1.0	U	1.0	UJ	0.91	U	0.85	U	0.91	U	1.0	U
HMX	0.85	U	0.79	U	1.1		1.0	U	1.0	U	0.91	U	0.85	U	0.91	U	1.0	U
RDX	0.85	U	0.79	U	10.0		1.0	U	1.0	U	0.91	UJ	0.85	UJ	0.91	UJ	1.0	U
nitrobenzene	0.42	U	0.40	U	0.40	U	0.51	U	0.48	U	0.45	U	0.42	U	0.45	U	0.48	U
nitrocellulose	180	U	180	U			180	U	180	U	180	U	180	U	180	U	360	U
nitroglycerin	16.9	U	15.8	U	15.8	U	20.3	U	19.2	U	18.2	U	16.9	U	18.2	U	19.2	U
picric acid	0.42	U	0.40	U	0.60	U	0.51	U	0.48	U	0.45	U	0.42	U	0.45	U	0.48	U
tetryl	0.85	U	0.79	U	0.79	U	1.0	U	1.0	U	0.91	U	0.85	U	0.91	U	1.0	U

TABLE A-j

EXPLOSIVES RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	13GW02		13GW03		13GW04		13GW05		13SW02		13SW02-DUP		23GW01		23GW02		23GW03	
LOCATION:	13GW02		13GW03		13GW04		13GW05		13SW02		13SW02		23GW01		23GW02		23GW03	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
EXPLOSIVES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,3,5-trinitrobenzene	0.51	U	0.34	U	0.40	U	0.48	U	0.50	U	0.50	UR	0.37	U	0.48	U	0.48	U
1,3-dinitrobenzene	0.51	U	0.34	U	0.40	U	0.48	U	0.40	U	0.40	UR	0.37	U	0.48	U	0.48	U
2,4,6-trinitrotoluene	0.51	U	0.34	U	0.40	U	0.48	U	0.40	U	0.40	UR	0.37	U	0.48	U	0.48	U
2,4-dinitrotoluene	0.51	U	0.34	U	0.40	U	0.48	U	0.40	U	0.40	UR	0.37	U	0.48	U	0.48	U
2,6-dinitrotoluene	0.51	U	0.34	U	0.40	U	0.48	U	0.30	U	0.30	UR	0.37	U	0.48	U	0.48	U
2-amino-4,6-dinitrotoluene	0.51	U	0.34	U	0.40	U	0.48	U	1.0	U	1.0	UR	0.37	U	0.48	U	0.48	U
2-nitrotoluene	1.0	U	0.68	U	0.79	U	1.0	U	0.40	U	0.40	UR	0.74	U	1.0	U	1.0	U
3-nitrotoluene	1.0	U	0.68	U	0.79	U	1.0	U	1.0	U	1.0	UR	0.74	U	1.0	U	1.0	U
4-amino-2,6-dinitrotoluene	0.51	U	0.34	U	0.40	U	0.48	U	2.0	U	2.0	UR	0.37	U	0.48	U	0.48	U
4-nitrotoluene	1.0	U	0.68	U	0.79	U	1.0	U	2.0	U	2.0	UR	0.74	U	1.0	U	1.0	U
HMX	1.0	U	0.68	U	0.79	U	1.0	U	1.0	U	1.0	UR	0.74	U	1.0	U	1.0	U
RDX	1.0	U	0.68	U	0.79	U	1.0	U	1.0	U	1.0	UR	0.74	U	1.0	U	1.0	U
nitrobenzene	0.51	U	0.34	U	0.40	U	0.48	U	0.30	U	0.30	UR	0.37	U	0.48	U	0.48	U
nitrocellulose	360	U	360	U	180	U	180	U					360	U	360	U	360	U
nitroglycerin	20.3	U	13.5	U	15.8	U	19.2	U	35.0	U	35.0	UR	14.8	U	19.2	U	19.2	U
picric acid	0.51	U	0.34	U	0.40	U	0.48	U					0.37	U	0.48	U	0.48	U
tetryl	1.0	U	0.68	U	0.79	U	1.0	U	0.30	U	0.30	UR	0.74	U	1.0	U	1.0	U

TABLE A-j

EXPLOSIVES RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	23SW03		23SW04		23SW05		23SW05-DUP		26GW01		26GW02		26GW03		26GW04		26GW05	
LOCATION:	23SW03		23SW04		23SW05		23SW05		26GW01		26GW02		26GW03		26GW04		26GW05	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
EXPLOSIVES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,3,5-trinitrobenzene	0.45	U	0.34	U	0.42	U	0.48	U	0.51	U	0.45	U	0.54	U	0.48	U	0.42	U
1,3-dinitrobenzene	0.45	U	0.34	U	0.42	U	0.48	U	0.51	U	0.45	U	0.54	U	0.48	U	0.42	U
2,4,6-trinitrotoluene	0.45	U	0.34	U	0.42	U	0.48	U	0.51	U	0.45	U	0.54	U	0.48	U	0.42	U
2,4-dinitrotoluene	0.45	U	0.34	U	0.42	U	0.48	U	0.51	U	0.45	U	0.54	U	0.48	U	0.42	U
2,6-dinitrotoluene	0.45	U	0.34	U	0.42	U	0.48	U	0.51	U	0.45	U	0.54	U	0.48	U	0.42	U
2-amino-4,6-dinitrotoluene	0.45	U	0.34	U	0.42	U	0.48	U	0.51	U	0.45	U	0.54	U	0.48	U	0.42	U
2-nitrotoluene	0.91	U	0.68	U	0.85	U	1.0	U	1.0	U	0.91	U	1.1	U	1.0	U	0.85	U
3-nitrotoluene	0.91	U	0.68	U	0.85	U	1.0	U	1.0	U	0.91	U	1.1	U	1.0	U	0.85	U
4-amino-2,6-dinitrotoluene	0.45	U	0.34	U	0.42	U	0.48	U	0.51	U	0.45	U	0.54	U	0.48	U	0.42	U
4-nitrotoluene	0.91	U	0.68	U	0.85	U	1.0	U	1.0	U	0.91	UJ	1.1	UJ	1.0	UJ	0.85	U
HMX	0.91	U	0.68	U	0.85	U	1.0	U	1.0	U	0.91	U	1.1	U	1.0	U	0.85	U
RDX	0.91	U	0.68	U	0.85	U	1.0	U	1.0	U	0.91	U	1.1	U	1.0	U	0.85	U
nitrobenzene	0.45	U	0.34	U	0.42	U	0.48	U	0.51	U	0.45	U	0.54	U	0.48	U	0.42	U
nitrocellulose	720	U	180	U	180	U	180	U	180	U	180	U	180	U	180	U		
nitroglycerin	18.2	U	13.5	U	16.9	U	19.2	U	20.3	U	18.2	U	21.6	U	19.2	U	16.9	U
picric acid	0.45	U	0.34	U	0.42	U	0.48	U	0.51	U	0.45	U	0.54	U	0.48	U	0.42	U
tetryl	0.91	U	0.68	U	0.85	U	1.0	U	1.0	U	0.91	U	1.1	U	1.0	U	0.85	U

TABLE A-j

EXPLOSIVES RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	26GW06		BGGW01		BGGW01-DUP		BGGW02		BGGW03		BGGW04		BGSW01		BGSW02		BGSW04	
LOCATION:	26GW06		BGGW01		BGGW01		BGGW02		BGGW03		BGGW04		BGSW01		BGSW02		BGSW04	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
EXPLOSIVES	**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**		**ug/L**	
1,3,5-trinitrobenzene	0.28	U	0.40	U	0.51	U	0.40	U	0.34	U	0.71	U	0.50	UJ	0.50	UJ	0.50	UJ
1,3-dinitrobenzene	0.28	U	0.40	U	0.51	U	0.40	U	0.34	U	0.71	U	0.40	UJ	0.40	UJ	0.40	UJ
2,4,6-trinitrotoluene	0.28	U	0.40	U	0.51	U	0.40	U	0.34	U	0.71	U	0.40	UJ	0.40	UJ	0.40	UJ
2,4-dinitrotoluene	0.28	U	0.40	U	0.51	U	0.40	U	0.34	U	0.71	U	0.40	UJ	0.40	UJ	0.40	UJ
2,6-dinitrotoluene	0.28	U	0.40	U	0.51	U	0.40	U	0.34	U	0.71	U	0.30	UJ	0.30	UJ	0.30	UJ
2-amino-4,6-dinitrotoluene	0.28	U	0.40	U	0.51	U	0.40	U	0.34	U	0.71	U	1.0	UJ	1.0	UJ	1.0	UJ
2-nitrotoluene	0.56	U	0.79	U	1.0	U	0.79	U	0.68	U	1.4	U	0.40	UJ	0.40	UJ	0.40	UJ
3-nitrotoluene	0.56	U	0.79	U	1.0	U	0.79	U	0.68	U	1.4	U	1.0	U	1.0	U	1.0	U
4-amino-2,6-dinitrotoluene	0.28	U	0.40	U	0.51	U	0.40	U	0.34	U	0.71	U	2.0	UJ	2.0	UJ	2.0	UJ
4-nitrotoluene	0.56	U	0.79	U	1.0	U	0.79	U	0.68	U	1.4	U	2.0	U	2.0	U	2.0	U
HMX	0.56	U	0.79	U	1.0	U	0.79	U	0.68	U	1.4	U	1.0	UJ	1.0	UJ	1.0	UJ
RDX	0.56	U	0.79	U	1.0	U	0.79	U	0.68	U	1.4	U	1.0	UJ	1.0	UJ	1.0	UJ
nitrobenzene	0.28	U	0.40	U	0.51	U	0.40	U	0.34	U	0.71	U	0.30	U	0.30	U	0.30	U
nitrocellulose							180	U	180	U								
nitroglycerin	55.9	U	15.8	U	20.3	U	15.8	U	13.5	U	28.3	U						
picric acid	0.28	U	0.40	U	0.51	U	0.40	U	0.34	U	0.71	U						
tetryl	0.56	U	0.79	U	1.0	U	0.79	U	0.68	U	1.4	U	0.30	U	0.30	U	0.30	U

TABLE A-j

EXPLOSIVES RESULTS FOR WATER SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	WSSW10		WSSW13		WSSW22		WSSW30		---		---		---		---		---	
LOCATION:	WSSW10		WSSW13		WSSW22		WSSW30		---		---		---		---		---	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI											
EXPLOSIVES	**ug/L**		**ug/L**		**ug/L**		**ug/L**											
1,3,5-trinitrobenzene	0.50	U	0.50	U	0.50	U	0.40	U										
1,3-dinitrobenzene	0.40	UJ	0.40	UJ	0.40	U	0.40	U										
2,4,6-trinitrotoluene	0.40	U	0.40	U	0.40	U	0.40	U										
2,4-dinitrotoluene	0.40	U	0.40	U	0.40	U	0.40	U										
2,6-dinitrotoluene	0.30	U	0.30	U	0.30	U	0.40	U										
2-amino-4,6-dinitrotoluene	1.0	U	1.0	U	1.0	U	0.40	U										
2-nitrotoluene	0.40	U	0.40	U	0.40	U	0.79	U										
3-nitrotoluene	1.0	UJ	1.0	UJ	1.0	U	0.79	U										
4-amino-2,6-dinitrotoluene	2.0	U	2.0	U	2.0	U	0.40	U										
4-nitrotoluene	2.0	UJ	2.0	UJ	2.0	U	0.79	U										
HMX	1.0	U	1.0	U	1.0	U	0.79	U										
RDX	0.30	J	1.0	U	1.0	U	0.79	U										
nitrobenzene	0.30	U	0.30	U	0.30	U	0.40	U										
nitrocellulose							180	U										
nitroglycerin					35.0	U	15.8	U										
picric acid							0.40	U										
tetryl	0.30	U	0.30	U	0.30	U	0.79	U										

APPENDIX A.k.

ANALYTICAL DATABASE

EXPLOSIVES RESULTS

SOLIDS

TABLE A-k

EXPLOSIVES RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB01-00		01SB01-02		01SB02-00		01SB02-02		01SB03-00		01SB03-02		01SB04-00		01SB04-02		01SB05-00	
LOCATION:	01SB01		01SB01		01SB02		01SB02		01SB03		01SB03		01SB04		01SB04		01SB05	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
EXPLOSIVES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,3,5-trinitrobenzene	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U
1,3-dinitrobenzene	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U
2,4,6-trinitrotoluene	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U
2,4-dinitrotoluene	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U
2,6-dinitrotoluene	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U
2-amino-4,6-dinitrotoluene	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U
2-nitrotoluene	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U
3-nitrotoluene	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U
4-amino-2,6-dinitrotoluene	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U
4-nitrotoluene	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U
HMX	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U
RDX	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U
nitrobenzene	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U
nitrocellulose	17600	U	18000	U	18000	U	77000		17800	U	17500	U	17300	U	18000	U	17500	U
nitroglycerin	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U
picric acid	250	UR	250	UR	250	UR	250	UR	250	UR	250	UR	250	UR	250	UR	250	UR
tetryl	163	U	163	U	163	U	163	U	163	U	163	U	163	U	163	U	163	U

TABLE A-k

EXPLOSIVES RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB05-02		01SB06-00		01SB06-02		01SB07-00		01SB07-00-DUP		01SB07-02		01SB08-00		01SB08-02		01SB09-00	
LOCATION:	01SB05		01SB06		01SB06		01SB07		01SB07		01SB07		01SB08		01SB08		01SB09	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
EXPLOSIVES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,3,5-trinitrobenzene	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U
1,3-dinitrobenzene	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U
2,4,6-trinitrotoluene	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U
2,4-dinitrotoluene	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U
2,6-dinitrotoluene	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U
2-amino-4,6-dinitrotoluene	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U
2-nitrotoluene	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U
3-nitrotoluene	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U
4-amino-2,6-dinitrotoluene	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U
4-nitrotoluene	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U
HMX	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U
RDX	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U
nitrobenzene	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U
nitrocellulose	17300	U	17800	U	17800	U	17800	U	17600	U	17600	U	17300	U	16500	U	17600	U
nitroglycerin	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U
picric acid	250	UR	250	UR	250	UR	250	UR	250	UR	250	UR	250	UR	250	UR	250	UR
tetryl	163	U	163	U	163	U	163	U	163	U	163	U	163	U	163	U	163	U

TABLE A-k

EXPLOSIVES RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	01SB09-02		01SB10-00		01SB10-02		02SS01		02SS02		02SS03		02SS04		02SS05		02SS06	
LOCATION:	01SB09		01SB10		01SB10		02SS01		02SS02		02SS03		02SS04		02SS05		02SS06	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
EXPLOSIVES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,3,5-trinitrobenzene	40.2	U	40.2	U	40.2	U	38.2	U	40.2	U	38.3	U	38.3	U	40.2	U	38.3	U
1,3-dinitrobenzene	37.2	U	37.2	U	37.2	U	35.3	U	37.2	U	35.4	U	35.4	U	37.2	U	35.4	U
2,4,6-trinitrotoluene	35.6	U	35.6	U	35.6	U	33.8	U	35.6	U	33.9	U	33.9	U	35.6	U	33.9	U
2,4-dinitrotoluene	51.6	U	51.6	U	51.6	U	49.0	U	51.6	U	49.1	U	49.1	U	51.6	U	49.1	U
2,6-dinitrotoluene	47.7	U	47.7	U	47.7	U	45.3	U	47.7	U	45.4	U	45.4	U	47.7	U	45.4	U
2-amino-4,6-dinitrotoluene	46.7	U	46.7	U	46.7	U	44.3	U	46.7	U	44.5	U	44.5	U	46.7	U	44.5	U
2-nitrotoluene	81.4	U	81.4	U	81.4	U	77.3	U	81.4	U	77.5	U	77.5	U	81.4	U	77.5	U
3-nitrotoluene	81.8	U	81.8	U	81.8	U	77.6	U	81.8	U	77.9	U	77.9	U	81.8	U	77.9	U
4-amino-2,6-dinitrotoluene	40.9	U	40.9	U	40.9	U	38.8	U	40.9	U	38.9	U	38.9	U	40.9	U	38.9	U
4-nitrotoluene	87.3	U	87.3	U	87.3	U	82.9	U	87.3	U	83.1	U	83.1	U	87.3	U	83.1	U
HMX	70.5	U	70.5	U	70.5	U	67.0	U	70.5	U	67.1	U	67.1	U	70.5	U	67.1	U
RDX	50.9	U	50.9	U	50.9	U	48.4	U	50.9	U	48.5	U	48.5	U	50.9	U	48.5	U
nitrobenzene	35.2	U	35.2	U	35.2	U	33.4	U	35.2	U	33.5	U	33.5	U	35.2	U	33.5	U
nitrocellulose	17300	U	17600	U	17600	U	17900	U	16300	U	16800	U	17400	U	17300	U	22500	U
nitroglycerin	10000	U	10000	U	10000	U	9520	U	10000	U	9520	U	9520	U	10000	U	9520	U
picric acid	250	UR	250	UR	250	UR	238	U	250	U	238	U	238	U	250	U	238	U
tetryl	163	U	163	U	163	U	154	U	163	U	155	U	155	U	163	U	155	U

TABLE A-k

EXPLOSIVES RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	02SS07		02SS08		13SD01		13SD02		13SD02-DUP		13SD03		23SB01-04		23SB01-16		23SB02-02	
LOCATION:	02SS07		02SS08		13SD01		13SD02		13SD02		13SD03		23SB01		23SB01		23SB02	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
EXPLOSIVES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,3,5-trinitrobenzene	42.3	U	40.2	U	40.2	U	0.20	U	0.10	U	40.2	U	40.2	U	40.2	U	40.2	UJ
1,3-dinitrobenzene	39.2	U	37.2	U	37.2	U	0.20	U	0.10	U	37.2	U	37.2	U	37.2	U	37.2	UJ
2,4,6-trinitrotoluene	37.5	U	35.6	U	35.6	U	0.20	U	0.10	U	35.6	U	35.6	U	35.6	U	35.6	UJ
2,4-dinitrotoluene	54.3	U	51.6	U	51.6	U	0.30	U	0.30	U	51.6	U	51.6	U	51.6	U	51.6	UJ
2,6-dinitrotoluene	50.2	U	47.7	U	47.7	U	0.30	U	0.30	U	47.7	U	47.7	U	47.7	U	47.7	UJ
2-amino-4,6-dinitrotoluene	49.1	U	46.7	U	46.7	U	0.20	U	0.10	U	46.7	U	46.7	U	46.7	U	46.7	UJ
2-nitrotoluene	85.7	U	81.4	U	81.4	U	0.20	U	0.10	U	81.4	U	81.4	U	81.4	U	81.4	UJ
3-nitrotoluene	86.1	U	81.8	U	81.8	U	0.30	U	0.30	U	81.8	U	81.8	U	81.8	U	81.8	UJ
4-amino-2,6-dinitrotoluene	43.0	U	40.9	U	40.9	U	0.30	U	0.30	U	40.9	U	40.9	U	40.9	U	40.9	UJ
4-nitrotoluene	91.8	U	87.3	U	87.3	U	0.30	U	0.30	U	87.3	U	87.3	U	87.3	U	87.3	UJ
HMX	74.2	U	70.5	U	70.5	U	0.30	U	0.30	U	70.5	U	70.5	U	70.5	U	70.5	UJ
RDX	53.6	U	50.9	U	50.9	U	0.60	U	0.60	U	50.9	U	50.9	U	50.9	U	50.9	UJ
nitrobenzene	37.1	U	35.2	U	35.2	U	0.20	U	0.10	U	35.2	U	35.2	U	35.2	U	35.2	UJ
nitrocellulose	17200	U	16700	U	13400	U					11800	U	16700	U	16600	U	17800	U
nitroglycerin	10500	U	10000	U	10000	U					10000	U	10000	U	10000	U	10000	UJ
picric acid	263	U	250	U	250	U					250	U	250	UR	250	UR	250	UR
tetryl	171	U	163	U	163	U	0.20	UJ	0.10	UJ	163	U	163	U	163	U	163	UJ

TABLE A-k

EXPLOSIVES RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	23SB02-16		23SB03-06		23SB03-14		23SB04-02		23SD01		23SD02		23SD03		23SD04		23SD05	
LOCATION:	23SB02		23SB03		23SB03		23SB04		23SD01		23SD02		23SD03		23SD04		23SD05	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
EXPLOSIVES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,3,5-trinitrobenzene	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U
1,3-dinitrobenzene	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U
2,4,6-trinitrotoluene	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U
2,4-dinitrotoluene	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U
2,6-dinitrotoluene	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U
2-amino-4,6-dinitrotoluene	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U
2-nitrotoluene	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U
3-nitrotoluene	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U
4-amino-2,6-dinitrotoluene	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U
4-nitrotoluene	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U
HMX	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U
RDX	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U
nitrobenzene	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U
nitrocellulose	16600	U	17700	U	15700	U	10400	U	10600	U	11700	U	11100	U	14200	U	10400	U
nitroglycerin	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U
picric acid	250	UR	250	UR	250	UR	250	U	250	U	250	U	250	U	250	U	250	U
tetryl	163	U	163	U	163	U	163	U	163	U	163	U	163	U	163	U	163	U

TABLE A-k

EXPLOSIVES RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	23SD05-DUP		26SB01-02		26SB02-04		26SB03-04		26SB03-06		26SB04-02		26SB04-06		BGSB01-00		BGSB01-05	
LOCATION:	23SD05		26SB01		26SB02		26SB03		26SB03		26SB04		26SB04		BGSB01		BGSB01	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
EXPLOSIVES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,3,5-trinitrobenzene	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U
1,3-dinitrobenzene	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U
2,4,6-trinitrotoluene	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U
2,4-dinitrotoluene	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U
2,6-dinitrotoluene	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U
2-amino-4,6-dinitrotoluene	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U
2-nitrotoluene	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U
3-nitrotoluene	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U
4-amino-2,6-dinitrotoluene	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U
4-nitrotoluene	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U
HMX	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U
RDX	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U
nitrobenzene	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U
nitrocellulose	13700	U	17300	U	17000	U	17800	U	17800	U	17300	U	16800	U	17100	U	48500	
nitroglycerin	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U	10000	U
picric acid	250	U	250	UR	250	UR	250	UR	250	UR	250	UR	250	UR	250	UR	250	UR
tetryl	163	U	163	U	163	U	163	U	163	U	163	U	163	U	163	U	163	U

TABLE A-k

EXPLOSIVES RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGSB02-00		BGSB02-00-DUP		BGSB02-05		BGSB03-00		BGSB03-05		BGSB04-00		BGSB04-05		BGSD01		BGSD02	
LOCATION:	BGSB02		BGSB02		BGSB02		BGSB03		BGSB03		BGSB04		BGSB04		BGSD01		BGSD02	
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI		1995 RI	
EXPLOSIVES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**	
1,3,5-trinitrobenzene	0.10	U	0.10	U	40.2	U	40.2	U	40.2	U	40.2	U	40.2	U	0.10	U	0.50	UJ
1,3-dinitrobenzene	0.10	U	0.10	U	37.2	U	37.2	U	37.2	U	37.2	U	37.2	U	0.10	U	0.50	UJ
2,4,6-trinitrotoluene	0.10	U	0.10	U	35.6	U	35.6	U	35.6	U	35.6	U	35.6	U	0.10	U	0.50	UJ
2,4-dinitrotoluene	0.20	U	0.20	U	51.6	U	51.6	U	51.6	U	51.6	U	51.6	U	0.30	U	1.0	UJ
2,6-dinitrotoluene	0.20	U	0.20	U	47.7	U	47.7	U	47.7	U	47.7	U	47.7	U	0.30	U	1.0	UJ
2-amino-4,6-dinitrotoluene	0.10	U	0.10	U	46.7	U	46.7	U	46.7	U	46.7	U	46.7	U	0.10	U	0.50	UJ
2-nitrotoluene	0.10	U	0.10	U	81.4	U	81.4	U	81.4	U	81.4	U	81.4	U	0.10	U	0.50	UJ
3-nitrotoluene	0.20	U	0.20	U	81.8	U	81.8	U	81.8	U	81.8	U	81.8	U	0.30	U	1.0	UJ
4-amino-2,6-dinitrotoluene	0.20	U	0.20	U	40.9	U	40.9	U	40.9	U	40.9	U	40.9	U	0.30	U	1.0	UJ
4-nitrotoluene	0.20	U	0.20	U	87.3	U	87.3	U	87.3	U	87.3	U	87.3	U	0.30	U	1.0	UJ
HMX	0.20	U	0.20	U	70.5	U	70.5	U	70.5	U	70.5	U	70.5	U	0.30	U	1.0	UJ
RDX	0.40	U	0.40	U	50.9	U	50.9	U	50.9	U	50.9	U	50.9	U	0.50	U	2.0	UJ
nitrobenzene	0.10	U	0.10	U	35.2	U	35.2	U	35.2	U	35.2	U	35.2	U	0.10	U	0.50	UJ
nitrocellulose					18000	U	18000	U	17800	U	17300	U	17800	U				
nitroglycerin					10000	U	10000	U	10000	U	10000	U	10000	U				
picric acid					250	UR	250	UR	250	UR	250	UR	250	UR				
tetryl	0.10	U	0.10	U	163	U	163	U	163	U	163	U	163	U	0.10	UJ	0.50	UJ

TABLE A-k

EXPLOSIVES RESULTS FOR SOLID SAMPLES

NWS EARLE, COLTS NECK, NEW JERSEY

SAMPLE NUMBER:	BGSD04		WSSD10		WSSD13		WSSD22		---	---	---	---	---
LOCATION:	BGSD04		WSSD10		WSSD13		WSSD22		---	---	---	---	---
DATA SOURCE:	1995 RI		1995 RI		1995 RI		1995 RI						
EXPLOSIVES	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**						
1,3,5-trinitrobenzene	0.10	U	0.50	UJ	0.20	UJ	0.60	UJ					
1,3-dinitrobenzene	0.10	U	0.50	UJ	0.20	UJ	0.60	UJ					
2,4,6-trinitrotoluene	0.10	U	0.50	UJ	0.20	UJ	0.60	UJ					
2,4-dinitrotoluene	0.30	U	1.0	UJ	0.30	UJ	1.0	UJ					
2,6-dinitrotoluene	0.30	U	1.0	UJ	0.30	UJ	1.0	UJ					
2-amino-4,6-dinitrotoluene	0.10	U	0.50	UJ	0.20	UJ	0.60	UJ					
2-nitrotoluene	0.10	U	0.50	UJ	0.20	UJ	0.60	UJ					
3-nitrotoluene	0.30	U	1.0	UJ	0.30	UJ	1.0	UJ					
4-amino-2,6-dinitrotoluene	0.30	U	1.0	UJ	0.30	UJ	1.0	UJ					
4-nitrotoluene	0.30	U	1.0	UJ	0.30	UJ	1.0	UJ					
HMX	0.30	U	1.0	UJ	0.30	UJ	1.0	UJ					
RDX	0.50	U	2.0	UJ	0.60	UJ	2.0	UJ					
nitrobenzene	0.10	U	0.50	UJ	0.20	UJ	0.60	UJ					
tetryl	0.10	UJ	0.50	UJ	0.20	UJ	0.60	UJ					

APPENDIX B

SOIL GAS SURVEY REPORT

Final Report

SOIL GAS SURVEY
NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY

Solicitation No. 1298-95-294

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Audited by: 7/6/95

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Table of Contents:

Executive Summary 1

Operational Procedure 2
- Sample Collection Protocol
- Analysis Protocol

Discussion of Results 4
- Sample Collection
- Sample Analysis

QA/QC 6

Appendix
A. Table 1: Sample Collection Data
Table 2: Summary of Results
Table 3: Duplicate Analysis
Table 4: QA/QC Analysis
B. Diagram of sample point locations
C. Individual Chromotrgrams
Site 3
Site 16
Site 26

Executive Summary:

Environmental Field Service Inc. (EFS Inc.) was contracted by Halliburton NUS Corporation to perform a soil gas sampling and analysis project at the Naval Weapons Station Earle, Colts Neck, New Jersey. Project commenced on 5/31/94 and concluded on 6/8/95. Project oversight and supervision was provided by Halliburton NUS Corporation.

Soil gas samples were collected using "Direct Push Technology" which incorporated both truck mounted units and hand operated equipment. Hollow rod were driven to depth where expendable point was released allowing sample to be collected through dedicated, virgin P.E. downhole tubing.

Samples were screened on site using a field portable gas chromatograph (GC). This instrument was calibrated to certified gas standards. Analytical methods used included modified SW846 8010, 8015. Analytical results were reported relative to BTEX (benzene, toluene, ethylbenzene, xylene m-p, xylene-o), TCE and PCE. Reporting limits were: Total BTEX 0.603 ppm, TCE 0.031 ppm, PCE 0.048 ppm.

The sites included in the project were Site 3, 26 and 16. A total of 190 samples were collected and analyzed plus 19 duplicated. Real-time results were used by Halliburton site manager to bias additional sampling locations

Operational Procedures:

A. Sample Collection Protocol

Approximately 50 percent of sample locations were not accessible by truck mounted direct push equipment and were sampled using manual rotary hammer drill to drive rods. Sample collection procedure was identical for both methods.

1. Locate sample points and mark.
2. Clear all underground utilities; Electric, Water, Sewer, Gas, UST or other potential underground objects. Ensure no other hazards exist prior to start of probing operation.
3. Review Health and Safety Plan for listed potential hazards and engage proper gas monitoring equipment and PPE levels of protection. All work performed at site was conducted at level D.
4. Decon all equipment that will come in contact with sample; drive rods, expendable point holder, tubing adapter.
5. Blank all equipment by collecting clean air sample through sampling equipment. Confirm quality of blank sample by screening with OVA or field GC.
6. Drive probe rod to predetermined depth and extract six inches to release expendable point and open cavity to sample soil gas. If point does not open, use "popper" device with extension rods to release drive point.
7. Assemble 1/4" tubing and adapter with o-ring. Insert to bottom of drive rods, turn counter clockwise to engage threads and form seal. Sample will only contact virgin PE tubing, point holder and adapter. Samples are now isolated from contact with drive rods.
8. Assemble collection system consisting of 40ml VOA vial, transfer device and tubing. Pump device is located after sample vial and hence does not contact sample. Label sample vial with site name, sample ID, time, date and sampler name.
9. Purge sample line by removing 3-5 volume of air using hand pump and collect sample after purging. Every stroke of pump moves 15cc of air. If duplicate analysis is required, place second vial onto device, purge one volume of air and collect sample. Duplicate samples were collected for ten percent of total samples.
10. Remove sample VOA vial, place in dark cooler at 4 degree C. Transfer to field screening location. Maximum holding time is 48 hours but less than 24 hours is recommended.
11. Remove probe rod assemble, decon all sample contacting equipment and dispose of sample tubing.
12. Fill probe hole with clean sand and patch surface if needed with cement or cold asphalt patch.
13. Clean area of all sample apparatus before moving to next location.

B. Field Screening by Gas Chromatography (GC) Method:

1. Field GC used for screening was PhotoVac 10S Plus Portable Gas Chromatograph. GC operates on an isothermal oven at a temperature setting of 40 degrees C. Run time for BTEX, TCE and PCE analysis is approximately 500 secs which allows for all relevant peaks to emit and sufficient time for any remaining contaminants to run through column.
2. Carrier gas used was high purity lab grade air (<0.1 TPH).
3. Flow rate for column and auto backflush were balanced daily between 10-15 ml/min.
4. GC was calibrated using certified calibration gas supplied by Scott Specialty Gas. See QA/QC section for specification of calibration gas.
5. Chlorinated gas standard contained additional compounds beyond TCE and PCE which required individual standard runs to identify retention times for TCE and PCE. Individual standards were supplied by Suppelco and were injected separately.
6. Library was created and updated after all calibration runs.
7. GC method was setup with the following parameters;

Sample Volume:	0.5 ml
Gain:	1000
Oven Temperature:	40 degree C
Window Percent:	5%
Analysis Time:	500 sec.

8. All samples and standards were injected using gas tight syringe (1 ml).Injection volume was 0.5 ml with run time of 500 seconds.
9. At completion of run, record all identified peaks on manual field log, store run data on internal memory disk and print hard copy.

Discussion of Results:

A. Sample Collection

The collection process applied produced a smooth and consistent project. Ninety five percent of the samples collected had no deviations from normal protocol and hence have a high confidence value. A few sample locations exhibited questionable parameter and data generated must be carefully evaluated. These locations are listed and discussed below.

Sample Location	Comments
03sg09	First sample taken at 10', believed to have hit water. Resampled at 8' with better results.
03sg03	Water in sample tube, did not resample
Site 26	All samples collected OK
16sg02	Hit water at 8', resampled at 7'
16sg07	Hit water at 8'
Tile Drain Area	Samples 1-15, site 16: Area exhibited varying water levels
16sg31	Hit concrete pad at 2', moved sample 5' towards tracks.
16sg21	Water at 2'
Catch Basin Area	Water level for area approximately 2'
16sg50	Sample collected at 1'
16sg49	Sample collected at 1'
16sg41	Sample collected at 1'
16sg90	Could not penetrate concrete structure below asphalt, 2.5'
16sg88	Could not penetrate concrete structure below asphalt, 2.5'
16sg98	Drawing vacuum at 4'.
16sg62	Rejected, could not penetrate through rail base.
Site 16:	Wooded area east of rail track had very high water level, most samples collected above 2'.

Location of sample points were selected by Halliburton personnel on-site. Little deviation to original grid pattern occurred and is identified on site maps. Deviation of less than 10% of grid were not recorded. For example, points moved 7' on a 100' grid site due to obstructions are not listed.

Sample collection data is summarized in table 1.

B. Sample Analysis

All data generated by field GC is summarized in Table 2 and actual chromatogram's are attached in Appendix A. Field equipment operated smoothly producing high confidence results. All samples were analyzed within 48 hour hold time limit with most samples analyzed within 1-24 hours. Samples were stored in dark cooler at 4 degree C. Results below 10% of calibration standard were considered Non-detect or ND. Lower detection limits are listed below.

Lower Detection Limits (ppm):

Benzene	0.100
Toluene	0.097
Ethylbenzene	0.101
Xylene m-p	0.201
Xylene o	0.103
Total BTEX	0.603
TCE	0.031
PCE	0.048

Equipment used for this project included Photovac 10S Plus field GC with Cp-sil 5 column. Unit was programmed for temperature of 40 degree C. Flow rates were measured using Photovac Digital Flowmeter. Carrier gas used was certified to be less than 0.1 ppm of TPH. GC had external printer for realtime copy of chromatgrams plus all results were saved on internal memory card.

Discussion of GC results that warrant special consideration are listed below;

Site 3:
Samples 03 and 09 had some water in sample tube which can affect results.

Site 26:
Ran system blank after sample 15, showed no carryover resulting from high TCE
Sample 03 had some water in sample tube which can affect results.

Site 16:
Sample 02 had some water in sample tube which can affect results.
Sample 54 had slight vacuum in bottle which can affect results.

QA/QC:

Various QA/QC steps were taken to ensure high confidence factor for generated data. Results confirmed that data generated was sound and accurate. The following steps were taken under QA/QC protocol;

1. Ten percent of samples collected and analyzed were duplicated.
2. Field GC was calibrated daily to certified calibration standard. This procedure was performed at half-way point of each day and at end of day.
3. Sample blanks (GC, Syringe, Equipment) were run at various times to ensure system was clean of outside influences.

Duplicate Analysis:

Twenty six duplicate samples were collected and analyzed, summary of results are listed in Table 3. All duplicates showed very good correlation except for site 26 sample 09 and 14. Sample 09 had water in tube and duplicate analysis is more representative of actual conditions. Sample 14 showed differences in TCE levels for no apparent reason. Some samples showed higher variances but were close to detection limits which may explain the variance.

Calibration:

Field GC was calibrated to certified gas standards purchased from "Scott Specialty Gases". Actual concentrations of standards are listed below.

Calibration Gas Standards (ppm)

Benzene	1.000
Toluene	0.974
Ethylbenzene	1.010
Xylene m-p	2.018
Xylene o	1.030
Total BTEX	6.032
TCE	0.314
PCE	0.482

Chlorinated standard contained additional compounds which required individual TCE and PCE standards to be run to correctly identify retention times of these compounds. Individual standards were purchased from Suppelco and were diluted before injection to GC.

GC duplicated were run from same sample to ensure response of GC was consistent.

Syringe blanks were run to ensure no carryover contamination was present in syringe. If syringe showed any positive reading, instrument was immediately changed and cleaned. On 6/1/95, the syringe blanks showed positive readings twice and hence were changed and cleaned.

Summary of all QA/QC GC runs are listed in Table 4. Individual chromotograms for QA/QC runs are not included in this report.

SOIL GAS SURVEY

APPENDIX A

Table 1: Sample Collection Data

	SAMPLE		ANALYSIS		
Sample ID	DATE	TIME	DATE	TIME	DEPTH
03-SG-01	05/31/95	1410	05/31/95	1511	8
03-SG-02	05/31/95	1335	05/31/95	1519	8
03-SG-03	05/31/95	1305	05/31/95	1425	8
03-SG-04	05/31/95	1505	05/31/95	1530	8
03-SG-05	06/01/95	1110	06/01/95	1132	8
03-SG-07	06/01/95	1020	06/01/95	1032	8
03-SG-08	05/31/95	1610	05/31/95	1620	8
03-SG-09	06/01/95	1135	06/01/95	1201	8
03-SG-09	05/31/95	1230	05/31/95	1413	10
03-SG-10	05/31/95	1535	05/31/95	1554	8
03-SG-11	06/01/95	1045	06/01/95	1113	8
03-SG-13	06/01/95	1010	06/01/95	1053	8
03-SG-14	06/01/95	0930	06/01/95	1042	8
03-SG-15	05/31/95	1550	05/31/95	1607	8
03-SG-16	05/31/95	1625	05/31/95	1637	8
03-SG-17	06/01/95	1030	06/01/95	1123	8
03-SG-19	06/01/95	0915	06/01/95	1105	7.5
03-SG-20	06/01/95	0850	06/01/95	1001	5.6
03-SG-21	06/01/95	0845	06/01/95	0945	8
03-SG-22	06/01/95	0800	06/01/95	0933	8
03-SG-23	06/01/95	0710	06/01/95	0851	8
03-SG-24	06/01/95	0745	06/01/95	0911	8
03-SG-24 Dup	06/01/95	0745	06/01/95	0922	8
03-SG-25	06/01/95	1405	06/01/95	1905	8
03-SG-26	06/01/95	1350	06/01/95	1913	8
03-SG-27	06/01/95	1340	06/01/95	1857	8
03-SG-28	06/01/95	1130	06/01/95	1923	8

Table 1: Sample Collection Data (continued)

	SAMPLE		ANALYSIS		
Sample ID	DATE	TIME	DATE	TIME	DEPTH
16-SG-01	06/05/95	1107	06/06/95	0827	7
16-SG-02	06/05/95	1044	06/06/95	0835	7
16-SG-02 dup	06/05/95	1044	06/06/95	0843	8
16-SG-03	06/05/95	0945	06/06/95	0948	8
16-SG-03 dup	06/05/95	0945	06/06/95	0955	8
16-SG-04	06/05/95	0918	06/06/95	1001	8
16-SG-05	06/05/95	0901	06/06/95	1008	8
16-SG-06	06/05/95	1000	06/06/95	0924	8
16-SG-07	06/05/95	1013	06/06/95	0934	8
16-SG-08	06/05/95	1040	06/06/95	1017	7
16-SG-09	06/05/95	1055	06/06/95	0858	7
16-SG-10	06/05/95	1115	06/05/95	2326	7
16-SG-11	06/06/95	1658	06/07/95	1412	5
16-SG-12	06/06/95	1644	06/06/95	1810	5
16-SG-13	06/06/95	1628	06/06/95	1816	6
16-SG-14	06/06/95	1608	06/06/95	1756	6
16-SG-14 dup	06/06/95	1609	06/06/95	1803	6
16-SG-15	06/06/95	1812	06/07/95	1427	7
16-SG-16	06/06/95	0830	06/06/95	1117	3
16-SG-17	06/06/95	0855	06/06/95	1024	3
16-SG-17 dup	06/06/95	0858	06/06/95	1108	3
16-SG-18	06/06/95	0911	06/06/95	1604	3
16-SG-19	06/05/95	1523	06/05/95	2210	1.5
16-SG-20	06/05/95	1433	06/05/95	2310	1.5
16-SG-21	06/05/95	1410	06/05/95	2303	1.5
16-SG-22	06/05/95	1543	06/05/95	2238	1.5
16-SG-23	06/05/95	1532	06/05/95	2255	1.5
16-SG-24	06/05/95	1445	06/05/95	2247	1.5
16-SG-25	06/05/95	1600	06/05/95	2121	3
16-SG-25 dup	06/05/95	1600	06/05/95	2159	3
16-SG-26	06/05/95	1415	06/05/95	2218	3
16-SG-27	06/05/95	1619	06/05/95	2151	2
16-SG-28	06/05/95	1644	06/05/95	2141	1.5
16-SG-29	06/05/95	1700	06/05/95	2129	1.5
16-SG-30	06/06/95	0758	06/06/95	1035	1.5
16-SG-31	06/07/95	1100	06/07/95	1700	3
16-SG-32	06/07/95	1110	06/07/95	1722	4
16-SG-33	06/07/95	1045	06/07/95	1706	5
16-SG-34	06/07/95	1025	06/07/95	1732	5
16-SG-35	06/07/95	1120	06/07/95	1716	3

Table 1: Sample Collection Data (continued)

Sample ID	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	DEPTH
16-SG-36	06/07/95	1005	06/07/95	1623	5
16-SG-37	06/07/95	1135	06/07/95	1601	3
16-SG-38	06/07/95	1128	06/07/95	1646	3
16-SG-39	06/07/95	1109	06/07/95	1609	3
16-SG-40	06/07/95	1100	06/07/95	1653	5
16-SG-41	06/07/95	1642	06/07/95	1758	1
16-SG-42	06/07/95	1539	06/08/95	0936	1.5
16-SG-43	06/07/95	1530	06/08/95	1014	1.5
16-SG-43 dup	06/07/95	1543	06/08/95	0847	1.5
16-SG-44	06/07/95	1430	06/08/95	0830	1.5
16-SG-45	06/07/95	1449	06/08/95	0943	1.5
16-SG-45 dup	06/07/95	1452	06/08/95	1007	1.5
16-SG-46	06/07/95	1600	06/07/95	1810	1.5
16-SG-46 dup	06/07/95	1600	06/07/95	1816	1.5
16-SG-47	06/07/95	1045	06/07/95	1804	2.5
16-SG-48	06/07/95	0750	06/07/95	1530	5
16-SG-49	06/07/95	1635	06/07/95	1743	1
16-SG-50	06/07/95	1600	06/08/95	0902	1
16-SG-51	06/07/95	1524	06/08/95	0840	1.5
16-SG-52	06/07/95	1417	06/08/95	0930	3.5
16-SG-52	06/07/95	1417	06/07/95	1830	3.5
16-SG-52 dup	06/07/95	1425	06/08/95	0921	3.5
16-SG-53	06/07/95	1348	06/07/95	1750	4
16-SG-54	06/07/95	1338	06/07/95	1822	4
16-SG-55	06/07/95	1315	06/08/95	0959	4
16-SG-55 dup	06/07/95	1318	06/08/95	1034	4
16-SG-56	06/07/95	0805	06/07/95	1504	5
16-SG-56 dup	06/07/95	0806	06/07/95	1458	5
16-SG-57	06/06/95	1748	06/07/95	1439	2.5
16-SG-58	06/06/95	1728	06/07/95	1433	4.5
16-SG-59	06/05/95	1125	06/05/95	2319	7
16-SG-60	06/07/95	0825	06/07/95	1546	5
16-SG-61	06/06/95	0817	06/06/95	1051	2
16-SG-63	06/06/95	1048	06/06/95	1557	4
16-SG-64	06/06/95	1058	06/06/95	1618	4
16-SG-65	06/06/95	1144	06/06/95	1704	5
16-SG-66	06/06/95	1414	06/06/95	1655	5
16-SG-67	06/06/95	1446	06/06/95	1646	5
16-SG-68	06/07/95	0855	06/07/95	1521	5
16-SG-69	06/06/95	1000	06/06/95	1734	3

Table 1: Sample Collection Data (continued)

Sample ID	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	DEPTH
16-SG-70	06/06/95	0945	06/06/95	1722	3
16-SG-70 dup	06/06/95	0946	06/06/95	1728	3
16-SG-71	06/06/95	1026	06/06/95	1741	4
16-SG-72	06/06/95	1123	06/06/95	1611	4
16-SG-73	06/06/95	1138	06/06/95	1748	5
16-SG-74	06/06/95	1355	06/06/95	1711	5
16-SG-75	06/06/95	1010	06/06/95	1627	5
16-SG-76	06/07/95	0910	06/07/95	1512	5
16-SG-77	06/07/95	0925	06/07/95	1553	5
16-SG-78	06/07/95	0939	06/07/95	1540	5
16-SG-79	06/08/95	0810	06/08/95	1113	4
16-SG-80	06/08/95	0819	06/08/95	1101	4
16-SG-81	06/08/95	0829	06/08/95	1122	4
16-SG-82	06/08/95	0857	06/08/95	1046	4
16-SG-82 dup	06/08/95	0853	06/08/95	1055	4
16-SG-83	06/08/95	0920	06/08/95	1129	4
16-SG-84	06/08/95	1020	06/08/95	1136	4
16-SG-85	06/08/95	1035	06/08/95	1143	4
16-SG-86	06/08/95	1053	06/08/95	1150	4
16-SG-87	06/08/95	1142	06/08/95	1531	4
16-SG-89	06/08/95	1439	06/08/95	1522	4
16-SG-91	06/08/95	1117	06/08/95	1513	4
16-SG-92	06/08/95	1550	06/08/95	1559	4
16-SG-93	06/08/95	1518	06/08/95	1639	4
16-SG-94	06/08/95	1511	06/08/95	1546	4
16-SG-95	06/08/95	1611	06/08/95	1622	4
16-SG-95 dup	06/08/95	1611	06/08/95	1646	4
16-SG-96	06/08/95	1657	06/08/95	1727	4
16-SG-96 dup	06/08/95	1652	06/08/95	1735	4
16-SG-97	06/08/95	1658	06/08/95	1720	3
16-SG-98	06/08/95	1719	06/08/95	1757	3
16-SG-99	06/08/95	1730	06/08/95	1749	3

Table 1: Sample Collection Data (continued)

Sample ID	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	DEPTH
26-SG-01	06/02/95	1230	06/02/95	1537	7
26-SG-01Dup	06/02/95	1230	06/02/95	1530	7
26-SG-02	06/02/95	1215	06/02/95	1558	7
26-SG-03	06/02/95	1115	06/02/95	1608	8
26-SG-04	06/02/95	1220	06/02/95	1631	7
26-SG-05	06/02/95	1205	06/02/95	1623	7
26-SG-06	06/02/95	1110	06/02/95	1616	8
26-SG-07	06/02/95	0840	06/02/95	1710	7
26-SG-08	06/02/95	1200	06/02/95	1644	8
26-SG-09	06/02/95	1100	06/02/95	1702	8
26-SG-09 dup	06/02/95	1100	06/02/95	1717	8
26-SG-10	06/02/95	0850	06/02/95	1726	8
26-SG-11	06/02/95	1150	06/02/95	1733	8
26-SG-12	06/02/95	0835	06/02/95	1521	8
26-SG-13	06/02/95	1000	06/02/95	1452	8
26-SG-14	06/02/95	0915	06/02/95	1408	8
26-SG-14 dup	06/02/95	0915	06/04/95	2158	8
26-SG-15	06/02/95	0900	06/02/95	1419	8
26-SG-16	06/02/95	0840	06/03/95	1447	8
26-SG-17	06/02/95	0835	06/03/95	1416	8
26-SG-18	06/02/95	0720	06/02/95	1503	8
26-SG-19	06/02/95	0655	06/02/95	1513	8
26-SG-21	06/02/95	0905	06/04/95	2206	8
26-SG-22	06/02/95	1140	06/04/95	2213	8
26-SG-23	06/02/95	0830	06/03/95	1207	7
26-SG-24	06/02/95	1525	06/03/95	0929	8
26-SG-25	06/02/95	1445	06/03/95	0945	8
26-SG-26	06/02/95	1430	06/03/95	1140	8
26-SG-27	06/02/95	1405	06/03/95	1001	8
26-SG-28	06/01/95	1600	06/01/95	2229	8
26-SG-29	06/01/95	1535	06/01/95	2319	8
26-SG-29 dup	06/01/95	1535	06/01/95	2301	8
26-SG-30	06/01/95	1515	06/01/95	2240	8
26-SG-31	06/01/95	1500	06/01/95	2310	8
26-SG-32	06/02/95	0910	06/02/95	2302	8
26-SG-33	06/02/95	1235	06/02/95	2250	8
26-SG-34	06/02/95	0810	06/03/95	1031	8
26-SG-35	06/02/95	1540	06/03/95	0936	8
26-SG-36	06/03/95	0750	06/04/95	2246	8
26-SG-37	06/03/95	0930	06/03/95	1116	8
26-SG-38	06/03/95	1030	06/03/95	1124	8
26-SG-39	06/03/95	1335	06/03/95	1422	8

Table 1: Sample Collection Data (continued)

Sample ID	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	DEPTH
26-SG-40	06/03/95	1345	06/03/95	1429	7
26-SG-43	06/02/95	0920	06/03/95	1157	8
26-SG-44	06/02/95	1120	06/02/95	1544	8
26-SG-44 dup	06/02/95	1120	06/02/95	1552	8
26-SG-45	06/02/95	0805	06/03/95	1132	8
26-SG-46	06/02/95	1605	06/03/95	1008	8
26-SG-46 dup	06/02/95	1605	06/03/95	1002	8
26-SG-47	06/03/95	0805	06/04/95	2334	8
26-SG-48	06/03/95	0940	06/03/95	1037	8
26-SG-49	06/03/95	1050	06/03/95	1502	8
26-SG-50	06/01/95	1505	06/02/95	0003	6
26-SG-51	06/03/95	1355	06/03/95	1439	7
26-SG-52	06/02/95	0955	06/03/95	1125	8
26-SG-53	06/02/95	1615	06/03/95	0922	8
26-SG-54	06/03/95	0810	06/04/95	2322	8
26-SG-55	06/03/95	0955	06/03/95	1059	8
26-SG-56	06/03/95	1110	06/04/95	2141	8
26-SG-57	06/01/95	1525	06/02/95	2251	8
26-SG-58	06/03/95	1415	06/04/95	2141	8
26-SG-59	06/02/95	1625	06/03/95	0914	8
26-SG-59 dup	06/02/95	1625	06/03/95	1015	8
26-SG-60	06/03/95	0825	06/04/95	2256	8
26-SG-61	06/03/95	1000	06/03/95	1045	8
26-SG-61 dup	06/03/95	1000	06/03/95	1052	8
26-SG-62	06/03/95	1135	06/04/95	2238	8
26-SG-63	06/01/95	1545	06/02/95	2344	8
26-SG-64	06/03/95	1430	06/04/95	2133	8
26-SG-65	06/03/95	0845	06/04/95	2305	8
26-SG-66	06/03/95	0835	06/04/95	2313	8
26-SG-67	06/03/95	1200	06/04/95	2214	8
26-SG-68	06/01/95	1600	06/02/95	2352	8
26-SG-69	06/03/95	1500	06/04/95	2125	8
26-SG-73	06/01/95	1630	06/02/95	2327	8
26-SG-74	06/03/95	1510	06/04/95	2118	8

Table 2: Sample Analysis Summary

Sample ID	Benzene	Toluene	Ethylbenzene	Xylene m,p	Xylene - o	TOTAL BTEX	TCE	PCE	Comments
03-SG-01	0.543	nd	3.722	5.440	2.197	**11.902**	**nd**	**0.512**	
03-SG-02	0.313	0.245	3.820	6.943	1.297	**12.618**	**0.096**	**0.391**	
03-SG-03	nd	0.183	0.220	0.433	0.152	**0.988**	**0.054**	**0.087**	Slight water in tube
03-SG-04	0.000	0.759	2.830	5.526	3.120	**12.235**	**0.188**	**0.364**	
03-SG-05	nd	nd	0.333	nd	0.261	**0.594**	**nd**	**0.132**	
03-SG-07	0.884	0.296	4.162	9.973	8.207	**23.522**	**nd**	**0.466**	
03-SG-08	0.320	0.532	5.906	11.720	3.395	**21.873**	**nd**	**0.425**	
03-SG-09	0.513	0.688	6.706	20.740	17.660	**46.307**	**0.172**	**1.654**	Resample of 03SG09
03-SG-09	nd	nd	nd	nd	nd	**nd**	**0.089**	**nd**	Slight water in tube
03-SG-10	nd	1.015	6.989	15.060	13.450	**36.514**	**0.194**	**0.510**	
03-SG-11	nd	nd	0.227	0.173	0.350	**0.750**	**nd**	**0.106**	
03-SG-13	nd	nd	3.428	9.097	6.373	**18.898**	**nd**	**0.075**	
03-SG-14	nd	0.232	1.719	2.663	2.702	**7.316**	**0.122**	**0.626**	
03-SG-15	5.791	0.582	8.267	19.270	18.840	**52.750**	**nd**	**2.354**	
03-SG-16	nd	0.314	1.808	2.341	3.050	**7.513**	**0.042**	**0.153**	
03-SG-17	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
03-SG-19	nd	nd	0.163	0.535	0.239	**0.937**	**nd**	**nd**	
03-SG-20	nd	nd	1.333	1.818	3.470	**6.621**	**nd**	**0.392**	
03-SG-21	nd	nd	5.067	14.540	9.568	**29.175**	**0.036**	**0.600**	
03-SG-22	nd	nd	0.339	1.241	0.150	**1.730**	**nd**	**nd**	
03-SG-23	0.396	0.315	nd	nd	nd	**0.711**	**nd**	**nd**	
03-SG-24	nd	nd	3.801	9.805	1.530	**15.136**	**nd**	**0.073**	
03-SG-24 Dup			3.589	8.694	1.430	**13.713**	**nd**	**0.071**	
03-SG-25	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
03-SG-26	nd	nd	nd	nd	nd	**nd**	**0.036**	**nd**	
03-SG-27	nd	nd	nd	nd	nd	**nd**	**0.046**	**nd**	
03-SG-28	nd	nd	nd	nd	0.102	**0.102**	**nd**	**nd**	

Table 2: Sample Analysis Summary (continued)

Sample ID	Benzene	Toluene	Ethylbenzene	Xylene m,p	Xylene - o	TOTAL BTEX	TCE	PCE	Comments
16-SG-01	nd	0.124	nd	nd	nd	**0.124**	**0.078**	**nd**	
16-SG-02	nd	0.156	nd	nd	nd	**0.156**	**0.114**	**nd**	
16-SG-02 dup	nd	nd	nd	nd	nd	**nd**	**0.089**	**nd**	Water in bottle
16-SG-03	nd	0.486	nd	nd	nd	**0.486**	**0.430**	**0.048**	
16-SG-03 dup	nd	0.488	nd	nd	nd	**0.488**	**0.431**	**0.037**	GC dup
16-SG-04	nd	0.206	nd	nd	nd	**0.206**	**0.082**	**nd**	
16-SG-05	nd	nd	nd	nd	nd	**nd**	**0.615**	**0.273**	
16-SG-06	nd	0.101	nd	nd	nd	**0.101**	**0.073**	**nd**	
16-SG-07	nd	nd	nd	nd	nd	**nd**	**0.047**	**nd**	
16-SG-08	nd	0.176	nd	nd	nd	**0.176**	**0.071**	**0.034**	
16-SG-09	nd	0.104	nd	nd	nd	**0.104**	**0.105**	**nd**	
16-SG-10	nd	0.134	nd	nd	nd	**0.134**	**nd**	**nd**	
16-SG-11	nd	0.124	nd	nd	nd	**0.124**	**0.040**	**nd**	
16-SG-12	0.137	0.121	nd	nd	nd	**0.258**	**nd**	**nd**	
16-SG-13	nd	0.128	0.122	nd	0.232	**0.482**	**nd**	**nd**	
16-SG-14	0.152	0.231	nd	nd	nd	**0.383**	**0.081**	**nd**	
16-SG-14 dup	0.114	0.178	nd	nd	nd	**0.292**	**0.062**	**nd**	
16-SG-15	1.297	0.302	0.404	nd	nd	**2.003**	**nd**	**nd**	
16-SG-16	nd	0.136	nd	nd	nd	**0.136**	**0.046**	**nd**	
16-SG-17	nd	0.127	nd	nd	nd	**0.127**	**0.044**	**nd**	
16-SG-17 dup	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-18	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-19	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-20	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-21	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-22	nd	nd	nd	0.148	nd	**0.148**	**nd**	**nd**	
16-SG-23	nd	0.103	nd	nd	nd	**0.103**	**nd**	**nd**	
16-SG-24	nd	0.282	nd	0.109	nd	**0.391**	**nd**	**nd**	
16-SG-25	nd	nd	nd	nd	nd	**nd**	**0.380**	**nd**	
16-SG-25 dup	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-26	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	

Table 2: Sample Analysis Summary (continued)

Sample ID	Benzene	Toluene	Ethylbenzene	Xylene m,p	Xylene - o	TOTAL BTEX	TCE	PCE	Comments
16-SG-27	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-28	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-29	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-30	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-31	0.182	0.204	0.180	nd	nd	**0.566**	**0.040**	**nd**	
16-SG-32	nd	0.406	nd	0.431	0.208	**1.045**	**0.402**	**0.335**	
16-SG-33	0.140	0.453	0.216	0.503	0.536	**1.848**	**0.165**	**0.062**	
16-SG-34	nd	0.246	nd	nd	0.102	**0.348**	**nd**	**0.047**	
16-SG-35	0.121	0.279	nd	0.120	nd	**0.520**	**0.110**	**nd**	
16-SG-36	nd	nd	nd	nd	nd	**nd**	**0.062**	**nd**	
16-SG-37	nd	nd	nd	nd	nd	**nd**	**0.078**	**nd**	
16-SG-38	0.299	0.633	0.100	0.200	0.119	**1.351**	**0.157**	**nd**	
16-SG-39	0.113	0.279	nd	0.140	0.239	**0.771**	**0.086**	**nd**	
16-SG-39 gc c	0.092	nd	nd	nd	nd	**0.092**	**0.059**	**nd**	
16-SG-40	nd	0.240	nd	0.135	0.129	**0.504**	**0.082**	**nd**	
16-SG-41	nd	0.155	nd	nd	nd	**0.155**	**0.062**	**nd**	
16-SG-42	nd	0.191	nd	nd	nd	**0.191**	**0.057**	**nd**	
16-SG-42 dup	nd	0.123	nd	nd	nd	**0.123**	**0.035**	**nd**	
16-SG-43	nd	0.473	nd	nd	nd	**0.473**	**0.176**	**nd**	
16-SG-44	nd	0.400	nd	0.123	nd	**0.523**	**0.148**	**nd**	
16-SG-45	nd	0.166	nd	nd	nd	**0.166**	**0.041**	**nd**	
16-SG-45 dup	nd	0.154	nd	nd	nd	**0.154**	**0.054**	**nd**	
16-SG-46	0.111	0.410	nd	0.257	0.103	**0.881**	**0.074**	**0.187**	
16-SG-46 dup	nd	0.684	nd	0.317	nd	**1.001**	**0.085**	**nd**	Better Sample, GC Dup
16-SG-47	0.109	nd	nd	nd	nd	**0.109**	**0.043**	**nd**	
16-SG-48	0.223	0.378	nd	0.100	nd	**0.701**	**0.133**	**nd**	
16-SG-49	nd	0.273	nd	nd	nd	**0.273**	**0.056**	**nd**	
16-SG-50	nd	0.155	nd	nd	nd	**0.155**	**0.040**	**nd**	
16-SG-51	nd	0.164	nd	nd	nd	**0.164**	**0.050**	**nd**	
16-SG-52	nd	0.444	nd	nd	nd	**0.444**	**0.230**	**nd**	
16-SG-52 dup	nd	0.511	nd	nd	nd	**0.511**	**0.231**	**nd**	

Table 2: Sample Analysis Summary (continued)

Sample ID	Benzene	Toluene	Ethylbenzene	Xylene m,p	Xylene - o	TOTAL BTEX	TCE	PCE	Comments
16-SG-53	3.483	0.186	1.267	0.664	1.901	**7.501**	**1.474**	**1.450**	
16-SG-54	0.111	nd	nd	0.139	nd	**0.250**	**0.062**	**nd**	Poor sample, vacuum
16-SG-55	nd	0.582	nd	nd	nd	**0.582**	**0.378**	**0.086**	
16-SG-55 dup	nd	0.589	0.232	nd	nd	**0.821**	**0.512**	**0.152**	
16-SG-56	nd	0.145	2.277	nd	1.482	**3.904**	**0.763**	**1.355**	
16-SG-56 dup	nd	0.136	2.003	nd	1.236	**3.375**	**0.709**	**1.252**	
16-SG-57	nd	0.257	nd	nd	nd	**0.257**	**nd**	**nd**	
16-SG-58	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-59	nd	0.133	nd	nd	nd	**0.133**	**nd**	**nd**	
16-SG-60	0.809	1.207	nd	1.656	1.432	**5.104**	**0.984**	**1.098**	
16-SG-61	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-63	0.124	0.303	nd	nd	nd	**0.427**	**0.095**	**nd**	
16-SG-64	nd	0.112	nd	nd	nd	**0.112**	**0.042**	**nd**	
16-SG-65	0.127	0.271	nd	nd	nd	**0.398**	**0.079**	**nd**	
16-SG-66	nd	0.591	nd	nd	0.404	**0.995**	**0.326**	**0.059**	
16-SG-67	nd	nd	3.796	1.644	6.168	**11.608**	**2.669**	**3.079**	
16-SG-68	0.199	0.314	0.292	0.216	0.488	**1.509**	**0.075**	**0.175**	
16-SG-69	nd	0.179	nd	nd	nd	**0.179**	**0.052**	**nd**	
16-SG-70	nd	0.123	nd	nd	nd	**0.123**	**0.041**	**nd**	
16-SG-70 dup	nd	0.114	nd	nd	nd	**0.114**	**0.038**	**nd**	
16-SG-71	0.100	0.155	nd	nd	nd	**0.255**	**0.045**	**nd**	
16-SG-72	nd	nd	nd	nd	nd	**nd**	**0.039**	**nd**	
16-SG-73	nd	0.209	nd	nd	nd	**0.209**	**0.102**	**0.101**	
16-SG-74	nd	0.402	nd	nd	nd	**0.402**	**0.093**	**nd**	
16-SG-75	nd	nd	8.371	3.472	14.860	**26.703**	**5.531**	**5.841**	
16-SG-76	nd	0.467	11.980	5.623	18.470	**36.540**	**6.122**	**9.055**	
16-SG-77	0.177	0.345	0.100	0.139	0.225	**0.986**	**0.103**	**0.071**	
16-SG-78	0.134	0.111	nd	nd	nd	**0.245**	**nd**	**nd**	
16-SG-79	nd	0.123	nd	nd	nd	**0.123**	**0.044**	**nd**	
16-SG-80	nd	nd	nd	nd	nd	**nd**	**0.048**	**nd**	
16-SG-81	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	

Table 2: Sample Analysis Summary (continued)

Sample ID	Benzene	Toluene	Ethylbenzene	Xylene m,p	Xylene - o	TOTAL BTEX	TCE	PCE	Comments
16-SG-82	nd	0.171	nd	nd	nd	**0.171**	**0.054**	**nd**	
16-SG-82 dup	nd	nd	nd	nd	nd	**nd**	**0.038**	**nd**	
16-SG-83	nd	0.137	nd	nd	nd	**0.137**	**0.062**	**nd**	
16-SG-84	nd	nd	0.366	0.182	nd	**0.548**	**0.356**	**0.291**	
16-SG-85	0.648	0.268	0.403	0.541	0.124	**1.984**	**0.179**	**0.179**	
16-SG-86	nd	0.633	1.173	0.495	0.544	**2.845**	**0.477**	**0.955**	
16-SG-87	nd	4.475	5.367	2.878	nd	**12.720**	**2.853**	**2.186**	
16-SG-89	4.405	1.166	22.050	9.889	nd	**37.510**	**4.588**	**5.395**	
16-SG-91	nd	0.817	6.300	4.769	nd	**11.886**	**3.600**	**3.399**	
16-SG-92	0.238	3.325	14.470	2.434	nd	**20.467**	**1.752**	**1.860**	
16-SG-93	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-94	4.978	3.506	42.540	15.810	nd	**66.834**	**1.949**	**5.453**	
16-SG-95	5.215	5.556	20.820	3.407	nd	**34.998**	**3.247**	**2.657**	
16-SG-95 dup	5.676	5.955	21.450	3.554	nd	**36.635**	**3.501**	**2.773**	
16-SG-96	nd	nd	0.251	nd	nd	**0.251**	**0.035**	**nd**	
16-SG-96 dup	0.145	nd	0.158	nd	nd	**0.303**	**nd**	**nd**	
16-SG-97	nd	nd	0.329	nd	nd	**0.329**	**nd**	**nd**	
16-SG-98	nd	nd	0.100	nd	nd	**0.100**	**nd**	**nd**	
16-SG-99	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	

Table 2: Sample Analysis Summary (continued)

Sample ID	Benzene	Toluene	Ethylbenzene	Xylene m,p	Xylene - o	TOTAL BTEX	TCE	PCE	Comments
26-SG-01	nd	0.179	nd	nd	nd	**0.179**	**0.179**	**nd**	
26-SG-01Dup	nd	0.201	nd	nd	nd	**0.201**	**0.049**	**nd**	
26-SG-02	nd	0.198	nd	nd	nd	**0.198**	**0.038**	**nd**	
26-SG-03	0.115	nd	nd	nd	nd	**0.115**	**0.123**	**nd**	Pulled some water in tube
26-SG-04	nd	0.166	nd	nd	nd	**0.166**	**0.039**	**nd**	
26-SG-05	nd	0.134	nd	nd	nd	**0.134**	**0.064**	**nd**	
26-SG-06	nd	nd	nd	nd	nd	**nd**	**1.461**	**nd**	
26-SG-07	nd	nd	nd	nd	nd	**nd**	**0.055**	**nd**	
26-SG-08	nd	nd	nd	nd	nd	**nd**	**0.079**	**nd**	
26-SG-09	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-09 dup	nd	nd	nd	nd	nd	**nd**	**2.335**	**nd**	
26-SG-10	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-11	nd	nd	nd	nd	nd	**nd**	**0.052**	**nd**	
26-SG-12	nd	nd	nd	nd	nd	**nd**	**0.373**	**nd**	
26-SG-13	nd	nd	nd	nd	nd	**nd**	**0.746**	**nd**	
26-SG-14	nd	nd	nd	nd	nd	**nd**	**4.347**	**nd**	
26-SG-14 dup	nd	nd	nd	nd	nd	**nd**	**0.137**	**nd**	
26-SG-15	nd	nd	nd	nd	nd	**nd**	**32.670**	**0.049**	
26-SG-16	nd	nd	nd	nd	nd	**nd**	**0.440**	**nd**	
26-SG-17	nd	nd	nd	nd	nd	**nd**	**0.032**	**nd**	
26-SG-18	nd	nd	nd	nd	nd	**nd**	**0.053**	**nd**	
26-SG-19	nd	nd	nd	nd	nd	**nd**	**0.053**	**nd**	
26-SG-21	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-22	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-23	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-24	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-25	nd	nd	nd	nd	nd	**nd**	**0.038**	**nd**	
26-SG-26	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-27	nd	nd	nd	nd	nd	**nd**	**0.040**	**nd**	
26-SG-28	nd	nd	nd	nd	nd	**nd**	**0.042**	**nd**	
26-SG-29	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-29 dup	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	

Table 2: Sample Analysis Summary (continued)

Sample ID	Benzene	Toluene	Ethylbenzene	Xylene m,p	Xylene - o	TOTAL BTEX	TCE	PCE	Comments
26-SG-30	0.102	0.119	nd	nd	nd	**0.221**	**0.089**	**nd**	
26-SG-31	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-32	nd	0.165	nd	0.108	nd	**0.273**	**nd**	**nd**	
26-SG-33	nd	0.226	0.107	0.198	0.140	**0.671**	**nd**	**nd**	
26-SG-34	nd	nd	nd	nd	nd	**nd**	**0.044**	**nd**	
26-SG-35	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-36	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-37	nd	0.112	nd	nd	nd	**0.112**	**nd**	**nd**	
26-SG-38	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-39	nd	0.217	nd	nd	nd	**0.217**	**0.030**	**nd**	
26-SG-40	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-43	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-44	nd	nd	nd	nd	nd	**nd**	**0.035**	**nd**	
26-SG-44 dup	nd	nd	nd	nd	nd	**nd**	**0.035**	**nd**	
26-SG-45	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-46	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-46 dup	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-47	nd	nd	nd	nd	nd	**nd**	**0.033**	**nd**	
26-SG-48	nd	0.134	nd	nd	nd	**0.134**	**nd**	**nd**	
26-SG-49	nd	0.106	nd	nd	nd	**0.106**	**nd**	**nd**	
26-SG-50	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	Reduce depth due to grade
26-SG-51	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-52	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-53	nd	nd	nd	nd	nd	**nd**	**0.033**	**nd**	
26-SG-54	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-55	nd	0.112	nd	nd	nd	**0.112**	**nd**	**nd**	
26-SG-56	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-57	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-58	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-59	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-59 dup	nd	nd	nd	nd	nd	**nd**	**0.037**	**nd**	
26-SG-60	nd	nd	nd	0.128	nd	**0.128**	**nd**	**nd**	

Table 2: Sample Analysis Summary (continued)

Sample ID	Benzene	Toluene	Ethylbenzene	Xylene m,p	Xylene - o	TOTAL BTEX	TCE	PCE	Comments
26-SG-61	nd	0.122	nd	nd	nd	**0.122**	**nd**	**nd**	
26-SG-61 dup	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-62	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-63	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-64	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-65	nd	0.116	nd	nd	nd	**0.116**	**0.047**	**nd**	
26-SG-66	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-67	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-68	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-69	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-73	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-74	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	

Table 3: Duplicate Analysis Results

Sample ID	Benzene	Toluene	Ethylbenzene	Xylene m,p	Xylene - o	TOTAL BTEX	TCE	PCE	Comments
03-SG-24	nd	nd	3.801	9.805	1.530	**15.136**	**nd**	**0.073**	
03-SG-24 dup	nd	nd	3.589	8.694	1.430	**13.713**	**nd**	**0.071**	
26-SG-01	nd	0.179	nd	nd	nd	**0.179**	**0.179**	**nd**	
26-SG-01dup	nd	0.201	nd	nd	nd	**0.201**	**0.049**	**nd**	
26-SG-09	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	Water on sample
26-SG-09 dup	nd	nd	nd	nd	nd	**nd**	**2.335**	**nd**	
26-SG-14	nd	nd	nd	nd	nd	**nd**	**4.347**	**nd**	
26-SG-14 dup	nd	nd	nd	nd	nd	**nd**	**0.137**	**nd**	
26-SG-29	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-29 dup	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-44	nd	nd	nd	nd	nd	**nd**	**0.035**	**nd**	
26-SG-44 dup	nd	nd	nd	nd	nd	**nd**	**0.035**	**nd**	
26-SG-46	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-46 dup	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-56	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-56 dup	0.218	nd	nd	nd	nd	**0.218**	**nd**	**nd**	
26-SG-59	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
26-SG-59 dup	nd	nd	nd	nd	nd	**nd**	**0.037**	**nd**	
26-SG-61	nd	0.122	nd	nd	nd	**0.122**	**nd**	**nd**	
26-SG-61 dup	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-02	nd	0.156	nd	nd	nd	**0.156**	**0.114**	**nd**	
16-SG-02 dup	nd	nd	nd	nd	nd	**nd**	**0.089**	**nd**	Water in bottle
16-SG-03	nd	0.486	nd	nd	nd	**0.486**	**0.430**	**0.048**	
16-SG-03 dup	nd	0.488	nd	nd	nd	**0.488**	**0.431**	**0.037**	
16-SG-14	0.152	0.231	nd	nd	nd	**0.383**	**0.081**	**nd**	
16-SG-14 dup	0.114	0.178	nd	nd	nd	**0.292**	**0.062**	**nd**	
16-SG-17	nd	0.127	nd	nd	nd	**0.127**	**0.044**	**nd**	
16-SG-17 dup	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-25 dup	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-25 dup	nd	nd	nd	nd	nd	**nd**	**nd**	**nd**	
16-SG-42	nd	0.191	nd	nd	nd	**0.191**	**0.057**	**nd**	
16-SG-42 dup	nd	0.123	nd	nd	nd	**0.123**	**0.035**	**nd**	

Table 3: Duplicate Analysis Results (continued)

Sample ID	Benzene	Toluene	Ethylbenzene	Xylene m,p	Xylene - o	TOTAL BTEX	TCE	PCE	Comments
16-SG-45	nd	0.166	nd	nd	nd	**0.166**	**0.041**	**nd**	
16-SG-45 dup	nd	0.154	nd	nd	nd	**0.154**	**0.054**	**nd**	
16-SG-46	0.111	0.410	nd	0.257	0.103	**0.881**	**0.074**	**0.187**	
16-SG-46 dup	nd	0.684	nd	0.317	nd	**1.001**	**0.085**	**nd**	
16-SG-52	nd	0.444	nd	nd	nd	**0.444**	**0.230**	**nd**	
16-SG-52 dup	nd	0.511	nd	nd	nd	**0.511**	**0.231**	**nd**	
16-SG-55	nd	0.582	nd	nd	nd	**0.582**	**0.378**	**0.086**	
16-SG-55 dup	nd	0.589	0.232	nd	nd	**0.821**	**0.512**	**0.152**	
16-SG-56	nd	0.145	2.277	nd	1.482	**3.904**	**0.763**	**1.355**	
16-SG-56 dup	nd	0.136	2.003	nd	1.236	**3.375**	**0.709**	**1.252**	
16-SG-70	nd	0.123	nd	nd	nd	**0.123**	**0.041**	**nd**	
16-SG-70 dup	nd	0.114	nd	nd	nd	**0.114**	**0.038**	**nd**	
16-SG-82	nd	0.171	nd	nd	nd	**0.171**	**0.054**	**nd**	
16-SG-82 dup	nd	nd	nd	nd	nd	**nd**	**0.038**	**nd**	
16-SG-95	5.215	5.556	20.820	3.407	nd	**34.998**	**3.247**	**2.657**	
16-SG-95 dup	5.676	5.955	21.450	3.554	nd	**36.635**	**3.501**	**2.773**	
16-SG-96	nd	nd	0.251	nd	nd	**0.251**	**0.035**	**nd**	
16-SG-96 dup	0.145	nd	0.158	nd	nd	**0.303**	**nd**	**nd**	

Table 4: QA/QC Analysis Summary

Date	Time	Benzene	Toluene	Ethylbenzene	Xylene m,p	Xylene - o	TOTAL BTEX	TCE	PCE	Comments
05/31/95	1252	1.000	0.974	1.010	2.018	1.030				BTEX Calibration
05/31/95	1328							71.8 sec		TCE Retention Time Run
05/31/95	1345								161.6 sec	PCE Retention Time Run
05/31/95	1354							0.314	0.482	TCE/PCE Calibration
05/31/95	1437	nd	nd	nd	nd	nd	nd	nd	nd	Equipment Blank
05/31/95	1544	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank
05/31/95	1713	nd	nd	nd	nd	nd	nd	0.324	0.504	TCE/PCE Calibration Check
05/31/95	1723	1.129	1.098	1.251	2.406	1.274				BTEX Calibration Check
05/31/95	1735	nd	nd	nd	nd	nd	nd	nd	nd	System Blank
06/01/95	0710	nd	nd	nd	nd	nd	nd	nd	nd	System Blank
06/01/95	0720	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank
06/01/95	0739	1.000	0.974	1.010	2.018	1.030				BTEX Calibration
06/01/95	0751							67.2 sec		TCE Retention Time Run
06/01/95	0758							0.314	0.482	TCE/PCE Calibration
06/01/95	0807								150.6 sec	PCE Retention Time Run
06/01/95	0812	nd	nd	nd	nd	nd	nd	nd	nd	Equipment Blank
06/01/95	0851	0.396	0.315	nd	nd	nd	nd	nd	nd	GC Duplicate, 03sg23
06/01/95	0902	0.411	0.317	nd	nd	nd	nd	nd	nd	GC Duplicate, 03sg23
06/01/95	1024	nd	nd	nd	0.198	0.120	0.318	nd	nd	Syringe Blank, Change Syringe
06/01/95	1132	nd	nd	0.333	nd	0.261	0.594	nd	0.132	GC Duplicate, 03sg05
06/01/95	1142	nd	nd	0.202	nd	0.098	0.300	nd	0.122	GC Duplicate, 03sg05
06/01/95	1210	nd	nd	nd	0.376	0.210	0.586	nd	nd	Syringe Blank, Change Syringe
06/01/95	1218	nd	nd	nd	nd	nd	nd	nd	nd	System Blank
06/01/95	1730	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank: OK
06/01/95	1838	1.000	0.974	1.010	2.018	1.030				BTEX Calibration
06/01/95	1848							0.314	0.482	TCE/PCE Calibration
06/01/95	2210	nd	nd	nd	nd	nd	nd	0.178	0.277	TCE/PCE Calibration Check
06/01/95	2219	0.998	0.871	0.958	1.890	0.969				BTEX Calibration Check
06/01/95	2335	1.000	0.974	1.010	2.018	1.030				BTEX Calibration

Table 4: QA/QC Analysis Summary (continued)

Date	Time	Benzene	Toluene	Ethylbenzene	Xylene m,p	Xylene - o	TOTAL BTEX	TCE	PCE	Comments
06/02/95	1316	nd	nd	nd	nd	nd	nd	nd	nd	System Blank
06/02/95	1335	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank: OK
06/02/95	1345	1.000	0.974	1.010	2.018	1.030				BTEX Calibration
06/02/95	1359							0.314	0.482	TCE/PCE Calibration
06/02/95	1639	nd	nd	nd	nd	nd	nd	0.291	0.421	TCE/PCE Calibration Check
06/02/95	1742	nd	nd	nd	nd	nd	nd	0.247	0.355	TCE/PCE Calibration Check
06/02/95	1747	nd	nd	nd	nd	nd	nd	nd	nd	System Blank
06/02/95	2241	1.000	0.974	1.010	2.018	1.030				BTEX Calibration
06/02/95	2221							0.314	0.482	TCE/PCE Calibration
06/03/95	0830	nd	nd	nd	nd	nd	nd	nd	nd	System Blank
06/03/95	0836	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank: OK
06/03/95	0843	1.000	0.974	1.010	2.018	1.030				BTEX Calibration
06/03/95	0852							0.314	0.482	TCE/PCE Calibration
06/03/95	1018	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank: OK
06/03/95	1026	nd	nd	nd	nd	nd	nd	0.341	0.490	TCE/PCE Calibration Check
06/03/95	1216	nd	nd	nd	nd	nd	nd	nd	nd	TCE/PCE Cal Check, RE-CAL
06/03/95	1341							74.0 sec		TCE Retention Time Run
06/03/95	1344							142.6 sec		PCE Retention Time Run
06/03/95	1400	1.000	0.974	1.010	2.018	1.030				BTEX Calibration
06/03/95	1409							0.314	0.482	TCE/PCE Calibration
06/03/95	1523	nd	nd	nd	nd	nd	nd	0.351	0.513	TCE/PCE Calibration Check
06/03/95	1530	1.067	0.950	1.037	1.988	1.066				BTEX Calibration Check
06/03/95	1538	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank: OK
06/03/95	1555	nd	nd	nd	nd	nd	nd	nd	nd	System Blank
06/04/95	2027	nd	nd	nd	nd	nd	nd	nd	nd	System Blank
06/04/95	2033	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank: OK
06/04/95	2039							68.5 sec		TCE Retention Time Run
06/04/95	2046								154.6 sec	PCE Retention Time Run
06/04/95	2059	1.000	0.974	1.010	2.018	1.030				BTEX Calibration
06/04/95	2111							0.314	0.482	TCE/PCE Calibration
06/04/95	2149	nd	nd	nd	nd	nd	nd	nd	nd	GC Duplicate 26sg56
06/04/95	2231	nd	nd	nd	nd	nd	nd	nd	nd	GC Duplicate 26sg56

Table 4: QA/QC Analysis Summary (continued)

Date	Time	Benzene	Toluene	Ethylbenzene	Xylene m,p	Xylene - o	TOTAL BTEX	TCE	PCE	Comments
06/04/95	2349	nd	nd	nd	nd	nd	nd	nd	nd	System Blank
06/04/95	2354	0.962	0.986	1.147	2.280	1.168		nd	nd	BTEX Calibration Check
06/05/95	0002	nd	nd	nd	nd	nd	nd	0.296	0.448	TCE/PCE Calibration Check
06/05/95	2017	nd	nd	nd	nd	nd	nd	nd	nd	System Blank
06/05/95	2022	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank: OK
06/05/95	2037								151.4 sec	PCE Retention Time Run
06/05/95								67.4 sec		TCE Retention Time Run
06/05/95	2102							0.314	0.482	TCE/PCE Calibration
06/05/95	2112	1.000	0.974	1.010	2.018	1.030				BTEX Calibration
06/06/95	0733	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank: OK
06/06/95	0750							66.6 sec		TCE Retention Time Run
06/06/95	0800								148.0 sec	PCE Retention Time Run
06/06/95	0810							0.314	0.482	TCE/PCE Calibration
06/06/95	0818	1.000	0.974	1.010	2.018	1.030				BTEX Calibration
06/06/95	0941	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank: OK
06/06/95	0948	nd	0.486	nd	nd	nd	nd	0.430	0.048	GD Duplicate: 16sg03
06/06/95	0955	nd	0.488	nd	nd	nd	nd	0.431	0.037	GD Duplicate: 16sg03
06/06/95	1130	nd	nd	nd	nd	nd	nd	0.505	0.716	TCE/PCE Cal Check, High
06/06/95	1135	1.492	1.429	1.543	2.953	1.515		nd	nd	BTEX Cal Check, High
06/06/95	1542	1.000	0.974	1.010	2.018	1.030				BTEX Calibration
06/06/95	1550							0.314	0.482	TCE/PCE Calibration
06/06/95	1826	1.114	1.056	1.141	2.172	1.113		nd	nd	BTEX Calibration Check
06/06/95	1833	nd	nd	nd	nd	nd	nd	0.310	0.465	TCE/PCE Calibration Check
06/06/95	1837	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank: OK
06/07/95	1337	nd	nd	nd	nd	nd	nd	nd	nd	System Blank
06/07/95	1347	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank: OK
06/07/95	1400							61.8 sec		TCE Retention Time Run
06/07/95	1404								122.8 sec	PCE Retention Time Run
06/07/95	1408							0.314	0.482	TCE/PCE Calibration
06/07/95	1413	1.000	0.974	1.010	2.018	1.030				BTEX Calibration
06/07/95	1629							0.314	0.482	TCE/PCE Calibration
06/07/95	1636	1.000	0.974	1.010	2.018	1.030				BTEX Calibration

Table 4: QA/QC Analysis Summary (continued)

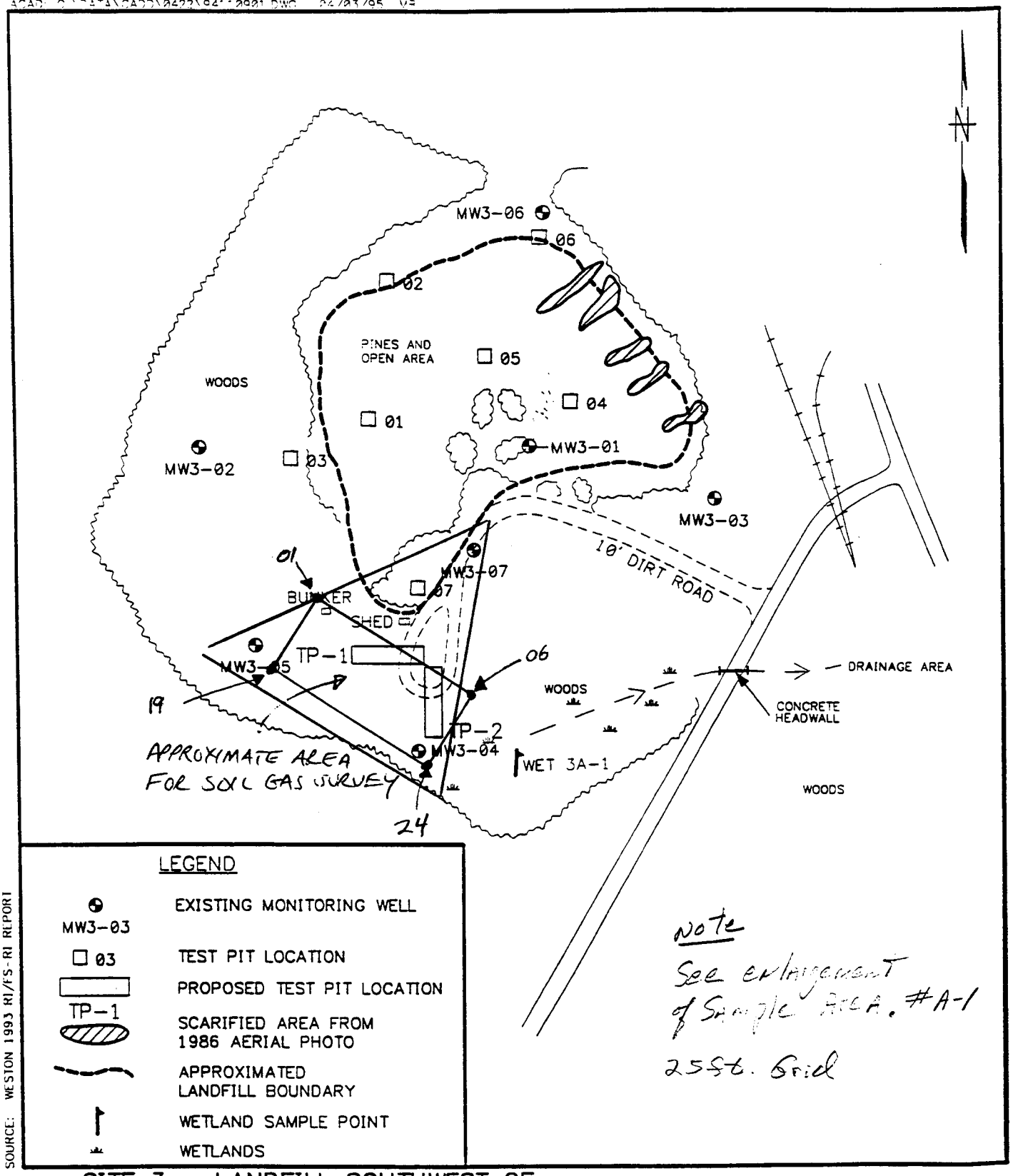
Date	Time	Benzene	Toluene	Ethylbenzene	Xylene m,p	Xylene - o	TOTAL BTEX	TCE	PCE	Comments
06/07/95	1732	nd	nd	nd	nd	nd	nd	0.243	0.345	TCE/PCE Check,adjust flows
06/07/95	1844	nd	nd	nd	nd	nd	nd	nd	nd	System Blank
06/08/95	0744	nd	nd	nd	nd	nd	nd	nd	nd	System Blank
06/08/95	0750	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank: OK
06/08/95	0759							71.8 sec	162.6 sec	TCE/PCE Retention Time Run
06/08/95	0806							0.314	0.482	TCE/PCE Calibration
06/08/95	0821	1.000	0.974	1.010	2.018	1.030				BTEX Calibration
06/08/95	0913	nd	nd	nd	nd	nd	nd	0.034	nd	Equipment Blank: 6/7/95
06/08/95	1028	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank: OK
06/08/95	1041	nd	nd	nd	nd	nd	nd	0.360	0.590	TCE/PCE Check,adjust flows
06/08/95	1453							0.314	0.482	TCE/PCE Calibration
06/08/95	1607	nd	nd	nd	nd	nd	nd	nd	nd	Syringe Blank: OK
06/08/95	1804	nd	nd	nd	nd	nd	nd	0.440	0.617	TCE/PCE Cal Check, high
06/08/95	1810	1.060	1.398	1.516	3.217	2.011		nd	nd	BTEX Cal Check, high

SOIL GAS SURVEY

APPENDIX B

Site 3
Page 1 of 2

ACAD: C:\DATA\CADD\0422\941\0901.DWG 04/03/95 VE



SOURCE: WESTON 1993 RI/FS-RI REPORT

SITE 3 – LANDFILL SOUTHWEST OF
"F" GROUP MONITOR WELL LOCATIONS
NWS EARLE, NJ

0 150 300
SCALE IN FEET

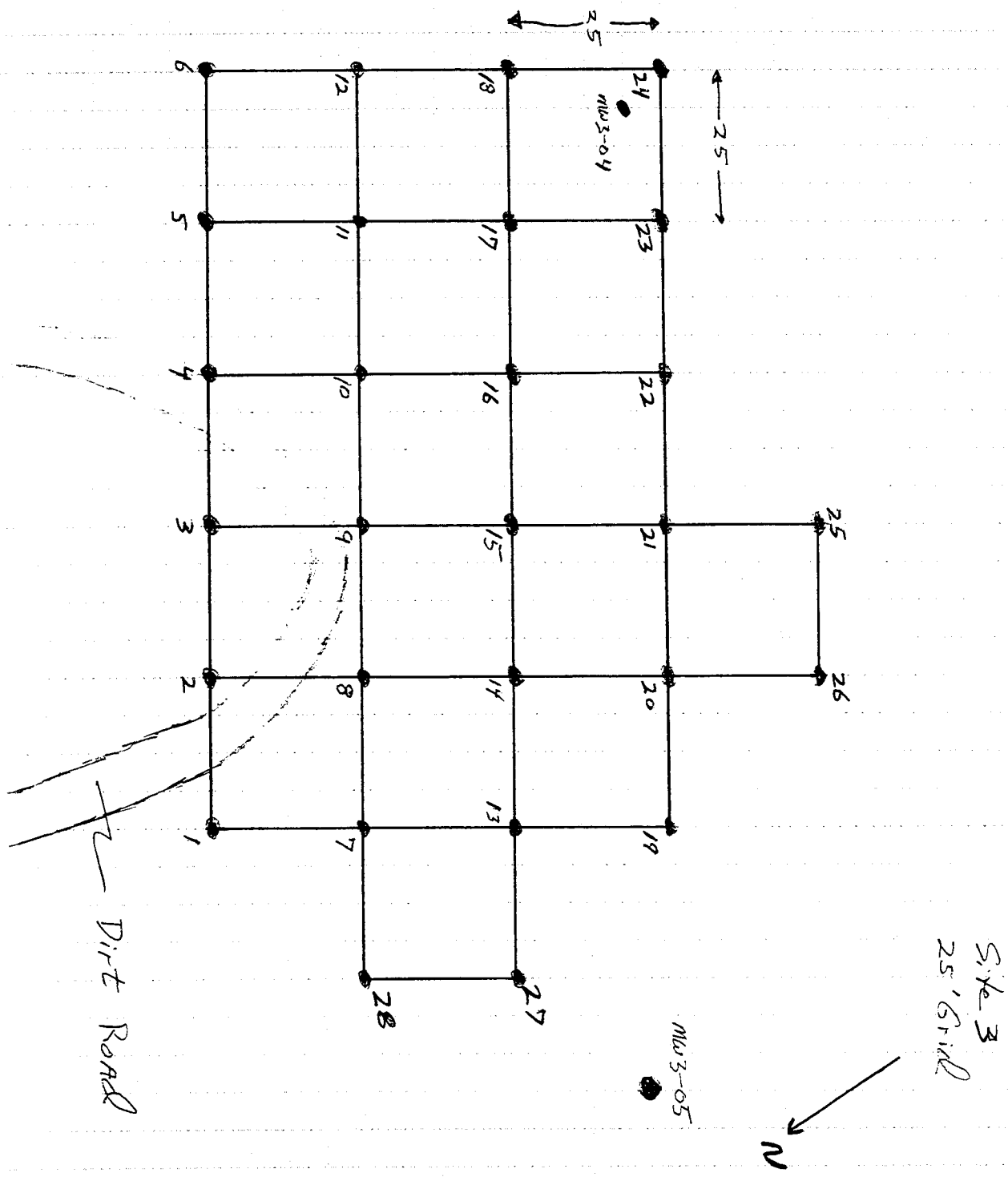
FIGURE 3-1

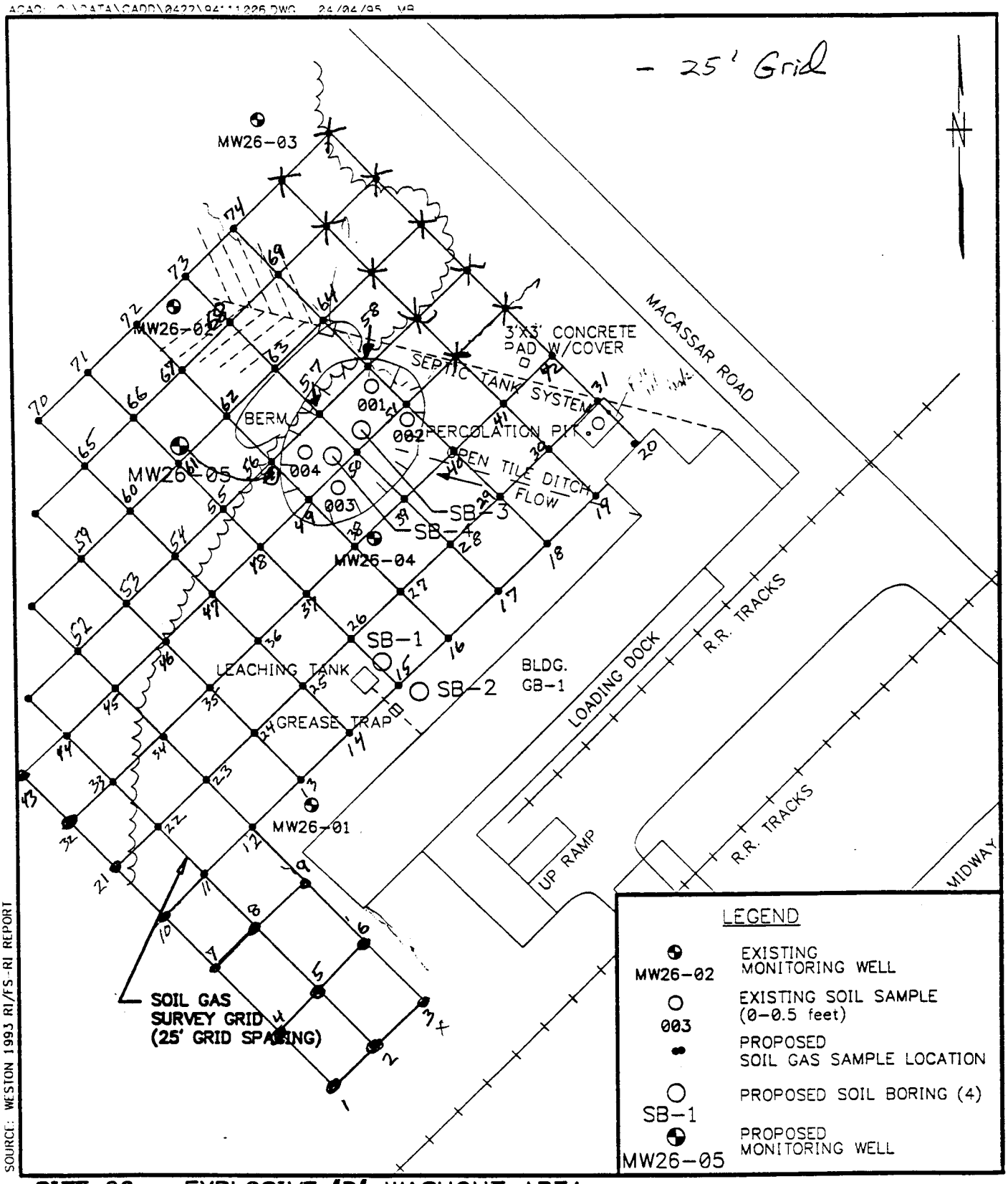
Halliburton NUS CORPORATION

site 3

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT	JOB NUMBER		
Halliburton NUS			
SUBJECT: Sample Location - Site 3			
BASED ON: Field Sampling 5/31/95 - 6/1/95		DRAWING NUMBER: A-1	
BY: TAW	CHECKED BY	APPROVED BY	DATE





SOURCE: WESTON 1993 RI/FS-RI REPORT

SITE 26 – EXPLOSIVE "D" WASHOUT AREA
MONITOR WELL AND SAMPLING LOCATIONS
NWS EARLE, NJ

0 50 100
SCALE IN FEET

FIGURE 3-3

Halliburton NUS CORPORATION

APPENDIX C

SOIL BORING AND MONITORING WELL INSTALLATION LOGS

APPENDIX C.a.

SOIL BORING LOGS

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: 01SB01
PROJECT NO.: 5803 DATE: 6/25/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.5	3	1.5/1.5		MDENSE	YELLOW BRN	SILTY SAND	SW/	MOIST	0
0935	2.0	5 10						SP		
S-2		13 6	1.8/2.0		MDENSE		SILTY SAND.		MOIST → WET	0
0940	4.0	8 6		4.0						
							BOTM @ 4'			
							DROVE 3" & SPLIT SP.			
							NO HSA.		TOOK:	
									01SB01-00	
									01SB01-02 (0.5-2)	
									FOR ANAL. (2-4)	

REMARKS CME RIG

BORING 01SB01

PAGE ___ OF ___

* See Legend on Back

BORING LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: 01SB02
PROJECT NO.: 5803 DATE: 6/25/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA :
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	3/5	1.8/2.0		M DENSE	YELLOW BRN	SILTY SAND	SM	MOIST	0
1000	2.0	7/7						/SP		
S-2		9/10	1.9/2.0		M DENSE	YELLOW BRN	SILTY F TO M SAND	SM	MOIST	0
1005	4.0	9/13		4.0				/SP		
							BOTM @ 4'			
							NO HSA.		TOOK	
							3" Ø SPOON TO SAMPLE		01SB02-00	
									01SB02-02	

REMARKS CME TRUCK RIG.

BORING 01SB02

PAGE 1 OF 1

* See Legend on Back

BORING LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: 01SB03
PROJECT NO.: 5803 DATE: 6/25/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: S CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY/SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	6/8	1.8/2.0		M DENSE	YELLOW BRN	SILTY SAND - TR GRAY	SM	MOIST - NAT	0
1025	2.0	10/10					TR ROOTS - ROCK FRAG.		PLACED AS FILL MATL ?	
S-2		10/16	1.9/2.0		M DENSE		SILTY SAND	SM	MOIST	0
1030	4.0	12/7		4.0				SP	LOOKS NAT.	
									MICACEOUS.	
							BOTTOM @ 4'			
							NO HSA			
							3" Φ SPOONS			
									TOOK:	
									01SB03-00 (.5-2.0)	
									01SB03-02 (2-4')	

REMARKS CME RIG

BORING 01SB03

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: 01SB04
PROJECT NO.: 5803 DATE: 6/25/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	5/13	1.7/2.0		M DENSE	BRN TO	SILTY SAND - TR ROAD	SM	MOIST	0
1045	2.0	12/10				YELLOW BRN	TR ROOTS GRAVEL		FILL	
S-2		12/10	1.8/2.0		M DENSE		SILTY SAND	SM	MOIST	0
1050	4.0	12/10		4.0				/SP	MICACEOUS	
							BOTTOM @ 4.0		TOOK:	
							NO HSA		01SB04-00 (.5-2')	
							3" Ø SPOON		01SB04-02 (2-4')	

REMARKS: OMF TRUCK RIG

BORING: 01SB04

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: 01SB05
PROJECT NO.: 5803 DATE: 6/25/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY - SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	1 / 1	1.8/2.0		LOOSE	YELLOW BRN	SILTY SAND - TR ROOTS	SM	MOIST -	0
1110	2.0	3 / 5						/SP		
S-2		5 / 5	1.9/2.0		MDENSE		SILTY F. SAND	SM	MOIST	0
1115	4.0	6 / 6		4.0				/SP	LOOKS NAT	
									MICACEOUS.	
							BOTM @ 4'			
							NO HSA			
							3'S SPOONS			
									TOOK:	
									01SB05-00 (.5+2)	
									01SB05-02 (2+4)	

REMARKS: CME TRUCK RIG

BORING 01SB05

PAGE 1 OF 1

* See Legend on Back

BORING LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: 01SB06
PROJECT NO.: 5803 DATE: 6/25/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA :
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	2/4	1.8/2.0		M DENSE	LT YELLOW BRN	SILTY SAND - TR ROOTS	SM	MOIST - DAMP	0
1305	2.0	6/10								
S-2		9/8	2.0/2.0		M DENSE		SILTY F TO M SAND	SM/		0
1310	4.0	7/7		4.0		MOTTLED		SP	MOIST → BOTM 6" WET	
									MICACEOUS	
							BOTM @ 4'			
							NO HSA.		TOOK	
							3" Φ SPOON		01SB06-00 (-5-2')	
									01SB06-02 (2-4')	

REMARKS CME TRUCK RIG

BORING 01SB06

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: 01SB07
PROJECT NO.: 5803 DATE: 6/25/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	1/3	1.8/2.0		M DENSE	BRN TO	SILTY SAND - TR F	SM	MOIST	0
1325	2.0	6/7				YELLOW BRN	GRAVEL	SP	GRAVEL IN TOP	
S-2		6/5	1.9/2.0		M DENSE		SILTY SAND	SM	1 FOOT OF SAND E	0
1330	4.0	5/6		4.0		MOTTLED		SP	MOIST -> WET	
									MICACEOUS	
							BOTTM @ 4'		TOOK	
							NO HSA		01SB07-00 (.5-2.0')	
							3" Φ SPOONS		DUP ↑ ALSO -DUP05	
									01SB07-02 (2-4')	

REMARKS ONE TRUCK RIG

BORING 01SB07

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: 01SB08
PROJECT NO.: 5803 — DATE: 6/25/95 — DRILLER: JC ANDERSON
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA: —
(Date, Time & Conditions) —

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	2/4	1.8/2.0		MDENSE	BRN TO	SILTY SAND - TR CLAY	SM/	MOIST	0
1400	2.0	5/8				YELLOW BRN	(TOP 6")	SP	SOME DARK	
S-2		7/11	1.8/2.0		MDENSE		SILTY F TO M SAND	SP/	STAINS TOP PART OF SAMPLE ALSO	0
1405	4.0	10/11		4.0		MOTTLD		SM	MICACEOUS	
							BOTTM @ 4'			
							NO HSA			
							3" Φ SPOONS			
									TOOK	
									01SB08-00 (.5-2.0)	
									01SB08-02 (2'-4')	

REMARKS CME RIG

BORING 01SB08

PAGE 1 OF 1

* See Legend on Back

BORING LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: 01SB09
PROJECT NO.: 5803 DATE: 6/25/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: CONT!
WATER LEVEL DATA :
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	1/3	1.8/2.0		MDENSE	BRN TO	SILTY SAND - SL TR OF	SM	MOIST	0
1420	2.0	6/6				YELLOW BRN	CLAY	/SP		
S-2		4/4	1.8/2.0		MDENSE		SILTY SAND	SM	MOIST → WET	0
1425	4.0	6/6		4.0				/SP		
									MICACEOUS	
							BOTM @ 4'			
									TOOK:	
									01SB09-00 (.5-2')	
									01SB09-02 (2-4')	

REMARKS

BORING 01SB09

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: 01SB10
PROJECT NO.: 5803 DATE: 6/25/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: CONT
WATER LEVEL DATA :
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (FT.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY - SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	4/6	1.8/2.0		M DENSE	YELLOW BRN	SILTY SAND	SM	MOIST	0
1445	2.0	6/8						/SP		
S-2		6/7	1.9/2.0		M DENSE	YELLOW BRN	SILTY SAND	SM	MOIST → WET	0
1500	4.0	8/7		4.0				/SP	LAST 6" WET	
							BOTM @ 4'		MICACEOUS	
							NO HSA			
							3" Φ SPOONS			
									TOOK:	
									01SB10-00 (.5-2')	
							TRIPLE VOL		→ MS/MSD ALSO	
									01SB10-02 (2-4')	

REMARKS CME TRUCK RIG.

BORING 01SB10

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE — BORING NO.: MW1-4
PROJECT NO.: 5803 — DATE: 7-12-95 — DRILLER: JCA
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA: —
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (Ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	4/8	1.7/2.0		M DENSE	ORANG BRN	SILTY FINE SAND-TR ROOTS	SM	MOIST	0
1108	2.0	10/11			↓	↓	↓		SL. MICACEOUS	
S-2		5/7	1.8/2.0		M DENSE	↓	SILTY FINE SAND	SM	MOIST	0
1115	4.0	8/9			↓	↓	SL. MICACEOUS			
S-3		6/6	1.8/2.0		M DENSE	YELLOW BRN	SILTY F TO M SAND	SM	MOIST → WET	
1120	6.0	6/6			↓	↓	↓	SP	WATER @ 3'	
	12.0				↓	↓	↓			
S-4		6/7	1.7/2.0		M DENSE	YELLOW BRN	SILTY F TO M SAND	SP/SM	WET	0
	14.0	9/11		14.0 BOTM	↓	↓	↓			
							HSA TO 14			
							SPLIT SPOONS (4)			
									SCREEN 4-14	
									SAND 3-14	
									BENT 3-2.5	
									GROUT TO SURF	
									CONSTRUCTION	
									APPROVED BY L.W.	
									OF NUDPE.	

REMARKS: ATTN: FRANKS

BORING MW1-4

PAGE 1 OF 1

*See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: MW1-5
PROJECT NO.: 5803 DATE: 7/12/95 DRILLER: JCA
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (FT.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY: CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	3/3	1.6/2.0		M DENSE	TAN BRN	SILTY SAND - TR ROOTS	SM	DAMP → MOIST	0
1330	2.0	5/7			↓	↓	↓		MICACEOUS	
S-2		5/4	1.7/2.0		LOOSE	YELLOW BRN	SILTY F SAND	SM/SP	MOIST	0
1335	4.0	4/4			↓				W/MICA	
S-3		5/6	1.7/2.0		M DENSE			SP/SM	MOIST	0
1340	6.0	6/9			↓		↓		W/MICA.	
S-4		7/6	1.8/2.0		LOOSE		SILTY F SAND	SM/SP	WET @ 7' WATER ≈ 7' ± BASED ON S-4 INFO	0
1345	8.0	5/5								
	13.0				↓	↓	↓			
S-5		6/8	1.7/2.0		M DENSE	YELLOW BRN	SILTY F SAND	SM/SP	WET	
	15.0	7/10		15.0	↓	↓	↓		TAKEN W/ 3' SPOON	
				BOTM					TO MAKE SURE	
									AUGERS WERE OPEN. - NOT PART OF PHOTO.	
							HSA TO 15		SCREEN 5 TO 15	
							5 SPLIT SPOONS		SAND 4 TO 15	
									BENT 2.5 TO 4	

REMARKS ATV (FAILING)

BORING MW1-5

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE — BORING NO.: MW3-08
PROJECT NO.: 5903 — DATE: 7-5-95 — DRILLER: JC ANDERSON
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA: —
(Date, Time & Conditions) —

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY/SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	1 / 2	1.8/2.0		LOOSE	TAN TO	SILTY FINE SAND - TR	SM	DAMP	0
1426	2.0	3 / 4				BRN	GRAVEL			
	5.0					YELLOW				
S-2		8 / 7	1.5/2.0		LOOSE	BRN	SILTY SAND - TR CLAY	SM	MOIST → WET	0
1435	7.0	6 / 4				TO ORANG		SP/	ALMOST CLAYEY SAND	
S-3		2 / 3	1.8/2.0		LOOSE	BRN TO			NEAR BOTTOM OF SAMPLE 2	
1445	9.0	5 / 5		8.5		BRN GRAY	CLAYEY SILT	ML	WET → MOIST	0
	10.0			10.0	M DENSE	YELLOW			MICACEOUS	
S-4		8 / 7	1.7/2.0		TO	BRN TO	SILTY SAND		LAST 6" WAS CLAYEY SILT	0
1455	12.0	8 / 8		11.5	STIFF	BRN GRAY	CLAYEY SILT	ML	MOIST → DAMP	
									MICACEOUS	
	15.0									
S-5		5 / 8	1.7/2.0		MED STIFF		CLAYEY SILT	ML	MOIST	
1520	17.0	8 / 7							MICACEOUS	
	20.0			20.0						
S-6		1 / 5	1.8/2.0		M STIFF	BRN GRAY	CLAYEY SILT - TR	ML	MOIST	
1527	22.0	8 / 12					SAND LENS.		MICACEOUS	
							BOTTOM 20'			
							SCR 5-20			
							SAND 4-20			
							BTN 2-4			

REMARKS: ATV RIG (FAILING) — BORING: MW3-08

PAGE ___ OF ___

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: MW4-7
PROJECT NO.: 5803 DATE: 7/12/95 DRILLER: Steve Berger
ELEVATION: FIELD GEOLOGIST: Teresa Sawyer
WATER LEVEL DATA:
(Date, Time & Conditions)

	SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
0950	SS S1	0	2 3	18	1	loose	brown	fine grained SILTY SAND w/ pebbles	GM		0
	↓	2	5 4	↓	2		lt brown	" " micaceous			
					3						
					4						
					5						
0955	SS S2	5	4 8	19	6	Med. Dense	orange	fine grained SILTY SAND and GRAVEL	GM		0
		7	10 19	↓	7						
					8						
					9						
					10						
1000	SS S-3	10	10 23	16	11	Dense	orange pink brown	Interbedded layers of SILTY SAND	GM		0
		12	21 20	↓	12			and GRAVEL - QUATZ			
					13						
					14						
1001	SS S-4	14	4 19	14	15			↓ saturated			
		16	20 23	↓	▼ 16	DENSE	Brown	COARSE grained SILTY SAND	GM		0
					17						
					18						
					19						
					20						
					21						
					22						
					23						
			5 3		24	STIFF	orange gray	SILTY CLAY - MICACEOUS	CL		0
	SS S-5	24 26	5 6		25						

REMARKS CME 55 Rig - 4'1/4" ID Hollow Stem Augers

TD = 24' BLS

BORING MW4-7

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: MW13-1
PROJECT NO.: 5803 — DATE: 6/24/95 — DRILLER: JC ANDERSON
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA: —
(Date, Time & Conditions) —

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY - SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	2/3	1.8/2.0		LOOSE	BRN	SILTY SAND	SM	TOP 6" TOPSOIL MOIST	0
0910	2.0	5/5		2.0	↓	TAN TO	↓			
S-2		12/13	1.7/2.0	3.0	M DENSE	OLIVE	SILTY F TO M SAND TR	SM	HIT WATER ≈ 4'±	0
0915	4.0	8/6			↓	↓	TO SOME GRAVEL	/SP	GRAVEL (MAX 3/4") LAYER ≈ 2'-3'	
S-3		3/4	1.9/2.0		↓	↓	↓		THEN OLIVE SILTY SAND	0
@ 0920	6.0	4/4		5.5	LOOSE	OLIVE ORANGE BRN	SILTY SAND (F TO M)	SM/SP	WET	
					↓	↓	↓		LAST 6" ORANGE BRN	
					↓	↓	↓		S-1 → S-3 SL MICACEOUS	
	10.0				↓	↓	↓			
S-4		4/5	1.8/2.0		M DENSE	YELLOW BRN	SILTY FINE SAND	SM/SP	WET	0
0940	12.0	6/5			↓	↓	↓		SL MICACEOUS	
	15.0			15.0	↓	↓	↓			
							BOTTOM @ 15' (HSA)			
							SCREEN: 15-5			
							SAND 15-4			
							BENTONITE 4-2.			

REMARKS ATV (FAILING)

BORING MW13-1

PAGE 1 OF 1

* See Legend on Back

HALLIBURTON NUS

BORING LOG

PROJECT: NWS EARLE - CTO 231 BORING NO.: MW13-2
PROJECT NO.: 5803 DATE: 6/23/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (Ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, Ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	2 2	1.5/2.0		LOOSE	TAN BRN	SILTY FINE TO M SAND	SM	6" TOPSOIL/LEAVES MOIST	2
1250	2.0	1 2		2.0				SP		
S-2		1 1	1.5/2.0		M DENSE	TAN GRAY	FINE TO COARSE SAND	SW	MOIST → WET	0
	4.0	5 10				ORANG BRN	TR F GRAVEL		WATER ≈ 4'±	
S-3		8 8	1.6/2.0		M DENSE	TO GRAY MOTLD			WET	0
1255	6.0	8 8					SILTY FINE SAND	SM	WET- SLIGHTLY MICACEOUS	
	10.0	3				YELLOW				
S-4		3 5	1.7/2.0		LOOSE	BRN	SILTY FINE SAND	SM	WET	0
1305	12.0	4								
	15.0					ORANG				
S-5	16.0	8 10	1.0/1.0		M DENSE	BRN	SILTY FINE SAND	SM	WET	0
1320									SL. MICACEOUS	
							HSA TO 15'			
							SCREEN 15 TO 5			
							SAND 15 TO 4			
							BENTONITE 4 TO 2			

REMARKS ATV RIG (FAILING)

BORING MW-13-2

PAGE 1 OF 1

* See Legend on Back

HALLIBURTON NUS

BORING LOG

PROJECT: NWS EARLE - CTO 231 BORING NO.: MW13-3
PROJECT NO.: 5803 DATE: 6/23/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA :
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	2 / 7	1.5/2.0		V LOOSE	LT. BRN	SILTY SAND	SM	6" TOPSOIL MOIST	.5
1510	2.0	1 / 1		2.0	↓	↓	↓			
S-2		1 / 1	1.7/2.0		M DENSE	OLIVE	SILTY FINE SAND	SM / SP	MOIST → WET WATER ≈ 4'	0
1512	4.0	6 / 7			↓	↓	↓			
S-3		6 / 7	1.8/2.0		M DENSE	OLIVE	SILTY FINE SAND	SM / SP	SLIGHT SULFUR ODOR WET SL.	0
1515	6.0	7 / 6			↓	↓	↓		MICACEOUS ALL SAMPLES	
									NOTE COLOR CHANGE AT 2' - NOT SO WITH MW13-2	
	10.0				↓	↓	↓			
S-4		5 / 7	1.0/2.0		M DENSE	OLIVE	SILTY SAND/SANDY SILT	SM / SP	WET	0
1530	12.0	6 / 5			↓	↓	↓			
				14.0						
	15.0			15.0	M DENSE	YELLOW BRN	SILTY SAND - TR M SAND	SM / SP	LOGGED FROM 3' SPOON USED	0
							HSA TO 15'		TO CLEAN HSA WITH.	
							SCREEN : 15 TO 5			
							SAND : 15 TO 4			
							BENT. : 4 TO 2			

REMARKS ATV RIG (FAILED)

BORING MW13-3

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: MW13-4
PROJECT NO.: 5803 — DATE: 6/24/95 — DRILLER: JC ANDERSON
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA: —
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (Ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	3 / 2	1.5/2.0		LOOSE	LT YELLOW BRN	SILTY SAND	SM/SP	DAMP → MOIST	0
1245	2.0	4 / 4			↓	↓	↓			
S-2		1 / 1	1.3/2.0		LOOSE	YELLOW BRN	SILTY SAND	SM/SP	MOIST	0
1250	4.0	3 / 5			↓	YELLOW	↓			
S-3		5 / 4	1.8/2.0		LOOSE	BRN TO	SILTY FINE TO M	SM/SP	MOIST	0
1255	6.0	4 / 6		5.5 / 6.0	↓	D. BRN	SANDY SILT SAND TR WOOD (PEAT)		NATURAL	0
S-4		6 / 5	1.9/2.0	7.5±	LOOSE	TAN BRN TO BRN	SILTY FINE TO M SAND		LAST 6" (S-4) WET WATER = 7.5±	
1300	8.0	3 / 5								
	10.0			10.0						
S-5		3 / 3	1.8/2.0		LOOSE	OLIVE	SILTY F TO M SAND	SM/SP	WET GLAUCONITIC NOTE COLOR CHANGE	0
1307	12.0	4 / 5								
	16.0			16.0						
S-6		6 / 8	1.8/2.0		MDENSE	OLIVE	SILTY F TO M SAND	SM/SP	WET	0
1320	18.0	10 / 10					HSA TO 16		TOOK 3" SPOON	
							SS (3") 16-18		16/18 FOR LITH ONLY	
							SCREEN 6-16			
							SAND 4-16			
							BENTONITE 2-4			

REMARKS: ATV RIG (FAILING)

BORING: MW13-4

PAGE ___ OF ___

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: MW13-5
PROJECT NO.: 5803 — DATE: 6/24/95 — DRILLER: JC ANDERSON
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA: —
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (Ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY/SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, Ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	4/5	1.8/2.0		LOOSE	TAN BRN	FINE TO MED SAND	SM/SP	DAMP	0
1445	2.0	5/5								
	5.0					YELLOW				
S-2		5/4	2.0/2.0		LOOSE	BRN	SILTY FINE TO MED SAND	SM/SP	MOIST	0
1500	7.0	4/4							NO WATER @ 7'	
									HIT WATER	
									≈ 8-9	
	10.0					OLIVE				
S-3		4/5	1.8/2.0		LOOSE	BRN	SILTY FINE TO MED SAND	SM/SP	WET - SL MICACEOUS	0.5
1515	12.0	5/5								
	17.0					YELLOW				
S-4		6/8	1.7/2.0		MDENSE	BRN	SILTY SAND	SM/SP	WET	0
	19.0	10/11							USED 3" SPOON HERE TO CLEAN OUT BOTH HSA.	
							HSA TO 17'			
							SCREEN 7 TO 17			
							SAND 5 TO 17			
							BENTONITE 5 TO 3			

REMARKS: ATV (FAILURE) — BORING: MW13-5

PAGE ___ OF ___

* See Legend on Back

BORING LOG — HALLIBURTON NUS

PROJECT: NWS - Earle
BORING NO.: MW-16-01
PROJECT NO.: 5803
DATE: 7-09-95
DRILLER: JCA - Drilling
ELEVATION:
FIELD GEOLOGIST: Paul Davis
WATER LEVEL DATA (DATE, TIME & CONDITIONS): (16-SB-01)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		3 / 7			–	Brown	Silty Fine to medium	SM	moist
0901	2.0	8 / 10	22/24		–		grained sand (subround pebbles)		No Hnu.
S-2 @		13 / 13			–	Brown		SM	moist
0905	4.0	14 / 12	22/24		–				No Hnu.
S-3 @		8 / 6			–	Brown		SM	moist
0909	6.0	4 / 4	23/24		–				No Hnu.
S-4 @		3 / 3			–	Olive Brown		SM	No Hnu.
0914	8.0	5 / 4	23/24		–				Wet @ 7.5'
S-5 @		3 / 2		≈ 8'	–	Olive Brn.			Saturated
0919	10.0	3 / 2	24/24		–			SM	No Hnu.
							Auger Down		
									Collected:
									16SB01-06
	16.								
S-6 @		6 / 13			–	Brown	Silty Fine to med-	SM	Saturated
0935	18.	13 / 12	24/24		–		ium grained sand.		No Hnu.
							— E.O.B. —		

REMARKS: CME
3" x 24" Splitspoon Sample barrels
140 lb hammer / 30"

16-SB-01
MW 16-01
BORING

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: MW16-2
PROJECT NO.: 5803 — DATE: 7/9/95 — DRILLER: JCA
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (Ft.) OR RUN NO.	BLOWS 6" OR ROD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, Ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HSP HNU PPM
S-1	0.0	3/6	1.5/2.0		M DENSE	YELLOW BRN	SILTY FINE TO C SAND	SW	MOIST 1 ppm	.8
1020	2.0	12/16			↓	↓	TR. GRAVEL - TR ROOTS		ON SAMPLE	
S-2		13/11	1.6/2.0		M DENSE	↓	FINE TO COARSE SAND	SW	MOIST 1 ppm	.8
1025	4.0	15/15		4.0	↓	OLIVE	↓		(WATER ≈ 5 or 6')	
S-3	⊙	5/5	1.7/2.0		M DENSE	ORANG BRN	SILTY F TO M SAND	SP/SM	MOIST → WET	.4
1030	6.0	6/7			↓	↓	↓		0 PPM ON SAMPL	
S-4		6/7			M DENSE	YELLOW BRN	SILTY F TO M SAND	SW/SP	WET	
1035	8.0	7/8			↓	↓	↓		0 PPM ON SAMPL	.6
	13.0				↓	↓	↓		↗ WET	.4
S-5		8/6	1.6/2.0		M DENSE	OLIVE BRN	SILTY F TO M SAND	SW/SP	FOR LAB: 6SB02-04	
	15.0	10/11		15.0	↓	↓	↓			1030
							HSA TO 15'			
							SCREEN 5 TO 15			
							SAND 4 TO 15			
							BENT 2 TO 4			
							GROUT TO SURF.			

REMARKS: ATV (FAILING)

BORING: MW16-2

PAGE 1 OF 1

* See Legend on Back

BORING LOG

HALLIBURTON NUS

PROJECT: NWS-Earle
BORING NO.: MW-16-03
PROJECT NO.: 5803
DATE: 7-09-95
DRILLER: JCA-Drilling
ELEVATION:
FIELD GEOLOGIST: Paul Davis
WATER LEVEL DATA (DATE, TIME & CONDITIONS): (16-SB-03)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		11/7			–	orange Brn.	Silty F-M Sand	SM	moist
1246	2.0	10/11	20/24		–	Gray	with Subround pebbles		No Hnu.
S-2 @		11/9			–	Gray	(some roots)	SM	moist
1250	4.0	6/8	22/24		–				No Hnu.
S-3 @		6/9			–	Olive Brown	Silty Fine to med. Sands	SM	wet (perched water)
1254	6.0	9/8	20/24		–		(some coarse grains)		Hnu = 0.8 ppm
S-4 @		4/8			–	Olive Brn.	Silty Fine to medium	SM	wet
1304	8.0	5/5	21/24		–		grained Sand		Hnu = 0.8 ppm
S-5 @		6/7		▼	–	Olive Brn.		SM	wet to Saturated
1310	10.0	7/8	24/24		–				No Hnu.
							Auger Down		
									Collected:
									16SB03-02 &
									16SB03-06
	16.0								
S-6 @		10/9			–	Orange Brn.	Silty Fine to medium	SM	Saturated
1335	18.0	9/10	24/24		–		grained Sand		No Hnu

REMARKS: CME
3" x 24" Split spoon Sample barrels
140 lb hammer / 30"

16-SB-03
MW-16-03
BORING

PAGE 1 OF 1

* See Legend on back

HALLIBURTON NUS

BORING LOG

PROJECT: NWS EARLE - CTO 231 BORING NO.: MW16-4
PROJECT NO.: 5803 DATE: 7/9/95 DRILLER: JCA
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA :
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY: CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HSP HNU PPM
S-1	0.0	6 9	1.8/2.0		M DENSE	YELLOW BRN	SILTY F TO M SAND - TR F. GRAVEL	SW	MOIST (0 PPM)	1
1505	2.0	12 13			↓	↓	↓		1/2" GRAVEL SUBROUND	
S-2		5 5	1.8/2.0		M DENSE		FINE TO CRS SAND - TR GRAVEL	SW	MOIST (0PPM)	0
1510	4.0	7 6			↓	↓	↓		3/4" SUBROUND GRAVEL	
S-3		3 9	1.7/2.0		M DENSE	GRAY TO BRN	↓	SW	MOIST → WET	2
1516	6.0	7 10		FILL ?	↓	↓	↓		1 PPM ON SAMPLE. COULD BE FILL	
S-4		7 15	1.8/2.0		M DENSE	OLIVE BRN	SILTY SAND (F TO M)	SM	MOIST → WET	1
1520	8.0	15 12		8.0	↓		TR ROOTS TR GRAVEL	/SP	.4 PPM (STILL FILL ?)	
S-5	⊙	10 11	1.8/2.0		M DENSE		SILTY F TO M SAND	SM /SP	50 PPM ON SAMPLE MOIST → WET	60
1526	10.0	15 15			↓		↓			
S-6	⊙	9 8	1.8/2.0		M DENSE		SILTY F TO M SAND		WET. 80 PPM ON SAMPLE WT ≈ 11± FUEL ODOR	90
1540	12.0	11 13								
									TO LAB: ALSO DUP 10	
	16.0				↓	↓	↓		16SB04-08 ←	1526
S-7		6 10	1.5/2.0		M DENSE	OLIVE BRN	SILTY F TO M SAND	SM /SP	16SB04-10	1540
	18.0	13 15		18.0	↓	↓	↓			
							HSA TO 18'			
							SPLIT SPOONS TO 18'		SCREEN 8-18	
							TOTAL (7)		SAND 6-18	
									BENT 4-6	
									GROUT TO SURF.	

REMARKS ATV (FAILING)
SET UP @ 1450

BORING MW16-4

PAGE 1 OF 1

* See Legend on Back

BORING LOG

HALLIBURTON NU:

PROJECT NWS-Earle BORING NO. MW-16-05
PROJECT NO. 5803 DATE 7-09-95 DRILLER JCA Drilling
ELEVATION FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS) (16-SB-05)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		5 / 6			-	Drk. Brn / Lt. Brn	Silty Fine to medium	SM	moist
1439	2.0	12 / 17	23/24		-	olive gray	grained Sand		No HNU.
S-2 @		10 / 11			-	olive gray		SM	moist
1443	4.0	11 / 10	18/24		-	olive gray			HNU = 3.0 ppm
S-3 @		2 / 1			-	olive gray		SM	HNU = 1.4 ppm
1448	6.0	2 / 4	24/24		-		(some pebbles)		wet = petrol. odors
S-4 @		4 / 4			-	olive brown		SM	HNU = 6.0 ppm
1453	8.0	8 / 8	20/24		-				wet petrol. odors
S-5 @		6 / 7			-	Olive Brown		SM	HNU = 50. ppm
1457	10.0	6 / 5	23/24		-				wet petrol. odors
S-6 @		6 / 6		▼ 10'	-	Olive Brn.		SM	Saturated petrol odors
1506	12.0	7 / 8	24/24		-	Orange Brn.			HNU = 6 ppm
							Auger Down		
									collected:
									16SB05-06 &
									16SB 05-08
	18.0								
S-7 @		7 / 9			-	orange Brn.	Silty Fine to	SM	Saturated
1525	20.0	8 / 7	24/24		-		medium grained Sand		HNU = 25. ppm

REMARKS CME
3" x 24" Splitspoon Sample barrels
140 lb hammer / 30"

MW-16-05
16-SB-05
BORING

PAGE 1 OF 1

* See Legend on back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: MW16-6
PROJECT NO.: 5803 — DATE: 7/9/95 — DRILLER: JCA
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (FT.) OR RUN NO.	BLOWS 6" OR ROD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	4/8	1.6/2.0		M DENSE	YELLOW BRN	SILTY F TO C SAND - TR	SW	MOIST 0PPM ON SAMPLE	0
1250	2.0	11/7			↓	GRAY	GRAVEL AND ROOTS			
S-2	⊙	8/7	1.8/2.0		M DENSE	TO OLIVE	SILTY F SAND/TR SLAG	SP/SM	MOIST → WET 0-PPM ON SAMPLE (FILL)	0
1255	4.0	6/7			↓	↓	↓			
S-3		3/3	1.7/2.0	4.5	SOFT				WET DUE TO PERCHED WATER	0
1300	6.0	5/6			TO	GRAY	SILTY CLAY - TR ROOTS	CL	MOIST/WET	
S-4	⊙	10/12	1.8/2.0	6.5	DENSE	GRAY	MED TO COARSE SAND		(COULD BE FILL) 0PPM (S-3	0
1305	8.0	15/19		8.0	↓	↓	TR F GRAVEL		S-4 = MOIST → WET 0PPM ON SAMPL	
S-5		10/12	1.8/2.0		M DENSE	OLIVE	SILTY FINE TO M SAND	SM/SP	WET ≈ 7 of 8' WET 0PPM ON SAMPLE.	0
1320	10.0	14/13								
	15.0									
S-6		10/9	1.7/2.0		M DENSE	OLIVE BRN	SILTY SAND (F TO/MED)	SP/SM	WET	0
1330	17.0	8/11		17.0	↓	↓	↓			
				BOTM						
							HSA TO 17		FOR LAB ⊙	
							6 SAMPLES		16SB06-02	1255
							WELL 7 TO 17		16SB06-06	1305
							SAND 5 TO 17			
							BENT 5 TO 3			
							GROUT TO SURFACE			

REMARKS: ATV (FAILING)

BORING: MW16-6

PAGE 1 OF 1

* See Legend on Back

BORING LOG

HALLIBURTON NU:

PROJECT NWS - Earle
BORING NO. 16 SB 07
PROJECT NO. 5803
DATE 7-08-95
DRILLER JGA - Drilling
ELEVATION
FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		8 / 7			–	Olive Brown	Broken Brick Fragments Silty F-M Grained Sand	SM	moist
1106	2.0	10 / 9	23/24		–	Gray orange brown	↓		No Hnu
S-2 @		8 / 4			–	Orange Brown	Silty F-m grained Sand	SM	moist 0.6 ppm
1110	4.0	4 / 5	23/24		–		Some subround pebbles bttm. 6" - Clayey F.G. Sand		moist to wet
S-3 @		5 / 6			–	Orange Brown	Clayey Fine to medium	SC	moist to wet
1115	6.0	6 / 7	18/24		–		grained Sand (some pebbles)	SC	Hnu = 0.6 ppm
S-4 @		4 / 2		▼	–	Orange Brown	Clayey Silty Fine to	SC	saturated
1121	8.0	2 / 2	24/24		–		medium grained Sand		Hnu = 0.8 ppm
									Collected:
									16SB07-04

REMARKS CME
3" X 24" splitspoon sample barrels
140 lb hammer / 30"

16SB07
BORING

PAGE 1 OF 1

* See Legend on back

BORING LOG

HALLIBURTON NU.

PROJECT NWS Earle
BORING NO. 16-SB-08
PROJECT NO. 5803
DATE 7-08-95
DRILLER JLA Drilling
ELEVATION
FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		7 / 10			–	Black	Sandy gravelly Cinders		HNU = 1.2 ppm
1022	2.0	7 / 5	15/24		–		↓		moist
S-2 @		14 / 8			–	orange Brown	Silty F-M Grained Sand (some pebbles)	SM	wet (perched water 2.5-3.5')
1027	4.0	8 / 10	21/24		–	Olive Gray blk	6" - Silty F-m Grained Sand; silty F-m G. Sand		moist No HNU
S-3 @		5 / 5			–	Gray	Silty F-M Grained Sand	SM	moist
1032	6.0	7 / 8	12/24		–	Olive Brn.	↓ (some pebbles)		HNU = 0.8 ppm
S-4 @		7 / 7			–	Olive Brown	Clayey F-M Grained Sand	SC	moist to wet
1040	8.0	8 / 8	20/24		–		Silty Clayey F-M Sand	SC	HNU = 0.8 ppm
S-5 @		10 / 10			–	Olive Brown	↓		Wet to Saturated
1045	10.0	10 / 10	23/24	▼ 9.5	–		↓	SC	HNU = 1.4 ppm
									collected 16SB08-06

REMARKS CME
3"x24" Splitspoon Sample barrels
140 lb hammer / 30"

BORING 16SB08

PAGE 1 OF 1

* See Legend on back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: 16SB09
PROJECT NO.: 5803 DATE: 7/9/95 DRILLER: JCA
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA :
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HSP HNU PPM
S-1	0.0	12 / 11	1.7/2.0		DENSE	GRAY BRN	SILTY F TO C SAND - TR SLAG	SW	MOIST → WET 20 PPM ON SAMPL	120
0900	⊙ 2.0	17 / 14			↓	↓	↓			
S-2		14 / 16	1.8/2.0		DENSE	YELLOW BRN	SILTY F TO M SAND - TR F GRAVEL	SM /SP	MOIST (2 PPM) (FILL) ON SAMPLE	70
0910	4.0	20 / 23			↓	↓	↓			
S-3		3 / 5	1.8/2.0	5.0	LOOSE /SOFT	OLIVE BRN	SILTY SAND / TO CLAYEY SAND	SC /SM	MOIST → WET	2
0915	6.0	5 / 3			↓	↓	↓		0 PPM ON SAMPLE	
S-4	⊙	3 / 5	1.7/2.0		MSTIFF				MOIST → WET	6
0920	8.0	7 / 9		8.0	↓	↓	↓		0 PPM ON SAMPLE	
S-5		8 / 10	1.8/2.0		M DENSE	YELLOW BRN	SILTY F/M. SAND	SM /SP	WET TO SAT WATER TABLE ≈ 9' 0 PPM	1
0930	10.0	12 / 13		10.0	↓	↓	↓			
							HSA TO 8'			
							SPILT SPOON TO 10'		FILL TO ≈ 5'?	
							(TOTAL OF 5)			
									TO LAB:	
									16SB09-00	0900
									16SB09-06	0920

REMARKS ATM (FILLING)

BORING 16SB09

PAGE 1 OF 1

*See Legend on Back

BORING LOG

HALLIBURTON NU:

PROJECT Nws. Earle
BORING NO. 16-SB-10
PROJECT NO. 5803
DATE 7-08-95
DRILLER JLA. Drilling
ELEVATION
FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		10 / 8			-	Brown	Silty Fine to med. grained sand	SM	moist 10-15 ppm
1245	2.0	6 / 6	18/24		-	olive gray	Black Sandy Cinders (10ppm) Silty F-M Grained Sand		Diesel/petrol. odors
S-2 @		7 / 10			-	olive gray	Silty Fine to medium	SM	moist to wet
1250	4.0	12 / 11	20/24		-		grained sand		petrol. odors (15 ppm)
S-3 @		5 / 5			-	olive gray	(Some pebbles)	SM	moist to wet
1254	6.0	5 / 5	23/24		-	~~Green~~			HNU: 3 ppm
S-4 @		4 / 4			-	Green	Clayey F-M grained Sand	SC	Saturated
1300	8.0	5 / 4	24/24		-	Green	Clayey silty F-M.G. Sand	SC	HNU = 10 ppm
									Collected:
									16SB10-00
									16SB10-04

REMARKS CME
3" x 24" Splitspoon Sample barrels
140 lb hammer / 30"

16SB-10
BORING

PAGE 1 OF 1

* See Legend on Back

BORING LOG

HALLIBURTON NU.

PROJECT NWS-Earle
BORING NO. 16 SB 11
PROJECT NO. 5803
DATE 7-08-95
DRILLER JCA Drilling
ELEVATION
FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
	1.0						Concrete Pad		Auger thru.
S-1 @		9 / 9			–	Olive brown	Silty Fine to medium	SM	HNU = 2.0 ppm
0932	3.0	8 / 13	20/24		–		grained Sand-Some pebbles		moist
S-2 @		23 / 18			–	Yellow Brown	Silty Fine grained Sand	SM	HNU = 1.8 ppm
0937	5.0	19 / 15	23/24		–	Gray Brn.	1"-thick burnt wood chunk Silty F.G. Sand		moist
S-3 @		5 / 5			–	Gray Brown	↓	SM	HNU = 1.6 ppm
0940	7.0	4 / 6	22/24		–	Olive Brown	Silty F-M Grained Sand		1" Ø Subround pebbles
S-4 @		9 / 9			–	Olive Brown	↓	SM	moist to wet
0950	9.0	8 / 6	4/24		–		↓		No HNU.
S-5 @		4 / 3			–	Green	Silty F-M Grained Sand	SM	wet HNU = 1.6 ppm
0955	11.0	4 / 5	23/24	▼ 10'	–	Olive Brown	↓		saturated 16SB11-09

REMARKS CME
3" x 24" Splitspoon sample barrells
140 lb hammer / 30"

BORING 16SB11

PAGE 1 OF 1

* See Legend on Back

BORING LOG

HALLIBURTON NU:

PROJECT NWS - Earle
BORING NO. 16-SB-12
PROJECT NO. 5803
DATE 7-09-95
DRILLER JLA Drilling
ELEVATION
FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		4 / 5			–	Brown	Silty Fine to medium	SM	moist
1110	2.0	6 / 8	22/24		–		grained Sand (some pebbles)		NO Hnu.
S-2 @		8 / 10			–	Brown		SM	moist
1114	4.0	12 / 13	23/24		–				NO Hnu.
S-3 @		5 / 5			–	Brown		SM	moist
1119	6.0	6 / 5	21/24		–	Orange Brown	(Fewer pebbles)		NO Hnu.
S-4 @		5 / 2			–	Orange Brown		SM	moist to wet
1124	8.0	2 / 3	18/24		–				Hnu = 12 ppm (Petrol odors)
S-5 @		6 / 6		▼	–	Orange Brown		SM	Saturated Hnu = 14 ppm
1127	10.0	6 / 6	24/24		–		▼		Petrol odors
									Collected:
									16 SB 12-06
									16 SB 12-02

REMARKS CME
3"x24" Splitspoon Sample barrels
140 lb hammer / 30"

16-SB-12
BORING

PAGE 1 OF 1

* See Legend on back

BORING LOG

HALLIBURTON NU:

PROJECT NWS-Earle
BORING NO. 16-SB-13
PROJECT NO. 5803
DATE 7-09-95
DRILLER JCA Drilling
ELEVATION
FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		5 / 5			–	Brown	Silty Fine to medium	SM	moist
1028	2.0	10 / 12	21/24		–		grained Sand (subround pebbles)		NO Hnu.
S-2 @		10 / 19			–	Brown	↓	SM	moist
1031	4.0	14 / 16	23/24		–	Orange Brown	↓ (1" Thick wood chips)		NO Hnu.
S-3 @		7 / 6			–	Orange Brown	Silty Fine to medium	SM	moist
1040	6.0	6 / 7	23/24		–		Sand (some pebbles)		NO Hnu.
S-4 @		4 / 4			–	Orange brown	↓	SM	NO Hnu
1044	8.0	3 / 4	23/24		–	Brown	↓		wet
S-5 @		4 / 5		▼	–	Olive Brn.	↓	SM	Saturated Petrol. odors
1048	10.0	5 / 4	24/24		–	Orange Brn.	↓ (Roots wood)		Hnu = 16 ppm

Collected:
16SB13-06 &
16SB13-02

REMARKS CME
3" X 24" Splitspoon Sample barrels
140 lb hammer / 30"

16SB-13
BORING

PAGE 1 OF 1

* See Legend on back

BORING LOG

HALLIBURTON NU:

PROJECT NWS - Earle
BORING NO. 16-SB-14
PROJECT NO. 5803
DATE 7-08-95
DRILLER JCA Drilling
ELEVATION
FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		7 / 7			–	Orange Brown	Clayey F-M sand (pebbles)	SC	moist
1455	2.0	8 / 8	18/24		–	Dark Brown	Silty F-M sand (1" ø pebb)	SM	NO Hnu.
S-2 @		7 / 9			–	Dark Brown	} 5" - thick ↓		wet Hnu: 5ppm
1500	4.0	9 / 6	23/24		–	Orange Brown	Silty Fine to medium Sand	SM	Saturated (perched water)
S-3 @		14 / 6			–	Orange Brn.	Clayey F-M sand (some pebbs)	SC	moist
1505	6.0	6 / 10	24/24		–	olive	Black sandy cinders Sandy Clay with roots		NO Hnu.
S-4 @		3 / 5			–	Olive	Silty Fine to medium	SM	wet
1510	8.0	5 / 6	24/24		–		grained Sand (some clay)		Hnu = 2.0 ppm
S-5 @		3 / 3		▼ 8'	–	Drk. Olive	↓	SM	Saturated
1517	10.0	4 / 5	24/24		–	Green	↓		Hnu = 1.4 ppm

Collected: 16-SB14-04 MS/MSD taken here (4'-8')

REMARKS CME
3" x 24" Split spoon sample barrels
140 lb hammer / 30"

16SB-14
BORING

PAGE 1 OF 1

* See Legend on Back

BORING LOG

HALLIBURTON NU:

PROJECT NWS- Earle
BORING NO. 16-SB-15
PROJECT NO. 5803
DATE 7-08-95
DRILLER JCA Drillers
ELEVATION
FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE,TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		17 / 15			-	Brown	Silty F-m sand w/ Grtz. Frags.	SM	Dry
1329	2.0	15 / 6	16/24		-	grayish olive brn.	Silty F-M Sand		1.0 ppm
S-2 @		16 / 14			-	Grayish blk.	Clayey Silt - Some Sand	SC	moist
1335	4.0	14 / 14	18/24		-		pieces of wood sticks		1.0 ppm
S-3 @		4 / 4			-	Olive Brown	↓	SC	moist to wet
1340	6.0	8 / 10	23/24		-		Silty Clayey F-M Sand (pebbles)	SM SC	No Hnu.
S-4 @		7 / 8			-	olive Brn.	↓		moist to wet
1345	8.0	10 / 10	18/24		-		↓	SM SC	Hnu = 0.8 ppm
S-5 @		9 / 9		▽ = 8.5	-	Olive Brn.	↓		Hnu = 1.0 ppm.
1350	10.0	7 / 7	23/24		-		↓	SM SC	Saturated
									Collected: 16SB15-06

REMARKS CME
3"x 24" Splitspoon Sample barrels
140 lb hammer / 30"

16SB15
BORING

PAGE 1 OF 1

* See Legend on back

BORING LOG

HALLIBURTON NUS

PROJECT NWS- Earle
BORING NO. 16-SB-16
PROJECT NO. 5803
DATE 7-08-95
DRILLER JLA - Drilling
ELEVATION
FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @	1.0	X / X			-		Asphalt / crusted rock		Auger Through
1420	2.0	19 / 14	12/12		-	Olive Brown	Silty F-M Grained Sand	SM	moist - No Hnu
S-2 @		9 / 7			-	Olive Brown	Silty Fine to medium		moist Hnu=1.0 ppm
1423	4.0	9 / 9	23/24		-	Gray	grained Sand	SM	petrol. odors
S-3 @		7 / 6			-	Olive Brown	↓ (Some pebbles)		Hnu: 1.0 ppm
1426	6.0	4 / 5	24/24		-		Clayey F-M Sand	SC	moist to wet
S-4 @		6 / 5			-	Olive Brown	Clayey Silty Fine to	SC	wet
1435	8.0	5 / 5	22/24		-		medium grained Sand		No Hnu.
S-5 @		4 / 2		▼ 8'	-	Green	↓	SC	Saturated
1442	10.0	2 / 3	24/24		-		↓		No Hnu.
									Collected:
									16SB16-06
									also Duplicate
									taken here.

REMARKS CME
3" x 24" Splitspoon Sample barrels
140 lb hammer / 30"

16SB16
BORING

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: 16SB17
PROJECT NO.: 5803 DATE: 7/8/95 DRILLER: JCA
ELEVATION: FIELD GEOLOGIST: CONT!
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY / SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HSP HNU PPM
S-1 @ 1245	0.0	4/4 8/12	1.7/2.0		M DENSE	OLIVE BRN	SILTY F TO C SAND - TR F. GRAVEL	SW	WET - STANDING WATER COULD BE FILL	.4
S-2 1250	2.0	12/11 10/8	1.6/2.0		M DENSE	BRN GRAY		SW	0 HNU ON SAMPLE 1 PPM ON SAMPLE S-2 - MOIST TO WET DUE TO LOW AREA	.8
S-3 1300	4.0	5/5 7/12	1.8/2.0	6.0	M DENSE	OLIVE BRN		SW	MOIST → WET >20 PPM ON SAMP. FUEL ODOR	30
S-4 1315	6.0	10/12 10/9	1.7/2.0		M DENSE		SILTY FINE TO M SAND	SM/SP	MOIST W/ODOR 15 PPM ON SAMPLE	40
S-5 1325	8.0	6/6 6/7	1.8/2.0	10.0 BGM	M DENSE				WET AT ≈ 8' W/ODOR	40
							HSA TO 8			
							SPLITSPOONS TO 10' (5 TOTAL)		TOOK FOR LAB: 16SB17-04 16SB17-06 ALSO DUP DUP-08	

REMARKS ATV (FAILING)

BORING 16SB17

PAGE 1 OF 1

*See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: 16SB18
PROJECT NO.: 5803 DATE: 7/8/95 DRILLER: JCA
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK SR. OR USCS	REMARKS	(HSP) HNU PPM
S-1	0.0	6/8	1.5/2.0		M DENSE	BLACK	SLAG AND SAND	SW	MOIST TO WET	3
1345	2.0	12/14		2.0	↓	↓	↓ (FILL)		1 PPM ON SAMPL	
S-2	⊙	11/13	1.7/2.0		M DENSE	YELLOW BRN	SILTY F TO M SAND-TR	SP/SM	MOIST 9 PPM ON SAMPL	30
1350	4.0	8/8			↓	OLIVE	↓ COARSE SAND		W/ODOR	
S-3		12/11	1.6/2.0		M DENSE	BRN	F TO C SAND-TR F	SW	MOIST → WET	30
1357	6.0	10/10			↓	↓	↓ GRAVEL		15 PPM ON SAMPLE POOR REC.	
S-4	⊙	6/7	1.6/2.0		M DENSE	BRN		SW	MOIST → WET	40
1405	8.0	10/11			↓	↓	↓		W/ODOR 10 PPM ON SAMPLE	
S-5		8/6	1.5/2.0		M DENSE	OLIVE BRN	SILTY F TO M SAND	SP/SM	WET	40
	10.0	8/11		10.0						
				BOTM						
							HSA TO		TO LAB:	
							SPLIT SPOONS TO 10'		16SB18-02	1350
							TOTAL OF 5		16SB18-06	1405

REMARKS ATV (FAILING RIG)

BORING 16SB18

PAGE 1 OF 1

*See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: 16SB19
PROJECT NO.: 5803 — DATE: 7/8/95 — DRILLER: JCA
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (Ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	H.SP HNU PPM
S-1	0.0	4/6	1.5/2.0		M DENSE	GRAY	SILTY F TO C SAND - TR	SW	4" ASPHALT MOIST	1
1055	2.0	8/12			↓	↓	F GRAVEL		SUBROUND GR.	
S-2		10/11	1.8/2.0		M DENSE	OLIVE GRAY	↓	SW	MOIST TO WET	4
1100	4.0	10/9			↓	↓	↓		3 PPM ON SAMPLE	
S-3		9/8	1.8/2.0		M DENSE	OLIVE GRAY	↓	SW	MOIST → WET	7
1108	6.0	7/8		6.0	↓	↓	↓		3 PPM ON SAMPLE	
S-4	⊙	4/6	1.8/2.0		M DENSE	OLIVE BRN	SILTY F TO M SAND	SM/	MOIST → WET	50
1112	8.0	7/9			↓	↓	↓	SP	FUEL ODOR >20 ON SAMPLE	
S-5	⊙	8/8	1.7/2.0		M DENSE	↓	SILTY F TO M SAND	SM/	MOIST → WET >20 ON SAMPLE	80
1123	10.0	12/14		10.0	↓	↓	↓	SP	WT ≈ 9' ±	
				BOTM						
							HSA TO 8'		SENT TO LAB: ⊙	
							SS TO 10' (TOTAL 5)		16SB19-06	
									16SB19-08	

REMARKS: ATV (FAILING) 1050 HRS (Auger thru Asphalt)

BORING 16SB19

PAGE 1 OF 1

*See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: 16SB20
PROJECT NO.: 5803 DATE: 7/8/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	H SP HNU PPM
S-1	0.0	4/6	1.7/2.0		M DENSE	BRN GRAY	SILTY SAND - TR ROOTS	SM	MOIST → WET	30
0950	2.0	10/10		2.0	↓	↓	↓		FUEL ODOR	
S-2	⊙	9/11	1.8/2.0		M DENSE	YELLOW BRN	SILTY SAND F TO COARSE	SW	MOIST → WET	90
0955	4.0	10/12			↓	↓	↓ TR F GRAVEL		FUEL ODOR	
S-3		8/10	1.8/2.0		M DENSE	BRN	SILTY F TO COARSE SAND		MOIST → WET	60
1000	6.0	11/14		6.0	↓	↓	↓ TR GRAVEL		FUEL ODOR. SUBROUND GRAVEL	
S-4	⊙	8/11	1.9/2.0		M DENSE	OLIVE BRN	SILTY FINE SAND	SM	MOIST → WET	50
1010	8.0	10/10			↓		↓	/SP		
S-5		6/7	1.8/2.0		M DENSE		SILTY FINE SAND	SM	WET	
1025	10.0	7/8		10.0	↓	↓	↓	/SP		
				BOTM						
							HSA TO 8'			
							5 SPLIT SPOONS			
									WATER ≈ 8' ±	
								⊙	SENT TO LAB	
									S-2 (16SB20-02)	
									S-4 (16SB20-06)	

REMARKS ATV RIG (FAILING)

BORING 16SB20

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: 17-MW-05
PROJECT NO.: 5903 — DATE: 7/12/95 — DRILLER: Steve Berger
ELEVATION: — FIELD GEOLOGIST: Teresa Sawyer
WATER LEVEL DATA: —
(Date, Time & Conditions) —

	SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
1415	SS S-1	0	3 3	12"		loose	brown	damp SILTY SAND w/roots	MH		0
	↓	2	3 3	↓	1 2	loose	orange	some - micaceous			
					3						
					4						
					5						
					6						
1425	SS S-2	6	2 2	17	7	soft	black orange	SANDY CLAY - WET	CL		0
	↓	8	2 4	↓	8	MED STIFF	orange gray	SANDY CLAY			
1430	SS S-3	8	2 2	16	9 ▼	SOFT	↓	↓			0
	↓	10	3 3	↓	10	↓	gray orange	mixed lenses of SAND + CLAY	SC	SATURATED	
					11						
					12						
					13						
					14						
					15						
					16						
1445	SS S-4	17	3 3	19	17 18	loose	Gray	f.g. SAND w/small clay	SC		0
		19	3 5	↓	19			lenses			
					20						
								TD = 17' BLS			

REMARKS: CME 55 Rig - 4 1/4" ID Hollow Stem Augers

BORING 17-MW-05

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: MW19-07
PROJECT NO.: 5803 — DATE: 6/27/95 — DRILLER: JC ANDERSON
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA: —
(Date, Time & Conditions) —

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	4 / 5	1.8/2.0		M DENSE	BRN TO GRAY	SILTY SAND - TR GRAVEL	SM	MOIST	0
1305	2.0	5 / 6					TR ROOTS	SP	GRAVEL IN TOP 1 FOOT OF S-1	
	5.0					MOTTLD YELLOW BRN				
S-2		14 / 11	1.9/2.0		M DENSE		SILTY SAND TO	SM		
1315	7.0	8 / 7		6.5 / 7.0	M STIFF	TO TAN	SANDY CLAY / CLAYEY	SP	MOIST	0
							SAND	SC	MICACEOUS	
									LAST 6" CLAYEY SEAM.	
	10.0					TAN YELLOW BRN				
S-3		[illegible]	1.7/2.0		M DENSE		SILTY SAND / SANDY SILT	SM	MOIST → WET	
1320	12.0	[illegible]					TR CLAY	ML	WET @ 11' (WT) ±	
									MICACEOUS	
	15.0					OLIVE ORANGE BRN				
S-4		6 / 7	1.8/2.0		M DENSE		SILTY F TO M SAND - TR	SW	WET	0
1340	17.0	8 / 8					CRS SAND		MICACEOUS	
									TR GLAUCONITE	
	19.0								BECOMES DARKER GREEN ≈ 18' ±	
S-5		[illegible] / 12	1.6/2.0	20.0'	DENSE	GREEN	GLAUCONITIC SAND	SW	WET 10-20	
	21.0	7 / [illegible]					F TO C.		SAND 7-20	
							[illegible] 20'		ROCK 5-7'	
							TOOK 3 SP[illegible]			
							TO CLEAN [illegible]			
							BOTTOM @ 20' w/			

REMARKS: ATV RIG (FAILING) [illegible] -IRS — NO CHEM SAMPLE HERE.

BORING MW19-07

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: MW23-1
PROJECT NO.: 5803 — DATE: 7/7/95 — DRILLER: JC ANDERSON
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA: —
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (FT.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY/SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, FT.)	MATERIAL DESCRIPTION* SOIL DENSITY/CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	6/8	1.5/2.0		M DENSE	YELLOW BRN	F TO C SAND	SW	MOIST	.2
1300	2.0	8/9							COULD BE NAT PLACED AS FILL	
S-2		2/2	1.7/2.0		V LOOSE			SW	NEAR GROUND CABLE.	.1
1315	4.0	2/2		4.0						
S-3	⊙	2/3	1.8/2.0		V LOOSE	OLIVE	SILTY F TO M SAND	SM/SP	MOIST - NAT.	.2
1325	6.0	2/2				OLIVE			SENT 23SB01-04	
S-4		3/3	1.7/2.0		LOOSE	ORANG BRN		SM/SP	MOIST	.2
1330	8.0	4/6								
S-5		4/7	1.7/2.0		M DENSE				SAME AS ABV.	.2
1335	10.0	6/8								
S-6		8/9	1.8/2.0		M DENSE	ORANG BRN	F TO M SAND	SM/SP	MOIST	.3
1345	12.0	10/10								
S-7		7/8	2.0/2.0		M DENSE				SAME AS S-6	.3
1400	14.0	9/13								
S-8		7/7	1.8/2.0		M DENSE			SM/SP	MOIST	.2
1415	16.0	8/9								
S-9	⊙	8/10	1.7/2.0		M DENSE			SM/SP	SET WELL @ 17-27 SAND 27-15 BENT 15-12	.2
1430	18.0	11/14								
S-10		7/11	1.6/2.0		M DENSE		FINE TO MED SAND	SM/SP	MOIST → WET @ 19'±	.2
1440	20.0	14/14							23SB01-16	
				25.0						
S-11	25.0	12/11			DENSE	GRAY GREEN	[illegible] F-M SAND	SP	WET	
	27.0	16/18								

REMARKS: ATV 27.0 (FAILING) ALSO BORING 23SB01
⊙ CHEM SAMPLE
LAB SEF [illegible] DATE

BORING MW23-1
PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: MW23-2
PROJECT NO.: 5803 — DATE: 7/7/95 — DRILLER: JC ANDERSON
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA: —
(Date, Time & Conditions) —

SAMPLE NO. & TYPE	DEPTH (ft) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HSP HNU PPM
S-1	0.0	3/3	1.8/2.0		M DENSE	BRN	SILTY F TO M SAND	SP	MOIST - WET	1
0822	2.0	9/11			↓	↓	↓ COARSE SAND		TOOK 23SB02-02	
S-2	⊙	12/9	1.7/2.0	4.0	M DENSE	YELLOW BRN	SILTY SAND/CLAYEY SILT	ML	BASED ON PERCHED MOIST → WET H2O	1
0830	4.0	9/10			↓	OLIVE	↓	/SM	COULD BE FINE TO [illegible]	
S-3		5/8	1.6/2.0		M DENSE	ORANG BRN	SILTY FINE TO M SAND	SP	MOIST	.8
0835	6.0	9/13			↓			/SM		
S-4		7/11	1.8/2.0		M DENSE				MOIST - SAME AS	.4
0840	8.0	11/14			↓				S-3	
S-5		12/15	1.7/2.0		M DENSE			SP	MOIST - SAME AS	0
0900	10.0	19/8			↓	ORANG			S-3	
S-6		8/11	1.8/2.0		M DENSE	OLIVE BRN		SP	MOIST - SIMILAR	1
0910	12.0	12/13		12.0		OLIVE	↓	/SM	TO S-3 - MORE OLIVE IN COLOR	
S-7		8/9	1.7/2.0		M DENSE	ORANG BRN	FINE TO COARSE SAND	SW	MOIST	1
0920	14.0	10/9		14.0	↓		↓			
S-8		13/15	1.8/2.0		DENSE		FINE TO MED SAND	SP	MOIST DIR. ABOVE WT	1
0930	16.0	17/19			↓	↓			TOOK 23SB02-16	
S-9	⊙	12/11	1.9/2.0		M DENSE	ORANG BRN		SP	MOIST	.4
0940	18.0	10/12			↓	↓	↓			
S-10		7/9	1.8/2.0		M DENSE	OLIVE	SILTY FINE TO C SAND	SW	WET WT ≈ 18'	.6
0955	20.0	10/12								
	24.0								⊙ SENT TO LAB	
S-11		7/8	1.9/2.0	25.0	↓	↓	↓ GLAUCONITIC			0
	26.0	12/22		26.0	DENSE	OLIVE	SILTY F TO M SAND	SP	WET	

REMARKS: ATV RIG — 23SB02 - Sample
HSA TO 26' — SET SCR 16' → 26' — Desig.
SAND 26 → 14
BENT 14 → 11

BORING MW23-2

PAGE 1 OF 1

* See Legend on Back

BORING LOG

HALLIBURTON NUS

PROJECT: NWS - Earle
BORING NO.: 23-MW-03
PROJECT NO.: 5803
DATE: 7-07-95
DRILLER: JCA Drilling
ELEVATION:
FIELD GEOLOGIST: Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		11 / 9			–	Brown	Silty Fine grained Sand (Debbl)	SM	HNU = 0.6 ppm
0845	2.0	8 / 7	16/24		–	Olive Brown	Clayey Fine grained Sand	SC	dry to damp
S-2 @		8 / 7			–	Olive Brown	Clayey fine grained sand	SC	HNU = 0.4 ppm
0850	4.0	7 / 8	19/24		–		Some silt (orange brown bands)		Damp
S-3 @		8 / 9			–	Olive Brown	↓	SC	NO HNU
0853	6.0	10 / 14	22/24		–		↓		Damp.
S-4 @		14 / 7			–	Olive Brown	↓		Collect 23-SB03-06
0903	8.0	8 / 8	21/24		–		(Some med. grained Sand)	SC	No HNU.
S-5 @		8 / 7			–	Olive Brown	Clayey fine grained Sand		No HNU
0906	10.0	6 / 6	19/24		–		(Some med-coarse grains)	SC	moist
S-6 @		8 / 8			–	Olive Brown	↓		No HNU
0910	12.0	8 / 12	16/24		–		↓	SC	moist
S-7 @		6 / 6			–	Olive Brown	↓		NO HNU
0920	14.0	7 / 10	18/24		–		(Dark brn. Bands)	SC	moist
S-8 @		7 / 7			–	Olive Brn.	↓		collect 23SB03-14
0928	16.0	7 / 8	21/24		–	grayish olive brn.	Clayey F.G. Sand (more Clay)	SC	NO HNU moist to wet
S-9 @		7 / 7			–	grayish-olive-brown	Silty fine to med-	SM	Saturated
0935	18.0	10 / 11	24/24		–		lum grained Sand	SM	NO HNU
							Auger Down		
							↓		
							↓		
							↓		
							↓		
S-10 @	24.	8 / 8			–	grayish olive Brown	Silty fine to med. gr. Sand	SM	Saturated
1010	26.0	9 / 10	23/24		–	Blue-green	Silty F.M.G Sand (some Clay)	SM	NO HNU

REMARKS: CME
3" x 24" split spoon sample barrels
140 lb hammer – 30" drop

BORING: 23-MW-03

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: 26SB01
PROJECT NO.: 5803 — DATE: 6/26/95 — DRILLER:
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY/SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HSP HNU PPM
S-1	0.0	4/5	1.8/2.0		MDENSE	BRN	SILTY SAND - TR COARSE	SM	TR ROOTS	0
1310	2.0	6/6			↓	↓	SAND - TR F GRAVEL	/SP	MOIST	
S-2	•	10/13	1.9/2.0		DENSE	YELLOW BRN	SILTY SAND	SM	MOIST - SOME	.5
1315	4.0	14/18		4.0	↓	↓	↓	/SP	SL. DARK STAINS NOTICED	
S-3		10/12	1.7/2.0		DENSE	YELLOW BRN	SILTY SAND	SM	MOIST - VERY	0
1335	6.0	17/17			↓		↓	/SP	CLEAN LOOKING SAMPLE (6-8)	
S-4		20/21			V. DENSE		SILTY SAND			0
1345	8.0	22/46			↓		↓			
S-5		18/16	1.8/2.0		DENSE		SILTY F TO C SAND	SW	WET	.5
	10.0	20/21		BOT 10'	↓	↓	↓		WATER @ 9'± NO ODORS	
									S-5 LOOKS CLEAN	
									WILL TAKE S-2 BASED ON	
							HSA TO 8'		VISUAL AND SLIGHT HNU	
							BOTM 10' W/3" SPOON		READING	
									TOOK: •	
									26SB01-02 @ 1315 HRS	
									POSSIBLY FILL TO AT LEAST 4'	

REMARKS

BORING 26SB01

PAGE 1 OF 1

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: 26SB02
PROJECT NO.: 5803 — DATE: 6/26/95 — DRILLER: JC ANDERSON
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	H.SP HNU PPM
S-1	0.0	3/6	1.7/2.0		M DENSE	BRN	SILTY SAND - TR ROOTS	SM/SP	MOIST	0
1425	2.0	10/12			↓	↓	↓			
S-2		10/12	1.8/2.0		DENSE	↓	SILTY SAND - TR ROOTS	SM	MOIST	1
1435	4.0	18/23		4.0	↓	YELLOW	CLAY, BRICK FR.		CREM (FILL) SL. ODOR	
S-3	•	8/5	1.7/2.0		M DENSE	BRN	SILTY SAND	SM/SP	SWEET SMELL ? MOIST	15
1445	6.0	12/9			↓	↓	↓		LOOKS "CLEAN" AS COMPARED TO	
S-4		9/17	1.8/2.0		DENSE	↓	SILTY SAND - SOME		S-2 (NAT) MOIST	8
1500	8.0	23/25			↓	↓	C. SAND F GR.		COARSER MAT. UPPER 1' OF S-4	
S-5		10/17	1.9/2.0		DENSE	↓	SILTY SAND - SOME	SP/SW	LOOKS CLEAN.	2
1510	10.0	23/25		10.0	↓	↓	↓ COARSE SAND		WET S-5 WET	
									WT 29'	
							HSA TO 8'			
							BOTTOM 6' (3' SPOON)			
									TOOK:	
									26SB02-04	
									BASED ON HNu	
									HIT IN H.SP OF ZIP LOCK - HAD	
									SL-ODOR BUT NOT AS STRONG	
									AS S-2 - BUT SENT HI HIT	
									TO LAB.	
									≈ 20 min before H.SP Readings	
									All Bags.	

REMARKS: ATV RIG - FAILING. SET UP 1420 HRS

BORING 26SB02

PAGE 1 OF 1

*See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: 26SB03
PROJECT NO.: 5803 — DATE: 6/26/95 — DRILLER: JC ANDERSON
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA: —
(Date, Time & Conditions) —

SAMPLE NO. & TYPE	DEPTH (Ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY / SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, Ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS HSPACE	HNU PPM
S-1	0.0	3/5	1.6/2.0		M DENSE	BRN TO	SILTY SAND - TR ROOTS	SM/SP	MOIST 1	0
1000	2.0	7/8			↓	YELLOW BRN	↓ TR COARSE GR			
S-2		9/10	1.8/2.0		M DENSE	↓	SILTY F TO M SAND		MOIST -1	.2
1005	4.0	10/14			↓	TAN	↓			
S-3	•	8/13	1.7/2.0		DENSE	YELLOW BRN	SILTY FINE SAND	SM	MOIST 1.8	0
1015	6.0	21/23			↓		TO COARSE SAND	SW	COARSE SAND IN LOWER 1/2 OF S-3	
S-4	•	21/23	1.8/2.0		DENSE		FINE TO COARSE SAND	SW	WET LAST 6" 1	0
1020	8.0	24/25		8.0	↓	↓	↓		≈ 7.5 WATER	
							HSA TO 6'			
							BOTTOM @ 8'			
									TOOK	
									26SB03-04	
									26SB03-06	

REMARKS ATV RIG (FAILED)

BORING 26SB03

PAGE 1 OF

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: 26SB04
PROJECT NO.: 5803 DATE: 6/26/95 DRILLER: JCA
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA :
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS H SP	HNU PPM
S-1	0.0	3/3	1.8/2.0		M DENSE	BRN	SILTY SAND - TR ROOTS	SM/SP	MOIST 1	.2
0925	2.0	6/6			↓	↓	↓			
S-2	•	3/5	1.7/2.0		M DENSE	YELLOW BRN	SILTY SAND - TR COARSE	SM/SP	MOIST. 1	0
0930	4.0	6/8			↓	TAN	↓ SAND			
S-3		10/12	1.9/2.0		DENSE	YELLOW BRN	SILTY FINE SAND	SM/SP	MOIST 0	0
0940	6.0	16/18			↓		↓			
S-4	•	11/12	1.7/2.0		DENSE		SILTY F TO C SAND	SM	WET 1	0
0945	8.0	15/18		8.0	↓	↓	↓		WATER ≈ 7'±	
							HSA TO 6'			
							BOTM @ 8'			
									TOOK	
									26SB04-02	
									26SB04-03	

REMARKS ATV RIG (FAILING)

BORING 26SB04

PAGE 1 OF 1

* See Legend on Back

BORING LOG

HALLIBURTON NUS

PROJECT NWS - EARLE
BORING NO. MW-26-05
PROJECT NO. 5803
DATE 7-06-95
DRILLER JCA Drillers
ELEVATION
FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS) 7-6-95, 1340 - 1430, Sunny, warm 85° humid

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		7 / 5			med. Dense	light Brown	Silty Fine grained Sand	SM	Dry
1344	2.0	5 / 6	18/24		Med. Dense		(some pebbles)		No Hnu
S-2 @		5 / 6			med. Dense	orange Brown	Silty Fine grained Sand	SM	Dry
1346	4.0	6 / 7	20/24		med. Dense				No Hnu
S-3 @		5 / 7			Med. Dense	orange Brown	Silty fine grained Sand	SM	No Hnu
1348	6.0	7 / 9	20/24		med. Dense		Some Subround pebbles		moist
S-4 @		8 / 13			med. Dense	orange Brown	(some silt) med. to coarse Grained Sand	SP	No Hnu
1350	8.0	14 / 12	20/24		med. Dense		2"-thick silty F.G. Sand lens med. to coarse grained sand		moist
S-5 @		9 / 10			med Dense	orange Brown	Silty Fine grained Sand	SM	No Hnu
1400	10.0	12 / 14	17/24		med Dense		with subround pebbles (bands)		moist
S-6 @		10 / 10			Med. Dense	light Brown	3"-dark brn. clayey sand med. to coarse grained sand		(some silt) No Hnu
1405	12.0	8 / 6	18/24		med. Dense	orange brown	Silty Fine grained Sand	SM	wet
S-7 @		7 / 7		▼ 12'	med. Dense	orange Brown	Silty Fine grained Sand		Saturated
1410	14.0	8 / 5	20/24		med. Dense		(micaceous) Trace of coarse grains	SM	No Hnu
							(2"-gray silty F.G Sand lens)		
							Auger Down		
							↓		
	19.0								
S-8 @		12 / 14				orange Brown	Silty Fine grained -	SM	Saturated
1425	21.0	13 / 11	21/24				Sand		No Hnu

REMARKS CME 140 lb hammer / 30"
2"-dia x 24" Splitspoon sample barrels
No Chemical Samples Collected

MW-26-05
BORING

PAGE 1 OF 1

* See Legend on back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE — BORING NO.: MW26-06
PROJECT NO.: 5803 — DATE: 7-6-95 — DRILLER: JC ANDERSON
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA: —
(Date, Time & Conditions) —

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY/SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	2/3	1.5/2.0		LOOSE	BRN	SILTY F TO M SAND -	SP/SW	MOIST	0
1120	2.0	3/4			↓	↓	TR C. SAND TR →		FINE GRAVEL	
S-2		2/3	1.7/2.0		M DENSE	YELLOW BRN	SILTY F TO M SAND	SP/SM	MOIST → WET	0
1125	4.0	4/14			↓	↓	↓		WET ZONE @ 3'	
S-3		15/20	1.6/2.0		DENSE	YELLOW BRN	SILTY F TO C SAND - TR	SW	MOIST	0
131	6.0	24/18			↓	TAN	↓ F. GRAVEL		SUBROUND GR.	
S-4		10/10	1.8/2.0	7.0	M DENSE	GRAY TO	SILTY SAND TO	SM	(QUARTZ)	0
	8.0	12/13		8.0	↓	TAN BRN	FINE TO MED SAND ↓	SP	MOIST → WET, WET AT ≈ 7.5'	
S-5		10/10	1.7/2.0		M DENSE	GRAY TO	SILTY F. SAND - TR C.	SM	WET	0
	10.0	5/7			↓	ORANGE BRN	SAND	/SP	COARSE SAND IN UPPER GRAY MAT'L	
	14.0									
S-6		12/11	1.8/2.0				↓			
	16.0	10/9		16.0	↓	↓	SILTY FINE SAND	SM/SP	WET.	
							BOTH HSA @ 16'			
							BOTH SS @ 18'			
									SCREEN 6 TO 16	
									SAND 4 TO 16	
									BENT 0 TO 4	

REMARKS: ATV (FAILING)

BORING MW26-06

PAGE 1 OF 1

* See Legend on Back

BORING LOG

HALLIBURTON NU.

PROJECT NWS- Earle
BORING NO. 26-SB DEC95-01
PROJECT NO. 5803 CTO-231
DATE 12-5-95
DRILLER JCA Drilling
ELEVATION
FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		3 / 4				Light Brown	Silty fine grained Sand		moist
1350	2.0	5 / 5	18/24				w/ Subround pebbles		No HNU
S-2 @		7 / 10				Light Brown			moist
1354	4.0	12 / 12	21/24						No HNU
S-3 @		12 / 11				Light Brown	Silty very fine grained Sand		HNU = 0.4 ppm
1400	6.0	11 / 13	21/24			Brown			moist to wet
S-4 @		4 / 4				Gray			wet
1405	8.0	4 / 4	24/24						HNU = 3 ppm
S-5 @		4 / 5				Grayish Brown			wet HNU = 150 ppm
1410	10.0	6 / 6	24/24						Solvent odors collected:
							E.O.B.	*	26-SBDEC95-01 (8'-10')

REMARKS CME 55 Drill Rig HSA = 4.25" ID
2" x 24" Split Spoons

26-SBDEC95-01
BORING

PAGE 1 OF 1

* See Legend on Back

BORING LOG

HALLIBURTON NU.

PROJECT NWS- Earle
BORING NO. 26-SB DEC95-02
PROJECT NO. 5603 CTO-231
DATE 12-5-95
DRILLER JCA Drilling
ELEVATION
FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		5/5				Brown	Silty fine grained		moist
1420	2.0	7/7	18/24				Sand w/ pebbles (some clay)		No HNU.
S-2 @		17/21				Olive Brown	↓		moist
1423	4.0	20/23	18/24				↓		No HNU.
S-3 @		7/5				light Brown	Silty fine grained Sand		moist to wet
1428	6.0	4/6	24/24			Dark Brown	Silty fine grained Sand		HNU = 1.0 ppm
S-4 @		5/7				Gray	↓		moist to wet
1432	8.0	7/9	21/24				↓		HNU = 4 ppm
S-5 @		10/13				Gray	↓		moist to wet
1435	10.0	15/13	23/24			Yellow Brn.	↓		HNU = 3 ppm
S-6 @		13/12				Yell. Brn.	↓		wet to Saturated HNU = 6 ppm
1440	12.0	11/10	24/24	▼ 11.5			↓		collected: 26-SBDEC95-02 (10'-12')
							EOB		

REMARKS CME 55 Drill rig HSA = 4.25" ID
2" x 24" Split spoons

26-SBDEC95-02
BORING

PAGE 1 OF 1

* See Legend on Back

BORING LOG

HALLIBURTON NUS

PROJECT NWS- Earle BORING NO. 27-SB01
PROJECT NO. 5803 CTO-231 DATE 12-5-95 DRILLER JCA Drilling
ELEVATION FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
							Blue/green paint chips mixed with...		
S-1 @		5 / 7				Light Brown	Silty fine grained		Dry collected
1200	2.0	10 / 10	20/24				Sand w/ many S.R. pebbles		No HNU. 27-SB01-01 (1-2')
S-2 @		13 / 13				Light Brown	Silty fine grained		Dry-moist No HNU
1206	4.0	15 / 17	23/24				Sand w/ subround pebbles		collected 27-SB01-03 (3-4')
							Auger Down		
	10.0								
S-3 @		15 / 15				Brown	Clayey-Silty fine		No HNU saturated
1215	12.0	17 / 19	24/24	▼ 11'			grained Sand		collected 27-SB01-10 (10'-12')

REMARKS CME 55 Drill rig HSA - 4.25" ID
3" x 24" long Splitspoons

27-SB01
BORING

PAGE 1 OF 1

* See Legend on back

BORING LOG

HALLIBURTON NUS

PROJECT NWS- Earle BORING NO. 27-SB02
PROJECT NO. 5803 CTO-231 DATE 12-5-95 DRILLER JCA Drilling
ELEVATION FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		8 / 8				Light Brown	Silty fine grained		moist *27-SB02-01
1115	2.0	10 / 11	14/24				Sand w/ Subround pebbles		No Hnu. (1'-2')
S-2 @		12 / 13				Light Brown			moist to wet No Hnu
1120	4.0	13 / 15	24/24						collected: * 27-SB02-03 (3'-4')
							Auger Down		
	10.0								*collected:
S-3 @		13 / 13				Brown	Silty fine grained		wet 27-SB02-10 (10'-12')
1140	12.0	15 / 16	24/24				Sand with Subround pebbles		No Hnu
							E.O.B.		

REMARKS CME 55 Drill Rig HSA 4.25" ID
3" X 24" long Split Spoons

BORING 27-SB02

PAGE 1 OF 1

* See Legend on back

BORING LOG

HALLIBURTON NUS

PROJECT NWS-EARLE
BORING NO. 29-MW-01
PROJECT NO. 5803
DATE 7-7-95
DRILLER ICA Drilling
ELEVATION
FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS) 7-7-95, 1255 — 1345, cloudy, humid 88°

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		6 / 7			–	Brown	Fine grained Sandy Silty	SM	Dry - stiff
1257	2.0	7 / 8	18/24		–		Clay with pebbles		HNU = 0.6 ppm
S-2 @		7 / 6			–	light Brown	Silty F.G. Sand w/ pebbles	SM	Dry - HNU = 1.0 ppm
1300	4.0	4 / 7	16/24		–	Black	Sandy Cinders/Ash w/ pebbles		collect 29-SB01-02
S-3 @		8 / 8			–	Black	Cinders with one 3"-		moist
1304	6.0	6 / 4	4/24		–		wood chunk piece		NO HNU.
S-4 @		22 / 20			–	olive	Blk.- Cinders (wood chunk) Silty Fine grained Sand	SM	Wet
1314	8.0	19 / 18	24/24		–	Olive gray	Silty Fine-Med-Coarse (Pebbly) Sand	SP SM	HNU = 0.6 ppm
S-5 @		14 / 25		▼ =	–	light Brown	Silty Fine-Med-Coarse Sand	SP SM	Saturated
1323	10.0	19 / 15	22/24		–		many Coarse grains & pebbles		NO HNU
							Auger Down		
	16.0						▼		
S-6 @		15 / 16			–	orange Brown	Silty Fine grained	SM	Saturated
1345	18.0	16 / 18	24/24		–		Sand		NO HNU

REMARKS CME Drill rig
3" dia. x 24" Split spoon sample barrels
~~140 Cle~~ 140 lb hammer / 30"

29-MW-01
BORING

PAGE 1 OF 1

* See Legend on back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE — BORING NO.: MW29-2
PROJECT NO.: — DATE: 7-10-95 — DRILLER: JCA
ELEVATION: — FIELD GEOLOGIST: CONTI / SAWYER
WATER LEVEL DATA: —
(Date, Time & Conditions) —

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HSP HNU PPM
S-1	0.0	4/14	1.5/2.0		M DENSE	OLIVE	SILTY FINE SAND - TR	SM	MOIST → WET 0 PPM ON SAMPLE	0
1305	2.0	14/12			↓	GRAY	↓ F. GRAVEL	/SP		
S-2	⊙	7/7	1.6/2.0		M DENSE	BROWN	FINE TO C. SAND - TR	SW	MOIST → WET	4
1310	4.0	14/10			↓	↓	ROOTS / F. GRAVEL		0 PPM ON SAMPLE	
S-3		8/8	1.5/2.0		M DENSE	BRN GRAY	FINE TO C SAND - TR F	SW		0
1320	6.0	8/5		6.0	↓	YELLOW	GRAVEL		COULD BE FILL TO 6'±	
S-4		5/5	1.6/2.0		SOFT TO	BRN TO	SANDY CLAY TO SILTY FINE SAND - TR	SM	0 PPM ON SAMPLE MOIST → WET	0
1330	8.0	6/7			M DENSE	OLIVE	↓ ROOTS.	/SP	4" SANDY CLAY LENS	
S-5		7/11	1.7/2.0		DENSE	TAN BRN	FINE TO COARSE SAND	SW	WATER ≈ 8'/9'± WET	0
1335	10.0	14/20			↓	↓	TR FINE GRAVEL			
									TOOK:	
									29SB02-02	1310
	15.0				↓	↓	↓		FOR TPH/PCB'S 1 QT GLASS	
S-6		7/4	1.2/2.0		M DENSE	OLIVE BRN	SILTY SAND	SM	WET	
	17.0	8/11		17.0	↓	↓	↓	/SP	SET WEEK 7-17	
				BOTM					SAND 5-17	
							HSA TO 17.		BENT 3-5	
							6 SPLIT SPOON SAMPLES		CEMENT. GROUT TO SURF	
							4" SPOON F 15' TO			
							CUTTING OUT HSA.			

REMARKS: TRUCK RIG.

BORING MW29-2

PAGE 1 OF 1

* See Legend on Back

BORING LOG

HALLIBURTON NUS

PROJECT NWS - Earle
BORING NO. Q-SB02
PROJECT NO. 5803 CTO-231
DATE 12-4-95
DRILLER JCA Drilling
ELEVATION
FIELD GEOLOGIST Paul Davis
WATER LEVEL DATA
(DATE, TIME & CONDITIONS)

SAMPLE NO.	DEPTH FT.	BLOWS 6"	SAMPLE RECOVERY LENGTH	LITHOLOGY CHANGE	MATERIAL DESCRIPTION* SOIL DENSITY HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS	REMARKS
S-1 @		8 / 10				Light Brown	Silty clay w/ subround pebbles		No HNU
1415	2.0	8 / 8	22/24			Grayish Black	Silty fine grained sand		Dry to moist
S-2 @		8 / 8				Olive Green	Clayey-silty fine		HNU = 6 ppm (wet)
1420	4.0	10 / 10	23/24				grained sand	*	collected Q-SB02-02 (2'-4')
S-3 @		10 / 12				Olive Green	↓		HNU = 10 ppm (wet)
1430	6.0	13 / 13	24/24					*	collected Q-SB02-04 (4'-6')
S-4 @		11 / 13				Olive Green	↓		
1440	8.0	11 / 11	24/24			Light Brown	Silty fine grained sand (some clay)		Saturated HNU = 7 ppm
							E.O.B.		

REMARKS CME 55 drill rig HSA 4.25" ID
3" x 24" long split spoons

Q-SB02
BORING

PAGE 1 OF 1

* See Legend on back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: BG01 (B6 MW-01)
PROJECT NO.: 5803 — DATE: 6/22/95 — DRILLER: JC ANDERSON
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA: —
(Date, Time & Conditions) —

SAMPLE NO. & TYPE	DEPTH (FT.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, FT.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	2/2	1.9/2.0		LOOSE	YELLOW BRN	SILTY FINE SAND	SP	MOIST (1545)	0
1545	2.0	2/3			↓	↓	TR-F. GRAVEL-TR CRS SAND	/SM	TOOK BGSB01-00 w/	
S-2		4/5	1.8/2.0		M DENSE	OLIVE BRN	SILTY FINE SAND	SM	MOIST TROWEL 0-6"	0
1555	4.0	7/7			↓	↓	↓	/SP		
	5.0				↓	↓	↓			
S-3		7/9	1.8/2.0		M DENSE	OLIVE BRN	SILTY FINE SAND-TR	SM	TOOK BGSB01-05	
1600	7.0	9/14			↓	↓	MED SAND	/SP	(5'-7')	0
	8.0				↓	TAN YELLOW	↓		3"Ø SPOON	
S-4		5/5	1.7/2.0		M DENSE	BRN	SILTY FINE SAND-TR	SM	MOIST	0
1610	10.0	6/9			↓	TAN	MED SAND	/SP		
S-5		4/5	1.9/2.0		M DENSE	YELLOW BRN	SILTY FINE TO MED SAND	SP	MOIST	0
1620	12.0	9/11			↓	↓	↓			
	13.0				↓	↓	↓			
S-6		4/4	1.8/2.0		M DENSE		FINE SAND - TR MED	SP	MOIST	0
1635	15.0	8/6			↓	↓	SAND			
S-7		5/6	1.6/2.0		M DENSE		FINE SAND TO MED	SP	MOIST	0
1645	17.0	10/10			↓	↓	↓	/SM		
					↓	↓	↓			
					↓	↓	↓			
	20.0				↓	OLIVE	↓		WT ≈ 19/20 ±	
S-8		3/3	1.8/2.0		M DENSE	BRN	SILTY FINE SAND	SM	WET	0
1704	22.0	5/6			↓	↓	↓	/SP		
					↓	↓	↓			
					↓	↓	↓			
					↓	↓	↓			

REMARKS ATV RIG (FRUING)

BORING BG01

PAGE 1 OF 2

See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: BG01 (BGMW-01)
PROJECT NO.: 5803 DATE: 6/22/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
	25.0									
S-9		10 / 10	1.5/2.0		M DENSE	OLIVE BRN	SILTY FINE SAND	SM	WET	0
1715	27.0	8 / 13						SP		
							BOTM @ 27'			
							HSA TO 27'			
							SCREEN 17 TO 27 GS.			
							SAND 27 TO 15			
							PELLETS 12 TO 15			
							Grouted Annulus 6-23-95			

REMARKS

BORING BG01

PAGE 2 OF 2

* See Legend on Back

BORING LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: BG02 (BG MW-02)
PROJECT NO.: 5803 DATE: 6/21/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA :
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY: CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-1	0.0	1/2	1.8/2.0		M DENSE	YELLOW BRN	SILTY SAND - TR ROOTS	SM	DAMP → MOIST	0
	2.0	6/5			↓	↓	↓			
S-2		5/6	1.7/2.0		LOOSE		SILTY SAND - TR COARSE	SM	DAMP → MOIST	0
	4.0	4/6					SAND			
	5.0									
S-3	•	3/4	1.9/2.0		LOOSE		SILTY SAND	SM	TOOK BGS802-05 MOIST.	0
@ 0845	7.0	5/6							@ 0845	
	10.0					TAN				
S-4		5/5	1.5/2.0		M DENSE	YELLOW BRN	SILTY SAND - SOME CRS	SP	DAMP → MOIST	0
0905	12.0	5/7					SAND			
	13.0									
S-5		3/3	1.8/2.0		M DENSE	TAN	SILTY SAND - TR MED	SM	DAMP → MOIST	0
0915	15.0	5/7					TO COARSE	/SP	NOTE LIGHTER	
							SAND		COLOR	
	18.0									
S-6		4/5	1.9/2.0		M. DENSE	PINK TAN	FINE TO MED SAND	SP	DAMP → MOIST	0
0930	20.0	8/3					TR COARSE	/SW		
							SAND			
	22.0									
S-7		7/8	2.0/2.0		M DENSE	TAN BRN	FINE TO MED SAND	SP	MOIST	0
0948	24.0	14/14								

REMARKS 0930 START W/ ATV RIG. * TOOK THEM SAMPLE 1-4 OZ GLASS 2-8 OZ GLASS
0'-6" TAKEN PRIOR TO DRILL SET UP

BORING BG02

PAGE 1 OF 1

*See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: BG02 (BGMW-02)
PROJECT NO.: 5803 — DATE: 6/21/95 — DRILLER: JC ANDERSON
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA: —
(Date, Time & Conditions) —

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-8	25.0	8 / 8	1.6/2.0	26.0	DENSE	TAN BRN	FINE TO COARSE SAND	SW	MOIST-	0
0958	27.0	14 / 19			↓	TO ORANG	TO SILTY SAND			
	28.0			28.0	↓	BRN	↓		CHANGE IN COLOR AT 26± TO ORANG-	
S-9		6 / 12	1.6/2.0		DENSE	TAN	FINE TO COARSE SAND-	SW	BRN. LESS OF MATERIAL	0
1005	30.0	14 / 17		30.0	↓	TAN	TR F. GRAVEL		MOIST	
S-10		12 / 15	1.8/2.0		DENSE	TO YELLOW	SILTY FINE TO COARSE	SW	MOIST	0
1015	32.0	18 / 22			↓	BRN	↓ SAND			
	35.0			35.0	↓	TAN	↓			
S-11		4 / 6	1.6/2.0		M DENSE	TO YELLOW	SILTY FINE SAND	SM	MOIST	0
1030	37.0	9 / 12			↓	BRN	↓			
	38.0				↓	YELLOW	↓			
S-12		12 / 14	1.8/2.0		M DENSE	BRN	SILTY FINE SAND - TR	SM	MOIST	0
1045	40.0	16 / 16			↓	↓	↓ MED SAND			
	42.0				↓	TAN	↓			
S-13		6 / 6	1.8/2.0		M DENSE	YELLOW	SILTY SAND - TR CLAY	SM	MOIST	0
1100	44.0	7 / 7			↓	BRN	↓		V. SLIGHT TR OF	
	45.0				↓	↓	↓		CLAY - THIN 1/4" SEAM.	
S-14		10 / 10	1.7/2.0		M DENSE	YELLOW BRN	SILTY SAND	SM	MOIST	0
1115	47.0	12 / 11			↓	↓	↓			
					↓	↓	↓			

REMARKS —

BORING BG02

PAGE 2 OF 4

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: BG02 (BGMW-02)
PROJECT NO.: 5803 — DATE: 6/21/95 — DRILLER: JC ANDERSON
ELEVATION: — FIELD GEOLOGIST: CONTI
WATER LEVEL DATA: —
(Date, Time & Conditions) —

SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY/SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
S-15	50.0	6/10	1.6/2.0		M DENSE	TAN YELLOW	FINE TO COARSE SAND	SP/SW	MOIST	0
1135	52.0	10/8			↓	BRN	↓			
	53.0				↓	↓	↓			
S-16		9/11	1.7/2.0		DENSE	BRN	FINE TO COARSE SAND	SW	MOIST	0
1330	55.0	18/32			↓	↓	↓			
					↓	↓	↓			
	57.0				↓	YELLOW	↓			
S-17		10/17	1.7/2.0		DENSE	BRN	SILTY FINE TO MED SAND	SM/SP	MOIST	0
1345	59.0	18/25			↓	TO TAN BRN	↓			
	60.0				↓		↓			
S-18		9/12	1.7/2.0		M DENSE	YELLOW BRN	SILTY FINE TO MED SAND	SM	MOIST	0
1410	62.0	12/12			↓	↓	↓		LAYERING PRESENT	
					↓	↓	↓		IN SAMPLE.	
					↓	↓	↓			
	65.0				↓	↓	↓			
S-19		13/50	1.8/2.0		U DENSE	TAN BRN	FINE TO COARSE SAND	SW	MOIST → DAMP	0
1430	67.0	53/60			↓	↓	TR F GRAVEL			
					↓	↓	↓			
					↓	↓	↓			
	70.0				↓	↓	↓			
S[illegible]		12/11	1.8/2.0		M DENSE	YELLOW BRN	FINE TO COARSE SAND	SW	WET	0
16[illegible]	[illegible]2.0	13/14			↓	↓	TR F.		WATER @ 70±	
					↓	↓	GRAVEL			
					↓	↓	↓			
					↓	↓	↓			

REMARKS —

BORING BG02

PAGE 3 OF 4

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 BORING NO.: BG02 (BGMW-02)
PROJECT NO.: 5803 DATE: 6/22/95 DRILLER: JC ANDERSON
ELEVATION: FIELD GEOLOGIST: CONTI
WATER LEVEL DATA:
(Date, Time & Conditions)

	SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
6/22		75.0				M DENSE	YELLOW BRN	FINE TO COARSE SAND-TR	SW	WET	0
								FINE GRAVEL			
	S-21	79.0									
		80.0	N/A			DENSE	YELLOW BRN	SILTY F TO M SAND	SW	WET	0
								TR FINE GRAVEL			
								TR CRS SAND			
								BOTM @ 79'			
								HSA TO 79'			
								SCREEN 67-77			
								SAND 65-79			
								PELLETS			

REMARKS

BORING BG02

PAGE 4 OF 4

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: BG-SB-03(mw03)
PROJECT NO.: 5803 — DATE: 6/26/95 — DRILLER: J Dave Borrell
ELEVATION: — FIELD GEOLOGIST: Terry Sawyer
WATER LEVEL DATA:
(Date, Time & Conditions) 6/26/95, overcast humid, 75°F

	SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
								GRASS ON SURFACE			
1030	SS 01	5	9 9 10 10	22"		loose	dk orange	f.g. SILTY SAND/some pebbles	SM	Collect sample	0
		7				med dense	"	CLAYEY SAND/DAMP	SC		
1040	SS 02	8	11 16 6 7	5"		loose	dk orange	f.g. SAND + ANGULAR GRAVEL	SM		0
		10						not much recovery because of gravel - SANDSTONE /DAMP			
1052	SS 03	13	4 4 6 5	24"		loose	orange	f.g. SILTY SAND	SM		0
		15						MICA FLAKES			
		18									
1104	SS 04	18	3 4 3 6	24"		loose	orange	f.g. SILTY SAND	SM		0
		20									
1110	SS 05	20		24"							
		22									
1113	SS 06	22		18				small clay lens			
		24									
1127	SS 07	24		22							
		26									

REMARKS CME 55 Rig 4 1/4" ID Hollow Stem Augers
27 SS samples TD = 70'

BORING BG-SB03(mw-03)

PAGE 1 OF 3

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: BG-SB-03 (mw03)
PROJECT NO.: 5803 — DATE: 6/26/95 — DRILLER: J. DAVE BORRELL
ELEVATION: — FIELD GEOLOGIST: Terry Sawyer
WATER LEVEL DATA:
(Date, Time & Conditions) 6/26/95 1130, overcast, humid, 75°F

	SAMPLE NO. & TYPE	DEPTH (Ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, Ft.)	MATERIAL DESCRIPTION* SOIL DENSITY: CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
1130	SS 08	26	9 7 7 10	20"		loose	orange	f.g. SILTY SAND	SM		0
		28						micaceous			
1140	SS 09	28	5 6 7 7	24							
		30									
1145	SS 10	30	5 6 7 7	24"				SAME AS ABOVE	SM		0
		32									
1315	SS 11	32	8 8 7 7	24"							
		34									
1320	SS 12	34	4 5 5 6	24"		loose	light orange	f.g. SILTY SAND	SM		0
		36						micaceous			
1330	SS 13	36	7 8 8 9	20							
		38									
1335	SS 14	38	6 5 7 7	24							
		40									
1340	SS 15	40	6 5 6 6	20							
		42									
1345	SS 16	42	6 5 7 7	24		loose	light ~~orange~~ tan	f.g. SILTY SAND	SM		0
		44				loose	tan	also micaceous - carboniferous		lenses	
1400	SS 17	44	5 6 6 5	24							
		46									
1405	SS 18	46	6 7 7 6	18							
		48				5 6					
1135	SS 19	48	4 5 4 8	18		loose	orange tan	tan + orange mottled f.g. SILTY SAND	SM		0
		50									

REMARKS

BORING BG-SB03 (mw03)

PAGE 2 OF 3

* See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: BG-SB03 (MW03)
PROJECT NO.: 5803 — DATE: 6/26/95 — DRILLER: J. Dave Borell
ELEVATION: — FIELD GEOLOGIST: Terry Sawyer
WATER LEVEL DATA: —
(Date, Time & Conditions) —

	SAMPLE NO. & TYPE	DEPTH (ft.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY/ CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
1445	SS 20	50	4 5	17"		loose	pink/orange	f.g. SILTY SAND	SM		0
	↓	52	4 5	↓				↓			
1455	SS 21	52	7 7	24"		loose	orange brown pink	banded SILTY SAND layers			
	↓	54	7 6	↓				small clay stringers			
1515	SS 22	54	6 7	18"		loose	brown	f.g. SILTY SAND - still micaceous - bottom pink brown banded	SM		0
	↓	56	8 7	↓							
1530	23	56	7 8	16"		loose	pink orange brown	banded SILTY SAND	SM		0
	↓	58	8 8	↓							
1540	SS 24	58	7 8	20"		loose	orange	f.g. SILTY SAND w/ CLAY			0
	↓	60	8 5	↓				CLAY stringers			
1570	SS 25	60	10 5	21"	▼	loose		↓			
	↓	62	5 6	↓				very moist - probably collected yield water			0
1605	SS 26	62	3 5	22"	★(R)	loose	orange	saturated SILTY SAND			0
	↓	64	3 4	↓							
	SS 27	67	6 6	21"		loose	orange	f.g. SILTY SAND	SM		0
	↓	69	5 6	↓		loose	black	f.g. SILTY SAND - MICACEOUS			
								TD = 70'			

REMARKS —

BORING BG-SB03 (MW03)

PAGE 3 OF 3

*See Legend on Back

BORING LOG — **HALLIBURTON NUS**

PROJECT: NWS EARLE - CTO 231 — BORING NO.: BG-MW-04
PROJECT NO.: 5803 — DATE: 6/28/95 — DRILLER: J. Dave Borrell
ELEVATION: — FIELD GEOLOGIST: Teresa Sauinger
WATER LEVEL DATA:
(Date, Time & Conditions)

SAMPLE NO. & TYPE	DEPTH (FT.) OR RUN NO.	BLOWS 6" OR RQD (%)	SAMPLE RECOVERY SAMPLE LENGTH	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION* SOIL DENSITY: CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	ROCK BR. OR USCS	REMARKS	HNU PPM
SS S-1	0	8 9	16"		MED DENSE	DK Brown	f.g. SILTY SAND	SM		0
↓	2	9 10	↓	1 2	↓	orange	↓		wet @ bottom of spoon	
				3						
				4						
				5						
SS S-2	5	7 6	22"	6	MED DENSE	BROWN TAN	mottled f.g. SILTY SAND	SM	Collect BG-SB03-05	0
↓	7	6 7	↓	7	↓	↓				
SS S-3	10	8 9	20"		MED DENSE	ORANGE BROWN	fg mixed SILTY SAND and	SC	SATURATED	0
	12	8 9	↓				CLAY - small clay lenses			
SS S-4	18	6 8	18"		MED DENSE	ORANGE GRAY	FG SILTY SAND w/ CLAY	SC		0
	20	8 11					lenses			
							21'			

REMARKS: Core ~~ 4 1/4" ID Hollow Stem Augers
4 Split Spoon Samples

BORING BG-MW-04

PAGE 1 OF 1

* See Legend on Back

APPENDIX C.b.

MONITORING WELL SHEETS

HALLIBURTON NUS
Environmental Corporation

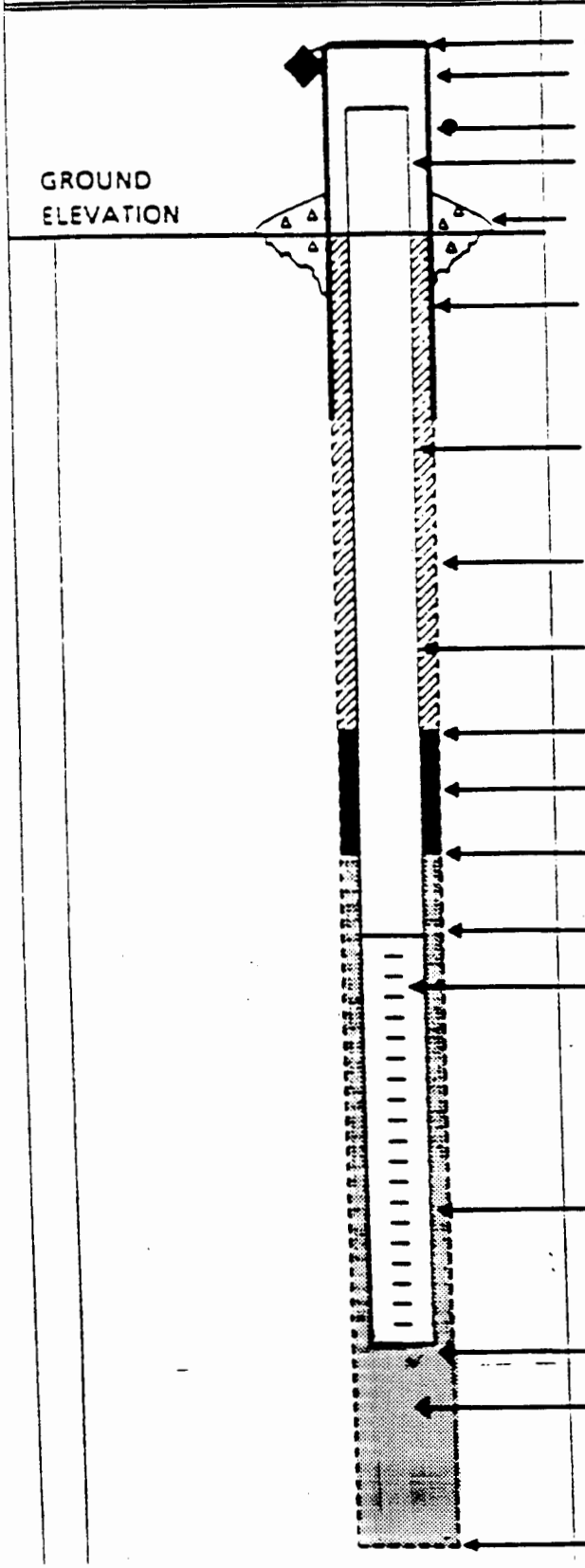
BORING NO BG mw-01

OVERBURDEN
MONITORING WELL SHEET

PROJECT CTO - 231
PROJECT NO. 5803
ELEVATION Ground: 94.16' msl
FIELD GEOLOGIST

LOCATION NWS-Earle
BORING BG mw-01
DATE

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD Pump



ELEVATION OF TOP OF SURFACE CASING: 96.79'
ELEVATION OF TOP OF RISER PIPE: 96.31'
STICK - UP TOP OF SURFACE CASING: +2.63'
STICK - UP RISER PIPE: +2.15'
TYPE OF SURFACE SEAL: Concrete
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: Cement grout
ELEVATION / DEPTH TOP OF SEAL: 112'
TYPE OF SEAL: Bentonite Pellets
DEPTH TOP OF SAND PACK: 115'
ELEVATION / DEPTH TOP OF SCREEN: 117'
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10 SL x 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 morie
ELEVATION / DEPTH BOTTOM OF SCREEN: 127'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 127'
TYPE OF BACKFILL BELOW OBSERVATION WELL: N/A
ELEVATION / DEPTH OF HOLE: 127'

BORING NO. BG MW-02

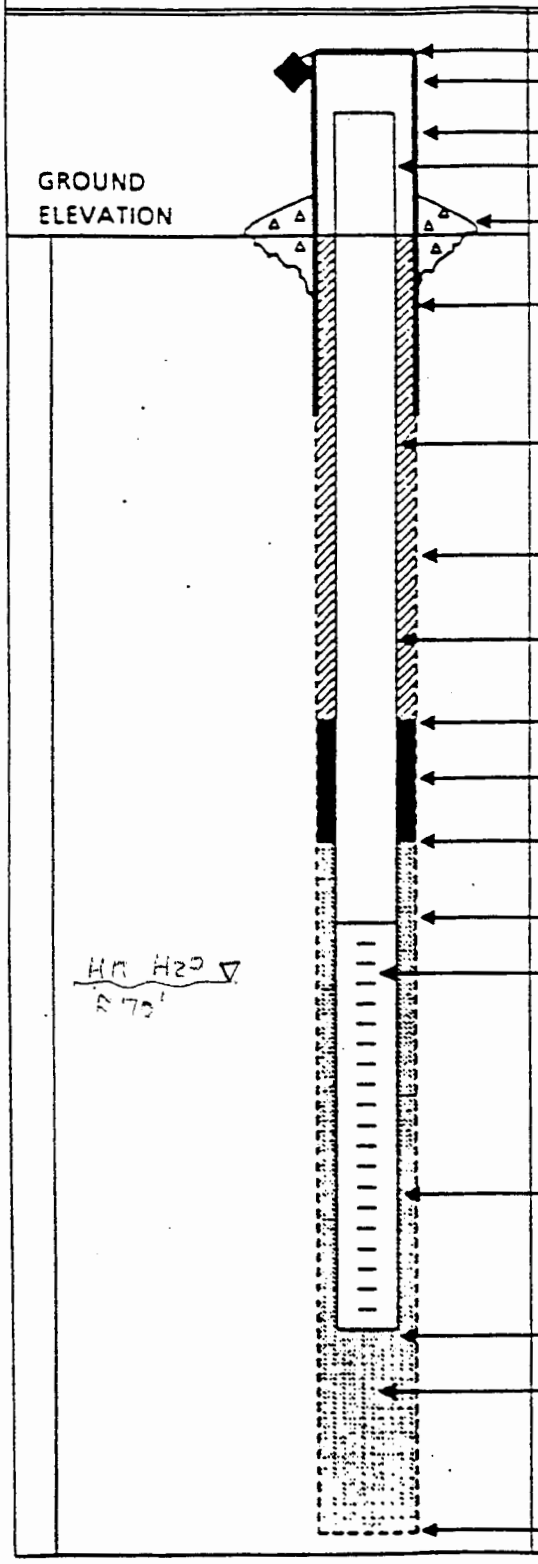
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT CTO 231
PROJECT NO. 5803
ELEVATION Ground: 231.19' MSL
FIELD GEOLOGIST CONTI

LOCATION NWS EARLE
BORING BG02
DATE 6/22/95

DRILLER JC ANDERSON
DRILLING METHOD HSA
DEVELOPMENT METHOD



ELEVATION OF TOP OF SURFACE CASING: 233.70'
ELEVATION OF TOP OF RISER PIPE: 233.32'
STICK - UP TOP OF SURFACE CASING: + 2.51'
STICK - UP RISER PIPE: + 2.13'
TYPE OF SURFACE SEAL: CONCRETE
I.D. OF SURFACE CASING: 6" Φ
TYPE OF SURFACE CASING: STEEL
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8" Φ
TYPE OF BACKFILL: CEMENT GROUT
ELEVATION / DEPTH TOP OF SEAL:
TYPE OF SEAL: GRANULAR BENTONITE
DEPTH TOP OF SAND PACK: 165'
ELEVATION / DEPTH TOP OF SCREEN: 167'
TYPE OF SCREEN:
SLOT SIZE x LENGTH:
I.D. OF SCREEN:
TYPE OF SAND PACK: #1 MORIE
ELEVATION / DEPTH BOTTOM OF SCREEN: 177
ELEVATION / DEPTH BOTTOM OF SAND PACK: 179
TYPE OF BACKFILL BELOW OBSERVATION WELL: #1 MORIE SAND
ELEVATION / DEPTH OF HOLE: 179

BORING NO. BG-MW-03

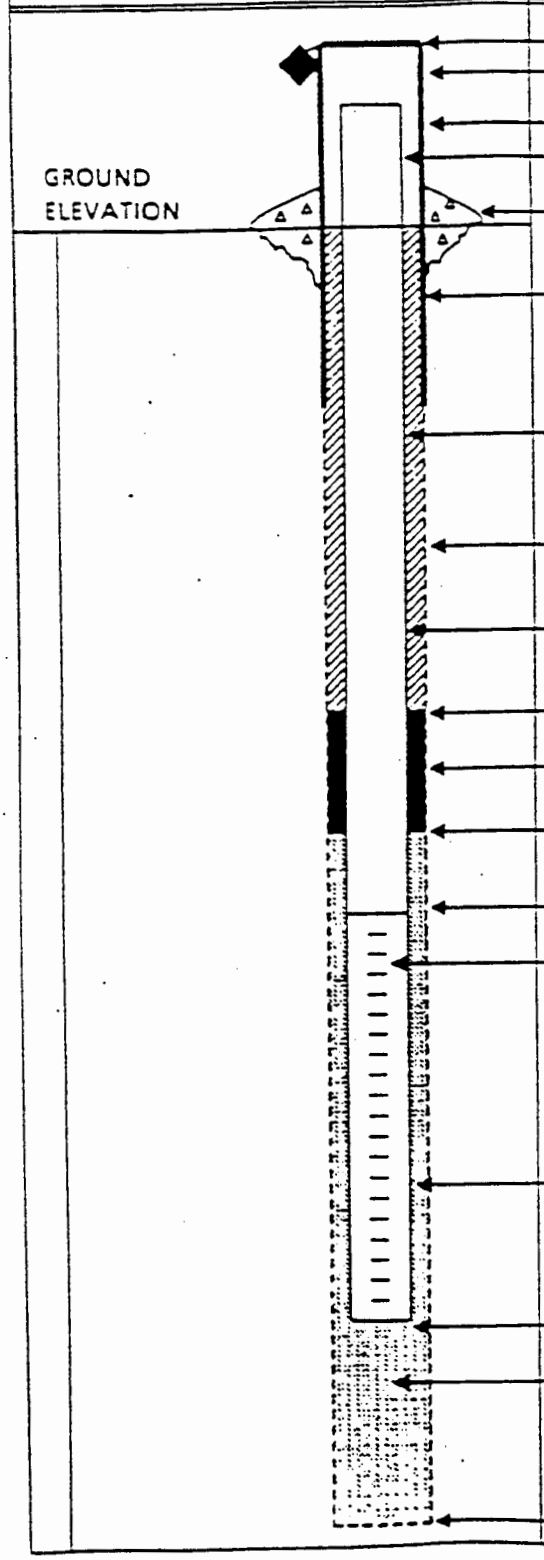
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT CTO 231
PROJECT NO. 5803
ELEVATION Ground: 201.75' MSL
FIELD GEOLOGIST Teresa Sawyer

LOCATION NWS EARLE
BORING BG-MW-03
DATE 6/26/95

DRILLER J. Dave Borrell
DRILLING METHOD Hollow Stem Auger
DEVELOPMENT METHOD BAILER + Pump



ELEVATION OF TOP OF SURFACE CASING: 204.20'
ELEVATION OF TOP OF RISER PIPE: 203.80'
STICK - UP TOP OF SURFACE CASING: + 2.45'
STICK - UP RISER PIPE: + 2.05'
TYPE OF SURFACE SEAL:
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: steel
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: Schedule 40 PVC
BOREHOLE DIAMETER: 7 1/4"
TYPE OF BACKFILL: bentonite cement grout
ELEVATION / DEPTH TOP OF SEAL: ≈ 53'
TYPE OF SEAL: bentonite slurry
DEPTH TOP OF SAND PACK: 57'
ELEVATION / DEPTH TOP OF SCREEN: 59'
TYPE OF SCREEN: schedule 40 PVC
SLOT SIZE x LENGTH: 0.10 , 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 filter pack sand
ELEVATION / DEPTH BOTTOM OF SCREEN: 69'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 70'
TYPE OF BACKFILL BELOW OBSERVATION WELL: #1 filter sand pack
ELEVATION / DEPTH OF HOLE: 70'

BORING NO. BG-MW-04

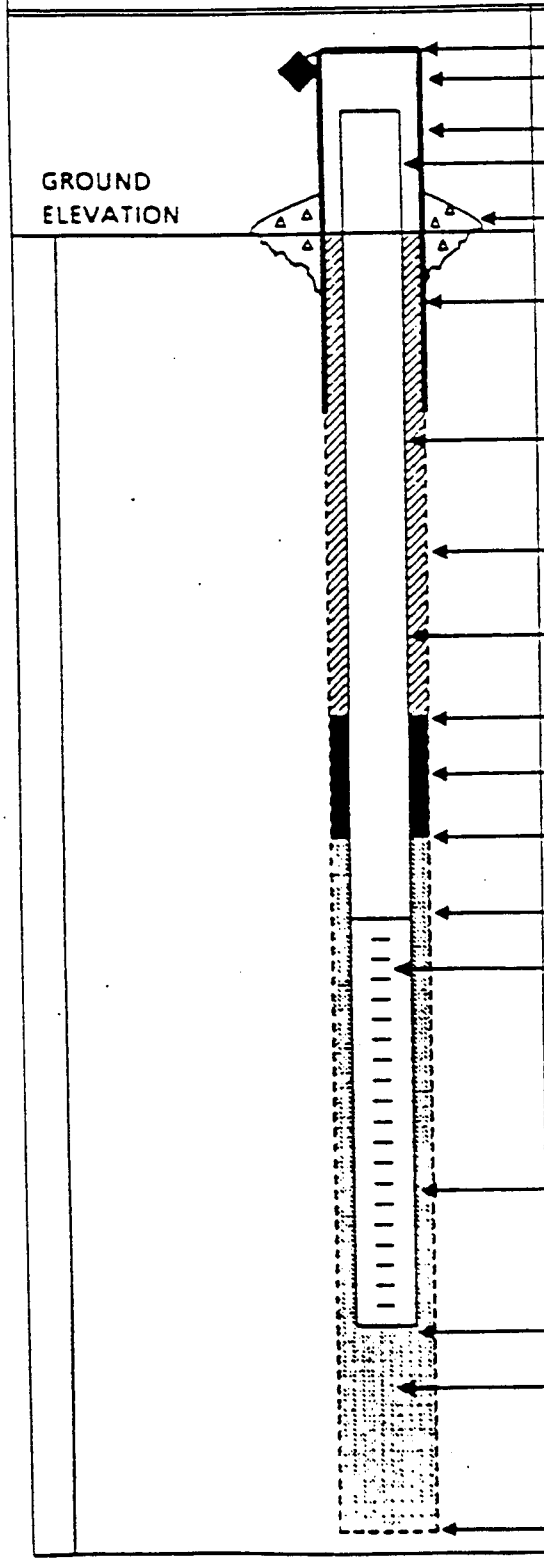
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT NWS EARLE
PROJECT NO. 5803
ELEVATION Ground: 26.82' MSL
FIELD GEOLOGIST Teresa Sawyer

LOCATION Colts Neck, N.J
BORING BG-MW-04
DATE 6/28/95

DRILLER J. Dave Borrell
DRILLING METHOD Hollow Stem Auger
DEVELOPMENT METHOD Bailer



ELEVATION OF TOP OF SURFACE CASING: 29.51'
ELEVATION OF TOP OF RISER PIPE: 28.96'
STICK - UP TOP OF SURFACE CASING: + 2.69'
STICK - UP RISER PIPE: + 2.14'
TYPE OF SURFACE SEAL: Concrete
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: Schedule 40 PVC
BOREHOLE DIAMETER: 8 1/4"
TYPE OF BACKFILL: bentonite / cement grout
ELEVATION / DEPTH TOP OF SEAL: 6'
TYPE OF SEAL: Bentonite Pellet
DEPTH TOP OF SAND PACK: 8'
ELEVATION / DEPTH TOP OF SCREEN: 10'
TYPE OF SCREEN: Schedule 40 PVC
SLOT SIZE x LENGTH: 0.10 , 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 filter pack sand
ELEVATION / DEPTH BOTTOM OF SCREEN: 20'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 21'
TYPE OF BACKFILL BELOW OBSERVATION WELL: #1 filter pack sand
ELEVATION / DEPTH OF HOLE: 21'

BORING NO. MW1-4

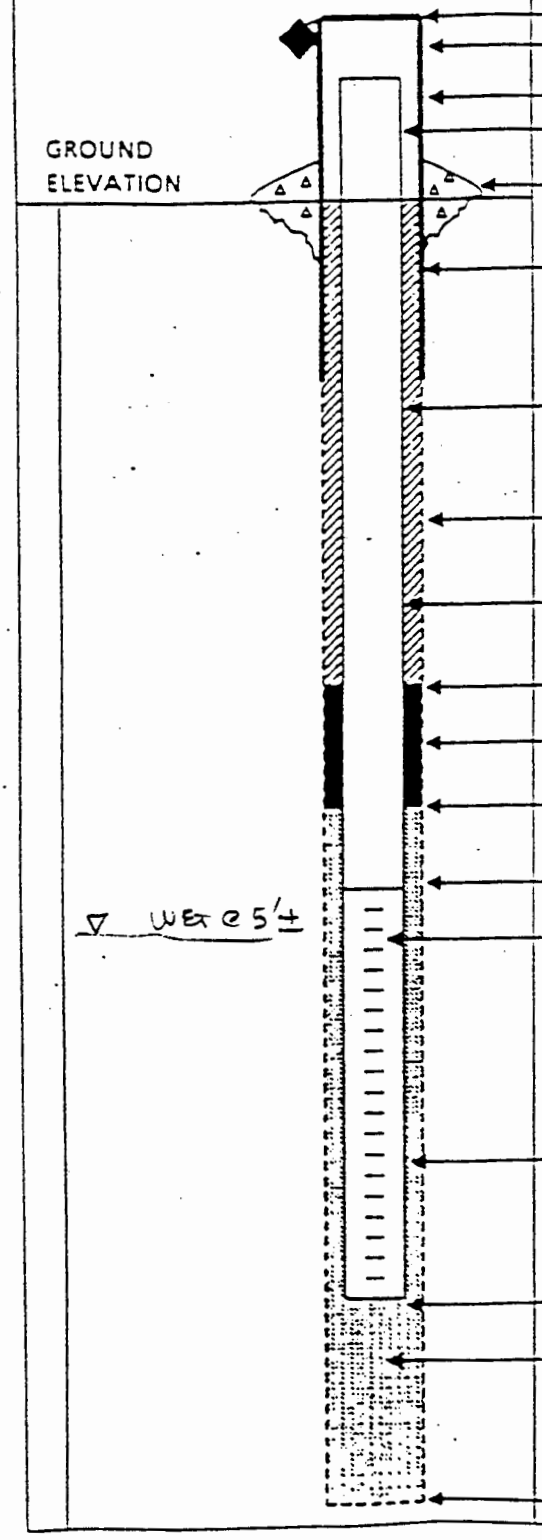
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT CTO 231
PROJECT NO. 5803
ELEVATION Ground 92.04' msl
FIELD GEOLOGIST CONTI

LOCATION NWS EARLE
BORING
DATE 7/12/95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD PUMP



ELEVATION OF TOP OF SURFACE CASING: 94.59'
ELEVATION OF TOP OF RISER PIPE: 93.93'
STICK - UP TOP OF SURFACE CASING: +2.55'
STICK - UP RISER PIPE: +1.89'
TYPE OF SURFACE SEAL: CONCRETE
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: STEEL
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: CEMENT GROUT
ELEVATION / DEPTH TOP OF SEAL: 12.5'
TYPE OF SEAL: BENT PELLETS
DEPTH TOP OF SAND PACK: 13
ELEVATION / DEPTH TOP OF SCREEN: 14
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10SL x 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 MORIE
ELEVATION / DEPTH BOTTOM OF SCREEN: 14
ELEVATION / DEPTH BOTTOM OF SAND PACK: 14
TYPE OF BACKFILL BELOW OBSERVATION WELL: NA
ELEVATION / DEPTH OF HOLE: 14

BORING NO. MW1-5

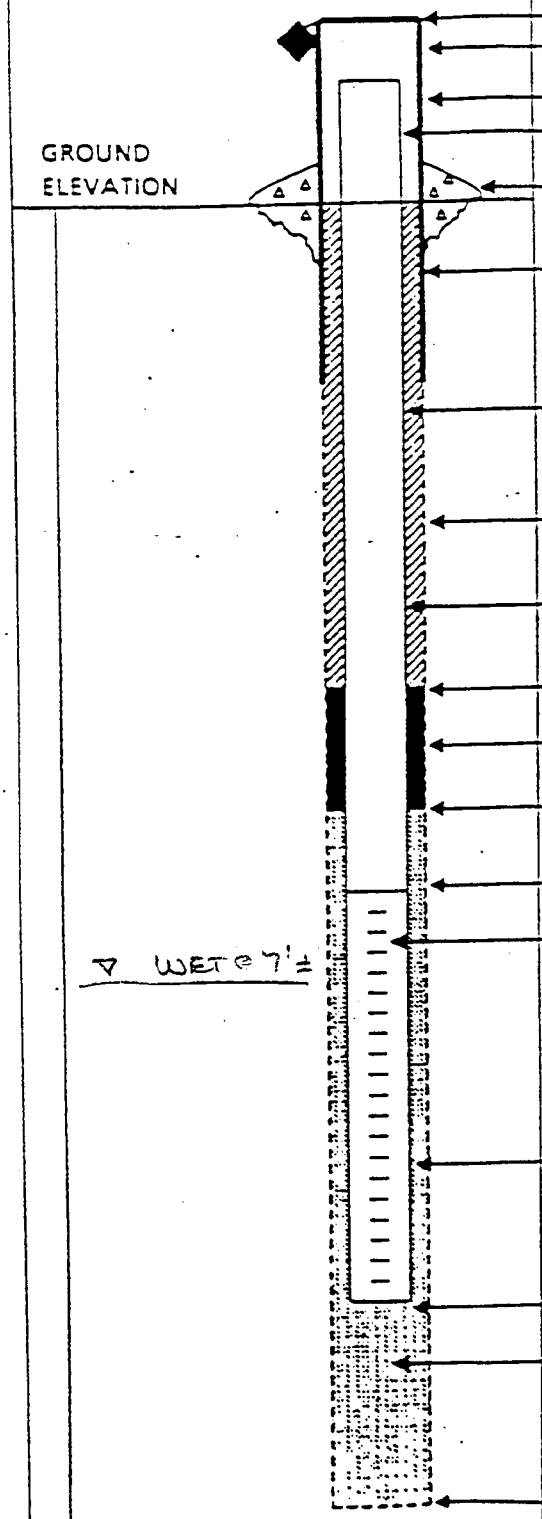
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT CTO 231
PROJECT NO. 5803
ELEVATION Ground: 92.37' msl
FIELD GEOLOGIST CONTI

LOCATION NWS EARLE
BORING MW1-5
DATE 7/12/95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD PUMP



ELEVATION OF TOP OF SURFACE CASING: 94.77'
ELEVATION OF TOP OF RISER PIPE: 94.20'
STICK - UP TOP OF SURFACE CASING: +2.40'
STICK - UP RISER PIPE: +1.83'
TYPE OF SURFACE SEAL: CONCRETE
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: STEEL
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: CEMENT GROUT
ELEVATION / DEPTH TOP OF SEAL: 12.5'
TYPE OF SEAL: BENT PELLETS
DEPTH TOP OF SAND PACK: 14'
ELEVATION / DEPTH TOP OF SCREEN: 15'
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10SL X 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 MORIE
ELEVATION / DEPTH BOTTOM OF SCREEN: 15'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 15'
TYPE OF BACKFILL BELOW OBSERVATION WELL: NA
ELEVATION / DEPTH OF HOLE: 15'

BORING NO. MW3-8

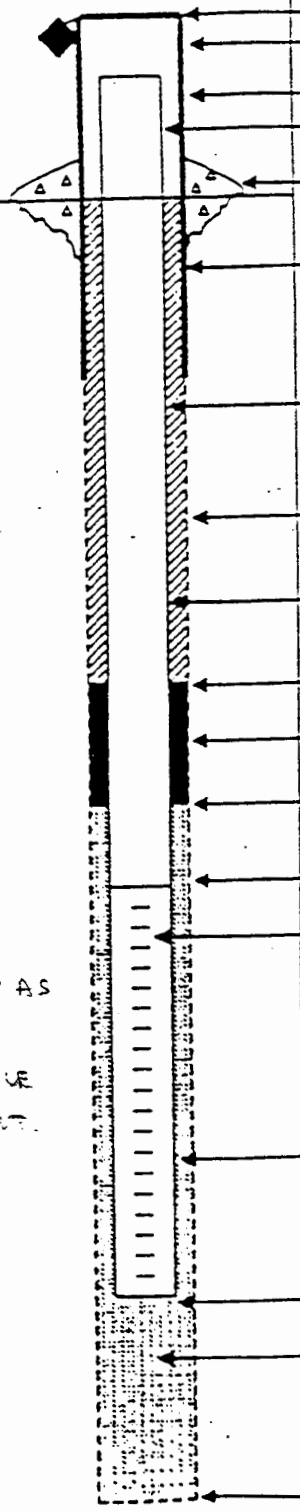
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT CTO 231
PROJECT NO. 5803
ELEVATION Ground: 116.11' MSL
FIELD GEOLOGIST CONTI

LOCATION NWS EARLE
BORING MW3-8
DATE 7/5/95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD BAILER



ELEVATION OF TOP OF SURFACE CASING: 118.84
ELEVATION OF TOP OF RISER PIPE: 118.22
STICK - UP TOP OF SURFACE CASING: + 2.73'
STICK - UP RISER PIPE: + 2.11'
TYPE OF SURFACE SEAL: CONCRETE
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: STEEL
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: CEMENT GROUT
ELEVATION / DEPTH TOP OF SEAL: 12'
TYPE OF SEAL: BENT. PELLETS
DEPTH TOP OF SAND PACK: 14'
ELEVATION / DEPTH TOP OF SCREEN: 15'
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10 SLX15'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 MORIE SAND
ELEVATION / DEPTH BOTTOM OF SCREEN: 20'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 20'
TYPE OF BACKFILL BELOW OBSERVATION WELL: NA
ELEVATION / DEPTH OF HOLE: 20'

BORING NO. MW4-7

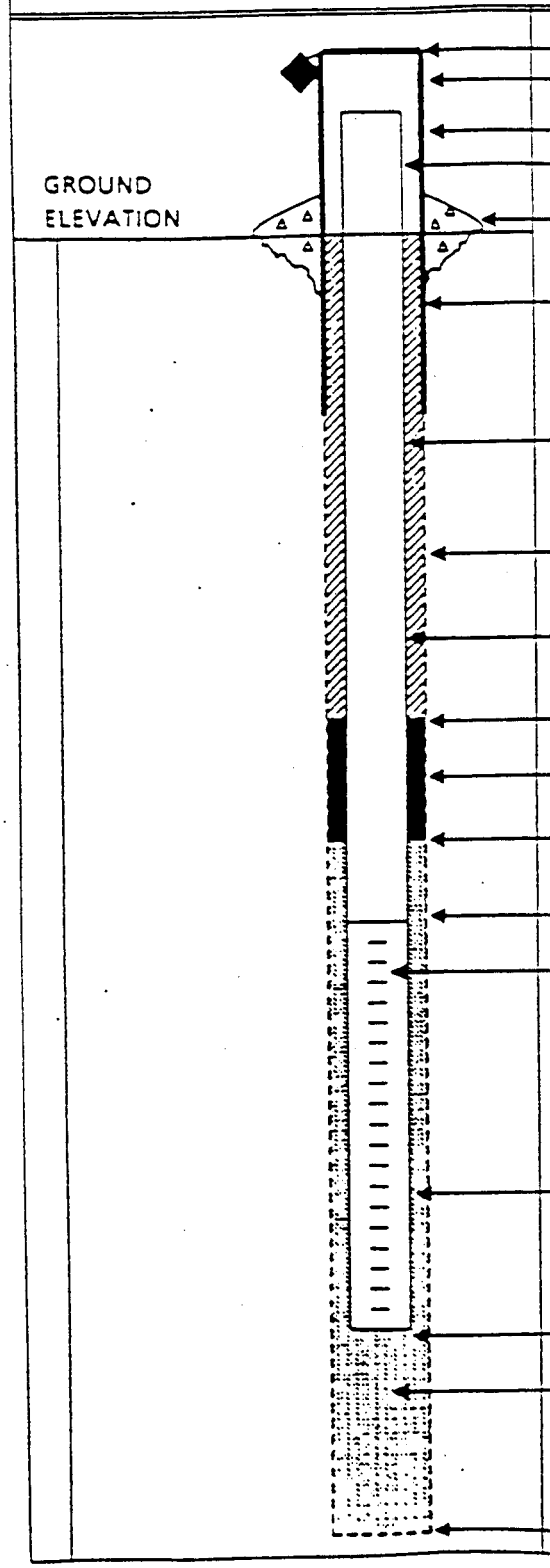
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT CTO 231
PROJECT NO. 5803
ELEVATION Ground: 162.52' MSL
FIELD GEOLOGIST

LOCATION NWS EARLE
BORING MW4-7
DATE 7/12/95

DRILLER STEVE BERGER
DRILLING METHOD HOLLOW STEM AUGER
DEVELOPMENT METHOD SURGE & PUMP



ELEVATION OF TOP OF SURFACE CASING: 165.32
ELEVATION OF TOP OF RISER PIPE: 164.50
STICK - UP TOP OF SURFACE CASING: + 2.80'
STICK - UP RISER PIPE: + 1.98'
TYPE OF SURFACE SEAL: CONCRETE
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: STEEL
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: SCHEDULE 40 PVC
BOREHOLE DIAMETER: 8 1/4"
TYPE OF BACKFILL: bentonite/CEMENT GROUT
ELEVATION / DEPTH TOP OF SEAL: 10'
TYPE OF SEAL: BENTONITE PELLET
DEPTH TOP OF SAND PACK: 12'
ELEVATION / DEPTH TOP OF SCREEN: 14'
TYPE OF SCREEN: SCHEDULE 40 PVC
SLOT SIZE x LENGTH: 0.10, 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 FILTER PACK SAND
ELEVATION / DEPTH BOTTOM OF SCREEN: 24'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 25'
TYPE OF BACKFILL BELOW OBSERVATION WELL: #1 FILTER SAND PACK
ELEVATION / DEPTH OF HOLE: 25'

HALLIBURTON NUS
Environmental Corporation

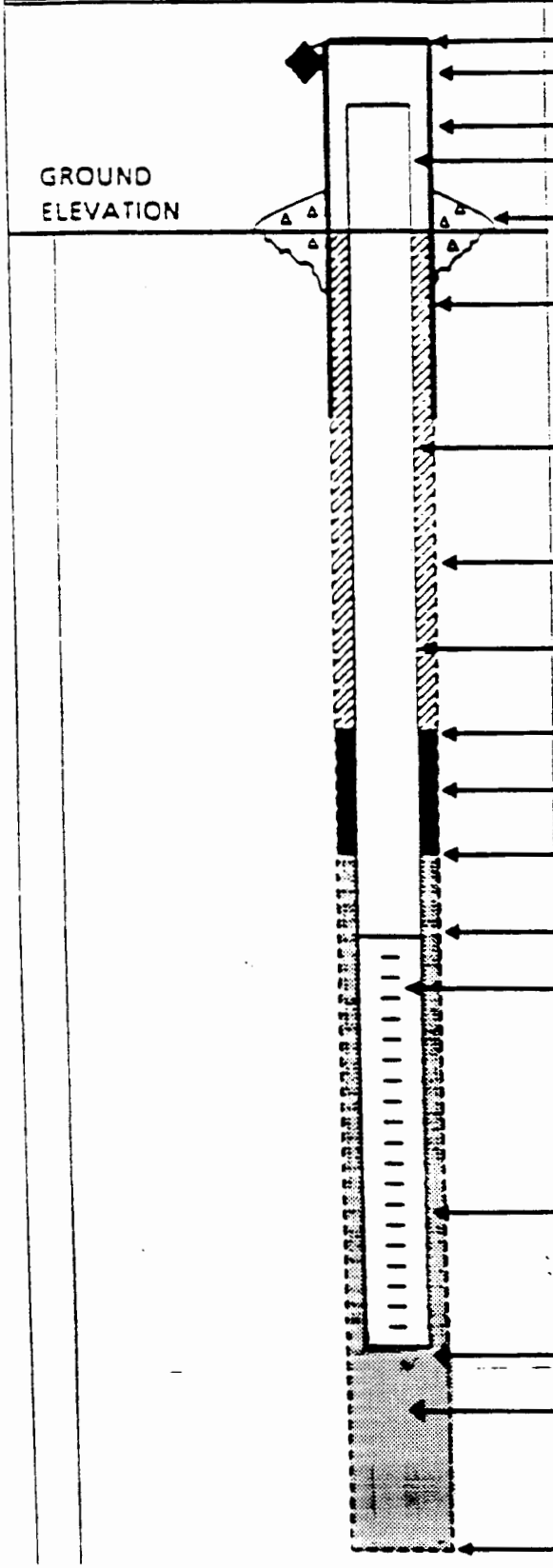
BORING NO MW13-1

OVERBURDEN
MONITORING WELL SHEET

PROJECT CTO - 231
PROJECT NO. 5803
ELEVATION Ground: 84.19' msl
FIELD GEOLOGIST Conti

LOCATION NWS-Earle
BORING MW13-1
DATE 6-23-95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD Pump



ELEVATION OF TOP OF SURFACE CASING: 86.43'
ELEVATION OF TOP OF RISER PIPE: 86.04
STICK - UP TOP OF SURFACE CASING: + 2.24'
STICK - UP RISER PIPE: + 1.85'
TYPE OF SURFACE SEAL: Cement / grout
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: cement / grout
ELEVATION / DEPTH TOP OF SEAL: 12'
TYPE OF SEAL: Bentonite Pellets
DEPTH TOP OF SAND PACK: 4'
ELEVATION / DEPTH TOP OF SCREEN: 15'
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10 SL x 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 morie
ELEVATION / DEPTH BOTTOM OF SCREEN: 15'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 15'
TYPE OF BACKFILL BELOW OBSERVATION WELL: N/A
ELEVATION / DEPTH OF HOLE: 15'

HALLIBURTON NUS
Environmental Corporation

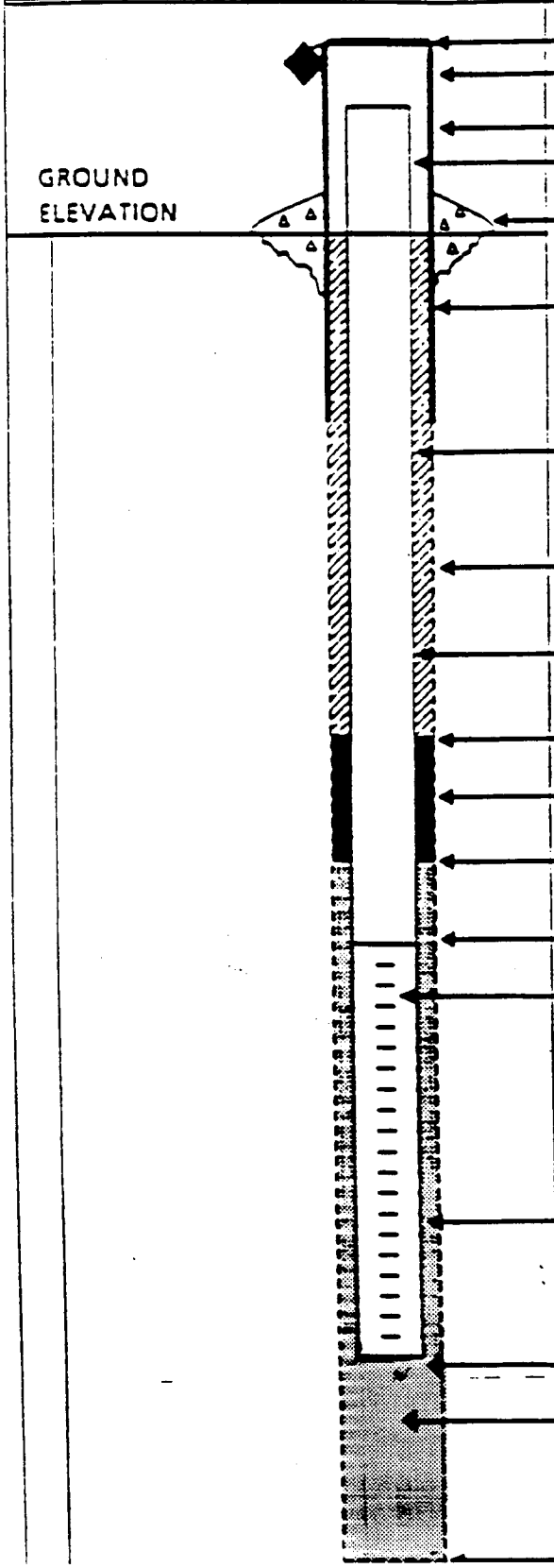
BORING NO MW13-2

OVERBURDEN
MONITORING WELL SHEET

PROJECT CTO - 231
PROJECT NO. 5803
ELEVATION Ground: 83.04' MSL
FIELD GEOLOGIST Conti

LOCATION NWS-Earle
BORING MW 13 - 2
DATE 6-23-95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD PUMP



ELEVATION OF TOP OF SURFACE CASING: 85.44'
ELEVATION OF TOP OF RISER PIPE: 85.09'
STICK - UP TOP OF SURFACE CASING: + 2.40'
STICK - UP RISER PIPE: + 2.05'
TYPE OF SURFACE SEAL: Cement / grout
I. D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: cement / grout
ELEVATION / DEPTH TOP OF SEAL: 12'
TYPE OF SEAL: Bentonite Pellets
DEPTH TOP OF SAND PACK: 4'
ELEVATION / DEPTH TOP OF SCREEN: 15'
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10 SL x 10'
I D. OF SCREEN: 2"
TYPE OF SAND PACK: # 1 morie
ELEVATION / DEPTH BOTTOM OF SCREEN: 15
ELEVATION / DEPTH BOTTOM OF SAND PACK: 15'
TYPE OF BACKFILL BELOW OBSERVATION WELL: N/A
ELEVATION / DEPTH OF HOLE: 15'

HALLIBURTON NUS
Environmental Corporation

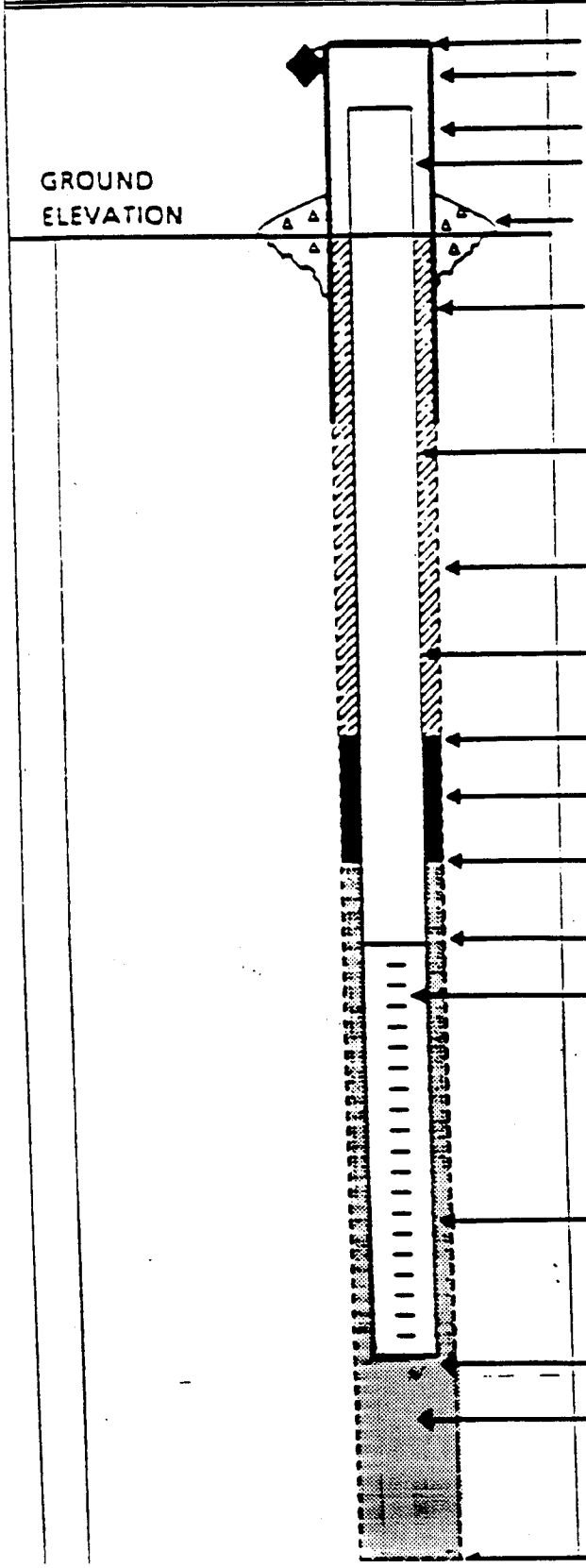
BORING NO MW13-3

OVERBURDEN
MONITORING WELL SHEET

PROJECT GTO-231
PROJECT NO. 5803
ELEVATION Ground: 81.28' MSL
FIELD GEOLOGIST Conti

LOCATION NWS-Earle
BORING MW13-3
DATE 6-23-95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD Pump



ELEVATION OF TOP OF SURFACE CASING: 83.69'
ELEVATION OF TOP OF RISER PIPE: 83.26'
STICK - UP TOP OF SURFACE CASING: +2.41'
STICK - UP RISER PIPE: +1.98'
TYPE OF SURFACE SEAL: Cement/grout
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: Cement/grout
ELEVATION / DEPTH TOP OF SEAL: 12'
TYPE OF SEAL: Bentonite Pellets
DEPTH TOP OF SAND PACK: 4'
ELEVATION / DEPTH TOP OF SCREEN: 15'
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10 SL x 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 morie
ELEVATION / DEPTH BOTTOM OF SCREEN: 15'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 15'
TYPE OF BACKFILL BELOW OBSERVATION WELL: N/A
ELEVATION / DEPTH OF HOLE: 15'

HALLIBURTON NUS
Environmental Corporation

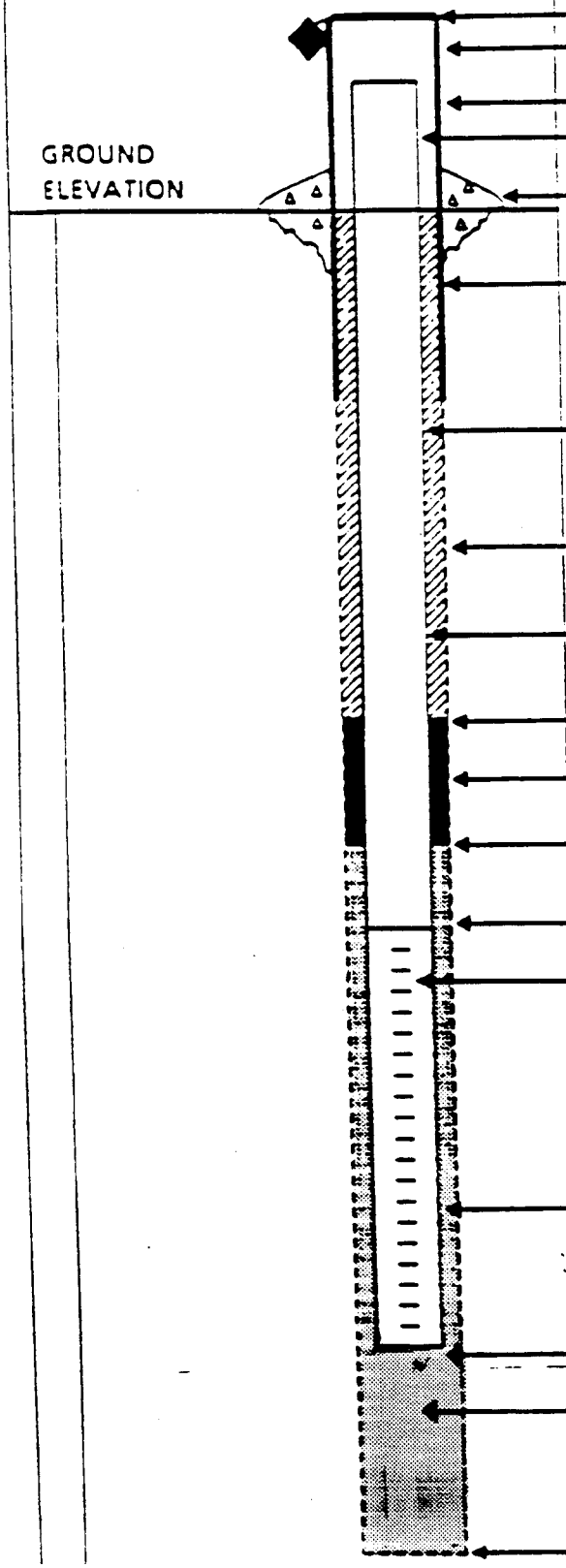
BORING NO MW13-4

OVERBURDEN
MONITORING WELL SHEET

PROJECT GTO - 231
PROJECT NO. 5803
ELEVATION Ground: 92.18' MSL
FIELD GEOLOGIST Conti

LOCATION NWS-Earle
BORING MW13-4
DATE 6-24-95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD Pump



ELEVATION OF TOP OF SURFACE CASING: 94.30'
ELEVATION OF TOP OF RISER PIPE: 93.85'
STICK - UP TOP OF SURFACE CASING: +2.12'
STICK - UP RISER PIPE: +1.67'
TYPE OF SURFACE SEAL: Concrete
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: Cement / grout
ELEVATION / DEPTH TOP OF SEAL: / 2'
TYPE OF SEAL: Bentonite pellets
DEPTH TOP OF SAND PACK: / 4'
ELEVATION / DEPTH TOP OF SCREEN: / 6'
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10 SL X 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 morie
ELEVATION / DEPTH BOTTOM OF SCREEN: / 16'
ELEVATION / DEPTH BOTTOM OF SAND PACK: / 16'
TYPE OF BACKFILL BELOW OBSERVATION WELL: N/A
ELEVATION / DEPTH OF HOLE: / 16'

HALLIBURTON NUS
Environmental Corporation

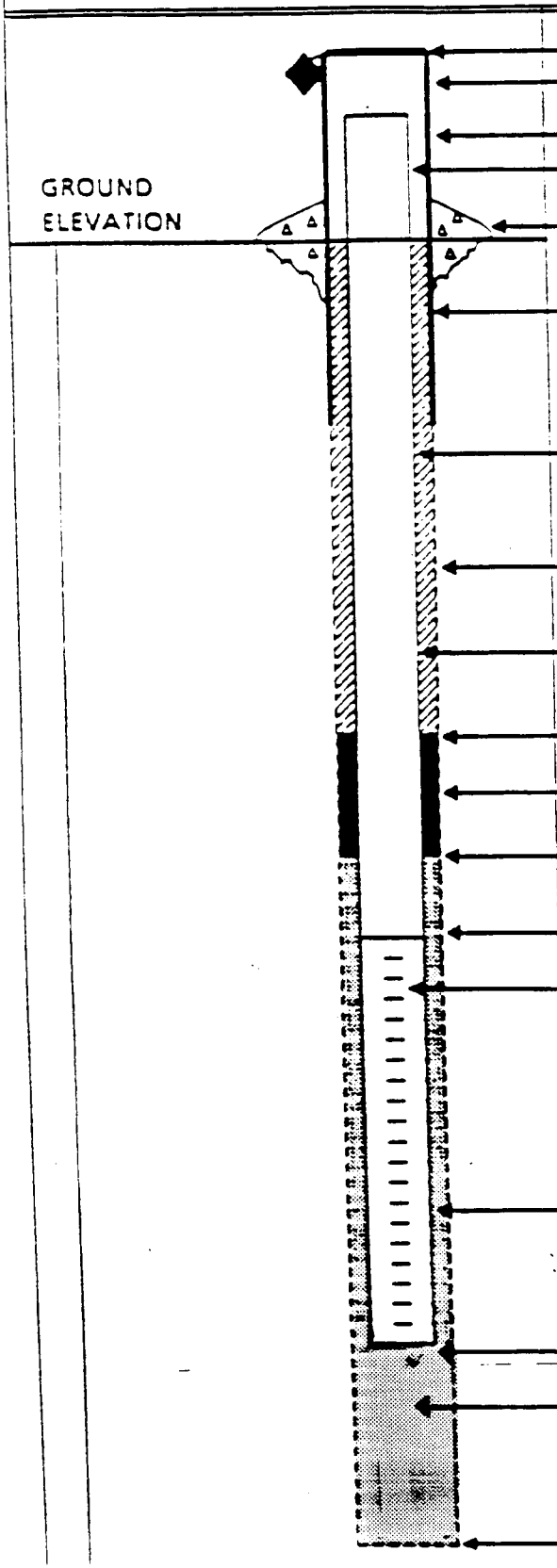
BORING NO MW13-5

OVERBURDEN
MONITORING WELL SHEET

PROJECT GTO - 231
PROJECT NO. 5803
ELEVATION Ground: 93.67' MSL
FIELD GEOLOGIST Conti

LOCATION NWS-Earle
BORING MW13-5
DATE 6-24-95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD Pump



ELEVATION OF TOP OF SURFACE CASING: 96.06
ELEVATION OF TOP OF RISER PIPE: 95.54

STICK - UP TOP OF SURFACE CASING: +2.39'
STICK - UP RISER PIPE: +1.87'

TYPE OF SURFACE SEAL: Concrete

I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel

RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC

BOREHOLE DIAMETER: 8"

TYPE OF BACKFILL: Cement grout

ELEVATION / DEPTH TOP OF SEAL: 13'

TYPE OF SEAL: Bentonite Pellets

DEPTH TOP OF SAND PACK: 15'

ELEVATION / DEPTH TOP OF SCREEN: 17'

TYPE OF SCREEN: PVC

SLOT SIZE x LENGTH: 10 SL x 10'

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: #1 morie

ELEVATION / DEPTH BOTTOM OF SCREEN: 17'

ELEVATION / DEPTH BOTTOM OF SAND PACK: 17'

TYPE OF BACKFILL BELOW OBSERVATION WELL: N/A

ELEVATION / DEPTH OF HOLE: 17'

HALLIBURTON NUS
Environmental Corporation

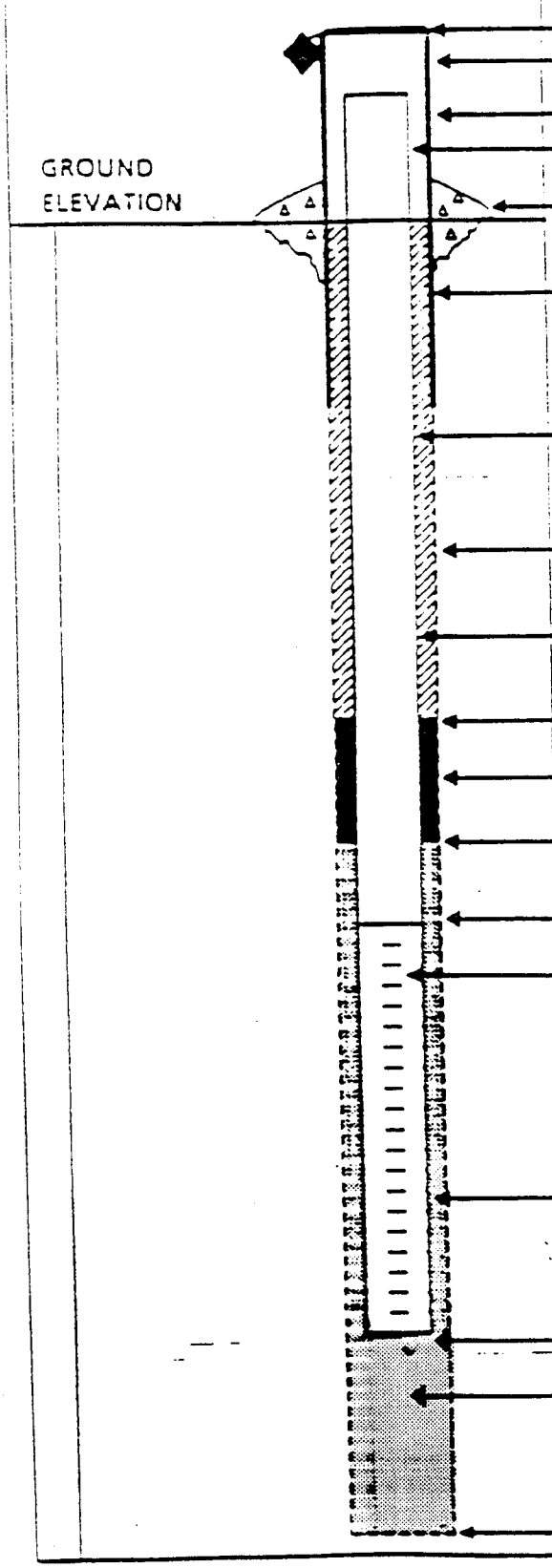
BORING NO MW-16-01

OVERBURDEN
MONITORING WELL SHEET

PROJECT NWS - Earle
PROJECT NO. 5803
ELEVATION Ground: 101.05' MSL
FIELD GEOLOGIST Paul Davis

LOCATION Colts Neck, NJ
BORING MW-16-01
DATE 7-09-95

DRILLER JCA - Drilling
DRILLING METHOD HSA
DEVELOPMENT METHOD



ELEVATION OF TOP OF SURFACE CASING: 103.01
ELEVATION OF TOP OF RISER PIPE: 102.34
STICK - UP TOP OF SURFACE CASING: + 1.96'
STICK - UP RISER PIPE: + 1.29'
TYPE OF SURFACE SEAL: Cement / grout
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC Schedule 40
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: Cement / grout
ELEVATION / DEPTH TOP OF SEAL: 1.5' bgs
TYPE OF SEAL: Bentonite Seal
DEPTH TOP OF SAND PACK: 3' bgs
ELEVATION / DEPTH TOP OF SCREEN: 6' bgs
TYPE OF SCREEN: PVC Schedule 40
SLOT SIZE x LENGTH: 0.10' X 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 Filter Sand
ELEVATION / DEPTH BOTTOM OF SCREEN: 16' bgs
ELEVATION / DEPTH BOTTOM OF SAND PACK: 16' bgs
TYPE OF BACKFILL BELOW OBSERVATION WELL:
ELEVATION / DEPTH OF HOLE: 16' bgs

BORING NO. MW16-2

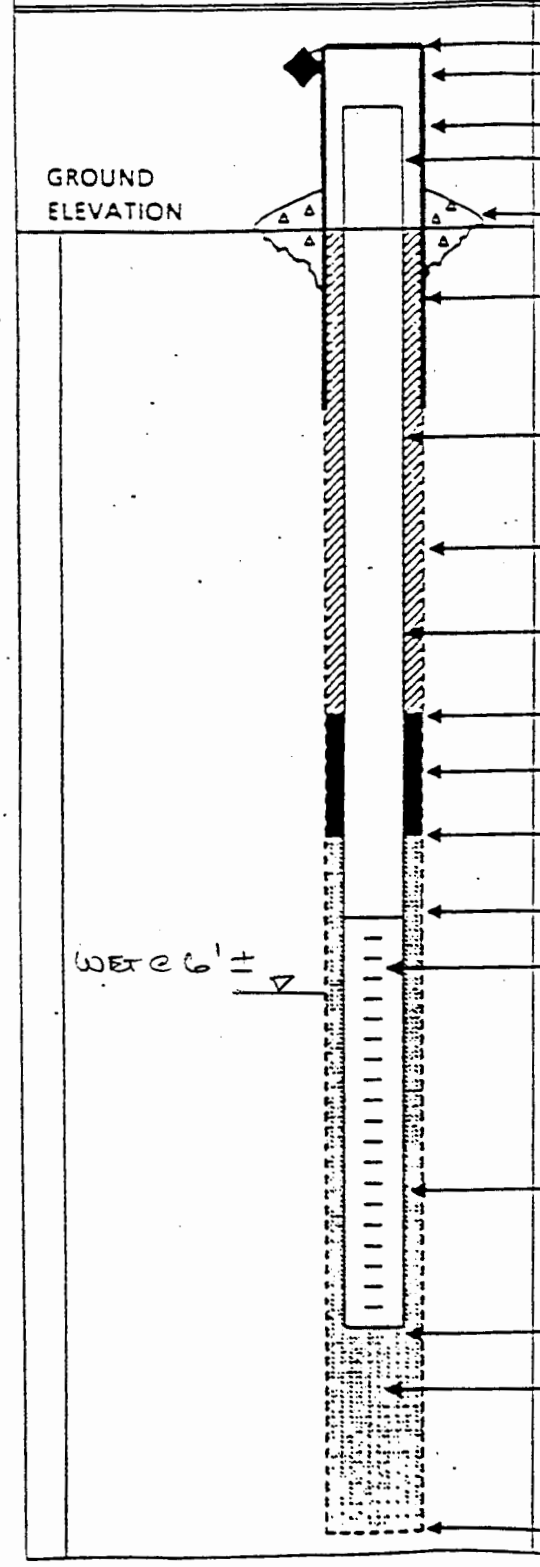
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT CTO 231
PROJECT NO. 5803
ELEVATION Ground: 96.57' MSL
FIELD GEOLOGIST CONTI

LOCATION NWS EARLE
BORING MW16-2
DATE / /95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD PUMP



ELEVATION OF TOP OF SURFACE CASING: 99.03'
ELEVATION OF TOP OF RISER PIPE: 98.48'
STICK - UP TOP OF SURFACE CASING: ± 2.46'
STICK - UP RISER PIPE: ± 1.91'
TYPE OF SURFACE SEAL: CONCRETE + 3 BARRIER POSTS
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: STEEL
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: CEMENT GROUT
ELEVATION / DEPTH TOP OF SEAL: 12'
TYPE OF SEAL: BENT PELLETS
DEPTH TOP OF SAND PACK: 14'
ELEVATION / DEPTH TOP OF SCREEN: 15'
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10SL x 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 MORIE
ELEVATION / DEPTH BOTTOM OF SCREEN: 15'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 15'
TYPE OF BACKFILL BELOW OBSERVATION WELL: NA
ELEVATION / DEPTH OF HOLE: 15'

HALLIBURTON NUS
Environmental Corporation

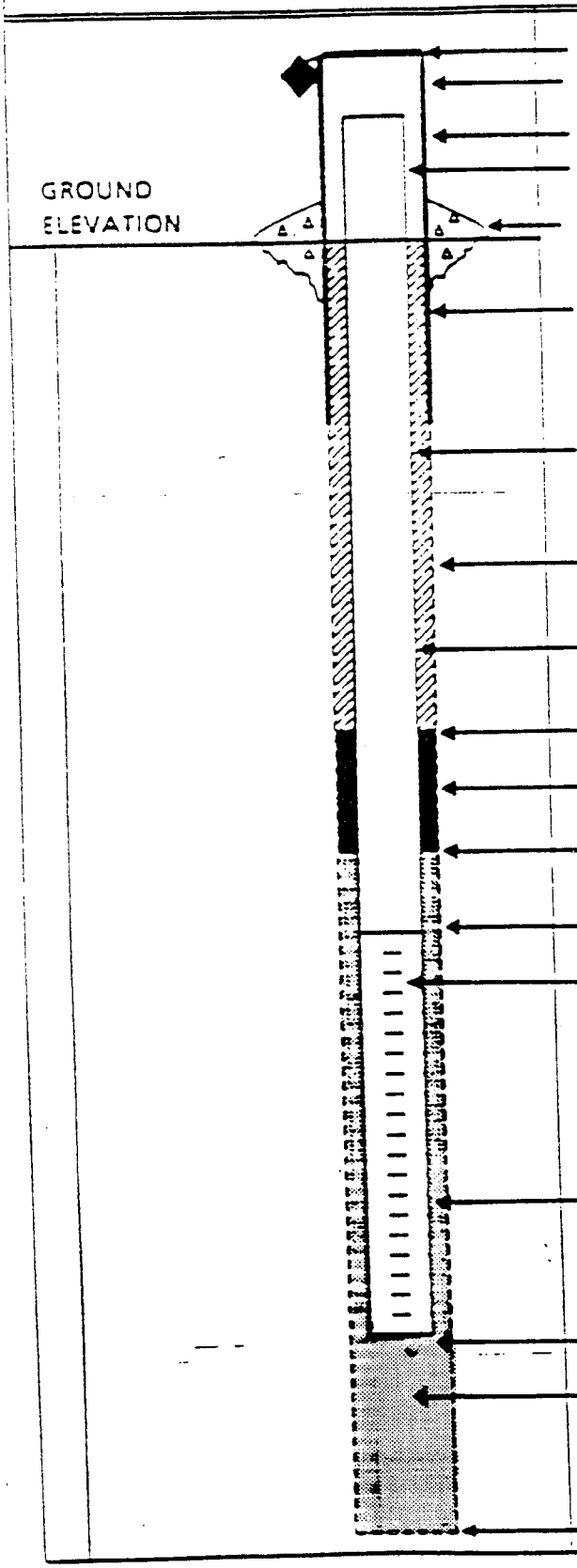
BORING NO MW-16-03

OVERBURDEN
MONITORING WELL SHEET

PROJECT NWS Earle
PROJECT NO. 5803
ELEVATION Ground: 99.85' MSL
FIELD GEOLOGIST Paul Davis

LOCATION Colts Neck, NJ
BORING MW-16-03
DATE 7-09-95

DRILLER JCA Drilling
DRILLING METHOD HSA
DEVELOPMENT METHOD



ELEVATION OF TOP OF SURFACE CASING: 99.86'
ELEVATION OF TOP OF RISER PIPE: 99.59'
STICK - UP TOP OF SURFACE CASING: + 0.01'
STICK - UP RISER PIPE: Flush mount (-0.26')
TYPE OF SURFACE SEAL: Cement/grout
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC Schedule 40
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: Cement/grout
ELEVATION / DEPTH TOP OF SEAL: 1.5' bgs
TYPE OF SEAL: Bentonite Slurry
DEPTH TOP OF SAND PACK: 3.5' bgs
ELEVATION / DEPTH TOP OF SCREEN: 6' bgs
TYPE OF SCREEN: PVC Schedule 40
SLOT SIZE x LENGTH: 0.10' x 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 Filter Sand
ELEVATION / DEPTH BOTTOM OF SCREEN: 16' bgs
ELEVATION / DEPTH BOTTOM OF SAND PACK: 16' bgs
TYPE OF BACKFILL BELOW OBSERVATION WELL:
ELEVATION / DEPTH OF HOLE: 16' bgs

BORING NO. MW16-4

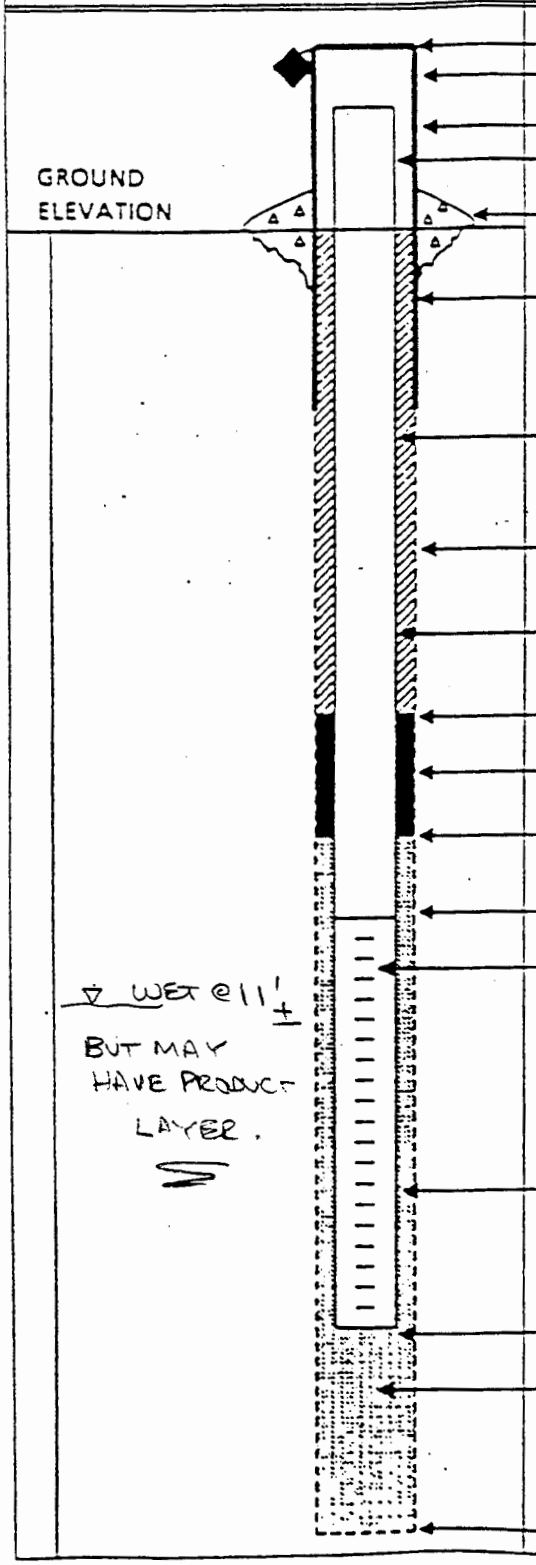
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT CTO 231
PROJECT NO. 5803
ELEVATION Ground: 102.29' MSL
FIELD GEOLOGIST CONTI

LOCATION NWS EARLE
BORING MW16-4
DATE / / 95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD PUMP



ELEVATION OF TOP OF SURFACE CASING: 104.84
ELEVATION OF TOP OF RISER PIPE: 104.30
STICK - UP TOP OF SURFACE CASING: + 2.55'
STICK - UP RISER PIPE: + 2.01'
TYPE OF SURFACE SEAL: CONCRETE + 2 BARRIER POSTS
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: STEEL
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: CEMENT GROUT
ELEVATION / DEPTH TOP OF SEAL: 14'
TYPE OF SEAL:
DEPTH TOP OF SAND PACK: 16'
ELEVATION / DEPTH TOP OF SCREEN: 18'
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10SL x 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 MORIE
ELEVATION / DEPTH BOTTOM OF SCREEN: 18'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 18'
TYPE OF BACKFILL BELOW OBSERVATION WELL: NA
ELEVATION / DEPTH OF HOLE: 18'

HALLIBURTON NUS
Environmental Corporation

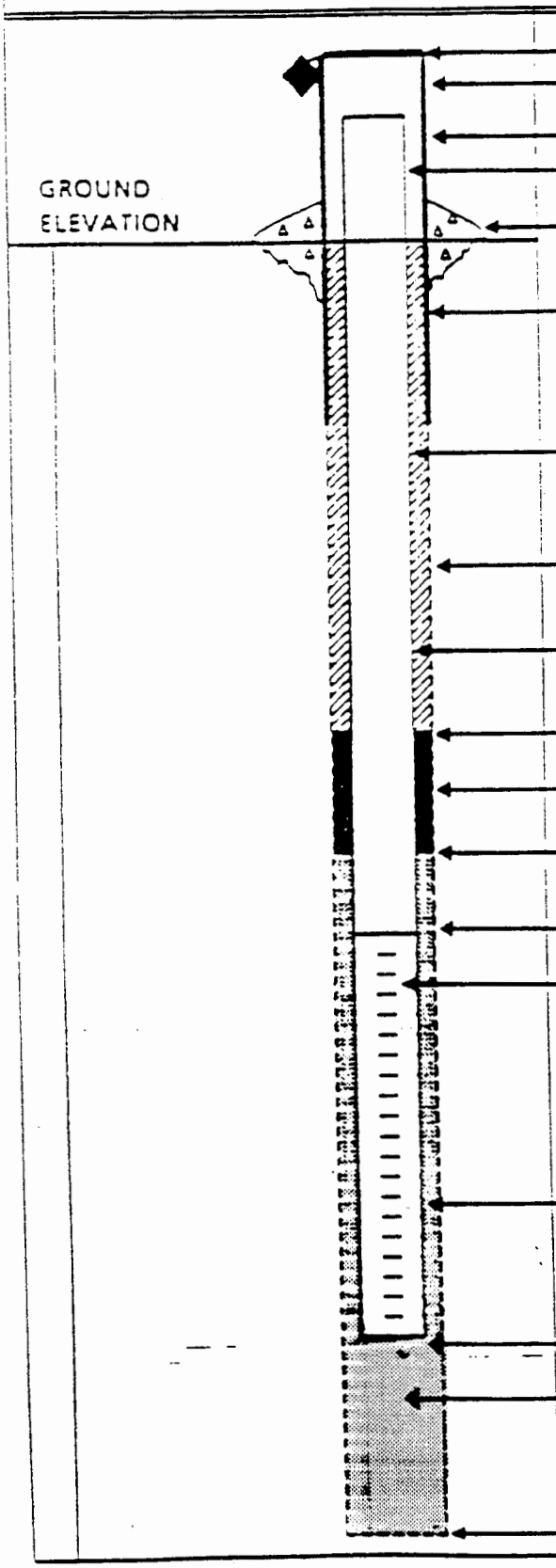
BORING NO MW-16-05

OVERBURDEN
MONITORING WELL SHEET

PROJECT NWS-Earle
PROJECT NO. 5803
ELEVATION Ground: 102.27' MSL
FIELD GEOLOGIST Paul Davis

LOCATION Colts Neck, NJ
BORING MW-16-05
DATE 7-09-95

DRILLER JCA Drilling
DRILLING METHOD HSA
DEVELOPMENT METHOD



ELEVATION OF TOP OF SURFACE CASING: 104.80
ELEVATION OF TOP OF RISER PIPE: 104.14
STICK - UP TOP OF SURFACE CASING: + 2.53'
STICK - UP RISER PIPE: + 1.87' AGS
TYPE OF SURFACE SEAL: Cement/grout
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: steel
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC schedule 40
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: Cement/grout
ELEVATION / DEPTH TOP OF SEAL: 4' bgs
TYPE OF SEAL: bentonite slurry
DEPTH TOP OF SAND PACK: 6' bgs
ELEVATION / DEPTH TOP OF SCREEN: 8' bgs
TYPE OF SCREEN: PVC Schedule 40
SLOT SIZE x LENGTH: .10' x 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 Filter Sand
ELEVATION / DEPTH BOTTOM OF SCREEN: 18' bgs
ELEVATION / DEPTH BOTTOM OF SAND PACK: 18' bgs
TYPE OF BACKFILL BELOW OBSERVATION WELL:
ELEVATION / DEPTH OF HOLE: 18' bgs

BORING NO. MW16-6

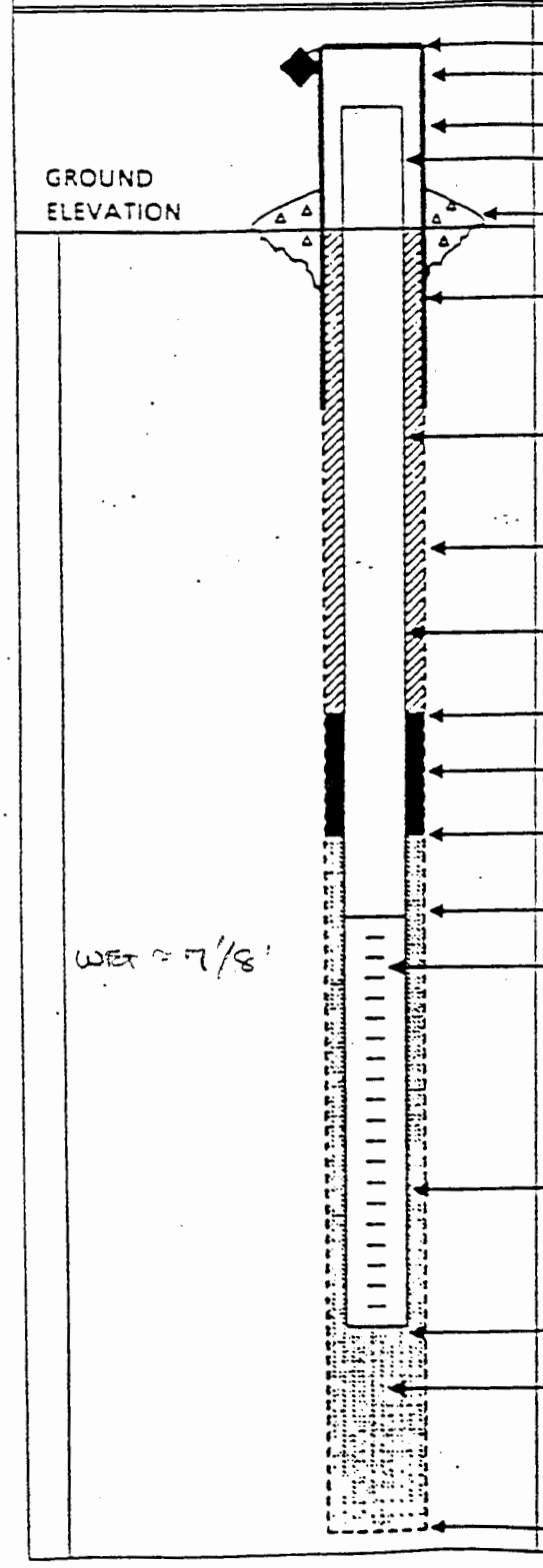
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT CTO 231
PROJECT NO. 5803
ELEVATION Ground: 96.99' MSL
FIELD GEOLOGIST CONTI

LOCATION NWS EARLE
BORING MW16-6
DATE 7/9/95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD PUMP



ELEVATION OF TOP OF SURFACE CASING: 99.31
ELEVATION OF TOP OF RISER PIPE: 98.73
STICK - UP TOP OF SURFACE CASING: + 2.32'
STICK - UP RISER PIPE: + 1.74'
TYPE OF SURFACE SEAL: CONCRETE + 2 BARRIER POSTS
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: STEEL
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: CEMENT GROUT
ELEVATION / DEPTH TOP OF SEAL: 13'
TYPE OF SEAL: BENT PELLETS
DEPTH TOP OF SAND PACK: 15'
ELEVATION / DEPTH TOP OF SCREEN: 17'
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10SL x 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: FILMORIE
ELEVATION / DEPTH BOTTOM OF SCREEN: 17'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 17'
TYPE OF BACKFILL BELOW OBSERVATION WELL: NA
ELEVATION / DEPTH OF HOLE: 17

BORING NO. 17-MW-05

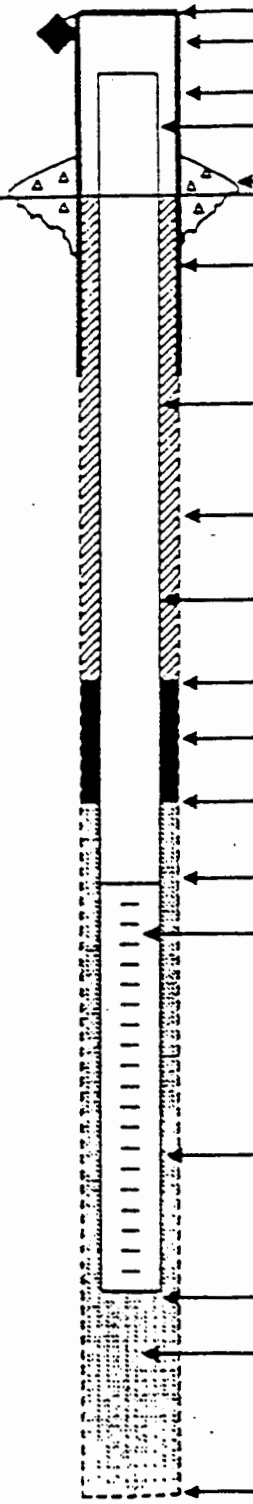
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT CTO 231
PROJECT NO. 5803
ELEVATION Ground: 15.24' msl
FIELD GEOLOGIST

LOCATION NWS EARLE
BORING 17-MW-05
DATE 7/12/95

DRILLER Steve Berger
DRILLING METHOD Hollow Stem Auger
DEVELOPMENT METHOD SURGE & pump



ELEVATION OF TOP OF SURFACE CASING: 14.70'
ELEVATION OF TOP OF RISER PIPE: 14.56
STICK - UP TOP OF SURFACE CASING: -0.54'
STICK - UP RISER PIPE: -0.68' (Flush mount)
TYPE OF SURFACE SEAL: Concrete
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: STEEL
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: SCHEDULE 40 PVC
BOREHOLE DIAMETER: 8 1/4"
TYPE OF BACKFILL: bentonite/cement GROUT
ELEVATION / DEPTH TOP OF SEAL: 3'
TYPE OF SEAL: BENTONITE PELLET
DEPTH TOP OF SAND PACK: 5'
ELEVATION / DEPTH TOP OF SCREEN: 7'
TYPE OF SCREEN: SCHEDULE 40 PVC
SLOT SIZE x LENGTH: 0.10 , 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 FILTER PACK SAND
ELEVATION / DEPTH BOTTOM OF SCREEN: 17'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 18'
TYPE OF BACKFILL BELOW OBSERVATION WELL: #1 FILTER PACK SAND
ELEVATION / DEPTH OF HOLE: 18'

HALLIBURTON NUS
Environmental Corporation

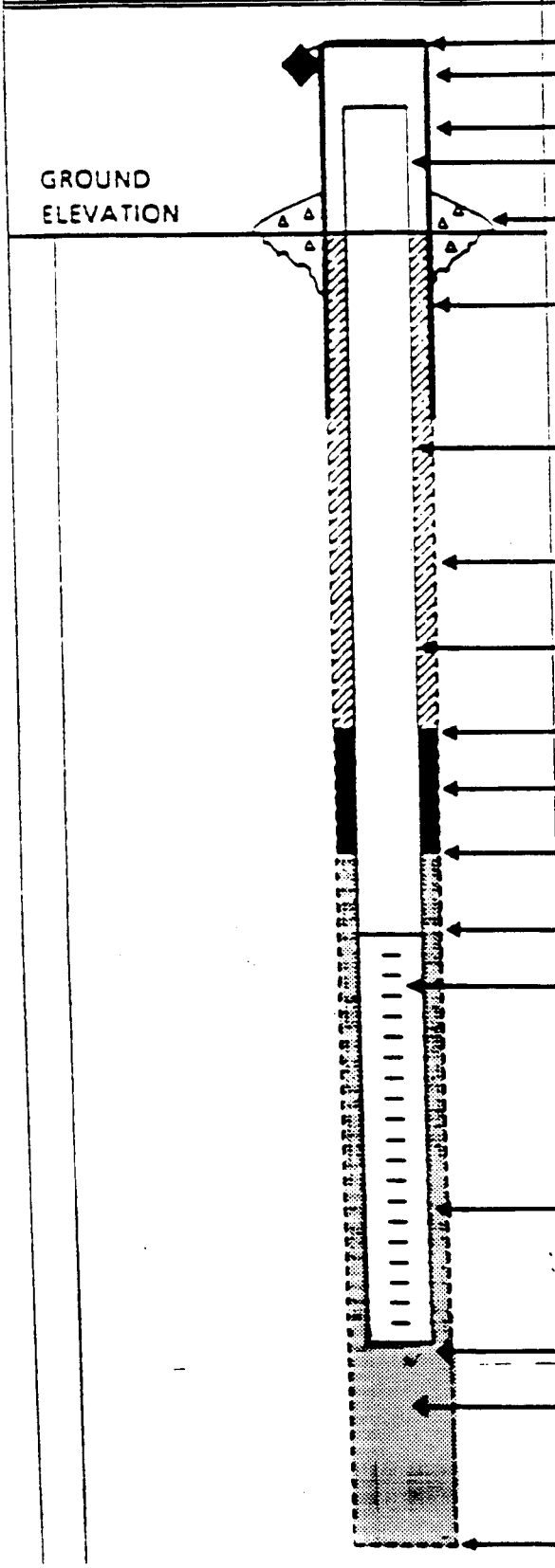
BORING NO MW19-07

OVERBURDEN
MONITORING WELL SHEET

PROJECT GTO - 231
PROJECT NO. 5803
ELEVATION Ground: 111.68' MSL
FIELD GEOLOGIST Conti

LOCATION NWS-Earle
BORING MW19-07
DATE 6-27-95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD Pump



ELEVATION OF TOP OF SURFACE CASING: 114.35
ELEVATION OF TOP OF RISER PIPE: 113.78

STICK - UP TOP OF SURFACE CASING: +2.67'
STICK - UP RISER PIPE: +2.10'

TYPE OF SURFACE SEAL: Concrete

I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel

RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC

BOREHOLE DIAMETER: 8"

TYPE OF BACKFILL: Cement grout

ELEVATION / DEPTH TOP OF SEAL: 15'

TYPE OF SEAL: Bentonite Pellets

DEPTH TOP OF SAND PACK: 17'

ELEVATION / DEPTH TOP OF SCREEN: 10'

TYPE OF SCREEN: PVC

SLOT SIZE x LENGTH: 10 SL x 10'

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: #1 morie

ELEVATION / DEPTH BOTTOM OF SCREEN: 20'

ELEVATION / DEPTH BOTTOM OF SAND PACK: 20'

TYPE OF BACKFILL BELOW OBSERVATION WELL: n/a

ELEVATION / DEPTH OF HOLE: 20'

BORING NO. MW23-1

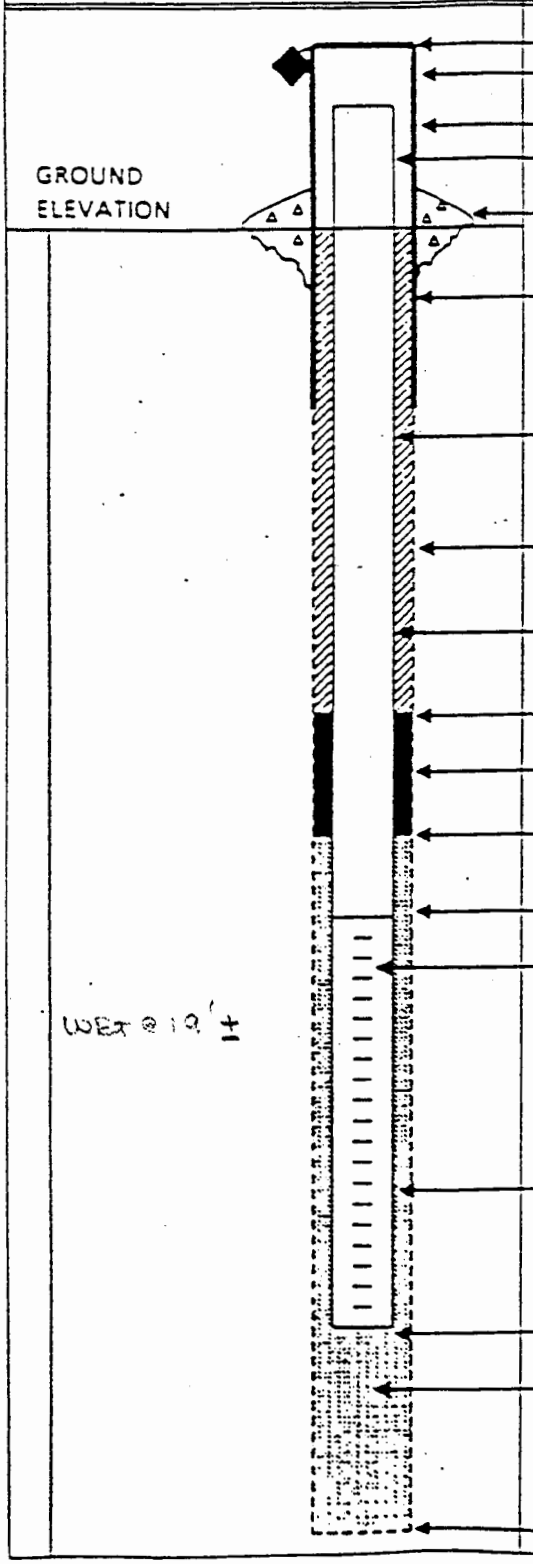
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT CTO 231
PROJECT NO. 5803
ELEVATION Ground: 117.69' MSL
FIELD GEOLOGIST CONTI

LOCATION NWS EARLE
BORING MW23-1
DATE 7/7/95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD PUMP



ELEVATION OF TOP OF SURFACE CASING:
ELEVATION OF TOP OF RISER PIPE: 119.62'
STICK - UP TOP OF SURFACE CASING: + 2.50'
STICK - UP RISER PIPE: + 1.93'
TYPE OF SURFACE SEAL: CONCRETE
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: STEEL
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: CEMENT GROUT
ELEVATION / DEPTH TOP OF SEAL: 12'
TYPE OF SEAL: BENT. PELLETS
DEPTH TOP OF SAND PACK: 15'
ELEVATION / DEPTH TOP OF SCREEN: 17'
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10 SL x 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 MORIE
ELEVATION / DEPTH BOTTOM OF SCREEN: 27'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 27'
TYPE OF BACKFILL BELOW OBSERVATION WELL: NA
ELEVATION / DEPTH OF HOLE: 27'

BORING NO. MW23-2

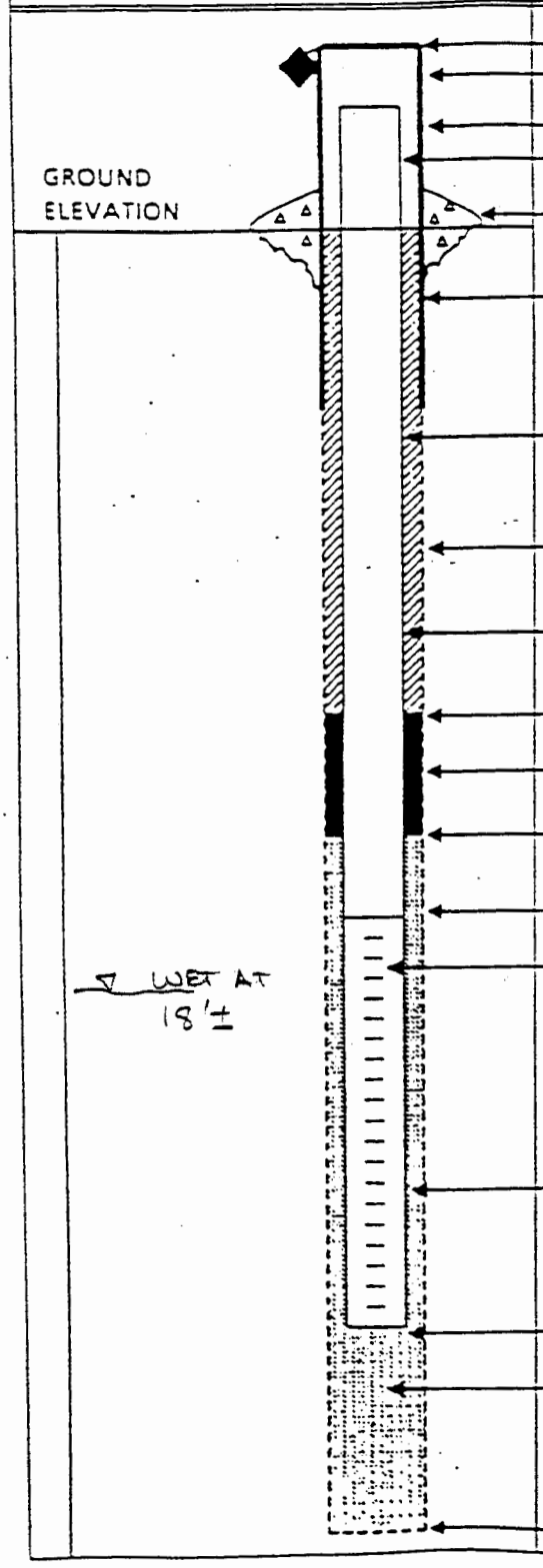
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT CTO 231
PROJECT NO. 5803
ELEVATION Ground: 115.98' msl
FIELD GEOLOGIST CONTI

LOCATION NWS EARLE
BORING MW23-2
DATE 7/7/95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD PUMP



ELEVATION OF TOP OF SURFACE CASING: 118.85'
ELEVATION OF TOP OF RISER PIPE: 118.22
STICK - UP TOP OF SURFACE CASING: +2.87'
STICK - UP RISER PIPE: +2.24'
TYPE OF SURFACE SEAL: CONCRETE
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: STEEL
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: CEMENT GROUT
ELEVATION / DEPTH TOP OF SEAL: 111'
TYPE OF SEAL: BENT PELLETS
DEPTH TOP OF SAND PACK: 114'
ELEVATION / DEPTH TOP OF SCREEN: 116'
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10SL x 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 MORIE
ELEVATION / DEPTH BOTTOM OF SCREEN: 126'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 126'
TYPE OF BACKFILL BELOW OBSERVATION WELL: NA
ELEVATION / DEPTH OF HOLE: 126'

HALLIBURTON NUS
Environmental Corporation

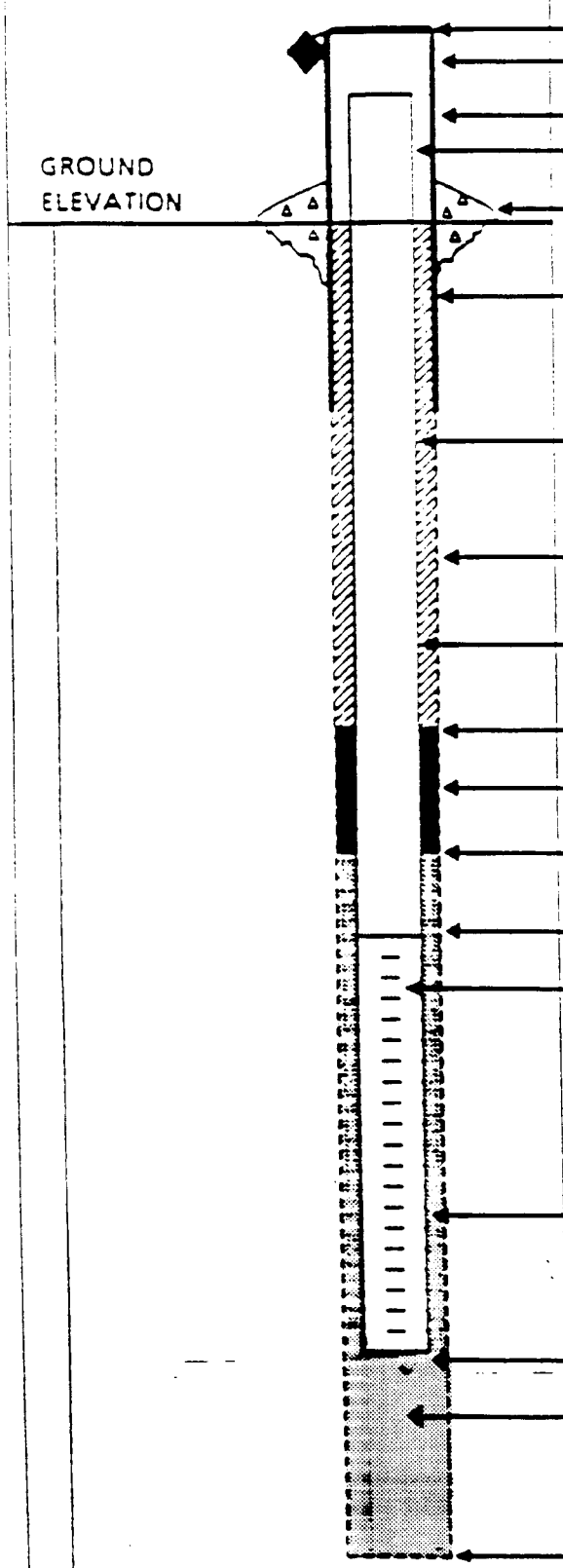
BORING NO MW-23-03

OVERBURDEN
MONITORING WELL SHEET

PROJECT NWS - Earle
PROJECT NO. 5803
ELEVATION Ground: 113.41' MSL
FIELD GEOLOGIST Paul Davis

LOCATION Colts Neck, NJ
BORING MW-23-03
DATE 7-07-95

DRILLER JCA - Drilling
DRILLING METHOD HSA
DEVELOPMENT METHOD



ELEVATION OF TOP OF SURFACE CASING: 113.46
ELEVATION OF TOP OF RISER PIPE: 113.19
STICK - UP TOP OF SURFACE CASING: +0.05'
STICK - UP RISER PIPE: Flush mount (-0.22')
TYPE OF SURFACE SEAL: Cement / grout
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC - Schedule 40
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: Cement / grout
ELEVATION / DEPTH TOP OF SEAL: 9' bgs
TYPE OF SEAL: Bentonite slurry
DEPTH TOP OF SAND PACK: 12' bgs
ELEVATION / DEPTH TOP OF SCREEN: 14' bgs
TYPE OF SCREEN: PVC Schedule 40
SLOT SIZE x LENGTH: 0.10' x 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 Filter Sand
ELEVATION / DEPTH BOTTOM OF SCREEN: 24' bgs
ELEVATION / DEPTH BOTTOM OF SAND PACK: 24' bg
TYPE OF BACKFILL BELOW OBSERVATION WELL:
ELEVATION / DEPTH OF HOLE: 24' bgs

HALLIBURTON NUS
Environmental Corporation

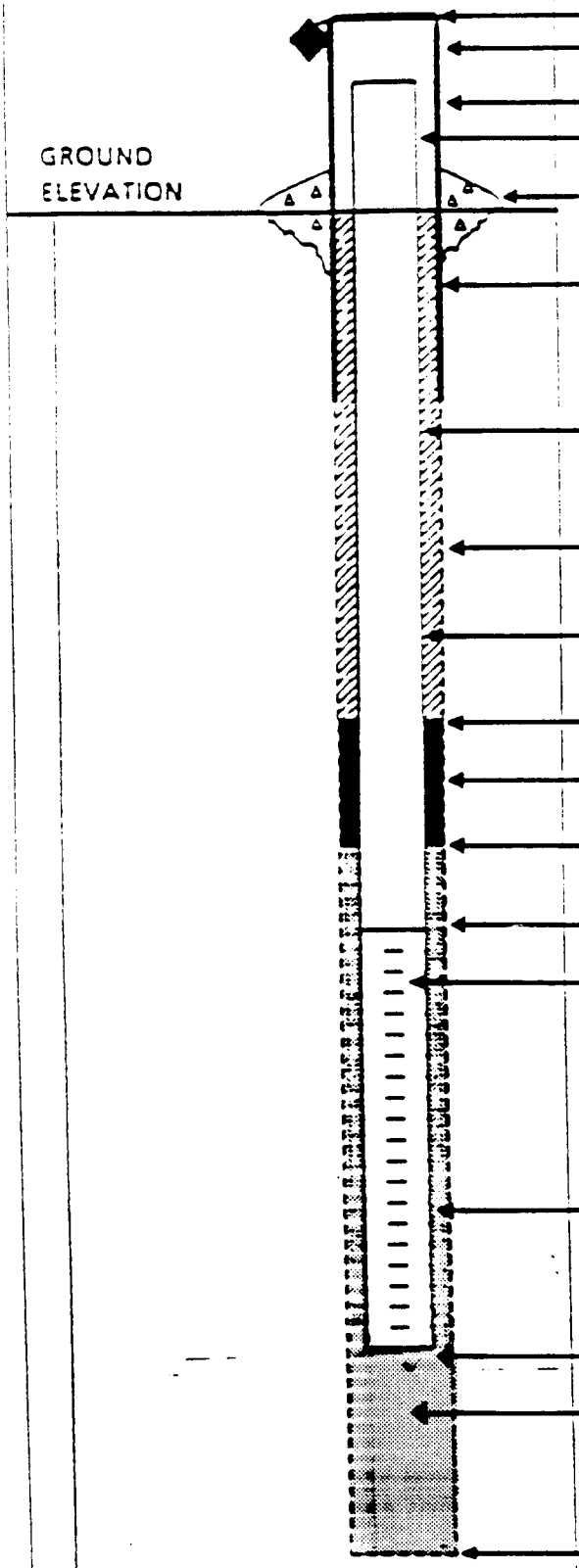
BORING NO MW-26-05

OVERBURDEN MONITORING WELL SHEET

PROJECT NWS - Earle
PROJECT NO. 5803
ELEVATION Ground: 147.70' MSL
FIELD GEOLOGIST Paul Davis

LOCATION Colts Neck, N.J
BORING MW-26-05
DATE 7-06-95

DRILLER JCA Drilling
DRILLING METHOD HSA
DEVELOPMENT METHOD



ELEVATION OF TOP OF SURFACE CASING: 150.23'
ELEVATION OF TOP OF RISER PIPE: 149.68'
STICK - UP TOP OF SURFACE CASING: + 2.53'
STICK - UP RISER PIPE: + 1.98'
TYPE OF SURFACE SEAL: Cement grout
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel
RISER PIPE I.D. 2-inches
TYPE OF RISER PIPE: PVC Schedule 40
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: Cement Grout
ELEVATION / DEPTH TOP OF SEAL: 5' bgs
TYPE OF SEAL: Bentonite Slurry
DEPTH TOP OF SAND PACK: 7' bgs
ELEVATION / DEPTH TOP OF SCREEN: 9' bgs
TYPE OF SCREEN: PVC Schedule 40
SLOT SIZE x LENGTH: 0.10' x 10'
I.D. OF SCREEN: 2 inches
TYPE OF SAND PACK: #1 Filter Sand
ELEVATION / DEPTH BOTTOM OF SCREEN: 19' bgs
ELEVATION / DEPTH BOTTOM OF SAND PACK: 19' bgs
TYPE OF BACKFILL BELOW OBSERVATION WELL: ~~#1 Filter Sand~~
ELEVATION / DEPTH OF HOLE: 19' bgs

BORING NO. MW26-6

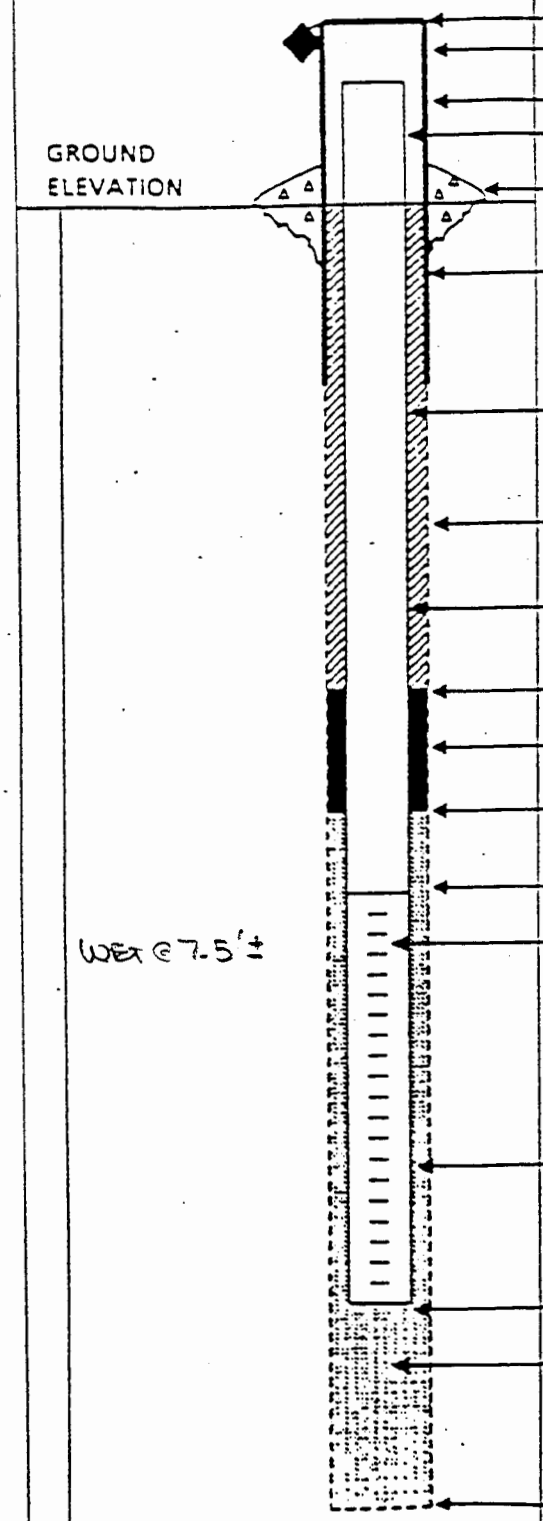
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT CTO 231
PROJECT NO. 5803
ELEVATION Ground: 144.94' MSL
FIELD GEOLOGIST CONTI

LOCATION NWS EARLE
BORING MW26-6
DATE 7/6/95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD PUMP



ELEVATION OF TOP OF SURFACE CASING: 147.38'
ELEVATION OF TOP OF RISER PIPE: 146.82'
STICK - UP TOP OF SURFACE CASING: + 2.44'
STICK - UP RISER PIPE: + 1.88'
TYPE OF SURFACE SEAL: CONCRETE + 2 BARRIER POSTS
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: STEEL
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: CEMENT GROUT
ELEVATION / DEPTH TOP OF SEAL: 12'
TYPE OF SEAL: BENTONITE PELLETS
DEPTH TOP OF SAND PACK: 14
ELEVATION / DEPTH TOP OF SCREEN: 16
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10 SL x 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 MORIE
ELEVATION / DEPTH BOTTOM OF SCREEN: 116
ELEVATION / DEPTH BOTTOM OF SAND PACK: 116
TYPE OF BACKFILL BELOW OBSERVATION WELL: NA
ELEVATION / DEPTH OF HOLE: 116

HALLIBURTON NUS
Environmental Corporation

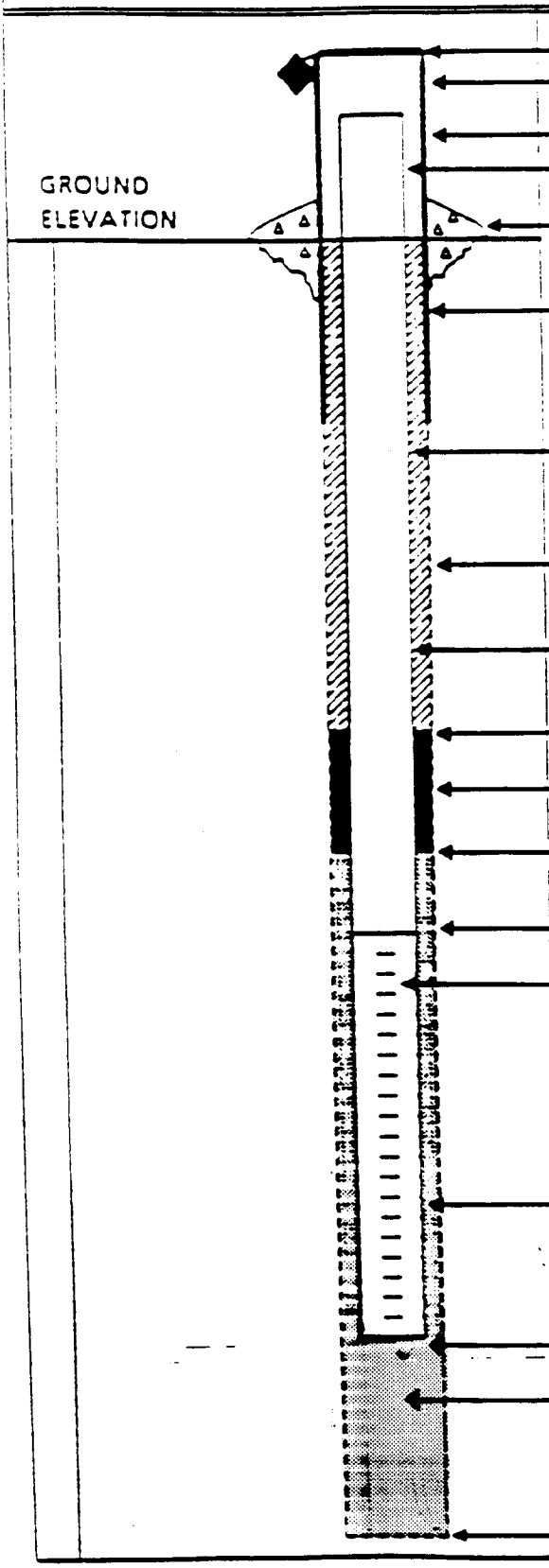
BORING NO 29-MW-01

OVERBURDEN
MONITORING WELL SHEET

PROJECT NWS-Earle
PROJECT NO. 5863
ELEVATION Ground: 97.36' MSL
FIELD GEOLOGIST Paul Davis

LOCATION Colts Neck, NJ.
BORING 29-MW-01
DATE 7-7-95

DRILLER JCA Drilling
DRILLING METHOD HSA
DEVELOPMENT METHOD



ELEVATION OF TOP OF SURFACE CASING: 100.02
ELEVATION OF TOP OF RISER PIPE: 99.42
STICK - UP TOP OF SURFACE CASING: + 2.66'
STICK - UP RISER PIPE: + 2.06'
TYPE OF SURFACE SEAL: Cement/grout
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel
RISER PIPE I.D. 2-inches
TYPE OF RISER PIPE: PVC Schedule 40
BOREHOLE DIAMETER: 8-inches
TYPE OF BACKFILL: Cement/grout
ELEVATION/DEPTH TOP OF SEAL: 2' bgs
TYPE OF SEAL: Bentonite Slurry
DEPTH TOP OF SAND PACK: 4' bgs
ELEVATION/DEPTH TOP OF SCREEN: 6' bgs
TYPE OF SCREEN: PVC Schedule 40
SLOT SIZE x LENGTH: 0.10' x 10'
I.D. OF SCREEN: 2-inches
TYPE OF SAND PACK: #1 Filter Sand
ELEVATION/DEPTH BOTTOM OF SCREEN: 16' bgs
ELEVATION/DEPTH BOTTOM OF SAND PACK: 18' bgs
TYPE OF BACKFILL BELOW OBSERVATION WELL: ~~#1 Filter Sand~~ DMD
ELEVATION/DEPTH OF HOLE: 18' bgs

BORING NO. MW29-2

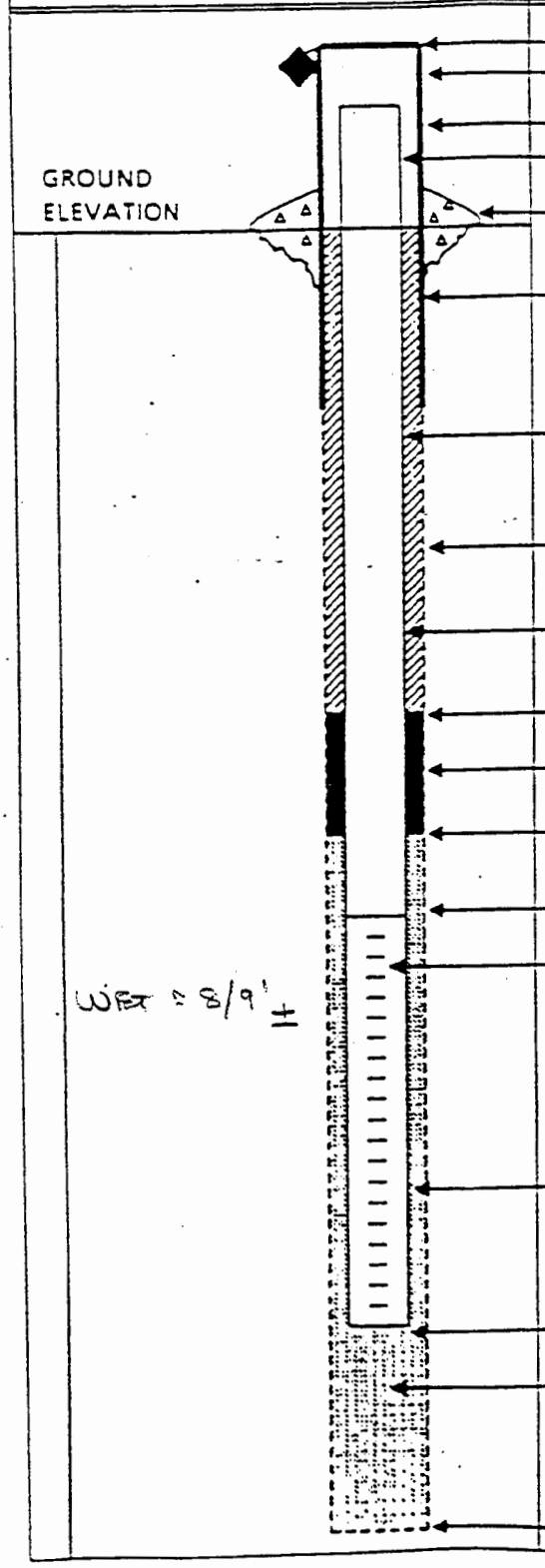
HALLIBURTON NUS
Environmental Corporation

MONITORING WELL SHEET

PROJECT CTO 231
PROJECT NO. 5803
ELEVATION Ground: 98.44' MSL
FIELD GEOLOGIST CONTI

LOCATION NWS EARLE
BORING MW29-2
DATE 7/10/95

DRILLER JCA
DRILLING METHOD HSA
DEVELOPMENT METHOD PUMP



ELEVATION OF TOP OF SURFACE CASING: 101.10'
ELEVATION OF TOP OF RISER PIPE: 100.39
STICK - UP TOP OF SURFACE CASING: + 2.66'
STICK - UP RISER PIPE: + 1.95'
TYPE OF SURFACE SEAL: CONCRETE
I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: STEEL
RISER PIPE I.D. 2"
TYPE OF RISER PIPE: PVC
BOREHOLE DIAMETER: 8"
TYPE OF BACKFILL: CEMENT GROUT
ELEVATION / DEPTH TOP OF SEAL: 13'
TYPE OF SEAL:
DEPTH TOP OF SAND PACK: 15'
ELEVATION / DEPTH TOP OF SCREEN: 17'
TYPE OF SCREEN: PVC
SLOT SIZE x LENGTH: 10SL X 10'
I.D. OF SCREEN: 2"
TYPE OF SAND PACK: #1 MORIE
ELEVATION / DEPTH BOTTOM OF SCREEN: 17'
ELEVATION / DEPTH BOTTOM OF SAND PACK: 17'
TYPE OF BACKFILL BELOW OBSERVATION WELL: NA
ELEVATION / DEPTH OF HOLE: 17'

APPENDIX D

SAMPLE COLLECTION LOGS

APPENDIX D.a.

GROUNDWATER SAMPLE LOGS

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. BG-GW01 Source Location SITE BACKGROUND

Total Well Depth: 29'	
Well Casing Size & Depth: 2" PVC 29 TOC	
Static Water Level: 22.10 TOC	
One Casing Volume: 1.1 GAL	
Start Purge (hrs.): 0901	
End Purge (hrs.): 1116	
Total Purge Time (min.): 135	
Total Amount Purged (gal.): 2	
Monitor Reading: <0.1 PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: →	SEE PG 2
Sample Date & Time: 8.23.95 1120	
Sampled By: KS AS	

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL

Signature(s): [signature]

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED
* DUP 21 - 082395
.163 X 6.9 = 1.1 GAL / 1 VOL

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TAL METALS	
CYANIDE	
TPH	
LANDFILL PAR.	
EXPLOSIVES	
TCL PEST. PCB	

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: BGGW01
DATE: 8-23-95

	Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START	0901	22.10								
	0905	22.13	—	19.4	4.67	25.8	>50	—	—	
	0910	22.13	80	18.7	5.02	36.3	>50	0.00	8	
	0915	22.13	70	18.6	5.11	171.0	>50.0	—	—	
	0920	22.13	70	18.6	5.17	171.	>50.0	0.00	48	
	0925	22.13	65	18.6	5.24	169	>50.	—	—	
	0930	22.13	55	19.0	5.32	167	>50	0.00	124	
	0935	22.13	55	19.3	5.35	166	>50	—	—	
	0940	22.13	55	19.3	5.42	165	>50.	0.00	145	
	0945	22.13	55	19.3	5.45	162	>50.	—	—	
	0950	22.13	55	19.3	5.48	162	>50.	0.00	130	
	0955	22.13	55	19.2	5.51	161	>50	—	—	
	1000	22.13	55	19.1	5.53	160	>50	0.00	117	
	1005	22.13	55	19.1	5.55	160	>50	—	—	
	1010	22.13	55	19.2	5.56	161	>50	0.00	104	
	1015	22.13	50	19.4	5.60	161	>50	—	—	
	1020	22.13	50	19.6	5.61	161	>50	0.00	89	
	1025	22.13	60	19.7	5.64	159	>50	—	—	
	1030	22.13	50	19.7	5.67	158	>50	0.00	98	
	1035	22.13	45	19.9	5.67	155	>50	—	—	
	1040	22.13	60	20.4	5.68	158	>50	0.00	71	
	1045	22.13	55	20.0	5.70	155	>50	—	—	* INCREASE FLOW TO
	1050	22.13	55	19.9	5.70	155	>50	0.00	62	SEE IF TURB DROPS +
	1055	22.13	125 *	19.6	5.69	153	>50	—	—	28 QTS TO FILL TANK
	1100	22.13	120	17.1	5.68	151	>50	0.00	65	TO DECREASE SAMPLE TIME
	1105	22.13	120	17.3	5.60	150	>50	0.00	52	DUP21-082395
	1110	22.13	120	17.3	5.59	152	>50	0.00	57	
	1115	22.13	110	17.6	5.59	151	>50	0.00	79	
	1116	END 2 GALLON PURGE								
	1120	BEGIN SAMPLING								
POST PARAMETERS	1125	22.13	120	22.4	5.73	141	49.8		89	

SIGNATURE(S) [illegible]

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803
NUS Source No. BG-GW02 Source Location SITE BACKGROUND

	Purge Data						
Total Well Depth: 79'	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 2" PVC 79' TOC							
Static Water Level: 70.48 TOC							
One Casing Volume: 1.4 GAL							
Start Purge (hrs.): 1630							
End Purge (hrs.): 1905							
Total Purge Time (min.): 155							
Total Amount Purged (gal.): 3.5							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: —	SEE PG 2						
Sample Date & Time: 8.23.95 1910	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS AS							

Signature(s):

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.163 x 8.5 = 1.4 GAL / 1 VOL

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TCL PEST/PCB	
TPH	
TAL METALS	
CYANIDE	
LANDFILL PAR	
EXPLOSIVES	

ID TAG INSTALLED

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: BGGW 02
DATE: 8.23.95

	Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. 45	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START	1630	70.48'	—	—			—	—	—	DEEP WELL: WAITING FOR FLOW TO REACH SURFACE
	1650	70.46	95	19.9	5.16	61	>50.	0.00	45	
	1655	70.46	80	19.3	5.02	61	720.	0.00	382	
	1700	70.46	100	17.8	4.88	60	44.6	0.00	>999	
	1705	70.46	100	16.9	4.77	61	42.0	0.00	>999	
	1710	70.46	95	16.4	4.73	61	41.0	0.00	786	
	1715	70.46	95	16.6	4.76	63	37.6	0.00	574	
	1720	70.46	100	16.7	4.84	61	39.9	0.00	410	
	1725	70.46	100	16.6	4.91	61	36.7	0.00	332	
	1730	70.46	100	16.4	4.96	60	35.1	0.00	261	
	1735	70.46	100	16.1	4.99	59	36.4	0.00	204	
	1740	70.46	100	16.0	5.04	59	31.9	0.00	188	
	1745	70.46	105	15.8	5.01	58	44.9	0.00	162	
	1750	70.46	100	15.9	5.11	58	34.5	0.00	148	
	1755	70.46	100	15.9	5.20	58	32.6	0.00	127	
	1800	70.46	105	15.7	5.22	59	33.6	0.00	115	
	1805	70.46	100	15.6	5.23	58	30.6	0.00	109	
	1810	70.46	100	15.6	5.28	59	29.1	0.00	103	
	1815	70.46	105	15.4	5.29	58	33.2	0.00	99	
	1820	70.46	110	15.2	5.30	58	32.5	0.00	85	
	1825	70.46	110	15.1	5.24	57	31.6	0.00	82	
	1830	70.46	110	15.0	5.30	58	31.7	0.00	81	2.5 GAL TO THIS POINT
	1835	70.46	110	15.0	5.31	57	34.5	0.00	72	
	1840	70.46	110	15.0	5.36	57	28.0	0.00	67	
	1845	70.46	115	14.8	5.34	57	32.7	0.00	65	
	1850	70.46	120	14.7	5.31	58	31.9	0.00	62	
	1855	70.46	105	14.7	5.33	58	32.5	0.00	57	
	1900	70.46	100	14.9	5.36	57	21.6	0.00	57	
	1905	70.46	100	15.0	5.37	57	18.9	0.00	57	
	1910	BEGIN SAMPLING		END SAMPLING		2100				
POST	2105	70.46	105	14.7	5.33	54	24.8	0.00	69	

SIGNATURE(S) [illegible]

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 3
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803
NUS Source No. BG GW 03 Source Location SITE BACKGROUND

Total Well Depth: 69.00	
Well Casing Size & Depth: 4" PVC 2" PVC TOC	
Static Water Level: 63.58 TOC	
One Casing Volume: 0.88 GAL	
Start Purge (hrs.): 1101	
End Purge (hrs.): 1340	
Total Purge Time (min.): 159	
Total Amount Purged (gal.): 3	
Monitor Reading: NO HNU readings above background PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: →	SEE PG 2
Sample Date & Time: 8/8/95 1345	
Sampled By: ~~KS~~ AS/CM	

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL

Signature(s):

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.163
.~~683~~ X 5.42 = 0.88 gallons

Analysis:	Preservative
TCL Volatiles	HCL
TCL SVOC's	None
TCL Pest/PCB's	None
TAL Metals	HNO_3
Cyanide	NaOH
Explosives	None
TPH	None
Landfill Parameters	H_2SO_4
Landfill Parameters	None

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: BG MW 03
DATE: 8/8/95

	Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. US	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
		~~63.21~~ AS								
Start	1101	63.58								
	1106	63.68								No measurable H_2O
	1111	63.84								" " "
	1116	64.04								" " "
	1121	64.20	0.140	13.4	5.82	113.0	10.3	0.00	410	
	1126	64.21	0.110	13.6	5.84	116.0	27.9	0.00	460	
	1131	64.19	0.110	13.7	5.79	113.0	37.2	0.00	520	
	1136	64.21	0.120	13.4	5.79	112.0	29.1	0.00	552	
	1141	64.21	0.110	13.5	5.76	107.0	33.6	0.00	489	
	1146	64.24	0.105	13.5	5.75	100.0	28.6	0.00	402	
	1151	64.25	0.100	13.7	5.68	91.3	30.6	0.00	296	
	1156	64.25	0.095	13.1	5.65	87.1	29.2	0.00	221	
	1201	64.25	0.090	13.7	5.63	84.4	28.7	0.00	191	
	1206	64.25	0.095	13.9	5.61	81.2	33.7	0.00	148	
	1211	64.25	0.100	14.2	5.65	77.5	22.3	0.00	134	
	1216	64.28	0.110	13.9	5.62	74.2	27.1	0.00	110	
	1221	64.27	0.085	14.6	5.63	72.4	23.5	0.00	97	
	1226	64.25	0.080	15.3	5.61	72.1	23.2	0.00	84	
	1231	64.24	0.090	16.1	5.62	70.6	23.4	0.00	72	
	1236	64.22	0.090	15.5	5.62	70.6	22.7	0.00	68	
	1241	64.21	0.080	15.6	5.60	69.3	22.6	0.00	66	
	1246	64.20	0.088	15.5	5.59	67.2	22.7	0.00	59	
	1251	64.21	0.080	15.4	5.57	64.6	21.8	0.00	51	
	1256	64.23	0.085	15.0	5.53	61.8	23.6	0.00	45	
	1301	64.22	0.090	14.8	5.52	60.8	22.1	0.00	39	
	1306	64.29	0.095	14.3	5.46	58.6	22.4	0.00	34	
	1311	64.28	0.090	14.6	5.49	59.5	22.1	0.00	31	
	1316	64.20	0.095	15.3	5.51	59.4	16.8	0.00	31	
	1321	64.18	0.060	15.6	5.51	60.6	22.6	0.00	—	

SIGNATURE(S) [illegible]

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: BG-GW03
DATE: 8/8/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. U.S	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1326	64.18	0.060	15.9	5.46	59.1	30.7	0.00	31	
1331	64.16	0.065	18.8	5.50	59.5	23.9	0.00	—	
1336	64.08	0.060	16.1	5.52	60.3	23.6	0.00	31	
1340	Purging complete after purging 3 gallons from the well								
1345	Sampling at BG-GW03 was begun								
1558	Complete sample collection								
	Post sample parameters								
1603	—	0.115	15.8	5.36	50.3	23.1	0.00	33	

SIGNATURE(S) [illegible]

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803
NUS Source No. BGGW04 Source Location SITE BACKGROUND

Total Well Depth: 20.00	Purge Data							
Well Casing Size & Depth: ~~4" PVC~~ 2" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Static Water Level: 15.66 TOC								
One Casing Volume: 0.71 GAL								
Start Purge (hrs.): 0845								
End Purge (hrs.): 0947								
Total Purge Time (min.): 62								
Total Amount Purged (gal.): 1.5								
Monitor Reading: NO HNU readings above background ~~PPM~~								
Purge Method: GEOGUARD								
Sample Method: GEOGUARD								
Depth Sampled: →	SEE PG 2							
Sample Date & Time: 819195 0950	Sample Data							
Sampled By: ~~KS~~ AB/CM	pH	S.C.	Temp. (°C)	TURB	DO	SAL		

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

163 ~~63~~ X 4.34 = 0.71

Analysis:	Preservative
✓ TCL Volatiles	~~HNO3~~ HCl
✓ TCL SVOC's	None
✓ TCL Pest/PCB's	None
✓ TAL Metals	HNO_3
✓ Cyanide	NaOH
✓ Landfill Para	None
✓ Landfill Para	H_2SO_4
✓ Explosives	None
✓ TPH	None

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: BG-GW04
DATE: 8/9/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µ/S	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
0845	15.66								
0850	15.81	0.205	15.7	3.59	737.0	37.1	0.02	-10	
0855	15.75	0.185	15.6	3.56	764.0	18.0	0.03	-10	
0900	15.74	0.080	16.1	3.57	769.0	25.0	0.03	-10	
0905	15.70	0.085	16.4	3.54	777.0	28.1	0.03	-10	
0910	15.75	0.095	16.4	3.56	793.0	24.6	—	—	recalibrating turb. meter
0915	15.74	0.100	16.1	3.55	793.0	27.6	0.04	18	
0920	15.75	0.100	16.1	3.55	801.0	28.5	0.03	13	
0925	15.77	0.085	16.2	3.57	801.0	>50.0	0.03	9	
0930	15.78	0.075	16.6	3.58	814.0	>50.0	0.03	6	
0935	15.80	0.080	16.6	3.58	817.0	44.4	0.03	5	
0940	15.80	0.090	16.5	3.58	814.0	750.0	0.03	3	
0945	15.78	0.095	16.4	3.57	814.0	750.0	0.03	3	
0947	END 1.5 GALLON PURGE								
0950	BEGIN SAMPLING								
1140	SAMPLE COLLECTION COMPLETED								
1148	POST SAMPLE PARAMETERS								
	15.75	0.100	20.8	3.65	773.0	49.1	0.03	4	

SIGNATURE(S) [signature]

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 3
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803
NUS Source No. 01GW01 Source Location SITE 01

Total Well Depth: 17.88	
Well Casing Size & Depth: 4" PVC TOC	
Static Water Level: 7.88 TOC	
One Casing Volume: 6.53 GAL	
Start Purge (hrs.): 0705	
End Purge (hrs.): 1019	
Total Purge Time (min.): 189	
Total Amount Purged (gal.): 5.5	
Monitor Reading: No readings above background PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: →	SEE PG 2
Sample Date & Time: 7/24/95 1020	
Sampled By: ASICM	

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL

Signature(s):

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 10 = 6.53

Analysis:	Preservative
TCL Volatiles	HCl
TCL SVOC's	None
TCL Pest	None
TAL Metals	HNO_3
Explosives	None
COD, TOC	H_2SO_4
BOD / N/N	None
TPH	None

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 01GW01	SITE - 01
BASED ON: 01GW01	DRAWING NUMBER:
BY: ASICM	CHECKED BY:
APPROVED BY:	DATE: 7/24/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
0705	0.205	8.00	4.78	10:1	19.2	31	6.0	0.00
0710	0.160	8.02	4.71	92.1	19.2	58	6.00	0.00
0715	0.160	8.05	4.69	92.1	17.8	—	10.0	0.00
0720	0.140	8.05	4.70	91.1	17.9	—	10.7	0.00
0725	0.135	8.05	4.72	91.1	18.1	—	11.2	0.00
0730	0.095	8.05	4.74	92.1	18.3	—	11.1	0.00
0735	0.100	8.03	4.75	92.1	18.5	—	12.5	0.00
0740	0.100	8.02	4.75	92.1	18.5	—	12.6	0.00
0745	0.100	8.03	4.76	92.1	18.6	—	14.1	0.00
0750	0.095	8.03	4.77	91.1	18.8	—	12.9	0.00
0755	0.095	8.02	4.77	93.1	19.2	—	14.3	0.00
0800	0.100	8.02	4.78	91.1	19.2	—	14.4	0.00
0805	0.095	8.02	4.77	90.1	18.8	80	14.1	0.00
0810	0.125	8.02	4.79	90.1	18.8	88	13.5	0.00
0815	0.100	8.02	4.79	90.1	18.8	97	13.7	0.00
0820	0.095	8.02	4.79	91.1	18.9	97	14.3	0.00
0825	0.065	8.02	4.78	91.1	19.0	101	15.0	0.00
0830	0.080	7.98	4.81	91.1	19.1	102	15.0	0.00
0835	0.090	7.98	4.80	91.1	19.0	98	13.7	0.00
0840	0.090	7.99	4.81	91.1	19.1	95	15.2	0.00
0845	0.090	8.00	4.81	91.1	19.1	88	14.1	0.00
0850	0.075	8.00	4.81	91.1	19.3	81	14.1	0.00
0855	0.080	7.96	4.81	93.1	19.4	76	13.5	0.00
0900	0.075	8.00	4.81	93.1	19.7	70	14.3	0.00
0905	0.065	8.00	4.81	91.1	19.9	66	14.8	0.00
0910	0.070	8.01	4.81	92.1	20.0	60	14.1	0.00
0915	0.055	7.97	4.81	92.1	20.2	57	14.1	0.00
0920	0.060	7.97	4.82	92.1	20.6	54	13.8	0.00
0925	0.065	7.95	4.82	93.1	21.1	—	15.1	0.00
0930	0.070	7.97	4.82	92.1	20.5	52	13.3	0.00
0935	0.075	7.97	4.82	93.1	20.3	50	13.5	0.00
0940	0.075	8.00	4.82	92.1	20.0	48	15.0	0.00

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 01GW01	SITE-01
BASED ON:	DRAWING NUMBER:
BY: CMIAS / CHECKED BY:	APPROVED BY: / DATE: 7/24/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
0945	0.080	7.97	4.82	93.1	20.3	45	13.1	0.00
0950	0.060	7.98	4.82	93.1	20.4	48	13.4	0.00
0955	0.050	7.95	4.82	93.1	21.1	—	13.5	0.00
1000	0.035	7.95	4.82	93.1	21.9	42	16.0	0.00
1005	0.040	7.95	4.82	93.1	23.0	42	13.4	0.00
1010	0.045	7.95	4.82	93.1	23.4	—	14.3	0.00
1015	0.045	7.95	4.81	93.1	23.8	42	14.0	0.00
1019	Purging was completed after purging 5.5 gallons							
1020	Sampling was begun by Andy Spaugh							
1140	Sampling was completed							
	Post Sampling Parameters							
1145	0.055	7.97	4.71	92.1	24.9	108	7.9	0.00

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name: NWS EARLE
Project Site Number: CTO 231 5803
NUS Source No.: 01GW02
Source Location: SITE 1

Total Well Depth: 17.6'	Purge Data
Well Casing Size & Depth: 4" PVC 17.6 TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: 6.42 TOC	
One Casing Volume: 7.3 GAL	
Start Purge (hrs.): 1520	
End Purge (hrs.): 1650	
Total Purge Time (min.): 90	
Total Amount Purged (gal.):	
Monitor Reading: <0. PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: —	SEE PG 2
Sample Date & Time: 7.23.95 1700	Sample Data
Sampled By: KS TR	pH / S.C. / Temp. (°C) / TURB / DO / SAL
Signature(s): [signature]	Observations / Notes: DEDICATED PUMP & TUBING; HORIBA, HNU, & GEOGUARD CELL USED; DUP 15 TAKEN [illegible]; .653 X 3 = 7.3 GAL / 1 VOL

Type of Sample

- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TAL METALS	
PYRIDINES	
BOD NTN/NH3	
TPH	
TSS, COD	

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 916W02	SITE - 1
BASED ON:	DRAWING NUMBER:
BY: KS TR	CHECKED BY:
APPROVED BY:	DATE: 7.25.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
START	520	250	6.42	5.10	47.3	26.9	236	3.63	0
	1525	.115	6.72	4.94	51.2	20.2	999+	4.46	0
	1530	.100	6.63	4.94	51.7	23.0	935	3.07	0
	1535	.095	6.62	4.94	51.9	24.1	999	2.62	0
	1540	.100	6.59	4.92	52.1	24.1	—	2.79	0
	1545	.095	6.61	4.93	52.1	24.5	999	2.65	0
	1550	.095	6.59	4.92	51.9	23.9	999	2.51	0
	1555	.095	6.58	4.91	51.9	22.1	999	2.45	0
	1600	.090	6.59	4.87	53.6	22.1	999	2.41	0
	1605	.100	6.58	4.86	53.7	22.3	999	2.41	0
	1610	.090	6.58	4.87	57.3	22.6	999	2.42	0
	1615	.075	6.57	4.88	57.5	23.2	999	2.32	0
	1620	.060	6.56	4.82	57.5	24.1	—	2.31	0
	1625	.080	6.55	4.83	57.7	25.3	999	2.13	0
	1630	.070	6.55	4.83	58.0	25.5	999	2.32	0
	1635	.075	6.55	4.82	58.0	24.9	—	2.29	0
	1640	.075	6.56	4.82	58.0	24.9	999	2.42	0
	1645	.060	6.55	4.83	58.0	25.6	999	2.22	0
	1650	.065	6.55	4.82	58.1	25.3	—	2.37	0
					1700 Hrs		Sample	[illegible]	
POST →	1945	.080	6.67	5.04	[illegible]	22.6	440	2.9	0

[illegible]

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803

NUS Source No. 01GW03 Source Location SITE 01

Total Well Depth: 18.35	Purge Data
Well Casing Size & Depth: 4" PVC 18.35 TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: 7.53 TOC	
One Casing Volume: 7.06 GAL	
Start Purge (hrs.): 1515	
End Purge (hrs.): 1650	
Total Purge Time (min.): 95	
Total Amount Purged (gal.): 5	
Monitor Reading: No readings above background PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: —	SEE PG 2
Sample Date & Time: 7/23/95 1655	Sample Data: pH / S.C. / Temp. (°C) / TURB / DO / SAL
Sampled By: ~~KS~~ JAS/CM	
Signature(s):	Observations / Notes: DEDICATED PUMP & TUBING; HORIBA, HNU, & GEOGUARD CELL USED; MS MSD sample was collected under 01GW03
Type of Sample: [x] Low Concentration; [ ] High Concentration; [x] Grab; [ ] Composite; [ ] Grab - Composite	.653 X 10.82 = 7.06

Analysis:	Preservative
TCL volatiles	HCl
TCL SVOC's	None
TCL Pest	None
TAL Metals	HNO3
Explosives	None
NH3, BOD	None
COD, TOC	H2SO4
TPH	None

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 01GW03	SITE - 01
BASED ON:	DRAWING NUMBER:
BY: ASICM	CHECKED BY:
APPROVED BY:	DATE: 7/22/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
~~1515~~	~~0.145~~	~~8.46~~ 7.69	5.32	49.0	19.1	68	5.2	0.00
1520	0.150	8.25	5.22	48.0	19.8	68	5.6	0.00
1525	0.065	8.38	5.23	48.0	20.5	52	5.5	0.00
1530	0.050	8.42	5.23	50.0	23.3	50	3.6	0.00
1535	0.050	8.40	5.26	50.0	24.4	—	3.7	0.00
1540	0.055	8.42	5.26	49.0	24.1	59	6.7	0.00
1545	0.040	8.45	5.26	50.0	23.6	68	3.6	0.00
1550	0.055	8.45	5.26	49.0	23.2	80	3.4	0.00
1555	0.055	8.45	5.25	49.0	22.6	—	6.4	0.00
1600	0.085	8.47	5.25	48.0	22.0	95	6.3	0.00
1605	0.070	8.50	5.25	48.0	21.6	112	6.5	0.00
1610	0.055	8.55	5.25	48.0	21.3	112	6.6	0.00
1615	0.075	8.55	5.25	48.0	21.3	118	6.8	0.00
1620	0.070	8.55	5.26	48.0	21.9	—	6.6	0.00
1625	0.050	8.56	5.26	49.0	22.7	120	6.8	0.00
1630	0.050	8.56	5.25	49.0	23.1	122	7.2	0.00
1635	0.050	8.57	5.26	49.0	23.2	122	7.1	0.00
1640	0.030	8.57	5.28	49.0	23.6	—	7.1	0.00
1645	0.045	8.58	5.27	49.0	23.9	122	7.2	0.00
1650	Purging was completed after purging 5 gallons							
1655	Sampling of 01GW03 was begun							
	Post sampling parameters							
2015		8.88	5.50	57	19.9	112	4.0	0.00

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 3
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 01GW04 Source Location SITE - 01

	Purge Data						
Total Well Depth: 16.00	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 2" PVC TOC							
Static Water Level: 8.10 TOC							
One Casing Volume: 1.29 GAL							
Start Purge (hrs.): 15.53							
End Purge (hrs.): 18.32							
Total Purge Time (min.): 159							
Total Amount Purged (gal.): 3							
Monitor Reading: PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time: 8/14/95 1835	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: ASICM							

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.163 X 7.90 = 1.29

Analysis:	Preservative				

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 016W04
DATE: 8/14/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond.	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START 1553	8.11								
1600	8.16	165	20.0	4.31	169.	25.4	0.00	168	
1605	8.16	120	20.3	4.30	171.	29.9	0.00	305	
1610	8.15	105	20.6	4.34	170.	43.9	0.00	270	
1615	8.15	100	20.8	4.35	170.	46.1	0.00	208	
1620	8.14	100	20.4	4.37	167.	47.5	0.00	189	
1625	8.15	105	20.2	4.37	165.	48.4	0.00	196	
1630	8.14	95	20.3	4.37	165.	49.0	0.00	232	
1635	8.14	60	21.3	4.39	165.	49.8	0.00	—	
1640	8.13	55	22.1	4.40	164.	48.3	0.00	255	
1645	8.13	55	22.4	4.40	165.	48.4	—	—	
1650	8.13	50	22.5	4.40	164.	47.9	0.00	247	
1655	8.13	50	22.8	4.41	161.	49.5	—	—	
1700	8.13	45	22.8	4.41	161.	46.6	0.00	233	
1705	8.12	45	22.8	4.42	160	27.5	—	—	
1710	8.14	65	22.4	4.43	160	27.1	0.00	225	
1715	8.13	60	21.7	4.44	161	23.6	—	—	
1720	8.13	65	21.3	4.43	160	38.1	0.00	192	
1725	8.14	65	21.0	4.40	158	22.6	—	—	
1730	8.14	70	21.0	4.43	158	42.7	0.00	167	
1735	8.14	65	20.9	4.43	158	39.6	—	—	
1740	8.14	70	20.8	4.41	158	42.2	0.00	169	
1745	8.14	70	20.7	4.42	160	20.9	—	—	
1750	8.14	60	20.7	4.41	160	38.2	0.00	160	
1755	8.15	75	20.3	4.42	158	38.7	—	—	
1800	8.14	60	20.2	4.42	158	44.6	0.00	154	
1805	8.14	80	19.7	4.43	157	20.6	—	—	
1810	8.14	75	19.9	4.42	155	21.9	0.00	152	
1815	8.14	75	20.2	4.41	157	27.1	—	—	
1820	8.14	60	20.4	4.44	158	23.5	0.00	152	

SIGNATURE(S) _____

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 01GW04
DATE: 8/14/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond.	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1825	8.14	55	20.6	4.41	159	>50.	—	—	
1830	8.14	60	20.7	4.43	158	>50.	0.00	152	
1832	END 3 GALLON PURGE								
1835	BEGIN SAMPLING								
1950	COMPLETED SAMPLING								
1955	POST SAMPLE PARAMETERS								
	8.20	90	20.1	4.47	150	24.7	0.00	173	

SIGNATURE(S) [signature]

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803
NUS Source No. 01GW05 Source Location SITE - 01

	Purge Data						
Total Well Depth: 16.00	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 2" PVC TOC							
Static Water Level: 9.13 TOC							
One Casing Volume: 1.12 GAL							
Start Purge (hrs.): 1445							
End Purge (hrs.): 1637							
Total Purge Time (min.): 112							
Total Amount Purged (gal.): 3							
Monitor Reading: NO HNU readings above background PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time: 8/13/95 1642	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: ASICM							

Signature(s):

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.163 X 6.87 =

Analysis:	Preservative
TAL metals	HNO_3
TCL volatiles	HCl
TCL SVOC's	None
TCL Pest	None
Explosives	None
TPH	None
Landfill Parameters	H_2SO_4
Landfill Parameters	None
* DISTAL Metals	HNO_3

* Disolved metals were run as per North Div Direction

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 016W05
DATE: 8/13/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond.	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1445	9.13								
1450	9.10	160	21.7	4.29	180.0	49.2	0.00	715	
1455	9.09	160	20.4	4.02	191.0	>50.0	0.00	939	
1500	9.09	145	20.0	3.99	196.0	>50.0	"	809	
1505	9.09	145	19.7	3.97	208.0	47.5	"	710	
1510	9.10	155	19.7	3.96	214.0	46.5	"	685	
1515	9.10	165	19.3	3.98	218.0	49.7	"	667	
1520	9.10	115	19.8	3.89	217.0	41.6	"	600	
1525	9.10	130	19.9	4.06	220.0	41.4	"	523	
1530	9.10	145	19.3	4.13	225.0	39.6	"	442	
1535	9.10	145	19.1	4.19	225.0	39.0	"	447	
1540	9.10	155	19.2	4.23	227.0	39.4	"	445	
1545	9.10	140	19.2	4.24	228.0	38.3	"	429	
1550	9.10	105	20.0	4.29	227.0	46.1	"	415	
1555	9.10	65	20.5	4.15	233.0	>50.0	"	410	
1600	9.10	55	21.2	4.42	231.0	37.7	—	—	
1605	9.10	55	22.2	4.45	232.0	38.3	0.00	378	
1610	9.10	45	22.8	4.57	231.0	39.0	—	—	
1615	9.10	45	23.5	4.42	235.0	45.0	0.00	369	
1620	9.10	45	23.8	4.45	234.0	36.4	—	—	
1625	9.10	45	23.8	4.46	231.0	40.6	0.00	380	
1630	9.10	50	23.4	4.46	233.0	38.6	—	—	
1635	9.10	40	23.2	4.42	232.0	45.4	0.00	398	
1637	END 3 GAL. PURGE								
1642	BEGIN SAMPLE COLLECTION								
1812	SAMPLING COMPLETE								
1820	POST SAMPLING PARAMETERS								
	9.15	85	22.5	4.42	244.0	44.4	0.00	336	

SIGNATURE(S) [illegible]

SAMPLE LOG SHEET

NUS CORPORATION
A Halliburton Company

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 02GW01 Source Location S,7L 2

Total Well Depth: T.O.S.C 30.50	Purge Data				
Well Casing Size & Depth: 4" PVC casing	Volume	pH	S.C.	Temp. (°C)	Color & Turbidity
Static Water Level: T.O.S.C 16.00					
One Casing Volume: 9.09					
Start Purge (hrs.): 1425					
End Purge (hrs.): 1536					
Total Purge Time (min.): 71					
Total Amount Purged (gal.): 2					
Monitor Reading: No HNU readings above background					
Purge Method: Geo Guard					
Sample Method: Geo Guard					
Depth Sampled: —					
Sample Date & Time: 08/04/95 1535	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Sampled By: A. Spaugh					
Signature(s): [signature]	Observations / Notes: .653 x 14.5 = 9.09				

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Analysis:	Preservative		Organic	Inorganic
TCL volatiles		Traffic Report #		
TCL Semivolatiles		Tag #		
TAL Metals				
Explosives		AB #		
Chromium+3		Date Shipped		
Chromium+6		Time Shipped		
		Lab		
		Volume		

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT	JOB NUMBER
NWS EARIE	CTO 231 5903
SUBJECT	
026W01	SITE - 01
BASED ON	DRAWING NUMBER

BY	CHECKED BY	APPROVED BY	DATE
ASICM			8/4/95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
~~1410~~	~~1405~~		16.00						
	1415	—	16.00	—	—	—	—	—	—
	1420	Pump	st.11	leaking					
start →	1425		16.00						
	1430	0.110	16.03	4.71	32.1	19.1	8	>50.0	0.00
	1435	0.110	16.01	4.64	32.5	17.5	14	>50.0	0.00
	1440	0.115	16.02	4.57	32.6	16.2	10	>50.0	0.00
	1445	0.100	16.01	4.51	33.5	16.5	8	>50.0	0.00
	1450	0.100	16.01	4.47	32.6	15.9	7	39.7	0.00
	1455	0.100	16.01	4.48	33.0	16.5	6	>50.0	0.00
	1500	0.120	16.02	4.44	33.2	15.6	6	>50.0	0.00
	1505	0.110	16.02	4.40	33.1	15.5	6	>50.0	0.00
	1510	0.110	16.03	4.43	32.8	15.6	6	>50.0	0.00
	1515	0.100	16.01	4.38	33.1	15.8	6	>50.0	0.00
	1520	0.100	16.01	4.35	33.1	15.7	7	>50.0	0.00
	1525	0.100	16.01	4.34	32.8	15.7	7	>50.0	0.00
	1530	0.105	16.00	4.36	32.8	15.6	7	>50.0	0.00
	1535	0.105	16.00	4.35	32.5	15.6	7	>50.0	0.00
	1536	END 2 GALLON PURGE							
	1538	BEGIN SAMPLE COLLECTION							
	1624	SAMPLE COMPLETE							
	1630	POST SAMPLE PARAMETERS							
		0.100	16.02	4.70	30.9	16.2	9	>50.0	0.00

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803

NUS Source No. 02GW02 Source Location SITE 02

Total Well Depth: 21.50	Purge Data						
Well Casing Size & Depth: 4" PVC 21.50 TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 10.05 TOC							
One Casing Volume: 7.5 GAL							
Start Purge (hrs.): 1650							
End Purge (hrs.): 1755							
Total Purge Time (min.): 65							
Total Amount Purged (gal.):							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: ——	SEE PG 2						
Sample Date & Time: 7.21.95 1800	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS TR							

Signature(s): [signature]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 11.45 = 7.5

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: SITE-02	
BASED ON: 02GW02	DRAWING NUMBER:
BY: KS TR / CHECKED BY:	APPROVED BY: / DATE: 7.21.95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
START 1650	.090	10.05	3.36	15.6	18.9	—	6.40	0
1655	.090	10.08	3.31	16.1	17.4	110	5.63	
1700	.100	10.07	3.30	16.1	17.4	69	4.89	
1705	.095	10.08	3.32	15.8	17.7	57	5.13	
1710	.095	10.08	3.35	15.5	17.9	51	4.62	
1715	.090	10.09	3.40	15.4	17.9	—	4.42	
1720	.095	10.09	3.42	15.4	18.0	52	4.37	
1725	.070	10.07	3.49	15.3	18.3	—	4.37	
1730	.070	10.06	3.55	15.2	18.8	54	4.35	
1735	.075	10.06	3.63	15.2	19.0	—	4.60	
1740	.075	10.07	3.66	14.9	18.9	53	4.61	
1745	.075	10.07	3.70	14.7	19.2	—	4.94	
1750	.070	10.07	3.64	16.0	19.2	61	4.56	
1755	.075	10.06	3.41	16.7	19.2	64	4.35	
		SAMPLED @ 1800						
STOP 1840	[illegible]	10.14	3.20	16.7	17.0	107	4.90	0

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 02GW03 Source Location SITE 2

	Purge Data						
Total Well Depth: 25.4'	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 4" PVC 25.4 TOC							
Static Water Level: 6.21 TOC							
One Casing Volume: 13 GAL							
Start Purge (hrs.): 1305							
End Purge (hrs.): 1515							
Total Purge Time (min.): 130							
Total Amount Purged (gal.): 2.4							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time: 7.27.95 1520	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS TR							

Signature(s): [signature]

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 19.19 = 13 GAL / 1 VOL

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TAL METALS	
CR^{+6}	
EXPLOSIVES	

25.40
6.21
19.19

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT	JOB NUMBER
NWS EARLE	CTO 231 5803
SUBJECT: 02GW03	SITE 2
BASED ON	DRAWING NUMBER

BY	CHECKED BY	APPROVED BY	DATE
KS TR			7.27.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1305	.095	6.21	4.64	37.7	19.4	167	6.17	—
	1310	.095	6.21	4.56	37.4	19.6	—	5.77	—
	1315	.085	6.21	4.56	37.5	20.3	321	5.62	0
	1320	.085	6.23	4.56	37.8	20.0	308	5.02	0
	1325	.075	6.23	4.54	37.6	19.7	304	5.27	0
	1330	.075	6.24	4.51	37.7	19.7	—	4.67	—
	1335	.075	6.25	4.49	37.8	20.1	282	4.57	0
	1340	.060	6.24	4.50	38.0	20.7	240	4.52	0
	1345	.080	6.24	4.51	38.4	20.4	—	4.60	—
	1350	.100	6.24	4.48	38.5	20.2	195	4.66	0
	1355	.080	6.24	4.46	38.3	20.1	176	4.61	0
	1400	.080	6.24	4.53	38.4	20.3	—	4.69	—
	1405	.125	6.25	4.43	38.6	19.7	176	4.89	0
	1410	.105	6.25	4.44	38.3	19.8	147	4.47	0
	1415	.105	6.24	4.40	38.5	19.5	117	4.52	0
	1420	.090	6.25	4.43	38.5	20.5	92	4.45	0
	1425	.100	6.25	4.46	39.1	19.6	87	4.52	0
	1430	.090	6.25	4.44	38.6	20.3	72	4.88	0
	1435	.090	6.27	4.48	38.7	20.2	—	4.95	—
	1440	.090	6.26	4.49	38.9	21.3	70	4.95	0
	1445	.085	6.25	4.50	39.1	20.7	—	4.53	—
	1450	.085	6.26	4.50	39.2	22.2	65	4.69	0
	1455	.075	6.25	4.52	39.4	21.8	—	4.61	—
	1500	.060	6.25	4.52	39.4	21.5	60	4.72	0
	1505	.080	6.25	4.53	39.2	22.4	—	4.48	—
Disconnect CELL →	1510								
	1515	.080	6.25	—	—	—	65	—	0
			SAMPLED	AT	1520				
POST	1635	.110	6.26	4.60	41.4	19.7	43	6.06	0

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number _____

NUS Source No. 02GW04 Source Location SITE 2

Total Well Depth:	Purge Data						
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level:							
One Casing Volume:							
Start Purge (hrs.):							
End Purge (hrs.):							
Total Purge Time (min.):							
Total Amount Purged (gal.):							
Monitor Reading:							
Purge Method:							
Sample Method:							
Depth Sampled:							
Sample Date & Time: 7-25-95	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS, GG, JK							

Signature(s): [illegible]

Type of Sample

- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:

"LOST WELL" CAN'T FIND

R. SIMPSON, JOSH H., GREG G. & JOHN KOLICIUS

WE ALL LOOKED AND CAN'T FIND THIS WELL

Analysis:	Preservative				

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE
Project Site Number CTO 231 5803
NUS Source No. 02GW04
Source Location SITE 2

	Purge Data						
Total Well Depth: 20.95	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 4 @"PVC 20.95 TOC							
Static Water Level: 5.98 TOC							
One Casing Volume: 9.8 GAL							
Start Purge (hrs.): 1515							
End Purge (hrs.): 1610							
Total Purge Time (min.): 55							
Total Amount Purged (gal.): 1.5							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: ———	SEE PG 2						
Sample Date & Time: 8.14.95 1615	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS CM							

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 × 14.97 = 9.8 GAL/1 VOL

~~.163 × ——— =~~

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TAL METALS	
CR+6	
EXPLOSIVES	

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 026W09
DATE: 8.14.95

	Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. mS/CM	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START	1515	4.90	50	17.17	5.09	.0500	7.70	—	—	TURBIDITY METER DEFECTIVE
	1520	4.90	45	18.26	5.27	.0500	7.15			
	1525	4.90	55	18.40	5.09	.0478	6.70			
	1530	4.91	100	16.35	5.01	.0471	6.68			
	1535	4.91	100	16.89	5.01	.0474	6.65			
	1540	4.91	75	16.52	5.00	.0476	6.57			
	1545	4.91	75	16.40	5.00	.0472	6.49			
	1550	4.91	75	17.97	4.98	.0478	6.34			
	1555	4.91	75	17.72	4.98	.0475	6.28			
	1600	4.91	65	17.61	4.96	.0476	6.25	0.00	2	← NEW METER FROM TRAILER
	1605	4.91	75	18.76	4.95	.0484	6.35	0.00	10	
	1610	4.91	100	16.16	4.95	.0498	6.22	0.00	5	
		SAMPLED	AT	1615						
POST	1705	4.91	100	14.83	4.87	.0504	5.64	0.00	10	

SIGNATURE(S) [illegible]

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 02GW05 Source Location SITE 2

Total Well Depth: 20.2	Purge Data						
Well Casing Size & Depth: 4" PVC 20.2 TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 9.58 TOC							
One Casing Volume: 6.[illegible] GAL							
Start Purge (hrs.): 1305							
End Purge (hrs.): 1505							
Total Purge Time (min.): 120							
Total Amount Purged (gal.):							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: ———	SEE PG 2						
Sample Date & Time: 7.21.95 1510 Hrs	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS TR							

Signature(s): [illegible]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 10.62 = 6.9

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TAL METALS	
EXPLOSIVES	
Cr^{+3} & Cr^{+6}	

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 02GW05	SITE - 2
BASED ON:	DRAWING NUMBER:
BY: KS TR	CHECKED BY:
APPROVED BY:	DATE: 7.21.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1305	.250	9.58	5.91	(1a) .0256	17.04	126	9.86	
	1310	.235	9.67	5.29	(1a) .0227	15.13	142	8.18	
	1315	0.275	9.~~60~~ (12)	5.12	(1a) .0201	14.88	97	7.54	0.00
	1320	.145	9.66	5.10	18.5	15.84	105	7.18	0.00
	1325	.075	9.61	5.09	24.0	16.10	- *	7.60	0.00
	1330	.075	9.61	5.11	23.3	17.83	105	7.27	0.00
	1335	.055	9.61	5.13	23.8	18.6	- *	7.75	0.00
	1340	.070	9.59	5.12	23.7	19.1	105	7.55	0.00
	1345	.070	9.59	5.13	23.6	19.3	- *	7.58	0.00
	1350	.065	9.59	5.14	23.2	19.4	102	7.56	0.00
	1355	.065	9.59	5.14	22.9	19.6	- *	7.42	0.00
	1400	.055	9.58	5.15	22.7	20.2	94	7.15	0.00
	1405	.060	9.58	5.16	22.3	20.5	- *	7.39	0.00
	1410	.050	9.60	5.16	22.0	20.8	87	7.16	0.00
	1415	.060	9.61	5.17	21.8	21.1	-	7.13	0.00
	1420	.065	9.61	5.16	22.0	20.5	85	7.03	0.00
	1425	.070	9.60	5.15	22.1	20.4	-	7.19	0.00
	1430	.050	9.60	5.16	21.2	20.8	83	7.21	0.00
	1435	.060	9.61	5.18	21.0	21.0	-	7.20	0.00
	1440	.055	9.60	5.14	20.8	20.8	77	7.35	0.00
	1445	.045	9.59	5.12	20.6	21.2	-	7.17	0.00
	1450	.070	9.60	5.16	20.4	21.5	80	7.29	0.00
	1455	.055	9.61	5.15	20.3	21.4	-	7.41	0.00
	1500	.055	9.60	5.15	20.0	21.4	77	7.39	0.00
	1505	.055	9.60	5.15	20.0	21.4	74	7.35	0.00
				SAMPLED @		1510			
POST →	1623	.055	9.61	3.84	18.4	20.3	87	7.05	0.00

* [illegible] TURBIDITY EVERY 5 min

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 02GW06 Source Location SITE 02

	Purge Data						
Total Well Depth: 21.8'	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 4" PVC 21.8' TOC							
Static Water Level: 9.01' TOC							
One Casing Volume: 8.4 GAL							
Start Purge (hrs.): 1730							
End Purge (hrs.): 1800							
Total Purge Time (min.):							
Total Amount Purged (gal.):							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time: 7.20.95 1810	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS TR							

Signature(s): KS

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 12.79 = 8.4 GAL 1 VOL

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TAL METALS	
CR^{+6}	
EXPLOSIVES	

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 026-W06	SITE-02
BASED ON:	DRAWING NUMBER:
BY: RS TR	CHECKED BY:
APPROVED BY:	DATE: 7·20·95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
START	1730	.250	9.51	4.83	68.9	16.9	-10 *	0.59	0
	1740	.270	9.54	4.46	50.4	16.06	-10 *	0.26	0
	1745	.125	9.62	4.33	66.6	16.82	-10 *	0.27	0
	1750	.160	9.65	4.31	64.5	17.65	12	0.25	0
	1755	.145	9.65	4.30	63.8	18.43	6	0.23	0
	1800	.150	9.67	4.27	62.3	18.79	5	0.29	0
			SAMPLED	AT		1810			
POST SAMPLE	1837	.180	9.71	4.59	53.0	13.31	3	3.90	0

* Recalibrate

MW-02-07
Well Development?

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 02GW07 Source Location SITE 2

	Purge Data						
Total Well Depth: 21.4	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 4" PVC 21.4 TOC							
Static Water Level: 10.51 TOC							
One Casing Volume: 7 GAL							
Start Purge (hrs.): 1035							
End Purge (hrs.): 1119							
Total Purge Time (min.): 44							
Total Amount Purged (gal.): 0.4							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: ———	SEE PG 2						
Sample Date & Time: 7.27.95 ———	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS TR							

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED
NO SAMPLE TAKEN; CHECKING PARAMETERS ONLY
PUMP RAISED 2' TOTAL 3' OFF BOTTOM
.653X =

Analysis:	Preservative

DAY 2

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARLE	JOB NUMBER: CTO 231 5803
SUBJECT: 02GW07	SITE 2 (DAY 2)
BASED ON:	DRAWING NUMBER:
BY: KS TR	CHECKED BY:
APPROVED BY:	DATE: 7.27.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1035	.040	10.51	5.23	68.0	23.7	—	4.35	—
	1040	.060	10.84	5.02	67.5	24.1	—	3.69	—
	1045	.050	10.89	5.02	67.2	24.6	—	2.74	—
	1050	.050	10.96	5.01	67.5	24.8	999	3.06	0
	1055	.050	11.00	5.00	67.8	24.8	—	2.61	—
	1100	.050	11.06	4.97	67.9	24.7	999	2.38	0
	1105	.060	11.14	4.96	67.9	24.5	—	2.31	—
	1119	.050	11.24	—	—	—	999	—	0

.55

MW02-07
REDEVELOPMENT RECORD

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of ____
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 02GW07 Source Location SITE 2

	Purge Data						
Total Well Depth: 21.4'							
Well Casing Size & Depth: 4" PVC 21.4' TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 9.29'							
One Casing Volume:							
Start Purge (hrs.): 1340							
End Purge (hrs.): 1435							
Total Purge Time (min.): 55							
Total Amount Purged (gal.): 5							
Monitor Reading: <0.1 PPM							
Purge Method: PARASTALTIC							
Sample Method: " /BAILER							
Depth Sampled: —							

Sample Date & Time:	Sample Data					
8-10-95	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: KS LM						

Signature(s): [signature]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [ ] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
USED HNU & HORIBA
GEO PUMP WOULD NOT PUMP LOWER THAN 350 ml/min; DRAW DOWN
.653 X = GAL/1 VOL
GEOGUARD PUMP REMOVED & GEO PUMP USED

Analysis:	Preservative
TCL VOC	
TCL SVOC	
TAL METALS	SEE COC
CR+6	
EXPLOSIVES	

NWS EARLE, NJ

WELL DEVELOPMENT

LOW FLOW PURGE DATA SHEET

4" SUBMERSABLE PUMP

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 7MW07

DATE: 8/10/95

WELL DEVELOPMENT

Time (Hrs.)	Water Level (Ft. below TOC)	Flow ~~(mL/Min.)~~ GAL	Temp. (Celcius)	pH (S.U.)	Cond.	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1525	11.34	8.0							REMOVED 8 GAL OF
1530	19.30								WATER WELL DRY:
									TO INLET PORT OF
									PUMP
1630	12.50	6.5							
									HIGH SOLIDS
1720	10.75	5.0							VERY HIGH SOLIDS
									PUMPED WELL DAY 3
									TIMES, EACH TIME
									REMOVED HIGH SOLIDS
									DISCHARGE WATER
									DARK BRN.

SIGNATURE(S) [illegible] LMA

PAGE __ of __

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 026W07
DATE: 8.10.95

	Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. mS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START	1340	9.29	500	21.1	4.28	.093	4.19	0.00	—	
	1345	11.14	400	21.6	4.29	.090	4.48	0.00	—	TURN DOWN PUMP
	1350	11.45	350	21.9	4.29	.089	6.62	0.00	390	" " "
	1355	11.49	300	22.3	4.30	.082	7.48	0.00	317	" " "
	1400	11.51	250	21.7	4.35	.075	8.86	0.00	270	100 mM → Water flow Stopped
	1405	11.48	—	20.9	4.40	.068	10.07	0.00	169	WELL DRY – 2 GALLONS
	1405	12.31	200	19.2	4.42	.098	6.64	0.00	344	LOWER PUMP TUBING
	1410	12.83	200							
	1415	12.83	200							TUBING AT 16' TOC
	1425	13.21	350	19.5	4.55	.056	7.31	0	560	LOWEST PUMP SETTING = 350 ML/MIN
	1430	13.63	350	19.2	4.51	.056	6.18	0	508	
	1435	14.01	350	19.1	4.60	.061	7.07	0	609	TOTAL REMOVED = 5 GAL

SIGNATURE(S) [illegible] LM

PAGE 2 **of** __

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of ____
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number GT0231 5803
NUS Source No. 02FW07 Source Location SITE 2

	Purge Data						
Total Well Depth: 22							
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
4" PVC 22 TOC							
Static Water Level: 12.22 TOC							
One Casing Volume: 6.4 GAL							
Start Purge (hrs.): 0900							
End Purge (hrs.): 1230							
Total Purge Time (min.): 210							
Total Amount Purged (gal.): 2.25							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: —	SEE PG 2						
Sample Date & Time: 8.12.95 1230	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KK [illegible]							

Signature(s): [illegible]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED
PUMP RAISED 18' NOW 2.5' OFF BOTTOM
- WELL DEVELOPED 8/11/95 - SEE NOTES
.653 x 9.78 = 6.4 gal/1 VOC
~~.163 x~~

Analysis:	Preservative				
TCL VOC					
TCL SVOC	SEE COC				
TAL METALS					
CR+6					
EXPLOSIVES					
* TAL DISSOLVED MET.					

* ADDED PER N. DIV

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 026W07
DATE: 8.14.95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. mS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START 0900	10.22	100	17.90	5.08	.0742	3.42	0.00	9991	
0905	10.72	50	18.31	5.08	.0742	3.54	—		
0910	10.74	50	18.41	5.07	.0743	3.36	—	—	
0915	10.87	50	19.17	5.07	.0746	3.75	0.00	999+	
0920	10.93	60	19.70	5.06	.0743	3.45	—	—	
0925	10.97	60	19.94	5.07	.0744	3.07	0.00	999+	
0930	11.01	60	20.09	5.07	.0744	2.85	—	—	
0935	11.05	60	20.15	5.07	.0745	2.84	0.00	999+	
0940	11.07	65	20.36	5.06	.0746	2.64	—	—	
0945	11.16	50	20.50	5.07	.0752	2.68	0.00	999+	
0950	11.27	60	18.33	5.06	.0758	2.51	—	—	
0955	11.33	60	18.52	5.06	.0751	2.36	0.00	840	
1000	11.30	60	18.95	5.05	.0745	2.07	—	—	
1005	11.29	60	19.33	5.05	.0741	2.81	0.00	541	
1010	11.32	60	19.81	5.06	.0738	2.47	—	—	
1015	11.25	60	20.28	5.10	.0743	2.50	0.00	528	
1020	11.30	65	20.85	5.06	.0743	2.68	—	—	
1025	11.33	65	21.33	5.06	.0741	[illegible]	0.00	409	
1030	11.26	65	21.38	5.07	.0742	2.37	—	—	
1035	11.35	70	20.98	5.06	.0743	2.17	0.00	546	
1040	11.33	60	21.27	5.09	.0741	2.20	—	—	
1045	11.32	60	21.31	5.05	.0740	2.03	0.00	536	
1050	11.34	50	21.22	5.05	.0738	2.04	—	—	
1055	11.34	55	21.36	5.05	.0736	2.19	—	—	
1100	11.36	60	21.59	5.06	.0737	1.92	0.00	435	
1105	11.36	55	21.91	5.06	.0736	1.93	—	—	
1110	11.35	50	22.47	5.06	.0739	1.92	—	—	
1115	11.36	55	22.04	5.06	.0736	1.92	0.00	425	
1120	11.36	60	21.74	5.05	.0737	2.00	—	—	
1125	11.40	60	22.32	5.05	.0738	2.03	0.00	393	

SIGNATURE(S) [illegible]

START 0900

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 026W07
DATE: 8.14.95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. mS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1130	11.42	45	22.55	5.06	.0737	2.14	—	—	
1135	11.42	50	22.86	5.06	.0738	1.83	—	—	
1140	11.40	40	23.22	5.05	.0737	1.80	0.00	351	
1145	11.42	45	23.20	5.05	.0748	1.85	—	—	
1150	11.43	50	23.16	5.05	.0740	1.87	0.00	315	
1155	11.42	50	23.34	5.05	.0738	1.68	—	—	
1200	11.44	50	23.20	5.04	.0737	1.69	0.00	329	
1205	11.43	50	23.76	5.04	.0737	1.65	—	—	
1210	11.43	50	24.15	5.03	.0736	1.62	0.00	315	
1215	11.43	50	24.64	5.01	.0735	1.57	—	—	
1220	11.42	50	25.51	5.01	.0734	1.82	0.00	338	
1225	11.41	50	26.73	5.04	.0731	1.67	—	—	
1230	11.41	50	26.11	5.04	.0739	1.67	0.00	341	
	SAMPLE @ 1230								
POST SAMPLE READINGS									
1315	11.39	50	20.55	5.04	.0741	1.64	0.00	565	

SIGNATURE(S) [illegible]

PAGE 3 of __

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 03GW01 Source Location SITE 3

	Purge Data						
Total Well Depth: 23.76'							
Well Casing Size & Depth: 4" PVC 23.76 TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
	START	3.59	.260	14.4	486	3.03	0
Static Water Level: 22.32 TOC							
One Casing Volume:							
Start Purge (hrs.):							
End Purge (hrs.):							
Total Purge Time (min.):							
Total Amount Purged (gal.):							
Monitor Reading: <0.1 PPM							
Purge Method: BAILER							
Sample Method: BAILER / PERISTALTIC							
Depth Sampled:							
Sample Date & Time: 7.24.95 1355	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS TR							

Signature(s): K. S. [illegible]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
PURGED DRY 7.22.95
VOC SAMPLED WITH A TEFLON BAILER
PARAMETERS, SVOC, TOTAL & DISS. METALS
PEST SAMPLED USING A PERISTALTIC PUMP
WITH DEDICATED TUBING
[illegible]
DISSOLVED METALS FIELD FILTERED THRU .45UM

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TOTAL TAL METALS	
DISSOLVED TAL METALS	
PEST	

[illegible] 0845

SAMPLED VOC & DISSOLVED METALS AT 1355 FOLLOWED
BY PERISTALTIC SAMPLED AT 1355 [illegible]
[illegible] METALS

PUMP BROKE DOWN AFTER 4QT NEED TO SAMPLE [illegible] FOR PEST [illegible]
[illegible]

CALCULATION WORKSHEET Order No. 19116 (01-91) PAGE ____ OF ____

CLIENT		JOB NUMBER	
SUBJECT 03GW01		SITE 3	
BASED ON BOTTOM 23.70		DRAWING NUMBER	
BY RS AS	CHECKED BY	APPROVED BY	DATE 7.19.95

TIME	WATER LEVEL	FLOW ML/MIN	
1746	21.84	285	
1748	22.50	215	
1750	22.63	175	
1752	22.69	150	PUMP LOWERED TO 21'
1753	22.77	120	OFF BOTTOM FOR PUMP
1755	22.9	95	ONLY
1758	22.82	80	
1800	22.82	—	DRY

DRY DAY 2 NO SAMPLE

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803
NUS Source No. 03GW-02 Source Location SITE 3

Total Well Depth:	Purge Data							
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Static Water Level: TOC								
One Casing Volume: gal								
Start Purge (hrs.):								
End Purge (hrs.):								
Total Purge Time (min.):								
Total Amount Purged (gal.):								
Monitor Reading: PPM								
Purge Method: GEOGUARD								
Sample Method: GEOGUARD								
Depth Sampled: —	SEE PG 2							
Sample Date & Time: —	Sample Data							
	pH	S.C.	Temp. (°C)	TURB	DO	SAL		
Sampled By: KS								

Signature(s): [signature]

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED
NO PUMP INSTALLED
DRY WELL 6/23/95 1140 HRS

.653X =

Analysis:	Preservative				

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page _____ of _____
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 036-W03 Source Location SITE 3

	Purge Data						
Total Well Depth: 24.63'							
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
4" PVC 24.63' TOC	START	3.59	.260	14.4	480	3.03	0
Static Water Level: 24.06 TOC							
One Casing Volume:							
Start Purge (hrs.):							
End Purge (hrs.):							
Total Purge Time (min.):							
Total Amount Purged (gal.):							
Monitor Reading:							
<0.1 PPM							
Purge Method: BAILER							
Sample Method: BAILER/PERISTALTIC							
Depth Sampled:							

Sample Date & Time:	Sample Data					
7.24.95 1320	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: RS TR	3.59	.260	14.4	480	3.03	0

Signature(s): [illegible]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
PURGED DRY 7.22.95
VOC SAMPLED WITH BAILER (TEFLON)
PARAMETERS SVOC, TOTAL & DISS. METALS
PEST SAMPLE USING PERISTALTIC
PUMP WITH DEDICATED TUBING
WATER CLEAR WITH TR. IRON FLOCK, SLIGHT PETROLEUM ODOR
DISSOLVED METALS FIELD FILTERED THRU .45 µm

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
~~TOTAL~~ TAL MET.	
DISS. TAL MET.	
PEST	

PUMPED ≈ 1 QT AT ~200 ML/MIN THEN ALLOWED TO RECHARGE PER [illegible] (1 QT EVERY 20 [illegible])

END SAMPLING AT 1620

* WHEN THE PUMP INTAKE WAS LOWERED THE PUMP WOULD NOT PULL THE HEAD

CALCULATION WORKSHEET Order No. 19116 (01-91)

PAGE ____ OF ____

CLIENT	JOB NUMBER

SUBJECT	
03GW03	SITE 3

BASED ON	DRAWING NUMBER
BOTTOM 24.45	

BY	CHECKED BY	APPROVED BY	DATE
KS AS			7.19.95

TIME	WATER LEVEL	FLOW ML/MIN	
1716	23.73		
			DAY 1 PURGE DRY SAMPLE ≈ 24 HRS LATER
			PUMP LOWERED TO ≈ 1" OFF BOTTOM FOR PURGING DRY ONLY
			NO FLOW TOO LITTLE WATER — DRY WELL NO SAMPLE —

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803
NUS Source No. 03GW-04 Source Location SITE 3

Total Well Depth:	Purge Data						
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: TOC							
One Casing Volume: GAL							
Start Purge (hrs.):							
End Purge (hrs.):							
Total Purge Time (min.):							
Total Amount Purged (gal.):							
Monitor Reading: PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: ———	SEE PG 2						
Sample Date & Time:	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS							

Signature(s): [signature]

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED
NO PUMP INSTALLED
DRY WELL 6/23/95 1050 HRS

.653X =

Analysis:	Preservative				

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 3
Case # _____
By _____

Project Site Name NWS EARLE
Project Site Number CT0231 5803
NUS Source No. 03GW05
Source Location SITE 03

Total Well Depth: 19.32	
Well Casing Size & Depth: 4" PVC TOC	
Static Water Level: 15.15 TOC	
One Casing Volume: 9AL	
Start Purge (hrs.): 1305	
End Purge (hrs.): 1320	
Total Purge Time (min.): 15	
Total Amount Purged (gal.): 0.25	
Monitor Reading: PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: →	SEE PG 2
Sample Date & Time: 7/20/95 1323	
Sampled By: KS/AS	

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL
4.68	19.8	17.7	1	21.9	0.00

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

Post sampling Data

pH	cond	temp	turb	DO	SAL
4.72	0.88	19.8	5	5.35	0.00

.653X =

Analysis:	Preservative
TCL Volatiles	HCl
TCL SVOC's	
TCL Pest/PCB's	
TAL Metals	HNO_3

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 036W05	SITE - 036W05
BASED ON:	DRAWING NUMBER:
BY: CM/AS	CHECKED BY:
APPROVED BY:	DATE: 7/20/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
1305	.180	15.15	5.08	17.7	22.6	15	14.5	0.00
1310	.145	15.91	4.67	19.1	17.4	6	18.0	0.00
1315	.120	16.23	4.68	19.2	17.1	4	20.0	0.00
1320	.100	16.57	4.68	19.8	17.7	1	21.9	0.00

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT	JOB NUMBER

SUBJECT	
03 GW05	SITE 3

BASED ON	DRAWING NUMBER
BOTTOM 19.35'	

BY	CHECKED BY	APPROVED BY	DATE
KS AS			7.19.95

TIME	WATER LEVEL	FLOW ML/MIN
1435	14.95	225
1445	15.63	205
1450	16.08	175
1455	16.21	190
1500	16.35	175
1503	16.50	270
1504	16.70	170
1505	16.91	180
1507	16.96	110
1508	17.00	110
1510	17.10	90
1511	17.13	90
1513	17.16	85
1515	17.21	125
1520	17.32	140
1525	17.35	100

DAY 1 PURGE DRY
SAMPLE ≈ 24 HRS LATER

PUMP LOWERED TO ≈ 1 INCH OFF BOTTOM TO PURGE DRY

1528	17.43	100
1530	17.49	100
1533	17.52	90
1536	17.54	80
1540	17.52	80
1543	17.60	65
1546	17.62	68
1550	17.63	59
1552	17.67	59

WATER LEVEL AT BOTTOM OF PUMP
WE CLOSE TO DRY

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 03EW06 Source Location SITE 03

Total Well Depth: 20.96	Purge Data						
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 13.49 TOC							
One Casing Volume: 9AL							
Start Purge (hrs.): 0950							
End Purge (hrs.): 1125							
Total Purge Time (min.): 235							
Total Amount Purged (gal.): 8							
Monitor Reading: 0.2 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time: 7/20/95 1127	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS/AS	5.85	19.3	16.2	5	34.7	0.00	

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

Post Sampling Data

pH	Cond	Temp	Turb	DO	SAL
5.79	.084 mS/cm	15.9	11	40.8	0.00
.653X		=			

Analysis:	Preservative
TCL Volatiles	HCl
TCL SVOC's	—
TCL Pest/PCB's	—
TAL Metals	HNO_3

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 03GW06	SITE-03
BASED ON:	DRAWING NUMBER:
BY: CM AS	CHECKED BY:
APPROVED BY:	DATE: 7.20.95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
0850	.270	13.49						
0855	.190	14.21						
0900	.200	13.87						
0905	.190	14.10						
0910	.220	14.10						
0915	.190	14.10						
0920	.150	14.10						
0925	.150	14.10						
0930	.110	14.10	5.71	152	17.0	186	36.2	0.00
0935	.120	14.12	5.74	30.8	16.5	191	38.1	0.00
0940	.120	14.10	5.73	25.1	16.9	190	41.0	0.00
0945	.050	14.02	5.71	21.8	17.1	185	43.0	0.00
0950	.180	13.98	5.67	21.8	17.8	187	44.5	0.00
0955	.075	14.02	5.94	20.5	16.8	187	44.3	0.00
1000	.150	13.92	5.82	20.8	18.2	177	42.3	0.00
1005	.150	14.02	5.65	20.8	18.0	175	42.3	0.00
1010	.185	13.95	5.68	20.6	17.5	140	37.6	0.00
1015	.120	13.92	5.60	20.5	18.7	125	42.0	0.00
1020	.100	13.90	5.67	19.7	18.3	116	36.4	0.00
1025	.100	13.90	5.69	19.3	17.8	99	37.2	0.00
1030	.150	13.90	5.72	19.9	17.6	80	39.9	0.00
1035	.110	13.93	5.75	19.8	17.4	74	40.4	0.00
1040	.125	13.90	5.78	19.4	17.1	60	38.8	0.00
1045	.125	13.95	5.79	19.3	17.0	44	39.9	0.00
1050	.125	13.95	5.81	19.4	16.9	33	37.3	0.00
1055	.135	13.95	5.82	19.5	16.9	29	38.9	0.00
1100	.155	13.95	5.84	19.4	17.0	22	37.2	0.00
1105	.175	13.92	5.85	19.4	18.8	15	37.3	0.00
1110	.170	13.96	5.82	19.4	16.8	11	36.5	0.00
1115	.165	14.0	5.86	19.5	16.5	8	35.5	0.00
1120	.145	14.2	5.86	19.1	16.3	6	35.9	0.00
1125	.180	14.2	5.85	19.3	16.2	5	34.7	0.00

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803
NUS Source No. 03GW-07 Source Location SITE 3

Total Well Depth:	Purge Data						
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
4" PVC TOC							
Static Water Level: TOC							
One Casing Volume: GAL							
Start Purge (hrs.):							
End Purge (hrs.):							
Total Purge Time (min.):							
Total Amount Purged (gal.):							
Monitor Reading: PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time:	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS							

Signature(s): [signature]

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED
NO PUMP INSTALLED
DRY WELL 6/23/95 1045 HRS

.653X =

Analysis:	Preservative				

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803
NUS Source No. 04GW01 Source Location SITE 4

Total Well Depth: 31.24	
Well Casing Size & Depth: 4" PVC 31.24 TOC	
Static Water Level: 21.49 TOC	
One Casing Volume: 6.4 GAL	
Start Purge (hrs.): 1105	
End Purge (hrs.): 1250	
Total Purge Time (min.): 105	
Total Amount Purged (gal.):	
Monitor Reading: <0.1 PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: ———	SEE PG 2
Sample Date & Time: 7.25.95 1255	
Sampled By: KS TR	
Signature(s): [signature]	

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 9.75 = 6.4

Analysis:	Preservative
TCL VOC	
TCL SVOC	
TAL METALS	
N/N, BOD, CHLORIDE, SULFATE	
COD, TOC, DECS	

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 04GW01	SITE - 4
BASED ON:	DRAWING NUMBER:
BY: RS TR / CHECKED BY:	APPROVED BY: / DATE: 7.25.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
START	1105	300	21.49	3.86	80.7	13.3	143	1.92	0
	1110	.270	21.67	3.93	79.7	14.0	148	1.82	0
	1115	.275	21.64	3.98	80.0	13.5	146	1.74	0
	1120	.250	21.62	3.94	79.5	13.4	148	1.42	0
	1125	.240	21.53	3.97	79.5	13.2	143	1.36	0
	1130	.240	21.55	3.94	79.1	14.0	150	0.86	0
	1135	.135	21.64	3.96	79.5	13.7	150	1.30	0
	1140	.135	21.63	4.03	79.5	13.9	146	1.03	0
	1145	.100	21.54	4.07	[illegible]	13.8	—	[illegible]	0
	1150	.050	21.60	4.07	78.2	15.1	—	0.85	0
REDUST FLOW	1155	.000	21.55	4.08	79.2	16.9	—	0.77	0
	1200	.250	21.66	4.08	79.2	13.5	136	1.05	0
	1205	.250	21.66	[illegible]	78.7	[illegible]	[illegible]	[illegible]	0
	1210	.240	21.65	4.09	78.6	13.2	116	1.17	0
	1215	.250	21.67	4.08	78.4	13.2	104	1.08	0
	1220	.245	21.65	4.08	78.3	13.1	93	1.04	0
	1225	.255	21.65	4.09	78.6	13.1	90	1.02	0
	1230	.255	21.64	4.08	78.1	13.2	83	[illegible]	0
	1235	.245	21.64	4.08	77.9	13.1	73	0.85	0
	1240	.240	21.66	4.07	77.9	13.1	65	0.91	0
	1245	.230	21.64	4.07	77.7	13.0	65	0.86	0
	1250	.240	21.66	4.05	77.6	13.0	65	0.81	0
	SAMPLE @ 1255 HRS								
	1330	.220	[illegible]	4.10	78.2	14.2	74	0.79	[illegible]

ON EXTERNAL BATTERY

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of ____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number GT0231 5803

NUS Source No. 046W02 Source Location SITE 4

Total Well Depth: 18.3'	Purge Data						
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
4" PVC 18.3' TOC							
Static Water Level: 4.16 TOC							
One Casing Volume: 2.3 GAL							
Start Purge (hrs.): 0930							
End Purge (hrs.): 1040							
Total Purge Time (min.): 70							
Total Amount Purged (gal.):							
Monitor Reading:							
<0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: ——	SEE PG 2						
Sample Date & Time:	Sample Data						
7.26.95 1045	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS TR							

Signature(s): [illegible]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653X =

Analysis:	Preservative				
TCL VOC					
TCL SVOC					
TAL METALS		SEE COC			
1 LPE — BOD, N/N SULFATE, CHLORIDE					
2 GLASS H_2SO_4 — TOC, COD, PHOS.	AMMONIA				

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 04 GW 02	SITE - 4
BASED ON:	DRAWING NUMBER:
BY: KS TR	CHECKED BY:
APPROVED BY:	DATE: 7.26.95

TSC -1.00

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
START	0930	.250	4.16	6.40	57.3	21.1	260	1.96	0.02
	0935	.240	4.45	6.34	56.5	17.1	141	1.21	0.02
	0940	.250	4.48	6.31	56.1	16.8	104	1.02	0.02
	0945	.240	4.46	6.31	56.0	17.1	69	0.69	0.02
	0950	.110	4.38	6.29	56.1	18.2	67	1.06	0.02
	0955	.070	4.32	6.29	55.5	19.9	65	1.09	0.02
	1000	.070	4.28	6.29	55.1	20.8	61	1.14	0.02
	1005	.055	4.27	6.34	54.7	21.7	—	1.24	—
	1010	.075	4.26	6.34	54.6	22.4	50	1.33	0.02
	1015	.035	4.25	6.34	54.6	23.1	—	1.18	—
	1020	.060	4.25	6.34	54.6	23.6	—	1.73	—
	1025	.060	[illegible]	6.36	54.6	24.3	60	2.04	0.02
	1030	.065	4.26	6.35	54.4	24.9	—	2.60	—
	1035	.065	4.26	6.36	54.3	24.4	—	2.61	—
	1040	.065	4.26	6.36	54.2	23.7	63	2.54	0.02
				SAMPLED AT 1045					
POST	1130	.075	4.41	6.42	49.6	21.3	91	3.81	0.02

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 04GW03 Source Location SITE 4

Total Well Depth:	Purge Data						
Well Casing Size & Depth: 4" PVC 27.2' TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: TOC							
One Casing Volume: GAL							
Start Purge (hrs.):							
End Purge (hrs.):							
Total Purge Time (min.):							
Total Amount Purged (gal.):							
Monitor Reading: PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: ———	SEE PG 2						
Sample Date & Time: 6.23.95	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS							

Signature(s): [signature]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED
DRY WELL: NO SAMPLE
NO PUMP INSTALLED
.653X =

Analysis:	Preservative				

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 04 GW 04 Source Location SITE 04

Total Well Depth: 37.30	Purge Data
Well Casing Size & Depth: 4" PVC TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: 27.65 TOC	
One Casing Volume: 6.29 GAL	
Start Purge (hrs.): 16.10	
End Purge (hrs.): 18.17	
Total Purge Time (min.): 127	
Total Amount Purged (gal.): 45	
Monitor Reading: NO HNU Readings above background PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: ———	SEE PG 2
Sample Date & Time: 7/25/95 1820	Sample Data: pH / S.C. / Temp. (°C) / TURB / DO / SAL
Sampled By: AS/CM	
Signature(s):	Observations / Notes: DEDICATED PUMP & TUBING; HORIBA, HNU, & GEOGUARD CELL USED
Type of Sample: ☒ Low Concentration ☐ High Concentration ☒ Grab ☐ Composite ☐ Grab - Composite	.653 X 9.65 = 6.29

Analysis:	Preservative
TCL Volatiles	HCl
TCL SVOC's	None
TAL Metals	HNO3
Ammonia, Phos	H2SO4
NO3N, BOD	None

CALCULATION WORKSHEET Order No. 19116 (01-91) PAGE ____ OF ____

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 04GW04	Site 04
BASED ON:	DRAWING NUMBER:
BY: AS/CM	CHECKED BY:
APPROVED BY:	DATE: 7/25/95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1610		27.65						
	1615	—	27.65	—	—	—	—	—	—
	1620	0.140	27.68	4.52	110.0	21.7	6	12.5	0.00
	1625	0.100	27.66	4.58	113.0	18.0	36	7.5	0.00
	1630	0.095	27.69	4.53	116.0	18.9	60	10.6	0.00
	1635	0.125	27.69	4.52	117.0	17.9	60	11.0	0.00
	1640	0.115	27.68	4.50	117.0	16.9	56	12.1	0.00
	1645	0.125	27.68	4.50	119.0	16.5	45	8.0	0.00
	1650	0.115	27.67	4.49	119.0	16.4	37	6.8	0.00
	1655	0.120	27.67	4.50	119.0	16.2	36	11.5	0.00
	1700	0.125	27.69	4.51	117.0	16.2	28	7.1	0.00
	1705	0.125	27.70	4.52	117.0	16.4	28	12.1	0.00
	1710	0.125	27.69	4.51	119.0	16.5	20	13.3	0.00
	1715	0.150	27.68	4.50	118.0	15.8	20	6.6	0.00
	1720	0.125	27.68	4.51	118.0	15.6	19	7.7	0.00
	1725	0.120	27.67	4.50	119.0	15.5	17	7.8	0.00
	1730	0.140	27.67	4.52	115.0	15.3	15	13.3	0.00
	1735	0.140	27.68	4.50	115.0	15.0	13	7.8	0.00
	1740	0.140	27.68	4.49	115.0	15.1	12	7.9	0.00
	1745	0.140	27.69	4.51	115.0	15.0	13	12.6	0.00
	1750	0.140	27.68	4.51	115.0	15.1	12	14.1	0.00
	1755	0.140	27.68	4.52	115.0	15.0	10	15.5	0.00
	1800	0.140	27.67	4.51	115.0	15.1	9	13.5	0.00
	1805	0.145	27.67	4.50	115.0	15.2	9	17.0	0.00
	1810	0.135	27.68	4.51	115.0	15.3	9	7.4	0.00
	1815	0.140	27.67	4.48	117.0	15.1	9	8.1	0.00
	1817	Complete 4.5 gallon purge							
	1820	Sample taken.							
	1852	Sample complete							
	1855	Post sample parameters							
		0.145	27.67	4.43	111.0	15.8	7	9.8	0.00

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of ____

Case # _____

By _____

Project Site Name: NWS EARLE
Project Site Number: CTO 231 5803
NUS Source No.: 04GW05
Source Location: SITE 4

Total Well Depth: 28	
Well Casing Size & Depth: 4" PVC 28 TOC	
Static Water Level: 17.24 TOC	
One Casing Volume: 7 GAL	
Start Purge (hrs.): 1520	
End Purge (hrs.): 1710	
Total Purge Time (min.): 110	
Total Amount Purged (gal.):	
Monitor Reading: <0.1 PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: →	SEE PG 2
Sample Date & Time: 7.25.95 1715	
Sampled By: KS TR	

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL

Signature(s): [signature]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED
Broken WELL CAP CANNOT BE LOCKED

.653 X 10.76 = 7 GAL / 1 VOL

Analysis:	Preservative
TCL VOC	
TCL SVOC	
TCL METALS	SEE COC
1 QT PE — N/N, BOD, CHLORIDE, SULFATE	
2 QT ½ SO_4 — COD, TOC, PHOS, AMMONIA	

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 04GW05	SITE-4
BASED ON:	DRAWING NUMBER:
BY: RS TR	CHECKED BY:
APPROVED BY:	DATE: 7.25.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
START	1520	.135	17.24	5.25	64.1	17.5	20	6.55	0
	1525	.110	17.48	5.20	63.0	17.5	85	5.77	0
	1530	.080	17.51	5.19	63.3	18.1	63	5.65	0
	1535	.070	17.48	5.19	63.4	19.2	—	5.38	0
	1540	.065	17.46	5.18	63.6	20.4	53	5.51	0
	1545	.060	17.44	5.19	63.6	20.7	—	5.34	0
	1550	.075	17.44	5.18	63.9	20.5	72	5.20	0
	1555	.060	17.44	5.18	64.6	20.2	114	4.81	0
	1600	.045	17.44	5.19	65.2	20.5	—	5.19	0
	1605	.050	17.43	5.20	65.8	21.3	151	5.12	0
	1610	.055	17.42	5.21	66.1	21.9	—	5.16	0
	1615	.050	17.39	5.22	66.1	22.4	175	5.13	0
	1620	.075	17.40	5.23	66.3	22.8	—	5.03	0
	1625	.070	17.42	5.22	66.5	21.4	211	5.04	0
	1630	.100	17.44	5.22	66.1	20.3	257	5.03	0
	1635	.125	17.48	5.21	65.7	18.5	285	4.98	0
	1640	.130	17.52	5.20	64.7	17.6	338	5.06	0
	1645	.070	17.49	5.20	64.5	17.6	333	5.17	0
	1650	.070	17.47	5.21	64.5	19.3	338	4.65	0
	1655	.060	17.46	5.21	64.5	20.6	—	4.90	0
	1700	.070	17.47	5.21	64.3	20.7	333	4.35	0
	1705	.065	17.45	5.20	64.2	20.4	—	4.50	0
	1710	.045	17.46	5.19	64.1	19.8	355	4.40	0
				SAMPLED		1715			
POST	1755	.240	17.33	5.22	61.7	15.5	555	5.10	0

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803

NUS Source No. 04GW06 Source Location SITE 04

Total Well Depth: 15.49	Purge Data
Well Casing Size & Depth: 4" PVC TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: 4.39 TOC	
One Casing Volume: 7.24 GAL	
Start Purge (hrs.): 1405	
End Purge (hrs.): 1500	
Total Purge Time (min.): 55	
Total Amount Purged (gal.): 2	
Monitor Reading: No HNU readings above background PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: →	SEE PG 2
Sample Date & Time: 7/25/95 1505	Sample Data: pH / S.C. / Temp. (°C) / TURB / DO / SAL
Sampled By: ASICM	

Signature(s):

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 11.10 = 7.24 gallons

Analysis:	Preservative
TCL volatiles	HCl
TCL SVOC's	None
TAL Metals	HNO_3
COD, TOC, Phes, Ammonia	H_2SO_4
Chloride, Sulfide	None

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT	JOB NUMBER
NWS EARIE	CTO 231 5803
SUBJECT	
04GW06	SITE - 04
BASED ON	DRAWING NUMBER

BY	CHECKED BY	APPROVED BY	DATE
ASICM			7/25/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
1405		4.39						
1410	0.180	4.49	4.53	96.3	19.6	4	10.9	0.00
1415	0.135	4.51	4.49	99.3	19.2	6	9.7	0.00
1420	0.115	4.47	4.48	102.0	19.5	6	9.8	0.00
1425	0.110	4.47	4.47	100.0	19.8	4	9.9	0.00
1430	0.120	4.49	4.47	101.0	19.2	2	9.9	0.00
1435	0.120	4.48	4.47	102.0	19.5	0	10.4	0.00
1440	0.110	4.48	4.47	101.0	19.4	1	11.0	0.00
1445	0.110	4.49	4.47	101.0	19.6	1	10.9	0.00
1450	0.105	4.50	4.48	101.0	19.6	1	10.5	0.00
1455	0.100	4.50	4.47	101.0	19.8	1	11.3	0.00
1500	0.105	4.49	4.48	99.0	19.8	1	11.5	0.00
1500	Complete purge 2 gallons							
1505	Sample for TCL Volatiles TCL SVOC's TOC, COD, Phosphate, Ammonia Chloride, Sulfate, N/N, BOD TAL Metals							
1535	Sample completed							
1540	Post sample parameters							
	0.115	4.51	4.52	97.0	20.3	1	13.1	0.00

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 04MW07 Source Location SITE 4

	Purge Data						
Total Well Depth: 26'	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 2" PVC 26' TOC							
Static Water Level: 17.95 TOC							
One Casing Volume: 1.3 GAL							
Start Purge (hrs.): 1303							
End Purge (hrs.): 1347							
Total Purge Time (min.): 44							
Total Amount Purged (gal.): 1							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time: 8.22.95 1352	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS AS							

Signature(s): [illegible]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.163 x 8.05 = 1.3 GAL/1 VOL

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TAL METALS	
LANDFILL PAR	

TAG INSTALLED

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 04MW07
DATE: 8.22.95

	Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START	1303	17.95								
	1310	17.97	130	21.2	5.13	31	>50	—	—	
	1315	17.98	100	18.0	4.87	14.2	>50	0.00	15	
	1320	17.98	70	18.6	4.84	13.8	>50	—	—	
	1325	17.97	75	18.1	4.81	13.1	>50	0.00	9	
	1330	17.95	55	18.7	4.88	13.0	>50	—	—	
	1335	17.95	60	19.2	4.96	12.8	>50	0.00	7	
	1340	17.95	55	18.9	5.04	12.7	>50	—	—	
	1345	17.97	75	18.5	5.04	12.4	>50	0.00	5	
	1347	END PURGE	1 GALLON							
	1352	BEGIN SAMPLING								
	1400	SAMPLING COMPLETED								
	1408	POST SAMPLE PARAMETERS								
		17.95	80	18.1	5.09	11.7	>50.0	0.00	8	

SIGNATURE(S) [illegible]

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number GT0231 5803
NUS Source No. 05GW01 Source Location SITE 05

Total Well Depth: 30.57	Purge Data							
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Static Water Level: 17.72 TOC								
One Casing Volume: 8.39 GAL								
Start Purge (hrs.): 1500								
End Purge (hrs.): 1731								
Total Purge Time (min.): 151								
Total Amount Purged (gal.): 7								
Monitor Reading: No Readings above background PPM								
Purge Method: GEOGUARD								
Sample Method: GEOGUARD								
Depth Sampled: —	SEE PG 2							
Sample Date & Time: 7/21/95 1731	Sample Data							
	pH	S.C.	Temp. (°C)	TURB	DO	SAL		
Sampled By: ~~KS~~ IAS/CM								

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 12.85 = 8.39

Analysis:	Preservative
TCL Volatiles	HCl
TAL Metals	HNO_3
Landfill Parameters	H_2SO_4
Landfill Parameters	—

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 056W01	SITE - 05
BASED ON:	DRAWING NUMBER:
BY:	CHECKED BY:
APPROVED BY:	DATE:

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
1500	0.225	17.72	4.74	16.1	18.3	23	4.0	0.00
1505	0.190	17.76	4.72	16.7	17.1	12	3.9	0.00
1510	0.165	17.78	4.68	16.8	16.7	12	4.0	0.00
1515	0.130	17.78	4.66	16.8	16.8	11	5.1	0.00
1520	0.100	17.75	4.65	17.1	17.6	13	5.6	0.00
1525	0.170	17.76	4.65	16.7	16.8	13	6.3	0.00
1530	0.210	17.78	4.63	16.6	15.9	19	6.9	0.00
1535	0.190	17.77	4.62	16.9	15.5	19	7.0	0.00
1540	0.200	17.78	4.61	16.6	15.4	21	8.4	0.00
1545	0.200	17.78	4.58	16.9	15.3	21	9.1	0.00
1550	0.070	17.77	4.59	16.7	16.2	22	9.7	0.00
1555	0.100	17.76	4.62	17.1	17.6	24	10.6	0.00
1600	0.120	17.77	4.62	16.5	17.0	—	11.9	0.00
1605	0.130	17.75	4.64	16.5	16.8	25	12.6	0.00
1610	0.100	17.77	4.62	16.7	16.6	26	13.0	0.00
1615	0.100	17.77	4.64	16.7	17.1	29	13.9	0.00
1620	0.115	17.76	4.65	16.7	17.2	27	14.4	0.00
1625	0.125	17.78	4.65	16.6	17.0	25	14.9	0.00
1630	0.050	17.76	4.67	16.6	17.1	—	15.1	0.00
1635	0.100	17.75	4.69	16.8	18.7	—	15.5	0.00
1640	0.070	17.76	4.70	16.7	19.1	25	16.4	0.00
1645	0.070	17.77	4.68	16.5	18.8	26	15.6	0.00
		Ran Air Tank Dry						
1715	0.170	17.78	4.71	17.1	21.3	25	15.7	0.00
1725	0.190	17.77	4.70	16.9	19.2	—	16.8	0.00
1730	0.180	17.77	4.71	16.7	19.1	25	16.4	0.00
1731	Sampling of 05GW01 was begun							
1755		17.78	4.70	17.1	19.4	24	18.1	0.00

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 05GW02 Source Location SITE 5

	Purge Data						
Total Well Depth: 29.2							
Well Casing Size & Depth: 4" PVC 29.2' TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 22.51 TOC							
One Casing Volume: 4.6 GAL							
Start Purge (hrs.): 1648			SEE PG 2				
End Purge (hrs.): 1833							
Total Purge Time (min.): 105							
Total Amount Purged (gal.):							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: —							
Sample Date & Time: 7.7.95 1835	Sample Data						
	pH	S.C.	Temp. (°C)	TURB.	DO	SAL	
Sampled By: KS CAA							

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA & HNU USED & GEOGUARD [illegible]

SEE PG 2
~~PUMP RATE = 6 PM~~
.653 X 6.07 = 4.6 GAL [illegible]

Analysis:	Preservative
TCL VOC	SEE COC
TAL METALS	
LANDFILL PAR	

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 056W02	
BASED ON	DRAWING NUMBER
BY: KS CM / CHECKED BY	APPROVED BY / DATE: 7-7-05

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. mS/cm	TEMP °C	TURB NTU	D.O. mg/L	SAL %
1649	.2	22.51	4.22	66.3	13.0	9[illegible]	8.3	0
1700	.2	22.70	4.23	66.3	13.9	78	8.3	0
1705	.2	22.70	4.17	67.0	13.0	38	8.3	0
1710	.2	22.70	4.15	59.8	13.7	45	8.1	0
1715	.2	22.70	4.11	71.2	13.3	42	7.0	0
1720	.2	22.69	[illegible]	71.6	13.2	55	[illegible]	0
1725	.25	22.69	4.08	73.2	13.2	36	8.2	0
[illegible]	.2	22.65	4.05	73.9	13.5	33	8.7	0
1735	.2	22.65	4.03	73.8	13.4	31	8.4	0
1740	.2	22.60	4.02	75.8	13.9	29	8.9	0
1745	.18	22.63	4.00	76.4	14.0	26	8.0	0
1750	.18	22.61	3.98	76.4	13.9	24	8.0	0
1755	.18	22.60	3.98	76.4	13.0	24	0.[illegible]	0
1800	.18	22.60	3.96	76.1	13.5	23	0.3	0
1805	.18	22.60	3.94	77.8	13.6	21	0.[illegible]	0
1810	.18	22.60	3.91	77.8	13.7	20	0.2	0
1815	.18	22.60	3.90	77.3	13.5	19	9.2	0
1820	.18	22.60	3.90	77.3	13.5	19	9.3	0
1825	.14	22.60	3.90	76.9	13.7	[illegible]	8.9	0
1830	.14	22.55	3.91	78.3	13.7	19	8.5	0

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 05GW03 Source Location SITE-05

Total Well Depth: 29.87	Purge Data						
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 18.13 TOC							
One Casing Volume: 7.67 GAL							
Start Purge (hrs.): 0850							
End Purge (hrs.): 1008							
Total Purge Time (min.): 178							
Total Amount Purged (gal.): 5							
Monitor Reading: No readings above background PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: —	SEE PG 2						
Sample Date & Time: 7/21/95 1012	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: ~~CS~~ / AS / CM							

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 11.74 = 7.67

Analysis:	Preservative
TCL Volatiles	HCl
TAL Metals	HNO_3
Landfill Parameters	H_2SO_4
Landfill Parameters	—

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 05 GW03	SITE - 05 GW03
BASED ON:	DRAWING NUMBER:
BY: CM / AS	CHECKED BY:
APPROVED BY:	DATE: 7/21/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
0850	0.095	18.13	4.11	163	17.4	36	26.1	0.00
0855	0.100	18.19	4.12	151	16.8	30	30.1	0.00
0900	0.075	18.21	4.09	34.3	15.4	58	32.0	0.00
0905	0.090	18.20	4.08	34.6	15.7	36	34.1	0.00
0910	0.100	18.20	4.06	33.7	16.1	31	37.1	0.00
0915	0.050	18.20	4.04	33.7	16.4	31	38.9	0.00
0920	0.125	18.22	4.01	34.3	16.6	29	39.8	0.00
0925	0.105	18.20	3.99	32.8	15.9	29	37.9	0.00
0930	0.135	18.21	3.95	32.7	15.7	—	37.1	0.00
0935	0.120	18.20	3.96	33.6	15.6	26	37.3	0.00
0940	0.110	18.20	3.94	33.6	15.5	25	35.0	0.00
0945	0.125	18.22	3.94	33.6	15.3	24	35.5	0.00
0950	0.110	18.20	3.92	33.4	15.4	22	33.6	0.00
0955	0.095	18.21	3.90	33.4	15.4	22	32.9	0.00
1000	0.105	18.21	3.92	33.4	15.5	22	32.2	0.00
1005	0.100	18.20	3.93	33.4	15.5	22	30.9	0.00
1008	Purging Complete after purging 5 gallons							
			Post Sampling Data					
1025		18.21	4.26	.145	13.9	22	3.71	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803

NUS Source No. 05GW04 Source Location SITE 05

Total Well Depth: 29.33	Purge Data						
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 15.22 TOC							
One Casing Volume: 9.21 GAL							
Start Purge (hrs.): 1055							
End Purge (hrs.): 1238							
Total Purge Time (min.): 203							
Total Amount Purged (gal.): 6							
Monitor Reading: NO HNU readings above bkg PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: ——	SEE PG 2						
Sample Date & Time: 7/21/95 1240	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: ~~KS~~ ICM/AS							

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 14.11 = 9.21 gallons

Analysis:	Preservative
TCL volatiles	HCL
TAL Metals	HNO_3
Landfill parameters	H_2SO_4
Landfill parameter	——

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 05GW04	SITE - 05
BASED ON:	DRAWING NUMBER:
BY: CM/AS	CHECKED BY:
APPROVED BY:	DATE: 7/21/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
1055	0.115	15.22	4.86	14.3	14.9	57	18.3	0.00
1100	0.095	15.31	4.90	14.7	16.0	47	19.7	0.00
1105	—	15.28	4.92	14.7	16.6	—	19.8	0.00
1110	0.135	15.30	4.90	14.8	16.9	39	20.1	0.00
1115	0.100	15.30	4.91	14.4	16.1	38	19.9	0.00
1120	0.170	15.28	4.91	14.4	15.9	34	20.1	0.00
1125	0.120	15.28	4.92	14.5	16.2	32	19.6	0.00
1130	0.140	15.28	4.88	14.4	16.3	29	19.1	0.00
1135	0.105	15.28	4.86	14.3	15.8	26	21.0	0.00
1140	0.170	15.30	4.80	14.3	14.8	26	20.0	0.00
1145	0.150	15.30	4.74	14.7	14.8	19	20.1	0.00
1150	0.125	15.30	4.72	14.6	15.3	18	19.7	0.00
1155	0.120	15.28	4.71	14.6	15.5	17	19.5	0.00
1200	0.115	15.30	4.70	14.6	15.4	17	18.9	0.00
1205	0.080	15.28	4.70	14.9	15.7	15	18.4	0.00
1210	0.090	15.28	4.70	14.7	15.7	15	17.7	0.00
1215	0.070	15.28	4.72	14.8	16.4	16	17.5	0.00
1220	0.075	15.28	4.71	14.7	16.2	13	16.7	0.00
1225	0.120	15.28	4.72	14.9	16.1	13	16.3	0.00
1230	0.110	15.30	4.72	14.9	15.4	13	16.0	0.00
1235	0.120	15.30	4.71	14.9	15.3	13	14.0	0.00
1238	Purging complete after 6 gallons was purged							
	Post Sampling Parameters							
1252		15.30	4.82	14.4	13.9	14	13.6	0.00

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page _____ of _____
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. OS GW 05 Source Location SITE 5

Total Well Depth: 29.2	TIME	Purge Data					
Well Casing Size & Depth; 4" PVC 29.2 TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
	START	4.29	.253	15.8	188	4.04	0.01
Static Water Level: 21.05' TOC	1623	4.23	.142	14.5	149	3.75	0
One Casing Volume: 5.32 GAL	1628	4.21	.138	14.5	42	4.75	0
Start Purge (hrs.): 1618	1633	4.18	.137	13.9	24	3.60	0
End Purge (hrs.): 1705	1638	4.19	.138	13.9	14	4.03	0
Total Purge Time (min.): 47	1651	4.18	.140	13.9	12	3.59	0
Total Amount Purged (gal.): 15.7	1700	4.19	.138	13.9	5	4.00	0
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD PUMP							
Sample Method: GEOGUARD PUMP							
Depth Sampled:							

Sample Date & Time: 7.5.95 1705	Sample Data					
	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: KS CM	4.17	.138	13.9	5	4.00	0

Signature(s): [illegible]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
ALSO SAMPLE FOR MS/MSD
[illegible]
HORIBA USED & HNU

	Analysis:	Preservative
TCL	VOC	SEE COC
TAL	METALS	
	L.F. PAR.	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number GT0231 5803
NUS Source No. 05GW06 Source Location SITE 5

Total Well Depth: 31'	Purge Data
Well Casing Size & Depth: 4" PVC 31' TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: 26.56 TOC	
One Casing Volume: 2.9 GAL	
Start Purge (hrs.): 1618	
End Purge (hrs.): 1634	
Total Purge Time (min.): 16	
Total Amount Purged (gal.):	
Monitor Reading: <0.1 PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: →	SEE PG 2
Sample Date & Time: 7.13.95 1637	Sample Data: pH / S.C. / Temp. (°C) / TURB / DO / SAL
Sampled By: KS CM	
Signature(s): [signature]	Observations / Notes: DEDICATED PUMP & TUBING; HORIBA, HNU, & GEOGUARD CELL USED
Type of Sample: ☒ Low Concentration ☐ High Concentration ☒ Grab ☐ Composite ☐ Grab - Composite	.653 X 4.44 = 2.9

Analysis:	Preservative
TCL VOC	
TAL METALS	SEE COC
LANDFILL PAR	

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARLE	JOB NUMBER: CTO 231 5803
SUBJECT: 05GW06	SITE 5
BASED ON	DRAWING NUMBER
BY: KS / CM; CHECKED BY	APPROVED BY; DATE: 7.13.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1618	.125	26.56	4.46	390	19.0	14	0.7	0.01
	1621	.125	26.81	4.46	402	18.9	11	.0	0.01
	1625	.080	26.81	4.46	396	18.0	9	1.2	0
	1630	.185	26.84	4.46	396	17.8	5	1.3	0
	1634	.160	26.90	4.44	404	17.1	5	1.6	0

SAMPLED AT 1637

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number GT0231 5803
NUS Source No. 05GW07 Source Location SITE 5

Total Well Depth: 26	Purge Data						
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
4" PVC 26 TOC							
Static Water Level: 22.95 TOC							
One Casing Volume: 2 gal							
Start Purge (hrs.): 1718							
End Purge (hrs.): 1735							
Total Purge Time (min.): 17							
Total Amount Purged (gal.):							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time: 7.13.95 1738	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS CM							

Signature(s): [signature]

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 x 3.05 = 2

Analysis:	Preservative
TCL VOC	
TAL METALS	SEE COC
LANDFILL PAD	

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARLE	JOB NUMBER: CTO 231 5803
SUBJECT: 05GW07	SITE 5
BASED ON	DRAWING NUMBER
BY: RS CAS / CHECKED BY	APPROVED BY / DATE: 7.13.95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START 1718	.210	22.95	3.80	585	21.7	8	1.1	0.02
1722	.240	23.83	4.02	596	16.5	9	1.6	0.02
1727	.200	23.31	4.02	596	16.9	6	2.1	0.02
1732	.180	23.42	3.98	596	17.6	5	2.8	0.02
1735	.125	23.37	4.00	575	16.8	5	3.4	0.02
		SAMPLED		AT	1738			

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 05GW08 Source Location SITE 05

Total Well Depth: 25.89	Purge Data
Well Casing Size & Depth: 4" PVC 25.89 TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: 8.18 TOC	
One Casing Volume: 5.02 GAL	
Start Purge (hrs.): 1350	
End Purge (hrs.): 1425	
Total Purge Time (min.): 35	
Total Amount Purged (gal.): 1.5	
Monitor Reading: no readings above background PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: →	SEE PG 2
Sample Date & Time: 7/23/95 1430	Sample Data: pH / S.C. / Temp. (°C) / TURB / DO / SAL
Sampled By: ~~KS~~ IAS / CM	
Signature(s):	Observations / Notes: DEDICATED PUMP & TUBING; HORIBA, HNU, & GEOGUARD CELL USED
Type of Sample: [x] Low Concentration; [ ] High Concentration; [x] Grab; [ ] Composite; [ ] Grab - Composite	.653 X 7.71 = 5.02

Analysis:	Preservative
TCL Volatiles	HCl
TAL Metals	HNO3
Landfill Parameters	H2SO4
Landfill Parameters	—

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 05GW08	SITE - 05
BASED ON:	DRAWING NUMBER:
BY: ASICM	CHECKED BY:
APPROVED BY:	DATE: 7/23/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
1350	0.180	18.28	5.27	11.4	17.9	7	6.0	0.00
1355	0.180	18.22	5.14	11.8	17.7	11	6.5	0.00
1400	0.055	18.25	5.09	11.9	18.2	7	7.4	0.00
1405	0.185	18.26	5.00	11.5	16.7	8	8.5	0.00
1410	0.215	18.26	4.95	11.7	14.5	8	9.5	0.00
1415	0.220	18.24	4.91	11.4	14.6	7	10.4	0.00
1420	0.135	18.26	4.86	11.4	15.2	6	11.0	0.00
1425	0.120	18.26	4.87	11.2	16.8	5	12.1	0.00
1428	Purging completed after purging 1.5 gallons							
1430	Sampling of 05GW68 was begun							
1450	Sampling of 05GW05 was completed							
1455	Post sample parameters were collected							
	0.150	18.27	4.83	10.4	16.2	5	10.3	0.00

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number GT0231 5803
NUS Source No. 05GW08 Source Location SITE-05

	Purge Data						
Total Well Depth: 26.35	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 4" PVC TOC							
Static Water Level: 18.33 TOC							
One Casing Volume: 1 gal							
Start Purge (hrs.): 0830							
End Purge (hrs.): 0908							
Total Purge Time (min.): 36							
Total Amount Purged (gal.): 1							
Monitor Reading: No HNU readings above background PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time: 7/28/95 0907	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: ~~KS~~ ASICM							

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab-Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED
Resampling for BOD analysis
From 7/28/95 Sample 05GW08

.653X =

Analysis:	Preservative
BOD	None

BOD ONLY

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARLE	JOB NUMBER: CTO 231 5803
SUBJECT: 05GW08	Site - 05
BASED ON:	DRAWING NUMBER:
BY: AS/CM	CHECKED BY:
APPROVED BY:	DATE: 7/28/95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	0830		18.33						
	0835	0.110	18.33	4.76	49.4	16.9	4	>50.0	0.02
	0840	0.110	18.34	4.65	42.4	15.5	4	>50.0	0.00
	0845	0.105	18.33	4.59	33.0	14.8	4	>50.0	0.00
	0850	0.100	18.33	4.37	29.5	14.0	4	>50.0	0.00
	0855	0.095	18.33	4.22	26.7	14.2	4	>50.0	0.00
	0900	0.090	18.33	4.48	29.5	14.7	4	>50.0	0.00
	0905	0.100	18.33	4.46	27.7	14.9	4	>50.0	0.00
	0906	Complete purge 1 gallon							
	0907	Obtained sample							
	0911	Sample completed							
	0916	Post sample parameters							
		0.100	18.33	4.55	28.6	14.0	4	>50.0	0.00

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 06GW01 Source Location SITE 6

Total Well Depth: 20.7[illegible]	Purge Data
Well Casing Size & Depth: 4" PVC 20.7[illegible] TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: [illegible] TOC	
One Casing Volume: 5.5 GAL	
Start Purge (hrs.): 0810	
End Purge (hrs.): [illegible]	
Total Purge Time (min.): [illegible]	
Total Amount Purged (gal.): [illegible]	
Monitor Reading: <0.1 PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: —	SEE PG 2
Sample Date & Time: 7.28.95 0930	Sample Data
Sampled By: KS TR	pH / S.C. / Temp. (°C) / TURB / DO / SAL
Signature(s): [illegible]	Observations / Notes: DEDICATED PUMP & TUBING; HORIBA, HNU, & GEOGUARD CELL USED; [illegible] .653 x 8.37 = 5.5 [illegible]

Type of Sample

- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TAL METALS	
TCL PEST	
EXPLOSIVES	
[illegible]	

CALCULATION WORKSHEET Order No. 19116 (01-91) PAGE ____ OF ____

CLIENT: NWS EARLE	JOB NUMBER: CTO 231 5803
SUBJECT: OGGW01	SITE 6
BASED ON:	DRAWING NUMBER:
BY: KS TR / CHECKED BY: -	APPROVED BY: / DATE: 7.23.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	0810	.240	12.42	5.63	69.6	17.8	345	4.40	0.02
	0815	.150	12.71	6.18	85.6	16.9	—	1.66	—
	0820	.055	12.65	6.25	85.4	18.4	201	1.53	0.03
	0825	.050	12.64	6.27	86.8	18.9	—	1.45	—
	0830	.045	12.60	6.28	87.[illegible]	20.1	—	1.63	—
	0835	.050	12.59	6.28	87.4	20.5	53	1.68	0.03
	0840	.060	12.59	6.29	88.3	20.4	—	1.25	—
	0845	.060	12.59	6.29	88.5	20.4	7	1.24	0.03
	0850	.060	12.59	6.30	88.8	20.3	—	1.30	—
	0855	.055	12.59	6.30	89.2	20.2	61	1.15	0.04
→ RECAL. TURB. METER	0900	.075	12.59	6.30	89.5	20.1	—	0.93	—
	0905	.075	12.59	6.31	89.7	20.0	—	1.05	—
	0910	.065	12.59	6.31	90.2	20.0	46	0.77	0.04
	0915	.040	12.59	—	—	—	42	—	0.04
	0920	.045	12.55	6.29	90.0	20.8	—	1.20	—
	0925	.040	12.54	6.30	90.0	21.2	54	1.25	0.04
					0930 [illegible] Sample Collected				
POST	1128	.100	12.63	6.27	102.1	17.8	58	1.10	0.04

SAMPLE LOG SHEET

NUS CORPORATION
A Halliburton Company

SAMPLE LOG SHEET

☐ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 06GW02 Source Location Site 06

Total Well Depth: 17.42	Purge Data					
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	Color & Turbidity	
4" PVC casing						
Static Water Level: 8.96						
One Casing Volume: 5.85						
Start Purge (hrs.): 15:25						
End Purge (hrs.): 17 10						
Total Purge Time (min.): 105						
Total Amount Purged (gal.): 3						
Monitor Reading: No HNU						
readings above Background						
Purge Method: Geo Guard Pump						
Sample Method: Geo Guard Pump						
Depth Sampled: —						
Sample Date & Time:	Sample Data					
8/2/95 1712	pH	S.C.	Temp. (°C)	Color & Turbidity		
Sampled By: ASICM						

Signature(s):

Type of Sample
- ☑ Low Concentration
- ☐ High Concentration
- ☑ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:

.653 x 8.96 = 5.85 gallons

Analysis:	Preservative		Organic	Inorganic
TCL Volatiles	HCl	Traffic Report #		
TCL SVOC's	None	Tag #		
TAL Metals	HNO_3			
TCL Pest	None	AB #		
Landfill Parameters	H_2SO_4	Date Shipped		
Landfill Parameters	None	Time Shipped		
Explosives	None	Lab		
		Volume		

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5903
SUBJECT: 06GW02	SITE - 06
BASED ON:	DRAWING NUMBER:
BY: ASICM	CHECKED BY:
APPROVED BY:	DATE: 8/2/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
1525		8.46						
1530	0.245	8.55	4.90	86.0	19.2	32	>50.0	0.00
1535	0.150	8.55	4.87	86.9	19.2	30	10.7	0.00
1540	0.115	8.53	4.84	98.5	19.6	26	9.5	0.00
1545	0.105	8.53	4.87	107.0	19.8	18	12.9	0.00
1550	0.140	8.55	4.86	124.0	19.0	14	11.4	0.00
1555	0.110	8.55	4.83	168.0	19.0	10	10.5	0.00
1600	0.115	8.54	4.84	190.0	19.1	10	11.0	0.00
1605	0.115	8.53	4.83	202.0	18.7	8	13.4	0.00
1610	0.115	8.55	4.83	212.0	18.7	8	9.2	0.00
1615	0.115	8.53	4.84	227.0	18.6	8	12.6	0.00
1620	0.125	8.55	4.82	233.0	18.3	8	9.8	0.00
1625	0.135	8.55	4.81	247.0	18.1	8	44.6	0.00
1630	0.115	8.55	4.80	254.0	18.1	7	43.4	0.00
1635	0.115	8.54	4.79	261.0	18.4	6	38.5	0.00
1640	0.110	8.53	4.82	271.0	18.3	7	40.5	0.00
1645	0.100	8.53	4.81	278.0	18.7	6	37.2	0.01
1650	0.105	8.54	4.81	282.0	18.5	6	38.1	0.01
1655	0.100	8.54	4.81	292.0	18.4	7	35.8	0.01
1700	0.100	8.55	4.84	295.0	18.1	6	32.9	0.01
1705	0.120	8.55	4.85	299.0	18.0	7	35.6	0.01
1710	0.120	8.55	4.87	306.0	17.9	7	36.1	0.01
1710	End 3 gallon purge							
1712	Begin sampling							
1820	sampling Complete							
1825	Post sampling parameters							
	0.100	8.61	4.95	451.0	19.0	4	28.8	0.01

SAMPLE LOG SHEET

NUS CORPORATION
A Halliburton Company

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 06GW03 Source Location Site 06

	Purge Data				
Total Well Depth: TOC 24.50					
Well Casing Size & Depth: 4" PVC Casing	Volume	pH	S.C.	Temp. (°C)	Color & Turbidity
Static Water Level: TOC 9.68					
One Casing Volume: 9.68 gal					
Start Purge (hrs.): 0830					
End Purge (hrs.): 1033					
Total Purge Time (min.): 123					
Total Amount Purged (gal.): 3					
Monitor Reading: No HNU readings above background					
Purge Method: Geo Guard pump					
Sample Method: Geo Guard pump					
Depth Sampled:					
Sample Date & Time: 8/3/95 1035	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Sampled By: AS/CM					

Signature(s):

Type of Sample
- [ ] Low Concentration
- [ ] High Concentration
- [ ] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:

.653 x 14.82 = 9.68 gallons

Analysis:	Preservative		Organic	Inorganic
TCL Volatiles	HCl	Traffic Report #		
TCL SVOC's	None	Tag #		
TAL Metals	HNO_3			
TCL Pest	None	AB #		
Landfill Para	H_2SO_4	Date Shipped		
Landfill Para	None	Time Shipped		
Explosives	None	Lab		
		Volume		

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5903
SUBJECT: 06 GW 03	SITE - 06
BASED ON:	DRAWING NUMBER:
BY: ASICM	CHECKED BY:
APPROVED BY:	DATE: 8/3/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
0812		9.68						
Start → 0830	0.150	9.68	4.99	267.0	17.7	165	>50.0	0.00
0835		9.68						
0840	0.110	9.67	5.01	278.0	17.5	200	>50.0	0.01
0845	0.100	9.66	5.02	281.0	17.6	181	>50.0	0.01
0850	0.095	9.66	5.02	283.0	17.7	169	>50.0	0.01
0855	0.105	9.66	5.00	284.0	17.6	160	25.8	0.01
0900	0.100	9.66	5.03	279.0	17.8	132	>50.0	0.01
0905	0.085	9.66	5.01	283.0	17.9	124	>50.0	0.01
0910	0.090	9.67	5.04	283.0	18.0	110	>50.0	0.01
0915	0.105	9.68	5.01	284.0	17.4	100	>50.0	0.01
0920	0.115	9.67	5.02	284.0	17.2	90	>50.0	0.01
0925	0.090	9.69	5.03	286.0	17.6	85	>50.0	0.01
0930	0.105	9.67	5.03	289.0	17.6	80	>50.0	0.00
0935	0.100	9.67	5.04	286.0	17.9	68	>50.0	0.01
0940	0.095	9.66	5.04	286.0	17.9	62	>50.0	0.01
0945	0.105	9.67	5.06	286.0	17.9	60	>50.0	0.01
0950	0.100	9.66	5.05	286.0	17.8	60	>50.0	0.01
0955	0.100	9.67	5.05	284.0	17.8	60	>50.0	0.01
1000	0.105	9.67	5.07	286.0	17.8	60	>50.0	0.01
1005	0.105	9.67	5.07	286.0	17.8	50	>50.0	0.01
1010	0.105	9.67	5.07	287.0	17.9	50	>50.0	0.01
1015	0.105	9.66	5.07	286.0	17.8	50	>50.0	0.01
1020	0.105	9.67	5.06	289.0	17.9	45	>50.0	0.01
1025	0.105	9.67	5.07	291.0	18.1	50	43.7	0.01
1030	0.100	9.67	5.08	292.0	18.3	50	>50.0	0.01
1033	END	3 gallon purge						
1035	BEGIN	SAMPLING						
1155 ~~1255~~	END	SAMPLING						
1200 ~~1300~~	Post	sampling parameters						
	0.105	9.66	5.05	292.0		42	>50.0	0.01

SAMPLE LOG SHEET

NUS CORPORATION
A Halliburton Company

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 06EWAY Source Location Site 6

	Purge Data				
Total Well Depth: TOC 20.15					
Well Casing Size & Depth: 4" PVC Casing	Volume	pH	S.C.	Temp. (°C)	Color & Turbidity
Static Water Level: TOC 10.49					
One Casing Volume: 6.31					
Start Purge (hrs.): 1250					
End Purge (hrs.): 1357					
Total Purge Time (min.): 67					
Total Amount Purged (gal.):					
Monitor Reading: No HNU readings above Background					
Purge Method: Geo Guard Pump					
Sample Method: Geo Guard Pump					
Depth Sampled: ———					
Sample Date & Time: 8/3/95 1400	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Sampled By: MS/CM					

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:

.653 x 9.66 = 6.31 gallons

Analysis:	Preservative
TCL Volatiles	HCl
TCL SVOC's	None
TAL Metals	HNO_3
TCL Pest	None
Landfill Parameters	H_2SO_4
Landfill Parameters	None
Explosives	None

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 06GW04	SITE - 06
BASED ON:	DRAWING NUMBER:
BY: AS/CM	CHECKED BY:
APPROVED BY:	DATE: 8/3/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
1250		10.49						
1255	0.240	10.54	6.57	947.0	18.0	307	33.4	0.04
1300	0.120	10.63	6.58	997.0	17.9	26	45.5	0.04
1305	0.125	10.68	6.57	997.0	18.0	12	42.9	0.04
1310	0.130	10.58	6.57	1020.0	17.7	7	35.8	0.04
1315	0.100	10.55	6.56	1013.0	18.1	7	34.9	0.05
1320	0.110	10.65	6.56	1010.0	18.1	15	34.4	0.05
1325	0.125	10.67	6.55	1020.0	17.7	9	36.3	0.05
1330	0.120	10.67	6.55	1010.0	18.0	7	35.9	0.05
1335	0.100	10.69	6.56	1020.0	17.6	10	24.1	0.05
1340	0.120	10.69	6.56	1016.0	17.3	14	28.6	0.05
1345	0.120	10.70	6.55	1020.0	17.2	6	27.8	0.05
1350	0.125	10.68	6.56	1020.0	17.4	7	32.5	0.05
1355	0.125	10.68	6.56	1020.0	17.6	10	24.6	0.05
1357	END 2 GALLON PURGE							
1400	SAMPLING BEGUN							
1505	END SAMPLING							
1510	POST SAMPLING PARAMETERS							
	0.125	10.76	6.66	1021.0	17.1	12	16.3	0.05

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE
Project Site Number CTO 231 5803
NUS Source No. 07GW01
Source Location SITE 07

Total Well Depth: 41.63	Purge Data
Well Casing Size & Depth: 4" PVC TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: 18.62 TOC	
One Casing Volume: 15.01 GAL	
Start Purge (hrs.): 1430	
End Purge (hrs.): 15.02	
Total Purge Time (min.):	
Total Amount Purged (gal.):	
Monitor Reading: NO HNU readings above BKG PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: →	SEE PG 2
Sample Date & Time: 7/26/95 1517	Sample Data: pH / S.C. / Temp. (°C) / TURB / DO / SAL
Sampled By: AS/CM	

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 23.01 = 15.01

Analysis:	Preservative
TCL Volatiles	HCL
TAL Metals	HNO_3
Landfill Parameters	H_2SO_4
Landfill Parameters	None

CALCULATION WORKSHEET Order No. 19116 (01-91)

PAGE ____ OF ____

CLIENT: NWS EARLE	JOB NUMBER: CTO 231 5803
SUBJECT: 07 GW 01	Site 7
BASED ON:	DRAWING NUMBER:
BY: AS/CM	CHECKED BY:
APPROVED BY:	DATE: 7/26/95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1430		18.62						
	1435	0.250	19.05	4.40	28.3	15.4	14	16.4	0.00
	1440	0.190	19.08	4.41	28.6	16.0	10	32.7	0.00
	1445	0.140	19.24	4.37	28.0	14.7	2	34.0	0.00
	1450	0.125	19.39	4.32	28.5	14.0	2	32.5	0.00
	1455	0.100	19.38	4.32	29.3	14.7	2	34.0	0.00
	1500	0.100	19.42	4.29	28.8	15.1	2	29.6	0.00
	1505	0.100	19.47	4.26	28.8	14.9	2	31.3	0.00
	1510	0.100	19.51	4.23	28.8	15.2	2	31.2	0.00
	1515	0.100	19.52	4.20	28.8	15.4	2	27.5	0.00
	1515	End purge 1 gallon							
	1517	Sample obtained.							
	1532	Sample complete							
		Post sample parameters							
	1540	0.100	20.19	4.29	28.7	16.8	3	22.0	0.00

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number GT0231 5803

NUS Source No. 076W02 Source Location SITE-07

Total Well Depth: 21.98	Purge Data						
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 10.28 TOC							
One Casing Volume: 7.28 GAL							
Start Purge (hrs.): 0935							
End Purge (hrs.):							
Total Purge Time (min.):							
Total Amount Purged (gal.):							
Monitor Reading: NO HNU readings above BKG PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: ———	SEE PG 2						
Sample Date & Time: 7/26/95 1030	Sample Data						
Sampled By: AS/CM	pH	S.C.	Temp. (°C)	TURB	DO	SAL	

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 11.2 = 7.28

Analysis:	Preservative
TCL Volatiles	HCL
TAL Metals	HNO_3
Landfill Parameters	H_2SO_4
Landfill Parameters	NONE

CALCULATION WORKSHEET Order No. 19116 (01-91) PAGE ____ OF ____

CLIENT: NWS EARLE	JOB NUMBER: CTO 231 5803
SUBJECT: 07GW02	Site 7
BASED ON:	DRAWING NUMBER:
BY: AS/CM	CHECKED BY:
APPROVED BY:	DATE: 7/26/95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	0935		10.28	~~4.3~~ AS			~~2~~ AS		
	0940	0.230	10.50	4.30	174.0	13.0	2	50.0	0.00
	0945	0.110	10.46	4.32	177.0	14.0	1	50.0	0.00
	0950	0.100	10.46	4.30	178.0	14.4	1	50.0	0.00
	0955	0.115	10.47	4.29	178.0	14.2	0	47.1	0.00
	1000	0.095	10.47	4.30	178.0	14.5	0	43.4	0.00
	1005	0.105	10.47	4.28	178.0	15.2	0	42.5	0.00
	1010	0.100	10.46	4.28	179.0	15.5	0	49.1	0.00
	1015	0.085	10.46	4.27	179.0	15.6	0	40.2	0.00
	1020	0.095	10.46	4.26	176.0	15.1	0	38.5	0.00
	1025	0.100	10.47	4.26	177.0	15.9	0	34.1	0.00
	1027	End purge 1.75 gallons							
	1030	Sample obtained							
	1050	Sample completed							
	1055	Post sample parameters							
		0.105	10.45	4.27	177.0	15.1	0	33.9	0.00

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name: NWS EARLE
Project Site Number: CTO 231 5803
NUS Source No.: 07GW03
Source Location: SITE 07

Total Well Depth: 35.65	
Well Casing Size & Depth: 4" PVC TOC	
Static Water Level: 23.05 TOC	
One Casing Volume: 7.21 GAL	
Start Purge (hrs.): 0850	
End Purge (hrs.): 0946	
Total Purge Time (min.): 56	
Total Amount Purged (gal.): 1.5	
Monitor Reading: PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: —	
Sample Date & Time: 7/27/95 0947	
Sampled By: AS/CM	
Signature(s): [signature]	

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL

SEE PG 2

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 12.58 = 7.21

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Analysis:	Preservative
TCL Volatiles	HCl
TAL Metals	HNO_3
Landfill Parameters	H_2SO_4
Landfill Parameters	NaOH

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARLE	JOB NUMBER: CTO 231 5803
SUBJECT: 07GW03	SITE - 07
BASED ON:	DRAWING NUMBER:
BY: AS/CM	CHECKED BY:
APPROVED BY:	DATE: 7/27/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
0850		23.05						
0855	0.150	23.09	4.15	39.4	14.0	28	21.8	0.00
0900	0.130	23.28	4.16	38.7	14.0	28	24.9	0.00
0905	0.105	23.31	4.17	39.7	15.0	18	24.4	0.00
0910	0.085	23.31	4.15	38.8	15.8	14	30.5	0.00
0915	0.090	23.33	4.18	39.2	15.4	12	35.6	0.00
0920	0.090	23.32	4.16	39.2	15.2	10	28.0	0.00
0925	0.085	23.31	4.15	40.3	15.3	9	29.8	0.00
0930	0.095	23.33	4.17	39.1	15.0	9	27.6	0.00
0935	0.100	23.34	4.17	40.0	14.6	9	28.1	0.00
0940	0.105	23.35	4.17	39.5	14.3	9	28.4	0.00
0945	0.110	23.34	4.19	39.9	14.4	9	39.5	0.00
0947	Complete 1.5 gallon purge							
0948	Sample collected							
1006	Sample completed							
1012	0.110	23.38	4.15	38.6	14.7	11	18.1	0.00
	↑ post sample parameters							

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803
NUS Source No. 07GW04 Source Location SITE 07

Total Well Depth: 25.25	Purge Data						
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 17.48 TOC							
One Casing Volume: 5.04 GAL							
Start Purge (hrs.): 1115							
End Purge (hrs.):							
Total Purge Time (min.):							
Total Amount Purged (gal.):							
Monitor Reading: NO HNU readings above BKG PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time: 7/26/95 1232	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: ~~MS~~ AS/CM							

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 7.77 = 5.04

Analysis:	Preservative
TCL volatiles	HCl
TAL metals	HNO_3
Landfill parameters	H_2SO_4
Landfill parameters	None

CALCULATION WORKSHEET Order No. 19116 (01-91) PAGE ____ OF ____

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 07GW07	Site 07
BASED ON: 07GW04	DRAWING NUMBER:
BY: ASICM	CHECKED BY:
APPROVED BY:	DATE: 7/26/95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1115		17.48						
FITTING LEAK →	1120	—	—	—	—	—	—	—	—
	1125	0.130	17.59	4.38	45.5	16.4	0	42.6	0.00
	1130	0.110	17.64	4.33	43.3	15.8	8	42.3	0.00
	1135	0.090	17.68	4.29	43.8	16.1	14	43.3	0.00
	1140	0.085	17.70	4.27	43.3	16.1	14	45.3	0.00
	1145	0.060	17.74	4.30	43.6	16.3	—	46.2	0.00
	1150	0.065	17.75	4.36	44.4	16.7	18	44.2	0.00
	1155	0.060	17.77	4.37	44.4	16.9	—	34.7	0.00
	1200	0.050	17.79	4.43	44.3	17.5	18	45.5	0.00
	1205	0.050	17.81	4.47	43.9	17.8	—	50.0	0.00
	1210	0.050	17.81	4.48	44.3	17.9	14	41.6	0.00
	1215	0.045	17.83	4.50	45.1	18.4	—	50.0	0.00
	1220	0.045	17.83	4.49	44.3	18.3	14	38.5	0.00
	1225	0.050	17.83	4.46	44.3	17.9	—	34.3	0.00
	1230	0.050	17.84	4.48	44.0	17.8	14	39.6	0.00
	1230	Complete Purge							

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page 1 of ____

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other ____

Case # ____

By ____

Project Site Name NWS EARLE Project Site Number GT0231 5803

NUS Source No. 07 GW 05 Source Location SITE 07

Total Well Depth: 22.25	Purge Data
Well Casing Size & Depth: 4" PVC TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: 14.68 TOC	
One Casing Volume: 4.93 GAL	
Start Purge (hrs.): 1125	
End Purge (hrs.): 1205	
Total Purge Time (min.): 30	
Total Amount Purged (gal.): 1	
Monitor Reading: No HNU readings above BKG PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: ———	SEE PG 2
Sample Date & Time: ~~No HNU reading~~ 7/27/95 1206	Sample Data: pH / S.C. / Temp. (°C) / TURB / DO / SAL
Sampled By: ~~BB~~ AJ/EM	

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 7.57 = 4.93

Analysis:	Preservative
TCL Volatiles	HCl
TAL Metals	HNO_3
Landfill Parameters	H_2SO_4
Landfill Parameters	NONE

CALCULATION WORKSHEET Order No. 19116 (01-91) PAGE ____ OF ____

CLIENT: NWS EARLE	JOB NUMBER: CTO 231 5803
SUBJECT: 02GW05	Site - 05
BASED ON:	DRAWING NUMBER:
BY: AS/CM	CHECKED BY:
APPROVED BY:	DATE: 7/27/95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1125		14.68						
	1130	0.275	14.86	4.36	206.0	14.0	2	15.1	0.00
	1135	0.090	14.89	4.33	212.0	15.3	2	24.5	0.00
	1140	0.105	14.91	4.27	211.0	15.9	1	28.7	0.00
	1145	0.120	14.95	4.32	211.0	14.9	0	23.0	0.00
	1150	0.115	14.98	4.29	211.0	15.0	0	22.6	0.00
	1155	0.100	15.02	4.29	212.0	15.2	0	29.9	0.00
	1200	0.095	15.04	4.30	214.0	15.3	0	33.1	0.00
	1205	0.100	15.09	4.29	213.0	15.0	0	37.9	0.00
	1205	End purge							
	1206	Sample taken							
	1223	Sample Completed							
		Post sample parameters							
	1228	0.105	15.52	4.32	212.0	15.3	0	30.8	0.00

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803

NUS Source No. 10GW01 Source Location SITE 10

Total Well Depth: 29.6'	Purge Data						
Well Casing Size & Depth: 4" PVC 29.6' TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 15.31 TOC							
One Casing Volume: 9.3 GAL							
Start Purge (hrs.): 0907							
End Purge (hrs.): 0936							
Total Purge Time (min.): 29							
Total Amount Purged (gal.):							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: —							
Sample Date & Time: 7.12.95 0945	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS CM							

Signature(s): K-A S

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA & HNU USED & GEO GUARD CELL

DUP-14 TAKEN AT THIS WELL

~~PUMP RATE = GPM~~

.653 X 14.29 = 9.3

Analysis:	Preservative
TCL VOC	
TAL METALS	SEE COC
CANCER PAR	

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 10GW01 SITE 10	
BASED ON:	DRAWING NUMBER:
BY: KS / CHECKED BY:	APPROVED BY: / DATE: 7.12.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	0907	.240	15.31	3.72	321	20.3	16	13.0	0.01
	0911	.90	15.60	3.74	310	17.1	15	13.9	0.01
	0914	.90	15.71	3.77	314	17.5	13	13.4	0.01
	0920	.260	15.77	3.78	306	16.9	8	12.6	0.01
	0925	.200	15.95	3.76	309	16.0	7	12.9	0.01
	0931	.115	15.83	3.80	307	17.8	6	12.4	0.01
	0936	.120	15.83	3.80	308	18.1	5	12.0	0.01

SAMPLED AT 0945

DUP-14 TAKEN AT THIS WELL

TEMP IS ELEVATED A FEW °C DUE TO LOW FLOW [illegible]

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number GT0231 5803

NUS Source No. 10GW02 Source Location SITE 10

Total Well Depth:	Purge Data						
Well Casing Size & Depth: 4" PVC 23.7 TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 12.72' TOC							
One Casing Volume: 7.2 GAL							
Start Purge (hrs.): 1042							
End Purge (hrs.): 1130							
Total Purge Time (min.): 48							
Total Amount Purged (gal.):							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled:							
Sample Date & Time: 7.10.95 1135	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS CM							

Signature(s): [illegible]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA & [illegible] USED & GEO GUARD CELL

SEE PAGE 2

~~PUMP [illegible]~~

.653 X 10.98 = 7.2 GAL / 1 VOC

Analysis:	Preservative
TCL VOC	
TAL METALS	SEE COC
LANDFILL PAR.	

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 10GW02 SITE 10	
BASED ON	DRAWING NUMBER
BY	CHECKED BY / APPROVED BY / DATE: 7·10·95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
1042	.225	12.72	3.56	14.3	14.7	—	9.7	0
1047	.225	12.76	3.60	14.2	14.7	13	9.3	0
1052	.120	12.75	3.64	14.0	15.9	11	8.6	0
1057	.150	12.77	3.65	13.9	16.0	—	8.7	0
1101	.180	12.77	3.66	13.8	15.8	14	9.5	0
1106	.120	12.77	3.67	14.0	15.6	10	9.1	0
1111	.150	12.77	3.69	14.0	16.6	8	8.6	0
1116	.170	12.78	3.68	14.0	16.4	6	8.7	0
1120	.120	12.77	3.68	14.0	16.0	5	8.6	0
1125	.120	12.75	3.69	14.0	16.5	6	8.1	0

SAMPLED AT 1135

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE
Project Site Number GT0231 5803
NUS Source No. 10GW03
Source Location SITE 10

	Purge Data						
Total Well Depth: 26.6	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 4" PVC 26.6 TOC							
Static Water Level: 11.85 TOC							
One Casing Volume: 9.6 GAL			SEE	PG 2			
Start Purge (hrs.): 1253							
End Purge (hrs.): 1328							
Total Purge Time (min.): 36							
Total Amount Purged (gal.):							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled:							
Sample Date & Time: 7.12.95 330	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS CM							
Signature(s): 7.12 95							

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA & HNU USED & GEOGUARD CELL

~~PUMP RATE = GPM~~
.653 X 14.75 = 9.6

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Analysis:	Preservative				

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARLE	JOB NUMBER: CTO 231 5803
SUBJECT: 10GW03	SITE 10
BASED ON	DRAWING NUMBER
BY: KS / CHECKED BY	APPROVED BY / DATE: 7.12.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1253	.110	11.85	4.87	17.6	21.9	19	2.2	0
	1258	.05	11.88	5.00	17.2	21.2	15	3.2	0
	1303	.075	11.92	5.02	17.6	21.6	12	3.7	0
	1308	.180	11.90	5.01	17.6	21.7	10	4.5	0
	1313	.260	11.90	4.99	16.6	19.2	9	5.2	0
	1318	.240	11.90	4.99	16.8	16.9	7	5.1	0
	1323	.250	11.90	4.97	16.7	16.9	5	4.7	0
	1328	.260	11.90	4.95	16.8	16.8	5	4.8	0
			SAMPLED	AT	1330				

TEMP IS ELEVATED [illegible]

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803

NUS Source No. 10GW04 Source Location SITE 10

Total Well Depth: 22.5'	Purge Data						
Well Casing Size & Depth: 4" PVC 22.5' TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 14.89' TOC							
One Casing Volume: 5 GAL							
Start Purge (hrs.): 1043							
End Purge (hrs.): 1103							
Total Purge Time (min.): 20							
Total Amount Purged (gal.):							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled:							
Sample Date & Time: 7.12.95 1105	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS CM							

Signature(s):

Type of Sample

- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:

DEDICATED PUMP & TUBING
HORIBA & HNU USED & GEOGUARD CELL

~~PUMP RATE = GPM~~

.653 X 7.61 = 5

Analysis:	Preservative
TCL VOC	
TAL METALS	SEE COC
LANDFILL PAR.	

CALCULATION WORKSHEET

Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 10GW04	SITE 10
BASED ON:	DRAWING NUMBER:
BY: KS	CHECKED BY:
APPROVED BY:	DATE: 7.12.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1043	.230	14.89	4.24	132	22.6	15	7.2	0
	1048	.155	15.12	4.35	23.9	16.5	8	11.5	0
	1053	.160	15.12	4.31	23.0	15.9	4	11.2	0
	1058	.160	15.12	4.31	23.0	15.9	3	11.0	0
	1103	.155	15.12	4.31	23.0	16.0	4	10.7	0

SAMPLED AT 1105

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 10GW05 Source Location SITE 10

	Purge Data						
Total Well Depth: 29.2							
Well Casing Size & Depth: 4" PVC 29.2 TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 13.90 TOC							
One Casing Volume: 10 GAL							
Start Purge (hrs.): 1300							
End Purge (hrs.): 1635							
Total Purge Time (min.): 215							
Total Amount Purged (gal.):							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled:							
Sample Date & Time: 7.10.95 . 1645	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS CM							

Signature(s): [signature]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA & HNU USED

SEE PG 2
~~PUMP RATE = GPM~~
.653 X 15.3 = 10

Analysis:	Preservative
TCL VOC	
TAL METALS	SEE COC
LANDFILL PAR.	

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 10GW05 SITE 20	
BASED ON	DRAWING NUMBER
BY: KS / CHECKED BY	APPROVED BY / DATE: 7.10.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1302	.275	13.90	~~3.55~~	29.9	19.7	—	9.3	0
	1305	.140	14.04	~~3.61~~	31.8	18.9	440	8.5	0
	1310	.120	14.00	~~3.62~~*	33.9	19.1	416	4.1	0
	1315	.120	14.00	~~3.63~~	148	19.2	390	3.8	0
	1320	.165	14.13	5.21	165	16.5	229	8.1	0
	1325	.195	14.25	5.12	152	16.3	180	8.4	0
	1330	.155	14.05	5.02	151	16.6	117	8.3	0
	1335	.165	14.05	4.95	148	16.9	95	7.1	0
	1340	.160	14.03	4.93	148	17.2	106	4.4	0
	1345	.130	14.03	4.93	148	17.6	83	4.4	0
	1405	.185	14.05	4.74	145	16.6	77	1.1	0
	1410	.170	↓	4.99	148	16.4	110	1.0	0
	1415	.170		4.95	147	15.9	86	1.2	0
	1420	.170		4.94	148	15.3	74	0.9	0
	1425	.170		4.87	149	15.3	79	1	0
	1455	.190	14.18	4.76	34.6	14.8	60	0.5	0
	1610	—	14.10	—	—	—	60	—	0
	1615	.150	14.00	5.22	35.2	16.0	34	1.7	0
	1620	.250	14.00	5.19	33.8	14.8	35	0.9	0
	1625	.145	14.00	5.18	34.0	14.7	34	0.9	0
	1635	.150	14.00	5.17	34.4	14.5	35	0.8	0

TOP CONNECTOR — CELL CONNECTOR TYGON TEF.

SAMPLED AT 1645

* FORGOT TO REMOVE PH BOOT

TEMP IS ≈ 3°C OVERRIDE DUE TO LOW FLOW & RUN ON SUPPLY LINE TO CELL

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2

Case # _____

By _____

Project Site Name: NWS EARLE Project Site Number: GT0231 5803

NUS Source No.: 10GW06 Source Location: SITE 10

Total Well Depth: 18.8'	Purge Data						
Well Casing Size & Depth: 4" PVC 18.8' TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 8.96 TOC							
One Casing Volume: 6.4 gal							
Start Purge (hrs.): 1539			SEE PG 2				
End Purge (hrs.): 1644							
Total Purge Time (min.): 65							
Total Amount Purged (gal.):							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: —							
Sample Date & Time: 7.12.95 1650	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS CM							
Signature(s): [signature]	Observations / Notes: DEDICATED PUMP & TUBING HORIBA & HNU USED [illegible] ~~PUMP RATE = GPM~~ .653 X 9.8 = 6.4						

Type of Sample

- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Analysis:	Preservative
TCL VOC	
TAL METALS	SEE COC
LANDFILL PAR	

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 10GW06	SITE 10
BASED ON:	DRAWING NUMBER:
BY: KS	CHECKED BY:
APPROVED BY:	DATE: 7.12.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1539	.075	8.96	4.00	170	10.4	10	2.0	0
	1542	.230	9.27	3.73	34.2	16.1	24	1.7	0
	1547	.230	9.41	3.78	30.6	14.8	20	1.8	0
	1552	.110	9.25	3.75	31.3	15.7	18	2.1	0
	1557	.125	9.50	3.77	30.7	16.1	16	2.4	0
	1600	.140	9.50	3.77	30.6	15.7	16	2.6	0
	1605	.140	9.52	3.73	31.3	15.6	15	2.8	0
	1610	.160	9.52	3.77	31.3	15.2	14	3.1	0
	1615	.160	9.55	3.75	31.3	14.9	12	3.2	0
	1620	.140	9.57	3.77	31.3	14.8	12	3.0	0
	1621	.150	9.60	3.77	31.3	15.0	11	1.6	0
	1625	.175	9.63	3.74	31.3	14.8	10	3.1	0
	1630	.175	9.70	3.71	31.5	14.8	10	2.8	0
	1635	.175	9.65	3.72	31.3	15.0	10	3.0	0
	1640	.165	9.68	3.75	32.5	15.0	10	1.8	0

SAMPLED AT 1650

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number GT0231 5803

NUS Source No. 10GW07 Source Location SITE 10

Total Well Depth: 23'	Purge Data						
Well Casing Size & Depth: 4" PVC 23' TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 10.49 TOC							
One Casing Volume: 8.2 GAL							
Start Purge (hrs.): 1450			SEE	PG 2			
End Purge (hrs.): 1510							
Total Purge Time (min.): 20							
Total Amount Purged (gal.):							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: —							
Sample Date & Time: 7.12.95 1513	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS CM							

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA & HNU USED & GEOGUARD CELL

~~PUMP RATE = GPM~~

.653 X 12.51 = 8.2

Analysis:	Preservative
TCL VOC	SEE COC
TAL METALS	
LANDFILL PAR	

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 10GW07	SITE 10
BASED ON	DRAWING NUMBER
BY: KS / CHECKED BY	APPROVED BY / DATE: 7.12.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1450	.275	10.49	4.02	198	21.0	4	2.0	0
	1455	.250	10.71	4.12	173	15.4	4	2.1	0
	1500	.210	11.27	4.10	169	15.0	4	2.5	0
	1505	.175	11.35	4.05	168	14.8	5	2.8	0
	1510	.125	11.40	4.07	170	15.6	5	2.9	0

SAMPLED AT 1513

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 116-01 Source Location SITE 11

Total Well Depth: 21.64	Purge Data						
Well Casing Size & Depth: 4" PVC 21.64 TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 3.31 TOC							
One Casing Volume: 12 GAL							
Start Purge (hrs.): 1320							
End Purge (hrs.): 1340							
Total Purge Time (min.): 20							
Total Amount Purged (gal.):							
Monitor Reading: PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: ——→	SEE PG 2						
Sample Date & Time: 7.23.96 1345	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS TR							

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 18.33 = 12 GAL / 1 VOL

Analysis:	Preservative
TCL VOC	[illegible]
[illegible]	

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 11GW01	SITE - 11
BASED ON:	DRAWING NUMBER:
BY: KS TR	CHECKED BY:
APPROVED BY:	DATE: 7.23.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
START	1320	.110	3.31	4.34	29.9	26.4	9	7.31	0
	1325	.095	3.34	4.42	28.2	21.3	–	5.73	0
	1330	.075	3.32	4.45	28.5	23.1	5	6.31	0
	1335	.065	3.32	4.46	28.1	24.1	—	5.89	0
	1340	.040	3.32	4.47	27.7	25.7	2	6.11	0
				SAMPLE 1345 HRS					
POST →	1405	.115	3.37	3.82	21.7	27.5	3	6.04	0

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 11GW02 Source Location SITE 11

Total Well Depth: 19.65	Purge Data						
Well Casing Size & Depth: 4" PVC 19.65 TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 4.35' TOC							
One Casing Volume: 10 GAL							
Start Purge (hrs.): 0835							
End Purge (hrs.): 0910							
Total Purge Time (min.): 65							
Total Amount Purged (gal.):							
Monitor Reading: PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time: 7.23.95 0915	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS TR							

Signature(s): [signature]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 15.3 = 10 GAL / 1 VOL

Analysis:	Preservative
TCL VOC	
TAL METALS	SO4 ICE

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 11GW02	SITE - 11
BASED ON:	DRAWING NUMBER:
BY: KS TR	CHECKED BY:
APPROVED BY:	DATE: 7.23.95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
0805	.020	4.35	[illegible]	[illegible]	19.8	—	[illegible]	0
0810	.035	4.33	3.85	46.1	18.8	34	5.01	0
0815	.075	4.36	[illegible]	47.2	19.0	20	5.16	0
0820	.085	4.37	3.85	47.3	19.2	17	[illegible]	0
0825	.085	4.36	[illegible]	[illegible]	[illegible]	—	[illegible]	0
0830	.050	4.37	[illegible]	[illegible]	[illegible]	14	[illegible]	0
0835	.165	4.35	3.87	46.8	20.1	—	4.26	0
0840	[illegible]	4.36	3.83	41.4	20.6	14	[illegible]	0
0845	.065	4.35	[illegible]	[illegible]	[illegible]	—	[illegible]	0
0850	.050	4.36	3.61	23.4	20.7	14	4.00	0
0855	.040	4.34	3.45	22.2	21.3	—	4.33	0
[illegible]	.075	4.33	3.32	[illegible]	[illegible]	—	4.15	0
[illegible]	.065	4.35	[illegible]	[illegible]	[illegible]	—	4.53	0
[illegible]	.035	4.34	[illegible]	[illegible]	[illegible]	13	[illegible]	0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	.060	[illegible]	3.29	29.9	[illegible]	12	4.79	0

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 11GW03 Source Location SITE 11

Total Well Depth: 22.22'	Purge Data						
Well Casing Size & Depth: 4" PVC 22.22' TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 9.39' TOC							
One Casing Volume: 8.4 gal							
Start Purge (hrs.): 1355							
End Purge (hrs.): 1525							
Total Purge Time (min.): 90							
Total Amount Purged (gal.):							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: —	SEE PG 2						
Sample Date & Time: 7.22.95 1530	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS TR							

Signature(s): [illegible]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 12.83 = 8.4 gal / 1 vol

Analysis:	Preservative
VOC	
TAL METALS	SEE COC

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 11GW03	SITE 11
BASED ON:	DRAWING NUMBER:
BY: KS TR	CHECKED BY:
APPROVED BY:	DATE: 7.22.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1355	.200	9.39	4.46	43.1	15.3	394	2.60	0
	1400	.090	9.71	4.39	43.9	15.1	221	1.32	
	1405	.105	9.63	4.39	43.9	16.1	—	1.24	
	1410	.065	9.54	4.39	43.9	18.8	103	1.44	
	1415	.055	9.49	4.39	43.5	20.6	—	1.44	
	1420	.055	9.50	4.41	43.3	21.4	99	1.46	
	1425	.065	9.58	4.42	43.2	22.1	—	1.46	
	1430	.075	9.52	4.42	43.4	21.8	97	1.44	
	1435	.070	9.53	4.43	43.6	20.7	—	1.34	
	1440	.070	9.54	4.43	43.4	20.0	110	1.28	
	1445	.070	9.54	4.43	43.3	19.6	—	1.26	
	1450	.070	9.55	4.43	43.1	19.7	104	1.24	
	1455	.060	9.54	4.42	43.4	20.2	96	1.15	
	1500	.045	9.51	4.42	42.8	21.4	—	1.22	
	1505	.060	9.51	4.42	42.3	22.4	70	1.17	
	1510	.060	9.52	4.42	42.6	22.8	—	1.21	
	1515	.070	9.52	4.43	42.3	23.0	65	1.07	
	1520	.080	9.57	4.43	42.7	20.7	—	1.14	
	1525	.090	9.57	4.43	42.2	20.4	63	1.13	
				SAMPLES @		1530			
POST →	1545	.075	9.65	3.30	27.1	19.4	74	2.22	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803

NUS Source No. 11GW04 Source Location SITE 11

Total Well Depth: 16.40	Purge Data
Well Casing Size & Depth: 4" PVC 16.40 TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: 4.60 TOC	
One Casing Volume: 7.7 GAL	
Start Purge (hrs.): 1725	
End Purge (hrs.): 1855	
Total Purge Time (min.): 90	
Total Amount Purged (gal.):	
Monitor Reading: <0.1 PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: —	SEE PG 2
Sample Date & Time: 7.22.95 1900	Sample Data
	pH / S.C. / Temp. (°C) / TURB / DO / SAL
Sampled By: KS TR	
Signature(s): [signature]	Observations / Notes: DEDICATED PUMP & TUBING; HORIBA, HNU, & GEOGUARD CELL USED
Type of Sample	.653 X 11.8 = 7.7 GAL / 1 VOL

- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Analysis:	Preservative

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 11GW04	SITE 11
BASED ON:	DRAWING NUMBER:
BY: KS TR / CHECKED BY:	APPROVED BY: / DATE: 7.22.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1725	.075	4.60	4.52	44.4	18.0	30	7.42	0
	1730	.050	4.61	4.51	44.2	19.3	—	7.04	0
	1735	.200	4.71	4.49	43.1	20.5	-10	5.76	0
	1740	.115	4.65	4.47	42.8	18.0	-10	4.87	0
	1745	.125	4.61	4.47	42.7	17.5	-10	4.66	0
	1750	.110	4.61	4.45	43.0	18.5	-10	4.75	0
	1755	.115	4.64	4.44	43.1	19.0	-10	4.48	0
	1800	.115	4.61	4.43	43.0	18.9	-10	4.37	0
	1805	.125	4.63	4.43	43.2	18.5	55	4.51	0
CM ARRIVED w/ spare pick st	1810	.125	4.62	4.42	43.2	18.4	57	4.38	0
	1815	.050	4.61	4.41	43.7	18.9	—	4.00	0
	1820	.040	4.62	4.41	43.5	19.6	—	4.48	0
	1825	.050	4.61	4.41	43.2	20.7	56	4.37	0
	1830	.060	4.61	4.42	43.2	21.2	—	4.24	0
	1835	.055	4.61	4.41	43.0	21.4	60	4.00	0
	1840	.080	4.62	4.42	42.9	20.9	—	4.03	0
	1845	.100	4.62	4.42	42.9	20.3	69	3.94	0
	1850	.125	4.64	4.41	42.9	18.9	77	4.32	0
	1855	.100	4.63	4.42	42.5	19.2	76	4.15	0
					1900 Hrs SAMPLE Collected				
POST	19:5	.110	4.64	4.36	39.1	18.00	102	4.63	0

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number GT0231 5803

NUS Source No. 11GW05 Source Location SITE 11

Total Well Depth: 15.40'	Purge Data
Well Casing Size & Depth: 4" PVC 15.40 TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: 4.05 TOC	
One Casing Volume: 7.4 GAL	
Start Purge (hrs.): 1000	
End Purge (hrs.): 1105	
Total Purge Time (min.): 65	
Total Amount Purged (gal.):	
Monitor Reading: 2 PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: →	SEE PG 2
Sample Date & Time: 7.23.05 1110	Sample Data
	pH / S.C. / Temp. (°C) / TURB / DO / SAL
Sampled By: KS TR	
Signature(s):	Observations / Notes: DEDICATED PUMP & TUBING HORIBA, HNU, & GEOGUARD CELL USED
Type of Sample [x] Low Concentration [ ] High Concentration [x] Grab [ ] Composite [ ] Grab - Composite	.653 X 11.35 = 7.4 gal / 1 vol

Analysis:	Preservative				

CALCULATION WORKSHEET

Order No. 19116 (01-91)

CLIENT: NWS EARLE	JOB NUMBER: CTO 231 5803
SUBJECT: NSWOS	SITE 11
BASED ON:	DRAWING NUMBER:
BY: KS TR	CHECKED BY:
APPROVED BY:	DATE: 7.23.95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1000	.065	4.05	4.08	42.4	18.9	7	6.47	0
	1005	.050	4.07	4.07	42.8	18.4	—	6.27	0
	1010	.045	4.06	4.04	43.4	21.0	11	6.16	0
	1015	.060	4.04	4.05	42.9	22.6	—	5.71	0
	1020	.050	4.04	4.05	42.6	22.7	33	5.65	0
	1025	.080	4.04	4.04	41.9	22.8	—	5.49	0
	1030	.045	4.04	4.05	41.4	23.8	48	5.05	0
	1035	.065	4.04	4.06	41.3	24.4	—	5.12	0
	1040	.075	4.04	4.07	41.3	24.4	61	5.02	0
	1045	.085	4.04	4.06	40.9	23.2	—	5.16	0
	1050	.075	4.04	4.06	40.5	22.4	78	5.13	0
	1055	.050	4.04	4.04	40.1	23.1	—	5.11	0
	1100	.055	4.04	4.05	39.6	24.9	—	4.95	0
	1105	.040	4.04	4.06	39.2	25.7	79	4.87	0
	Sampled @ 1110 Hrs								
POST →	1130	.105	4.04	4.10	34.9	21.6	119	5.55	0

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 3
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 13GW01 Source Location SITE 13

	Purge Data						
Total Well Depth: 17'	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 2" PVC 17' TOC							
Static Water Level: 5.93 TOC							
One Casing Volume: 1.8 GAL							
Start Purge (hrs.): 0905							
End Purge (hrs.): 1230							
Total Purge Time (min.): 205							
Total Amount Purged (gal.): 3							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: —	SEE PG 2						
Sample Date & Time: 8-11-95 1230	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS LM							

Signature(s): [signature]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.83 X 11.07 = .8 GAL/VOL
3 X =

Analysis:	Preservative				
TCL SVOC					
TCL VOC	SEE COC				
TCL PEST/PCB					
TAL METALS					
EXPLOSIVES					
HYDRO PAC					
* TAL DISSOLVED METALS					

* ADD DISSOLVED PER N. DIV.

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 136W01
DATE: 8.11.95

	Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. MS/CM	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START	0905	5.93	50	16.1	4.36	.1337	3.78	0.00	349	— = Not enough
	0910	6.01	50	18.3	4.33	.1322	3.01	0.00	999	WATER FOR CLEANING
	0915	6.00	50	17.4	4.33	.1332	2.93	0.00	999	OR TURBIDITY READING
	0920	6.01	70	16.7	4.36	.1299	2.60	0.00	999	
	0925	6.01	60	16.6	4.36	.1282	2.52	0.00	999	
	0930	6.00	60	17.2	4.37	.1277	2.61	—	—	
	0935	6.00	60	18.1	4.37	.1272	2.79	—	—	
	0940	6.00	50	18.6	4.38	.1271	2.75	0.00	815	
	0945	5.99	45	18.7	4.37	.1257	3.03	—	—	
	0950	6.00	50	19.0	4.37	.1254	3.09	—	—	
	0955	6.01	55	18.6	4.38	.1250	[illegible]	0.00	702	
10 MIN	1000	6.00	45	18.7	4.38	.1224	2.69	0.00	999	
	1010	6.00	65	18.7	4.39	.1220	2.68	—	—	
	1015	6.02	60	18.7	4.39	.1211	2.63	0.00	999	
15 MIN	1025	6.00	65	17.6	4.41	.1163	3.68	—	—	CLEANED CELL
	1030	6.00	65	17.8	4.40	.1182	3.40	0.00	999	
	1035	6.00	65	18.0	4.40	.1184	3.00	—	—	
	1040	6.00	65	18.0	4.40	.1185	3.16	0.00	999	
	1045	6.03	65	18.1	4.40	.1185	3.30	—	—	
	1050	6.02	65	18.3	4.40	.1185	3.15	—	—	
	1055	6.00	65	18.4	4.39	.1185	2.98	0.00	999	
	1100	6.01	65	18.4	4.39	.1185	2.77	—	—	
	1105	6.01	65	18.4	4.39	.1185	2.74	0.00	999	
	1110	6.01	60	19.0	4.40	.1188	2.93	—	—	
	1115	6.05	60	19.1	4.40	.1188	2.68	0.00	898	
	1120	6.04	60	18.7	4.40	.1191	2.98	0.00	843	
	1125	6.04	60	18.7	4.40	.1190	2.72	0.00	835	
	1130	6.03	60	18.6	4.40	.1190	2.57	—	—	
	1135	6.03	60	19.0	4.40	.1189	2.68	—	—	
	1140	6.03	60	19.3	4.40	.1190	2.70	—	—	

SIGNATURE(S) [illegible] LM

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 13GW01
DATE: _____

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. MS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1145	6.00	50	19.7	4.41	.1192	2.48	0.00	740	
1150	6.00	55	19.8	4.41	.1194	2.38	—	—	
1155	6.01	60	19.8	4.40	.1196	2.31	0.00	846	
1200	6.00	55	19.5	4.40	.1192	2.68	—	—	
1205	6.00	55	19.3	4.40	.1193	2.46	—	—	
1210	6.00	55	20.0	4.40	.1190	2.70	0.00	856	
1215	6.00	55	20.1	4.40	.1192	2.52	0.00	848	
1220	6.00	55	20.0	4.40	.1191	2.44	—	—	
1225	6.00	55	20.1	4.40	.1196	2.45	0.00	787	
1230	6.00	55	20.2	4.40	.1196	2.46	—	—	SAMPLE @ 1230
POST SAMPLE									
1350	6.03	60	20.4	4.45	.1116	2.69	0.00	8.54	

SIGNATURE(S) _____

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 4
Case # _____
By _____

Project Site Name NWS EARLE
Project Site Number CT0231 5803
NUS Source No. 13GW02
Source Location SITE - 13

Total Well Depth: 16.65	
Well Casing Size & Depth: 2" PVC TOC	
Static Water Level: 5.91 TOC	
One Casing Volume: 1.75 GAL	
Start Purge (hrs.): 0843	
End Purge (hrs.): 1346	
Total Purge Time (min.): 303	
Total Amount Purged (gal.): 10.5	
Monitor Reading: No HNU PPM Readings above background	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: →	SEE PG 2
Sample Date & Time: 8/24/95 1350	
Sampled By: ASICM	
Signature(s):	

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.163 X 10.74 = 1.75

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Analysis:	Preservative
TCL volatiles	
TCL SVOC's	
TAL Metals	
TCL Pest/PCB's	
Explosives	
TPH	
Landfill Para	
Landfill Para	

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 13GW02
DATE: 8/14/95

	Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. US	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START	0843	5.91								
	0850	5.94	185	15.5	5.47	290.0	>50.0	0.01	>999	
	0855	5.94	155	15.8	5.48	288.0	"	—	—	
	0900	5.96	245	14.4	5.50	290.0	"	—	—	
	0905	5.96	290	14.1	5.51	281.0	"	0.01	>999	
	0910	5.96	295	14.0	5.53	280.0	42.2	—	—	
	0915	5.95	295	14.0	5.56	275.0	39.3	—	—	
	0920	5.95	295	14.0	5.59	267.0	38.6	—	>999	
	0925	5.96	295	14.0	5.62	262.0	38.6	0.01	—	2. GAL.
	0930	5.96	295	13.9	5.64	257.0	37.3	—	—	
	0935	5.96	295	13.9	5.69	253.0	36.3	0.00	>999	
	0940	5.95	295	13.9	5.72	250.0	35.5	—	—	
	0945	5.96	295	13.9	5.75	249.0	33.7	—	—	
	0950	5.95	295	13.9	5.80	247.0	32.0	0.00	>999	2. GAL
	0955	5.96	295	14.0	5.84	244.0	32.9	—	—	
	1000	5.96	295	14.0	5.87	242.0	32.5	—	—	
	1005	5.96	295	13.9	5.88	240.0	29.6	0.00	975	
	1010	5.96	295	13.9	5.90	238.0	31.6	0.00	942	
	1015	5.96	295	14.0	5.91	238.0	31.2	0.00	865	
	1020	5.97	295	13.9	5.94	235.0	33.2	0.00	843	
	1025	5.97	290	14.0	5.96	234.0	32.2	0.00	805	2.5 GAL
	1030	5.97	296	13.9	5.97	233.0	29.9	0.00	764	
	1035	5.97	290	13.9	5.98	230.0	31.4	0.00	748	
	1040	5.97	290	13.9	5.98	230.0	30.3	0.00	727	
	1045	5.97	290	13.9	5.99	229.0	27.9	0.00	691	
	1050	5.97	290	14.1	6.00	228.0	27.9	0.00	661	2. GAL
	1055	5.98	290	14.0	6.01	228.0	25.0	0.00	647	
	1100	5.98	290	14.0	6.02	226.0	26.6	0.00	622	
	1105	5.98	290	13.9	6.02	225.0	27.9	0.00	614	
	1110	5.98	285	14.0	6.04	225.0	25.6	0.00	586	

SIGNATURE(S) [illegible]

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 13GW02
DATE: 8/14/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond.	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1115	5.99	285	14.0	6.04	225.	24.2	0.00	566	
1120	5.99	285	14.0	6.04	223.	27.1	0.00	551	2 GAL
1125	5.99	285	14.0	6.04	223.	25.7	0.00	542	
1130	5.99	285	14.0	6.04	221.	24.3	0.00	541	
1135	6.00	285	14.1	6.06	223.	26.5	0.00	522	
1140	6.00	255	14.4	6.06	224.	24.9	0.00	510	
1145	6.00	235	14.4	6.07	221.	30.6	0.00	486	
1150	5.99	220	14.7	6.07	224.	28.3	0.00	445	2 GAL
1155	5.99	185	15.1	6.08	221.	27.1	0.00	455	
1200	5.99	125	15.9	6.09	220.	24.9	0.00	442	
1205	5.99	80	16.9	6.09	220.	24.9	0.00	422	
1210	5.98	75	17.4	6.10	218	24.2	0.00	—	
1215	5.99	75	17.6	6.11	221.	24.0	0.00	402	
1220	5.99	65	17.8	6.10	218.	22.1	—	—	
1225	5.99	65	18.0	6.10	220.	21.5	0.00	358	
1230	6.00	55	18.3	6.10	223.	23.1	—	—	
1235	6.00	60	18.6	6.09	224.	>50.	0.00	322	
1240	6.00	50	18.8	6.09	220.	>50.	—	—	
1245	6.00	50	19.0	6.09	221.	>50.	0.00	296	
1250	6.00	55	19.2	6.09	222.0	>50.	—	—	
1255	6.00	50	19.4	6.10	223.	>50.	0.00	270	
1300	6.01	50	19.5	6.08	223.	>50.	—	—	
1305	6.01	55	19.6	6.09	222	47.5	0.00	261	
1310	6.01	60	19.3	6.07	222.	47.1	—	—	
1315	6.01	60	19.5	6.07	222.	45.5	0.00	245	
1320	6.01	55	19.3	6.07	222.	44.5	—	—	
1325	6.01	55	19.5	6.04	222.	18.5	0.00	234	
1330	6.01	50	19.7	6.07	219.	>50.	—	—	
1335	6.01	55	19.6	6.06	222.	49.7	0.00	241	
1340	6.01	55	19.6	6.06	222.	48.4	—	—	

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NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 13 GW 02
DATE: 8/14/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond.	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1345	6.01	55	19.9	6.04	217.	17.1	0.00	244	2 GAL
1346	END. 10.5 GALLONS PURGED								
1350	BEGIN SAMPLING								
1510	SAMPLING COMPLETED								
	POST SAMPLE PARAMETERS								
	6.04	90	19.4	6.03	209.	12.3	0.00	395	

SIGNATURE(S) _____

SAMPLE LOG SHEET

Halliburton NUS CORPORATION

Page _____ of _____

- ☐ Spring
- ☐ Lake
- ☐ Stream
- ☐ Lagoon/Pond
- ☒ Other Groundwater

Case No. _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 (5803)

HNUS Source No. 13-GW-02 Source Location Site 13 (13 mw 02)

Sample Method: Disposable Bailer	Composite Sample Data							
	~~Sample~~		~~Time~~			~~Color/Description~~		
Depth Sampled: 5' bgs		pH	turb.	D.O.	temp	Cond.	Sal	
	vol. Initial	6.08	999	1.32	12.1	1365	0.01	
Sample Date & Time: 12-6-95 @ 1300	vol. 1	6.31	999	1.01	13.4	1340	0.01	
	vol. 2	6.45	999	1.57	13.6	1285	0.01	
Sampled By: C. Meyer	vol. 3	6.45	999	1.11	13.5	1271	0.01	
Signature(s):								
Type of Sample								
☒ Low Concentration								
☐ High Concentration								
☒ Grab	Sample Data							
☐ Composite	Color		Description: (Sand, Clay, Dry, Moist, Wet, etc)					
☐ Grab - Composite	Brown		Turbid water					

Analysis:	Observation/Notes
TCL VOC's	No Hnu readings

		Organic	Inorganic
	Traffic Report No.		
	Tag No.		
	AB No.	2505132991	
	Date Shipped	12-6-95	
	Time Shipped	1830	
	Laboratory	Lancaster Labs	
	Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 3
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number GT0231 5803
NUS Source No. 13GW03 Source Location SITE - 13

Total Well Depth: 16.00	Purge Data							
Well Casing Size & Depth: ~~4" PVC~~ 2" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Static Water Level: 4.92 TOC								
One Casing Volume: 1.79 GAL								
Start Purge (hrs.): 0820								
End Purge (hrs.): 1222								
Total Purge Time (min.):								
Total Amount Purged (gal.): 13								
Monitor Reading: No HNU readings above BKG PPM								
Purge Method: GEOGUARD								
Sample Method: GEOGUARD								
Depth Sampled: ——	SEE PG 2							
Sample Date & Time: 8/11/95 1225	Sample Data							
	pH	S.C.	Temp. (°C)	TURB	DO	SAL		
Sampled By: ~~KS~~ AB/CM								

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.163
~~.163~~ X 11.08 = 1.79 gallons

Analysis:	Preservative
TCL Volatiles	HCL
TCL SVOC's	NONE
TCL Pest/PCB	NONE
TAL Metals	HNO_3
Landfill Para	NONE
Landfill Parameters	H_2SO_4
* TAL DISSOLVED MET.	HNO_3

* ADD DISSOLVED PER N. DIV.

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 13GW03
DATE: 8/11/95

	Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µ/S	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START	0820	4.92								
	0825	4.98	0.210	14.3	5.27	201.0	31.8	0.00	>999	
	0830	4.97	0.145	14.4	5.22	191.0	34.1	"	"	
	0835	4.96	0.155	14.4	5.22	186.0	34.1	"	"	
	0840	4.97	0.205	13.9	5.22	173.0	32.9	"	"	
	0845	4.96	0.240	13.8	5.21	167.0	30.1	"	"	
	0850	4.96	0.250	13.7	5.21	166.0	27.4	"	"	
	0855	4.96	0.260	13.7	5.20	47.9	24.9	"	"	
	0900	4.96	0.265	13.7	5.22	46.3	23.2	"	"	
	0905	4.96	0.265	13.9	5.27	44.2	20.1	"	"	
	0910	4.96	0.270	13.7	5.31	45.4	18.5	"	"	
	0915	4.96	0.275	13.7	5.33	44.1	17.5	"	"	
	0920	4.96	0.275	13.7	5.39	44.3	16.1	"	"	
	0925	4.96	0.275	13.7	5.39	44.3	4.1	"	"	
	0930	4.96	0.275	13.7	5.43	44.1	2.0	"	"	
	0935	4.96	0.275	13.7	5.46	43.8	1.7	"	983	
	0940	4.96	0.275	13.7	5.49	42.5	1.3	"	>999	
	0945	4.96	0.275	13.6	5.53	42.5	1.3	"	709	
	0950	4.96	0.275	13.7	5.53	41.4	1.6	"	890	
	0955	4.96	0.275	13.7	5.58	42.9	1.2	"	701	
	1000	4.96	0.275	13.7	5.57	41.6	1.0	"	612	
	1005	4.96	0.275	13.8	5.60	41.4	0.9	"	651	
	1010	4.96	0.275	13.9	5.63	41.8	0.9	"	634	
	1015	4.96	0.275	13.8	5.63	42.7	0.9	"	567	
	1020	4.96	0.265	13.8	5.64	42.7	1.0	"	550	
	1025	4.96	0.185	14.1	5.64	41.4	1.9	"	542	
	1030	4.96	0.155	14.3	5.62	41.8	1.2	"	538	
	1035	4.96	0.135	15.1	5.62	40.8	1.3	"	562	
	1040	4.96	0.135	15.2	5.62	39.8	1.2	"	620	
	1045	4.96	0.135	15.2	5.64	41.0	1.2	"	632	

SIGNATURE(S) [illegible]

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 13GW03
DATE: 8/11/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µ/S	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1050	4.96	0.130	15.5	5.66	41.9	1.1	0.00	699	
1055	4.97	0.185	14.7	5.67	41.8	1.2	0.00	752	
1100	4.97	0.185	14.6	5.70	43.2	1.3	0.00	818	
1105	4.97	0.180	14.7	5.69	43.2	1.5	0.00	820	
1110	4.97	0.180	14.7	5.67	42.9	1.2	0.00	780	
1115	4.97	0.175	14.8	5.68	42.2	1.2	0.00	803	
1120	4.97	0.180	14.6	5.68	43.2	1.2	0.00	836	
1125	4.97	0.170	14.9	5.68	41.9	1.3	0.00	766	
1130	4.98	0.170	14.9	5.67	42.2	1.3	0.00	811	
1135	4.99	0.175	15.1	5.68	43.2	1.2	0.00	790	
1140	4.97	0.175	15.2	5.68	42.2	1.2	0.00	805	
1145	4.98	0.180	15.0	5.68	42.2	1.5	0.00	780	
1150	4.98	0.175	15.0	5.69	41.9	1.2	0.00	759	
1155	4.98	0.160	15.3	5.68	42.2	1.6	0.00	749	
1200	4.98	0.155	15.6	5.69	43.2	1.5	0.00	688	
1205	4.99	0.155	15.7	5.70	43.2	1.8	0.00	692	
1210	4.98	0.155	16.0	5.70	42.1	1.2	0.00	706	
1215	4.99	0.155	16.0	5.70	42.1	1.1	0.00	707	
1220	5.00	0.155	15.9	5.69	41.7	1.5	0.00	712	
1222	END 13 GALLON PURGE								
1225	BEGIN SAMPLE COLLECTION								
1242	SAMPLE COMPLETED								
1247	POST SAMPLE PARAMETERS								
	4.98	0.150	15.9	5.79	41.2	17.4	0.00	695	

SIGNATURE(S) [signature]

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 4

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 13GW04 Source Location SITE -13

Total Well Depth:	
Well Casing Size & Depth: ~~4" PVC~~ 2" PVC TOC	
Static Water Level: TOC	
One Casing Volume: 9AL	
Start Purge (hrs.): 0835	
End Purge (hrs.): 1455	
Total Purge Time (min.): 380	
Total Amount Purged (gal.): 10	
Monitor Reading: No HNU readings above BKG PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: →	
Sample Date & Time: 8/10/95 1455	
Sampled By: ~~KS~~ AS/CM	
Signature(s):	

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL

SEE PG 2

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653X =

Type of Sample

- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Analysis:	Preservative
TAL Metals	HNO_3
TCL Volatiles	HCl
TCL Pest/PCBs	None
TCL SVOC's	None
Landfill Para	H_2SO_4
Landfill Parameters	None

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 13GW04
DATE: 8/10/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
0835	See comments								No water above pump
0840		0.195	18.1	4.84	28.3	>50.0	0.00	155	Top of pump at 10.85' TOC
0845		0.135	18.2	5.04	30.1	"	"	208	
0850		0.115	18.1	5.12	27.7	24.9	"	284	
0855		0.100	18.5	5.18	27.0	24.5	"	445	
0900		0.090	18.9	5.23	25.4	28.4	"	579	
0905		0.105	18.9	5.26	24.6	23.8	"	639	
0910		0.150	18.2	5.28	23.6	>50.0	"	601	
0915		0.180	17.7	5.29	24.2	"	"	567	
0920		0.180	17.7	5.30	24.2	"	"	524	
0925		0.175	17.8	5.26	23.7	"	"	523	
0930		0.175	17.5	5.28	23.7	"	"	532	
0935		0.180	17.5	5.28	23.7	"	"	596	
0940		0.185	17.5	5.29	23.7	"	"	639	
0945		0.185	17.6	5.28	24.5	"	"	702	
0950		0.190	17.7	5.28	24.5	"	"	773	
0955		0.190	17.8	5.29	24.1	"	"	865	
1000		0.190	17.9	5.29	24.0	"	"	834	
1005		0.185	17.8	5.30	24.0	"	"	743	
1010		0.185	18.0	5.27	24.0	"	"	660	
1015		0.185	17.9	5.29	24.1	"	"	650	
1020		0.185	18.1	5.31	24.0	"	"	600	
1025		0.185	18.1	5.30	24.0	"	"	565	
1030		0.185	18.1	5.30	24.0	"	"	544	
1035		0.185	18.1	5.30	24.1	"	"	497	
1040		0.185	18.1	5.30	24.2	"	"	475	
1045		0.185	18.1	5.31	24.0	"	"	457	
1050		0.185	18.0	5.31	24.2	"	"	435	
1055		0.185	18.1	5.30	24.2	"	"	399	
1100		0.185	18.3	5.30	24.2	"	"	382	

SIGNATURE(S) [illegible]

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 13GW04
DATE: 08/10/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. ~~µS~~	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1105	comments: page 2	0.185	18.1	5.28	23.6	20.1	0.00	375	
1110		0.185	18.1	5.30	24.1	>50.0	0.00	359	
1115		0.185	18.1	5.29	23.6	>50.0	0.00	342	
1120		0.185	18.1	5.30	23.6	"	"	325	
1125		0.185	18.2	5.30	24.1	"	"	314	
1130		0.185	18.2	5.30	24.1	"	"	297	
1135		0.185	18.1	5.29	23.6	"	"	297	
1140		0.115	18.8	5.28	24.2	"	—	—	
1145		0.185	18.5	5.29	24.1	19.9	"	271	
1150		0.185	18.4	5.29	24.2	>50.0		270	
1155		0.185	18.3	5.29	24.1	"	"	260	
1200		0.185	18.3	5.27	24.0	"	"	262	
1205		0.185	18.4	5.29	24.1	"	"	255	
1210		0.185	18.5	5.27	24.1	44.6	"	264	
1215		0.185	18.6	5.30	24.1	>50.0	"	270	
1220		0.110	19.8	5.31	23.8	21.8	"	251	
1225		0.130	19.4	5.28	24.4	49.3	"	242	
1230		0.120	19.8	5.31	23.9	31.5	"	237	
1235		0.135	19.7	5.30	24.5	24.4	"	228	
1240		0.125	19.9	5.31	23.8	22.6	"	229	
1245		0.120	20.0	5.31	23.8	24.7	"	223	
1250		0.115	20.0	5.24	23.9	23.6	"	223	
1255		0.115	20.1	5.32	24.3	>50.0	"	210	
1300		0.110	20.5	5.33	24.4	"	"	201	
1305		0.120	21.0	5.31	24.3	23.5	"	189	
1310		0.095	21.7	5.33	24.7	26.4	"	192	
1315		0.070	22.1	5.32	24.3	27.9	—	—	
1320		0.070	22.5	5.31	24.6	27.0	0.00	189	
1325		0.070	23.0	5.33	24.6	29.4	0.00	186	
1330		0.060	23.2	5.34	24.8	28.3	0.00	—	

SIGNATURE(S) _____

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 13GW04
DATE: 8/10/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1335	connect - see pg 2	0.060	23.2	5.32	24.8	27.1	0.00	173	
1340		0.070	23.5	5.35	24.8	22.9	0.00	157	
1345		0.065	23.9	5.36	24.8	28.6	0.00	—	
1350		0.055	24.2	5.32	24.8	31.2	0.00	139	
1355		0.060	24.2	5.35	24.9	28.8	0.00	—	
1400		0.060	24.4	5.35	24.8	29.5	0.00	124	
1405		0.055	24.8	5.34	24.9	30.7	0.00	114	
1410		0.050	25.6	5.38	25.4	31.6	—	—	
1415		0.040	25.1	5.36	24.9	31.4	0.00	101	
1420		0.100	21.7	5.32	24.6	30.9	0.00	96	
1425		0.115	20.8	5.25	23.8	34.1	0.00	75	
1430		0.110	20.7	5.22	24.4	30.2	0.00	63	
1435		0.110	21.6	5.27	24.3	27.0	0.00	55	
1440		0.080	22.1	5.32	24.2	28.4	0.00	51	
1445		0.125	20.9	5.24	24.2	46.2	0.00	55	
1450		0.130	20.0	5.23	24.4	22.2	0.00	64	
1451	END 10 GALLON PURGE								
1455	BEGIN SAMPLE COLLECTION								
1605	SAMPLE COMPLETED								
	POST SAMPLE PARAMETERS								
1611		0.120	22.4	5.31	23.8	34.3	0.00	154	

SIGNATURE(S) [signature]

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803

NUS Source No. 13GW05 Source Location SITE 13

Total Well Depth:	Purge Data						
Well Casing Size & Depth: ~~4"~~ 2" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: — TOC							
One Casing Volume: — gal							
Start Purge (hrs.): 1625							
End Purge (hrs.):							
Total Purge Time (min.):							
Total Amount Purged (gal.):							
Monitor Reading: NO HNU							
Readings above background PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: —	SEE PG 2						
Sample Date & Time: 6/10/95 1900	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: ~~KG~~ ASICM							

Signature(s):

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

.653X =

Analysis:	Preservative				

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 13GW05
DATE: 8/10/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1625	BEGIN - NO H_2O	ABOVE PUMP							
1630		0.170	20.3	4.38	32.9	12.9	0.00	155	
1635		0.165	19.9	4.35	33.9	12.3	0.00	356	
1640		0.160	18.6	4.29	34.4	28.6	0.00	939	
1645		0.145	18.2	4.24	33.6	13.5	0.00	>999	
1650		0.170	17.3	4.20	33.8	14.1	0.00	>999	
1655		0.170	17.4	4.21	33.1	33.0	0.00	>999	
1700		0.170	17.2	4.18	32.1	15.2	0.00	>999	
1705		0.165	17.3	4.16	31.5	33.8	0.00	>999	
1710		0.155	17.6	4.21	31.9	33.9	0.00	851	
1715		0.150	17.6	4.19	30.9	33.5	0.00	669	
1720		0.150	17.4	4.19	31.1	26.1	0.00	593	
1725		0.150	17.5	4.22	30.8	14.3	0.00	344	
1730		0.150	17.6	4.27	30.9	13.6	0.00	278	
1735		0.150	17.6	4.31	31.1	13.0	0.00	230	
1740		0.145	17.6	4.31	30.5	13.0	0.00	175	
1745		0.145	17.5	4.35	30.5	11.0	0.00	139	
1750		0.150	17.2	4.38	30.5	13.0	0.00	102	
1755		0.145	17.2	4.40	30.9	11.7	0.00	86	
1800		0.140	17.2	4.40	30.9	12.3	0.00	72	
1805		0.140	17.0	4.42	30.9	11.6	0.00	53	
1810		0.135	16.7	4.37	30.8	14.4	0.00	43	
1815		0.140	16.9	4.41	30.1	14.1	0.00	35	
1820		0.140	16.6	4.39	30.9	13.2	0.00	26	
1825		0.140	16.6	4.40	30.9	15.2	0.00	22	
1830		0.135	16.5	4.41	31.2	13.4	0.00	15	
1835		0.135	16.4	4.39	31.2	14.9	0.00	14	
1840		0.135	16.3	4.40	31.2	14.0	0.00	12	
1845		0.135	16.5	4.39	31.2	14.6	0.00	10	
1850		0.140	16.3	4.37	31.2	14.4	0.00	8	

SIGNATURE(S) _____

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 13GW05
DATE: 8/10/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. uS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1855		0.135	16.3	4.41	30.9	15.1	0.00	11	
1856	END 5 GAL. PURGE								
1900	BEGIN SAMPLE COLLECTION								
2010	SAMPLING COMPLETED								
2015	POST SAMPLE PARAMETERS								
		0.135	16.4	4.44	31.0	17.7	0.00	8	

SIGNATURE(S) [signature]

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 3
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 16MW01 Source Location SITE

Total Well Depth: 18'	Purge Data						
Well Casing Size & Depth: 2" PVC 18' TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 9.98 TOC							
One Casing Volume: 1.3 GAL							
Start Purge (hrs.): 1420							
End Purge (hrs.): 1705							
Total Purge Time (min.): 165							
Total Amount Purged (gal.): 2.5							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time: 8.13.95 1710	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS CM							

Signature(s): [illegible]

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.163 x 8.02 = 1.3 GAL/1 VOC

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TAL METALS	
TPH	

NO OIL VISIBLE IN PURGE/SAMPLE WATER

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 16GW01
DATE: 8.13.95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. mS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START 1420	9.98	250	21.52	5.60	0.500	3.82	0.01	920	
1425	10.08	55	21.86	5.39	0.497	2.60	—	—	
1430	10.08	55	23.27	5.38	0.500	2.89	—	—	
1435	10.06	55	24.66	5.38	0.504	2.94	0.01	955	
1440	10.06	50	27.04	5.39	0.504	2.51	—	—	
1445	10.06	40	28.48	5.39	0.500	2.22	—	—	
1450	10.06	60	24.23	5.38	0.504	2.50	0.01	935	
1455	10.08	50	25.25	5.37	0.503	2.89	—	—	
1500	10.08	60	25.58	5.37	0.497	2.25	0.01	999	
1505	10.06	70	25.19	5.35	0.498	2.31	—	—	
1510	10.05	50	25.64	5.34	0.471	2.24	0.01	880	
1515	10.05	70	24.25	5.33	0.463	2.31	—	—	
1520	10.02	60	24.29	5.33	0.465	2.32	0.01	847	
1525	10.02	70	24.75	5.32	0.453	2.38	—	—	
1530	10.04	60	25.17	5.31	0.440	2.28	0.01	417	
1535	10.06	75	24.20	5.31	0.437	2.22	—	—	
1540	10.06	70	23.78	5.30	0.432	2.28	0.01	329	
1545	10.06	55	22.96	5.29	0.424	2.25	0.01	254	
1550	10.06	80	23.00	5.28	0.421	2.36	—	—	
1555	10.06	80	22.82	5.27	0.418	2.08	0.01	182	
1600	10.06	55	23.47	5.26	0.413	2.23	—	—	
1605	10.06	60	24.69	5.27	0.412	2.04	0.01	117	
1610	10.06	65	24.51	5.27	0.412	2.23	—	—	
1615	10.06	50	24.22	5.26	0.415	2.05	0.01	64	
1620	10.06	60	24.69	5.27	0.414	2.13	—	—	
1625	10.06	55	26.43	5.23	0.413	1.97	0.01	42	
1630	10.06	60	24.71	5.27	0.418	2.09	—	—	
1635	10.03	60	24.22	5.27	0.417	2.25	0.01	28	
1640	10.04	75	24.11	5.26	0.415	2.05	0.01	26	
1645	10.04		23.29	5.26	0.415	2.08	—	—	

SIGNATURE(S) [illegible]

START 1420

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 16GW01
DATE: 8.13.95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. mS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1650	10.04	70	23.36	5.26	0.414	2.04	0.01	10	
1655	10.04	70	23.92	5.26	0.410	2.27	0.01	40	
1700	10.04	70	23.49	5.26	0.414	2.26	—	—	
1705	10.04	70	23.43	5.27	0.414	2.17	0.01	38	
1710	SAMPLES		AT	1710					
POST POG1									
1755	10.04	80	20.70	5.45	0.429	3.13	0.01	41	

SIGNATURE(S) [illegible]

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 16GW02 Source Location SITE -16

Total Well Depth: 16.5	Purge Data
Well Casing Size & Depth: 2" PVC TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: 7.6 TOC	
One Casing Volume: 1.429 AL	
Start Purge (hrs.): 1320	
End Purge (hrs.): 1712	
Total Purge Time (min.): 232	
Total Amount Purged (gal.): 4.5	
Monitor Reading: NO HNU Readings above background PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: ———	SEE PG 2
Sample Date & Time: 8/12/95 1718	Sample Data: pH / S.C. / Temp. (°C) / TURB / DO / SAL
Sampled By: AS/CM	
Signature(s):	Observations / Notes: DEDICATED PUMP & TUBING HORIBA, HNU, & GEOGUARD CELL USED

Type of Sample

☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

.163 X 8.83 = 1.42

Analysis:	Preservative
TCL Volatiles	HCl
TCL SVOC's	None
TPH	None
TAL Metals	HNO_3
* DISTAL Metals	HNO_3

* Disolved metal were collected because turbidity would not go below 200 as per John May KCW

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 166W02
DATE: 8/12/95

	Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START	1320	7.67								
	1325	7.69	0.130	22.4	5.72	323.0	>50.0	0.01	358	
	1330	7.69	0.100	22.5	5.60	305.0	"	0.01	922	
	1335	7.70	0.130	22.1	5.48	280.0	"	0.01	>999	
	1340	7.70	0.155	20.8	5.37	264.0	49.7	0.01	"	
	1345	7.70	0.165	21.0	5.32	262.0	48.2	0.01	"	
	1350	7.70	0.150	21.2	5.32	263.0	44.3	"	"	
	1355	7.71	0.140	21.4	5.32	261.0	42.3	"	"	
	1400	7.70	0.165	21.0	5.31	257.0	39.9	"	"	
	1405	7.70	0.150	20.8	5.31	256.0	33.7	0.00	924	
	1410	7.70	0.140	21.2	5.31	256.0	35.4	"	821	
	1415	7.70	0.160	20.6	5.32	257.0	33.6	"	846	
	1420	7.70	0.145	20.9	5.33	253.0	31.6	"	785	
	1425	7.71	0.150	21.2	5.35	256.0	27.3	"	683	
	1430	7.71	0.130	21.6	5.35	255.0	33.6	"	630	
	1435	7.71	0.145	21.2	5.38	255.0	25.0	"	647	
	1440	7.71	0.145	21.2	5.39	253.0	23.3	"	570	
	1445	7.71	0.145	21.3	5.40	254.0	25.1	"	515	
	1450	7.71	0.145	21.4	5.42	256.0	22.7	"	509	
	1455	7.71	0.150	21.3	5.42	254.0	22.2	"	476	
	1500	7.71	0.155	21.0	5.41	252.0	21.6	"	460	
	1505	7.72	0.160	20.7	5.42	257.0	21.8	"	433	
	1510	7.72	0.160	21.2	5.44	254.0	19.5	"	430	
	1515	7.72	0.140	21.3	5.45	254.0	21.5	"	483	
	1520	7.72	0.160	20.7	5.44	252.0	16.5	"	484	
	1525	7.72	0.160	20.7	5.44	257.0	19.5	"	420	
	1530	7.72	0.170	20.3	5.43	255.0	16.4	"	520	
	1535	7.72	0.160	20.3	5.44	255.0	14.5	"	430	
	1540	7.72	0.170	20.3	5.42	254.0	13.7	"	451	
	1545	7.72	0.170	20.2	5.42	254.0	14.3	"	446	

SIGNATURE(S) _____

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 26 GW02
DATE: 8/12/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1550	7.73	0.165	20.1	5.42	255.0	13.7	0.00	408	
1555	7.73	0.155	20.3	5.43	256.0	12.6	"	345	
1600	7.73	0.165	20.3	5.43	256.0	14.0	"	320	
1605	7.73	0.155	20.3	5.43	256.0	11.4	"	306	
1610	7.73	0.150	20.3	5.43	255.0	11.0	"	304	
1615	7.72	0.155	20.4	5.45	256.0	11.0	"	290	
1620	7.72	0.150	20.8	5.46	254.0	10.4	"	272	
1625	7.73	0.135	21.5	5.46	256.0	10.3	"	275	
1630	7.73	0.125	21.7	5.45	257.0	10.1	"	265	
1635	7.73	0.110	22.2	5.45	253.0	11.2	"	257	
1640	7.73	0.105	22.4	5.45	254.0	10.6	"	243	
1645	7.73	0.125	21.5	5.45	252.0	10.5	"	217	
1650	7.74	0.150	20.9	5.44	251.0	10.0	"	204	
1655	7.74	0.155	20.5	5.44	256.0	9.9	"	216	
1700	7.74	0.155	20.4	5.44	257.0	9.6	"	238	
1705	7.74	0.130	21.0	5.44	255.0	8.8	"	239	
1710	7.74	0.105	21.3	5.44	254.0	9.8	"	245	
1712	END 4.5 GALLON PURGE								
1718	BEGIN SAMPLE COLLECTION								
1816	SAMPLING COMPLETED								
1820	POST SAMPLE PARAMETERS								
	7.73	0.140	20.9	5.45	251	9.7	0.00	315	

SIGNATURE(S) _____

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 3
Case # _____
By _____

Project Site Name NWS EARIE
Project Site Number CT0231 5803
NUS Source No. 16GW03
Source Location SITE 16

Total Well Depth: 16.00	Purge Data							
Well Casing Size & Depth: 2" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Static Water Level: 8.31 TOC								
One Casing Volume: 1.25 GAL								
Start Purge (hrs.): 0740								
End Purge (hrs.): 1221								
Total Purge Time (min.): 281								
Total Amount Purged (gal.): 8.5								
Monitor Reading: No HNU readings above background PPM								
Purge Method: GEOGUARD								
Sample Method: GEOGUARD								
Depth Sampled: →	SEE PG 2							
Sample Date & Time: 8/13/95 1225	Sample Data							
	pH	S.C.	Temp. (°C)	TURB	DO	SAL		
Sampled By: AS/CM								

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.163 X 7.69 = 1.25 gallons

Analysis:	Preservative
TCL Volatiles	HCl
TCL SVOC's	None
TAL Metals	HNO_3
TPH	None

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 166W03
DATE: 8/13/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond.	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
0740	8.31		~~19.2~~	~~5.04~~	~~294.0~~	~~>50.0~~			
0745	8.34	0.135	19.2	5.04	294.0	>50.0	0.01	400	
0750	8.34	0.140	18.1	5.08	310.0	8.3	0.01	>999	
0755	8.35	0.200	17.4	5.04	325.0	47.6	0.01	933	
0800	8.34	0.205	17.5	5.02	330.0	45.1	0.01	863	
0805	8.33	0.165	18.0	5.05	331.0	40.0	0.01	801	
0810	8.32	0.135	18.3	5.06	337.0	36.8	0.01	769	
0815	8.32	0.120	18.8	5.07	334.0	34.5	0.01	765	
0820	8.32	0.145	18.2	5.08	339.0	33.0	0.01	817	
0825	8.32	0.160	18.1	5.09	339.0	31.4	0.01	991	
0830	8.33	0.170	18.0	5.08	332.0	29.1	0.01	>999	
0835	8.33	0.200	17.6	5.08	332.0	27.0	0.01	>999	
0840	8.32	0.210	17.7	5.07	329.0	25.2	0.01	>999	
0845	8.32	0.210	17.6	5.05	328.0	25.9	0.01	>999	
0850	8.32	0.210	17.5	5.05	329.0	22.8	0.01	>999	
0855	8.32	0.210	17.7	5.05	328.0	20.7	0.01	>999	
0900	8.32	0.210	17.6	5.04	328.0	20.8	0.01	>999	
0905	8.32	0.210	17.6	5.03	330.0	19.0	0.01	>999	
0910	8.32	0.210	17.6	5.04	330.0	19.0	0.01	>999	
0915	8.32	0.205	17.8	5.04	321.0	18.0	0.01	>999	
0920	8.32	0.205	17.6	5.02	328.0	17.1	0.01	>999	
0925	8.32	0.255	17.2	5.03	320.0	16.3	0.01	>999	
0930	8.32	0.265	17.2	5.02	325.0	18.0	0.01	>999	
0935	8.32	0.270	17.2	5.01	322.0	19.0	0.01	>999	
0940	8.32	0.275	16.9	5.01	322.0	33.6	0.01	>999	
0945	8.32	0.280	17.0	5.01	326.0	41.0	0.01	>999	
0950	8.32	0.280	17.0	4.99	326.0	38.5	0.01	>999	
0955	8.32	0.280	17.0	4.99	322.0	36.6	0.01	>999	
1000	8.31	0.065	19.9	5.00	325.0	33.9	—	—	
1005	8.31	0.050	21.9	4.99	326.0	32.8	0.01	>999	

SIGNATURE(S) [signature]

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 16GW03
DATE: 8/13/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1010	8.31	0.045	23.5	4.99	335.0	30.2	—	—	
1015	8.31	0.050	23.8	4.98	333.0	30.5	0.01	>999	
1020	8.31	0.055	23.9	4.97	334.0	29.9	—	—	
1025	8.31	0.050	24.0	4.98	334.0	27.4	0.01	945	
1030	8.31	0.055	24.0	4.98	336.0	27.9	—	—	
1035	8.31	0.050	24.0	4.98	334.0	27.3	0.01	828	
1040	8.31	0.055	23.6	4.97	325.0	25.5	—	—	
1045	8.31	0.050	23.8	4.98	329.0	24.1	0.01	730	
1050	8.31	0.050	24.0	4.97	329.0	24.4	—	—	
1055	8.31	0.055	24.0	4.97	325.0	24.3	0.01	635	
1100	8.31	0.050	24.2	4.97	327.0	21.3	—	—	
1105	8.31	0.050	24.5	4.97	327.0	23.4	0.01	538	
1110	8.31	0.075	22.8	4.97	319.0	22.3	0.01	520	
1115	8.31	0.075	22.1	4.97	320.0	20.3	—	—	
1120	8.31	0.065	22.9	4.97	317.0	21.8	0.01	465	
1125	8.31	0.055	23.5	4.95	325.0	20.2	—	—	
1130	8.31	0.065	24.0	4.95	323.0	19.8	0.00	437	
1135	8.33	0.040	24.5	4.94	327.0	17.7	—	—	
1140	8.33	0.065	23.4	4.93	319.0	19.3	0.01	440	
1145	8.33	0.060	23.4	4.95	320.0	17.7	—	—	
1150	8.33	0.070	22.9	4.94	317.0	18.3	0.01	388	
1155	8.32	0.070	22.8	4.95	317.0	24.9	—	—	
1200	8.32	0.070	22.8	4.95	322.0	19.8	0.01	400	
1205	8.32	0.050	24.3	4.93	323.0	16.9	—	—	
1210	8.32	0.055	24.2	4.93	325.0	17.4	0.01	438	
1215	8.32	0.055	24.3	4.93	325.0	17.3	—	—	
1220	8.33	0.050	24.8	4.93	321.0	17.2	0.01	469	
1221	END 8.5 GALLON PURGE								
1225	BEGIN SAMPLE COLLECTION								
1420	COMPLETE SAMPLE COLLECTION								
POST	8.33	0.045	25.0	4.92	312.0	17.1	0.01	529	

SIGNATURE(S) [signature]

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 16GW04 Source Location SITE 16

	Purge Data						
Total Well Depth: 20'	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 2" PVC 20' TOC							
Static Water Level: 14.96 TOC							
One Casing Volume: 0.8 GAL							
Start Purge (hrs.): 1445							
End Purge (hrs.): 1500							
Total Purge Time (min.): 15							
Total Amount Purged (gal.): 1							
Monitor Reading: 3.4 PPM							
Purge Method: PERISTALTIC							
Sample Method: "							
Depth Sampled: 3' BELOW OIL	SEE PG 2						
Sample Date & Time: 8.31.95 1505	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS							

Signature(s): [signature]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED TUBING
HORIBA, HNU
DEPTH TO OIL 12.36'

.163 × 5.04 = 0.8

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TAL METALS	
TPH	

(16GW04-OIL) ALSO SAMPLED OIL LAYER AT 1545
G.C. FINGER PRINT & S.G.
2-40 ml VIALS & QT GLASS (½ full)

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 16MW04
DATE: 8-31-95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. mS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1445	15.98	300 *	22.2	6.27	1.00	2.48	0.04	999+	BROWN OIL/WATER
1450	16.38	300	21.2	6.26	1.06	4.29	↓	999+	"
1455	16.35	300	21.9	6.21	1.05	3.39	↓	112	CLEARING
1500	16.35	300	22.0	6.20	.998	3.56	↓	138	CLEAR TO LIGHT TAN
	— SAMPLED AT 1505 —								
POST 1527	16.35	300							
									- HORIBA -
									OIL COATING ON PROBE
									MAY EFFECT SOME
									PARAMETERS
									* LOWEST PUMP SETTING

SIGNATURE(S) [illegible]

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803
NUS Source No. 16GW05 Source Location SITE 16

	Purge Data						
Total Well Depth: 20	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 2" PVC 20' TOC							
Static Water Level: 13.30' TOC							
One Casing Volume: 1.1 GAL							
Start Purge (hrs.): 1130							
End Purge (hrs.): 1145							
Total Purge Time (min.): 15							
Total Amount Purged (gal.): 1.0							
Monitor Reading: 1.8 PPM							
Purge Method: PERISTALTIC							
Sample Method:							
Depth Sampled: 4' BELOW OIL	SEE PG 2						
Sample Date & Time: 8.31.95 1150	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS							

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED TUBING
HORIBA, HNU
DEPTH TO OIL 12.28'

.163 X 6.7 = 1.1 GAL/VOL

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TAL METALS	
TPH	

(16GW05-OIL) ALSO SAMPLED OIL LAYER AT 1220
GC FINGER PRINT & S.G
2-40 ML VIALS + QT GLASS (½ FULL)
OIL WAS A DARK TEA COLOR

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 16MW05
DATE: 8.31.95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. mS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1130	13.30	285	19.9	5.69	1.19	4.10	0.05	75	OIL SHEEN ON SURFACE ; CLEAR
1135	13.35	285	18.7	5.69	1.15	8.00	0.05	17	↓
1140	13.35	285	19.0	5.66	1.13	4.49	0.05	49	
1145	13.35	285	18.5	5.73	1.12	6.70	0.05	11	
—	SAMPLED	@ 1150	—						
POST 1210	13.37	295							
									— HORIBA — OIL COATING PROBE MAY AFFECT SOME PARAMETERS

SIGNATURE(S) [illegible]

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 3
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 16SW03 Source Location SITE 16

	Purge Data						
Total Well Depth: 10	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 2" PVC 10' TOC							
Static Water Level: 3.60 TOC							
One Casing Volume: 1.7 GAL							
Start Purge (hrs.): 0905							
End Purge (hrs.): 1205							
Total Purge Time (min.): 240							
Total Amount Purged (gal.): 5.5							
Monitor Reading: <0. PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time: 1210	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By:							

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.163 X 10.4 = 1.7 GAL/VOC

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TAL METALS	
TPH	
* TAL DISSOLVED MET	

* ADD PER N. DIV.

NO OIL VISIBLE IN PUMP OR STORAGE

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 166W06
DATE: 8.13.95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. mS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START 0805	8.60	65	16.63	6.06	0.451	0.71	0.00	811	
0810	8.62	250	19.58	6.08	0.449	0.65	0.01	999	INCREASE FLOW
0815	8.62	250	17.53	6.11	0.437	0.20	0.01	999	TRY TO CLEAN UP
0820	8.65	250	16.67	6.05	0.400	0.22	0.01	780	
0825	8.62	250	16.75	6.06	0.380	0.22	0.01	606	
0830	8.62	250	16.90	6.06	0.362	0.18	0.01	425	
0835	8.62	245	16.90	6.05	0.349	0.20	0.01	395	
0840	8.62	205	17.06	6.04	0.342	0.19	0.01	459	
0845	8.62	195	17.34	6.03	0.339	0.19	0.01	395	DECREASE FLOW
0850	8.62	150	17.81	6.03	0.333	0.21	0.01	487	
0855	8.62	120	17.00	6.02	0.324	0.22	0.01	790	
0900	8.64	90	19.41	6.04	0.321	0.23	0.01	999+	
0905	8.64	90	19.84	6.03	0.320	0.25	0.01	999+	
0910	8.64	70	20.15	6.02	0.319	0.29	0.01	999+	
0915	8.62	70	20.59	6.02	0.322	0.27	—	—	
0920	8.63	75	21.24	6.02	0.319	0.31	0.01	999+	
0925	8.63	70	21.75	6.02	0.316	0.32	—	—	
0930	8.63	70	22.45	6.03	0.314	0.29	0.01	999+	
0935	8.63	70	22.30	6.03	0.310	0.34	—	—	
0940	8.63	55	22.28	6.04	0.313	0.30	0.01	999+	
0945	8.63	50	22.80	6.04	0.314	0.27	—	—	
0950	8.63	50	23.02	6.03	0.315	0.42	0.01	999+	
0955	8.65	80	23.61	6.02	0.316	0.35	—	—	
1000	8.64	50	23.58	6.03	0.316	0.30	0.01	999+	
1005	8.64	50	23.51	6.03	0.315	0.29	—	—	
1010	8.64	65	23.34	6.04	0.312	0.30	0.01	999+	
1015	8.63	70	22.20	6.04	0.313	0.24	0.01	999+	
1020	8.63	50	21.89	6.05	0.316	0.28	0.01	999+	
1025	8.63	50	21.70	6.04	0.314	0.27	—	—	
1030	8.63	55	22.61	6.03	0.322	0.33	0.01	999+	

SIGNATURE(S) [illegible] LM

START AT 0805

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 16GW06
DATE: 8.13.95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. mS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1035	8.64	50	23.20	6.03	0.321	0.28	—	—	
1040	8.69	50	23.59	6.03	0.320	0.16	0.01	999+	
1045	8.69	55	24.18	6.03	0.317	0.34	—	—	
1050	8.64	60	24.20	6.03	0.315	0.31	—	—	
1055	8.64	60	24.14	6.03	0.315	0.31	0.01	999+	
1100		CLEAN COC		RECHARGE					
1105		RECHARGE							
1110									
1115									RECHARGE
1120	8.67	50	17.64	6.02	0.325	0.38	—	—	
1125	8.66	50	17.89	6.02	0.327	0.45	—	—	
1130	8.66	50	18.77	6.02	0.329	0.69	0.01	999+	TUBE HEATING
1135	8.66	60	22.80	6.02	0.327	0.45	—	—	IN SUNLIGHT
1140	8.66	60	22.91	6.02	0.318	0.37	0.01	999+	
1145	8.66	60	22.23	6.01	0.313	0.44	—	—	
1150	8.65	60	22.34	6.01	0.312	0.38	0.01	999+	
1155	8.66	65	21.80	6.01	0.313	0.37	—	—	
1200	8.66	70	22.59	6.01	0.312	0.39	0.00	999+	
1205	8.66	70	23.00	6.01	0.314	0.32	—	—	4 HRS OF PURGING
	SAMPLED	AT	1210						
POST 1310	8.66	70	17.89	5.93	0.320	0.95	0.00	999+	

SIGNATURE(S) [illegible]

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name: NWS EARLE
Project Site Number: CTO 231 5803
NUS Source No.: "MW1"
Source Location: SITE 16 BEHIND BLDG-13

Total Well Depth: 20.2'	
Well Casing Size & Depth: 4" ~~PVC~~ 20.2 TOC	
Static Water Level: 10.54 TOC	
One Casing Volume: 6.3 GAL	
Start Purge (hrs.): 0800	
End Purge (hrs.): 1032	
Total Purge Time (min.): 152	
Total Amount Purged (gal.): 2	
Monitor Reading: <0.1 PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: →	SEE PG 2
Sample Date & Time: 8.22.95 1034	
Sampled By: KS AS	

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL

Signature(s): [signature]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

NO OIL SHEEN ON PURGE/SAMPLE WATER
NO ODOR

.653 X 9.66 = 6.3

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TPH	
TAL METALS	

4" CUSTOM STAINLESS STEEL INTERCASE

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: MW1 BEHIND BLDG 18

DATE: 8.22.95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START 0800	10.54								
0805	10.56	40	19.5	4.65	412.8	>50.0	—	—	
0810	10.57	80	19.9	4.43	525.	>50.0	0.01	13	
0815	10.57	55	20.0	4.38	548.	>50.0	—	—	
0820	10.56	40	20.6	4.36	554	44.7	0.02	26	
0825	10.56	55	21.1	4.35	554	43.9	—	—	
0830	10.56	55	21.2	4.36	561.	40.8	0.02	26	
0835	10.56	70	20.5	4.35	559.	39.2	—	—	
0840	10.56	60	20.5	4.34	555.	37.8	0.02	25	
0845	10.56	55	20.7	4.34	559	36.4	—	—	
0850	10.56	60	21.0	4.35	548.	34.7	0.02	23	
0855	10.56	60	20.9	4.34	548.	37.1	—	—	
0900	10.55	45	21.0	4.36	555.	35.6	0.02	21	
0905	10.56	50	22.0	4.37	556.	31.7	—	—	
0910	10.56	75	21.9	4.36	544	33.1	0.02	20	
0915	10.56	70	20.8	4.36	548.	34.4	—	—	
0920	10.56	70	20.9	4.36	543	31.0	0.02	17	
0925	10.55	45	21.7	4.37	554.	31.6	—	—	
0930	10.56	80	21.9	4.37	544.	29.2	0.02	17	
0935	10.56	70	21.3	4.38	543	29.4	—	—	
0940	10.56	55	21.9	4.38	544	28.9	0.02	14	
0945	10.56	45	22.5	4.38	550.	28.4	—	—	
0950	10.56	50	23.0	4.38	539.	28.2	0.02	13	
0955	10.56	50	23.0	4.38	544	27.8	—	—	
1000	10.56	50	23.6	4.39	539.	30.4	0.02	16	
1005	10.56	60	23.1	4.39	543	29.6	—	—	
1010	10.56	50	22.9	4.39	539.	29.5	0.02	13	
1015	10.56	50	23.0	4.38	544	28.1	—	—	
1020	10.56	60	23.2	4.40	538	28.1	0.02	13	
1025	10.56	75	22.7	4.39	537	26.7	—	—	

SIGNATURE(S) [illegible]

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: MW 1
DATE: 08/22/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. uS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1030	10.50	60	22.1	4.40	538	27.8	0.02	13	
1032	END PURGE	2.0 GALLONS							
1034	BEGIN SAMPLING								
1131	SAMPLING COMPLETED								
	POST SAMPLE PARAMETERS								
1140	10.54	75	22.2	4.36	489	30.0	0.02	11	

SIGNATURE(S) [signature] KS

SAMPLE LOG SHEET

NUS CORPORATION
A Halliburton Company

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 17GW01 Source Location S. to 17

Total Well Depth: TOC 20.44	Purge Data				
Well Casing Size & Depth: 4" PVC Casing	Volume	pH	S.C.	Temp. (°C)	Color & Turbidity
Static Water Level: TOC 11.58					
One Casing Volume: 5.79					
Start Purge (hrs.): 1150					
End Purge (hrs.): 1312					
Total Purge Time (min.): 182					
Total Amount Purged (gal.): 2					
Monitor Reading: No HNU readings above background					
Purge Method: Geo Guard Pump					
Sample Method: Geo Guard Pump					
Depth Sampled: —					
Sample Date & Time: 8/2/95 1320	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Sampled By: AS/CM					

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:

.653 x 8.86 = 5.79 gallons

Analysis:	Preservative		Organic	Inorganic
TCL Volatiles	HCl	Traffic Report #		
TCL SVOC's	None	Tag #		
TAL Metals	HNO_3			
TCL Pest	None	AB #		
Landfill Parameters	H_2SO_4	Date Shipped		
Landfill Parameters	None	Time Shipped		
		Lab		
		Volume		

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 17GW01	SITE - 17
BASED ON:	DRAWING NUMBER:
BY: ASICM	CHECKED BY:
APPROVED BY:	DATE: 8/2/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
1150		11.58						
1155	0.140	11.72	3.21	596.0	19.7	8	750.0	0.02
1200	0.110	11.71	3.19	596.0	20.1	11	>50.0	0.02
1205	0.100	11.70	3.17	598.0	19.9	9	>50.0	0.02
1210	0.105	11.71	3.16	596.0	19.0	10	750.0	0.02
1215	0.100	11.69	3.14	593.0	19.0	10	>50.0	0.02
1220	0.095	11.70	3.15	593.0	19.2	10	750.0	0.02
1225	0.085	11.68	3.15	582.0	19.9	10	>50.0	0.02
1230	0.090	11.66	3.15	581.0	19.5	11	49.8	0.02
1235	0.090	11.67	3.16	570.0	19.8	14	750.0	0.02
1240	0.095	11.68	3.17	567.0	19.6	15	750.0	0.02
1245	0.105	11.68	3.18	561.0	19.5	16	49.0	0.02
1250	0.095	11.69	3.20	562.0	19.7	16	750.0	0.02
1255	0.090	11.66	3.23	544.0	19.9	16	750.0	0.02
1300	0.090	11.66	3.25	544.0	20.0	17	750.0	0.02
1305	0.090	11.68	3.23	534.0	19.8	17	750.0	0.02
1310	0.100	11.67	3.27	538.0	19.3	18	750.0	0.02

1322 Purging complete after purging 2 gallons from the well

1320 Sampling of 17GW01 was begun

1415 Sampling complete at 17GW01

Post Sampling Parameters

1420	0.100	11.72	3.42	449.0	20.8	14	750.0	0.02

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803

NUS Source No. 17GW02 Source Location SITE 17

Total Well Depth:	Purge Data						
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: TOC							
One Casing Volume: gal							
Start Purge (hrs.):							
End Purge (hrs.):							
Total Purge Time (min.):							
Total Amount Purged (gal.):							
Monitor Reading: PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time:	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS							

Signature(s): [signature]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED
FLUSH MT. CAN'T FIND
NO SAMPLE

.653X =

Analysis:	Preservative				

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE
Project Site Number CTO 231 5803
NUS Source No. 17GW03
Source Location SITE 17

Total Well Depth: 17.70	
Well Casing Size & Depth: 4" PVC TOC	
Static Water Level: 7.57 TOC	
One Casing Volume: 6.60 GAL	
Start Purge (hrs.): 1350	
End Purge (hrs.): 1521	
Total Purge Time (min.): 91	
Total Amount Purged (gal.): 2	
Monitor Reading: NO HNU readings above background PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: →	SEE PG 2
Sample Date & Time: 7/27/95 1522	
Sampled By: AS/CM	

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL

Signature(s):

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 10.13 = 6.60

Analysis:	Preservative
TCL Volatiles	HCl
TCL SVOC's	None
TAL Metals	HNO3
Landfill Parameters	H2SO4
Landfill Parameters	None

CALCULATION WORKSHEET Order No. 19116 (01-91) PAGE ____ OF ____

CLIENT	JOB NUMBER
NWS EARLE	CTO 231 5803
SUBJECT	
17GW03	Site 17
BASED ON	DRAWING NUMBER

BY	CHECKED BY	APPROVED BY	DATE
ASICM			7/27/95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1350		7.57						
	1355	0.235	7.77	4.49	335.0	15.6	33	18.0	—
	1400	0.145	7.71	4.50	351.0	16.5	75	24.3	0.01
	1405	0.105	7.69	4.49	351.0	17.1	51	31.5	0.01
	1410	0.105	7.68	4.49	352.0	17.2	41	28.1	0.01
	1415	0.095	7.66	4.48	354.0	17.6	38	28.8	0.01
	1420	0.120	7.61	4.49	350.0	18.0	36	14.8	0.01
	1425	0.100	7.64	4.49	353.0	18.3	34	49.5	0.01
	1430	0.120	7.67	4.49	344.0	17.8	34	21.1	0.01
	1435	0.120	7.68	4.49	343.0	17.0	34	15.2	0.01
	1440	0.135	7.70	4.48	340.0	15.7	32	14.1	0.01
	1445	0.095	7.66	4.45	351.0	16.7	30	17.6	0.01
	1450	0.075	7.65	4.47	348.0	17.2	28	16.9	0.01
	1455	0.070	7.65	4.48	341.0	17.8	~~18.5~~	18.5	—
	1500	0.070	7.65	4.48	339.0	18.0	25	13.7	0.01
	1505	0.065	7.65	4.48	343.0	18.5	—	17.9	—
	1510	0.055	7.65	4.49	338.0	18.9	25	17.9	0.01
	1515	0.050	7.65	4.49	335.0	19.0	—	17.0	—
	1520	0.050	7.65	4.49	335.0	19.0	25	15.2	0.01
AW	~~1525~~ 1521	Complete purge 2 gallons							
AW	~~1530~~ 1522	Begin sampling							
	1601	Sample completed							
	1610	Post sample parameters							
		0.100	7.69	4.48	304.0	18.8	23	17.1	0.01

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 17 GW 04 Source Location SITE 17

Total Well Depth: 17.35	Purge Data						
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 9.38 TOC							
One Casing Volume: 5.19 GAL							
Start Purge (hrs.): 1635							
End Purge (hrs.): 1806							
Total Purge Time (min.): 91							
Total Amount Purged (gal.): 3							
Monitor Reading: No HNU Reading above BKG PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: ——	SEE PG 2						
Sample Date & Time: 7/27/95 1807	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: AS/CM							

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 7.97 = 5.19

Analysis:	Preservative
TCL volatiles	HCl
TCL SVOC's	None
TAL metals	HNO_3
Land Fill Para	H_2SO_4
Land Fill Para	None

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 17GW04	SITE - 17
BASED ON: 17GW04	DRAWING NUMBER: -
BY: ASICM	CHECKED BY:
APPROVED BY:	DATE: 7/27/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
1635		9.38						
1640	0.180	9.51	6.79	71.2	18.5	435	50.0	3.52
1645	0.170	9.51	6.80	72.3	18.2	181	43.9	>4.00
1650	0.150	9.74	6.82	72.7	18.7	32	5.6	>4.00
1655	0.135	9.80	6.82	72.7	18.7	24	10.7	>4.00
1700	0.140	9.83	6.82	72.3	18.5	12	42.4	>4.00
1705	0.135	9.89	6.83	71.2	18.8	6	31.0	>4.00
1710	0.130	9.92	6.84	71.2	18.9	4	41.1	>4.00
1715	0.130	9.93	6.83	69.3	18.9	15	39.7	>4.00
1720	0.100	9.92	6.84	69.3	19.2	10	40.8	>4.00
1725	0.085	9.90	6.84	68.3	19.8	22	35.6	>4.00
1730	0.060	9.84	6.84	67.8	20.3	—	28.1	—
1735	0.050	9.79	6.83	68.3	21.2	36	29.8	>4.00
1740	0.050	9.78	6.83	68.3	21.3	—	28.6	—
1745	0.050	9.75	6.83	68.3	21.6	47	27.6	>4.00
1750	0.055	9.74	6.81	66.5	20.8	—	23.8	—
1755	0.080	9.79	6.81	65.7	18.8	26	21.1	>4.00
1800	0.090	9.86	6.81	65.4	17.5	4	17.2	>4.00
1805	0.095	9.85	6.82	64.4	17.8	3	17.4	>4.00
1806	Complete purge 3 gallons							
1807	Sample collection began							
1840	Sample complete							
1845	Post samples parameters							
	0.050	10.20	6.80	57.7	18.6	21	9.5	>4.00

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 3
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803
NUS Source No. 17GW05 Source Location SITE 17

Total Well Depth: 17.00	Purge Data							
Well Casing Size & Depth: ~~4" PVC~~ 2" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Static Water Level: 7.73 TOC								
One Casing Volume: 1.50 GAL								
Start Purge (hrs.): 12.33								
End Purge (hrs.): 17.15								
Total Purge Time (min.): 282								
Total Amount Purged (gal.): 15.5								
Monitor Reading: No HNU reading above background PPM								
Purge Method: GEOGUARD								
Sample Method: GEOGUARD								
Depth Sampled: ———	SEE PG 2							
Sample Date & Time: 8/9/95 1715	Sample Data							
	pH	S.C.	Temp. (°C)	TURB	DO	SAL		
Sampled By: ~~KG~~ ASICM								

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.163
~~.153~~ X 9.27 = 1.50 gallons

Analysis:	Preservative
TCL Volatiles	HCl
TCL SVOC's	None
TAL Metals	HNO_3
Landfill Parameters	None
Landfill Parameters	H_2SO_4

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 176W05
DATE: 8/9/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1233	7.73								
1240	7.83	0.120	16.4	5.72	73.8	>50.0	0.00	122	
1245	7.83	0.100	16.0	5.69	67.9	"	0.00	796	
1250	7.82	0.100	15.9	5.62	66.5	"	"	999	
1255	7.83	0.095	15.8	5.54	63.0	"	"	"	
1300	7.83	0.100	15.4	5.47	61.8	"	"	"	
1305	7.84	0.155	14.4	5.43	61.2	"	"	"	
1310	7.83	0.200	13.9	5.36	59.9	"	"	"	
1315	7.84	0.200	13.4	5.33	61.2	45.6	"	"	
1320	7.83	0.220	13.4	5.30	61.2	33.1	"	"	
1325	7.83	0.220	13.3	5.29	61.2	31.8	"	"	
1330	7.83	0.225	13.2	5.30	61.1	31.2	"	"	
1335	7.82	0.220	13.1	5.29	61.1	29.9	"	"	
1340	7.82	0.220	13.3	5.29	61.2	30.0	"	"	
1345	7.82	0.235	13.2	5.28	61.2	34.9	"	"	
1350	7.82	0.225	13.2	5.29	61.2	28.3	"	"	
1355	7.81	0.235	13.2	5.32	61.1	26.9	"	"	
1400	7.82	0.240	13.1	5.33	61.1	25.0	"	"	
1405	7.82	0.230	13.2	5.34	61.1	24.9	"	"	
1410	7.82	0.240	13.2	5.35	60.2	23.6	"	"	
1415	7.83	0.290	12.8	5.41	61.0	49.2	0.00	872	
1420	7.82	0.305	12.6	5.40	60.5	42.0	0.00	846	
1425	7.82	0.300	12.6	5.40	60.5	35.8	0.00	642	
1430	7.82	0.300	12.7	5.42	61.0	32.3	0.00	645	
1435	7.82	0.305	12.5	5.42	60.8	32.1	0.00	596	
1440	7.82	0.300	12.6	5.41	60.8	32.1	"	560	
1445	7.82	0.300	12.5	5.41	59.8	31.1	"	485	
1450	7.82	0.300	12.5	5.44	60.1	30.3	"	454	
1455	7.82	0.300	12.4	5.42	60.1	29.8	"	372	
1500	7.82	0.300	12.5	5.46	60.1	29.4	"	348	

SIGNATURE(S) [illegible]

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 176W05
DATE: 8/9/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1505	7.82	0.300	12.4	5.44	60.1	29.3	0.00	316	
1510	7.82	0.300	12.2	5.47	60.1	28.2	0.00	294	
1515	7.82	0.300	12.5	5.45	60.1	27.8	"	275	
1520	7.82	0.300	12.5	5.46	60.1	29.4	"	242	
1525	7.82	0.300	12.5	5.47	60.1	28.1	"	220	
1530	7.83	0.300	12.4	5.47	59.8	29.3	"	206	
1535	7.83	0.300	12.5	5.47	59.8	28.1	"	195	
1540	7.83	0.300	12.4	5.47	59.8	21.8	"	189	
1545	7.83	0.300	12.5	5.48	59.1	27.4	"	174	
1550	7.83	0.300	12.4	5.47	59.8	27.9	"	169	
1555	7.83	0.300	12.5	5.49	59.1	27.4	"	160	
1600	7.83	0.300	12.3	5.49	59.1	27.5	"	150	
1605	7.83	0.295	12.5	5.50	59.1	24.7	"	144	
1610	7.83	0.275	12.8	5.49	58.3	23.3	"	136	
1615	7.82	0.190	13.1	5.48	58.3	24.8	"	125	
1620	7.82	0.190	13.2	5.46	59.0	23.0	"	91	
1625	7.81	0.160	13.4	5.47	59.0	18.5	"	73	
1630	7.81	0.125	13.8	5.46	58.6	20.1	"	65	
1635	7.81	0.120	14.0	5.45	58.6	19.0	"	60	
1640	7.80	0.115	14.0	5.46	58.6	15.9	"	60	
1645	7.80	0.095	14.3	5.47	59.5	15.0	"	62	
1650	7.80	0.070	14.9	5.46	59.4	15.2	—	—	
1655	7.80	0.060	15.3	5.46	59.1	17.0	0.00	64	
1700	7.80	0.050	15.8	5.47	58.9	14.7	—	—	
1705	7.80	0.050	16.0	5.46	60.0	16.5	0.00	67	
1710	7.81	0.170	14.1	5.47	58.8	14.0	0.00	81	
1712	END 15.5 GAL PURGE								
1715	BEGIN SAMPLE COLLECTION								
1755	SAMPLE COLLECTION COMPLETE								
1801	7.81	0.100	15.0	5.45	57.4	15.1	0.00	123	POST PARAMETERS

SIGNATURE(S) [illegible]

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 196W01 Source Location SITE 19

Total Well Depth: 26.50	Purge Data						
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 15.30 TOC							
One Casing Volume: 7.31 GAL							
Start Purge (hrs.): 1555							
End Purge (hrs.): 1733							
Total Purge Time (min.): 98							
Total Amount Purged (gal.): 4							
Monitor Reading: NO HNU readings Above background PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: —	SEE PG 2						
Sample Date & Time: 7/24/95	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: ~~KS~~ ASICM 1735							

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 11.20 = 7.31 gallons

Analysis:	Preservative
TCL Volatiles	HCl
TAL Metals	HNO3

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 19GW01	SITE - 19
BASED ON:	DRAWING NUMBER:
BY: ASI CM	CHECKED BY:
APPROVED BY:	DATE: 7/24/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
1555	0.080	15.33	5.94	371.0	22.0	—	18.7	—
1600	0.090	15.30	5.94	393.0	20.8	101	19.5	0.01
1605	0.185	15.33	5.79	360.0	16.9	137	22.7	0.01
1610	0.130	15.32	5.80	367.0	16.6	124	24.1	0.01
1615	0.185	15.32	5.80	360.0	16.0	113	12.6	0.01
1620	0.190	15.34	5.82	354.0	15.9	111	14.6	0.00
1625	0.190	15.33	5.82	356.0	15.5	102	13.0	0.01
1630	0.175	15.33	5.84	352.0	15.6	97	29.5	0.00
1635	0.195	15.33	5.85	346.0	15.4	90	30.7	0.01
1640	0.150	15.34	5.86	344.0	15.8	86	10.6	0.01
1645	0.180	15.33	5.87	331.0	15.8	76	34.0	0.01
1650	0.100	15.32	5.86	333.0	16.2	76	27.7	0.01
1655	0.125	15.33	5.87	330.0	16.2	70	23.0	0.01
1700	0.050	15.32	5.86	334.0	17.5	—	25.2	—
1705	0.030	15.31	5.87	332.0	18.8	62	12.1	0.01
1710	0.090	15.32	5.85	329.0	18.6	63	14.2	0.01
1715	0.065	15.33	5.87	326.0	17.7	58	10.6	0.01
1720	0.090	15.32	5.88	321.0	18.1	58	11.3	0.01
1725	0.080	15.32	5.86	316.0	17.9	58	11.0	0.01
1730	0.080	15.32	5.84	317.0	17.6	58	13.9	0.01
1733	Purging of 19GW01 was completed after purging 4 gallons							
1735	Sampling of 19GW01 was begun							
~~1739~~								
1742	Sampling completed.							
1745	Post sampling parameters							
	0.080	15.32	5.83	310.0	17.8	57	12.1	0.01

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 19GW02 Source Location SITE 19

Total Well Depth: 25.87	Purge Data						
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 12.75 TOC							
One Casing Volume: 8.55 GAL							
Start Purge (hrs.): 0800							
End Purge (hrs.): 0842							
Total Purge Time (min.): 42							
Total Amount Purged (gal.): 1							
Monitor Reading: NO HNU readings above BKG PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time: 7/25/95 0843	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: AS/CM							

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 13.12 = 8.55

Analysis:	Preservative
TCL Volatiles	HCl
TAL Metals	HNO_3

CALCULATION WORKSHEET Order No. 19116 (01-91) PAGE ____ OF ____

CLIENT: NWS EARLE	JOB NUMBER: CTO 231 5803
SUBJECT: 19GW02 Site 19	
BASED ON:	DRAWING NUMBER:
BY: ASICM	CHECKED BY:
APPROVED BY:	DATE: 7/25/95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	0800		12.75						
	0805	0.150	12.80	3.89	22.0	17.2	2	20.1	0.00
	0810	0.165	12.80	3.89	22.6	15.3	7	29.8	0.00
	0815	0.145	12.80	3.90	22.6	15.0	7	33.4	0.00
	0820	0.110	12.80	3.86	22.2	15.3	7	34.5	0.00
	0825	0.110	12.79	3.91	21.7	15.6	7	37.3	0.00
	0830	0.105	12.78	3.91	21.7	15.5	7	37.0	0.00
	0835	0.100	12.79	3.92	21.6	15.7	8	35.8	0.00
	0840	0.100	12.78	3.92	21.4	15.4	10	35.2	0.00
	0842	Complete purge. 1 gallon							
	0843	Sample taken. TCL Volatile, TAL Metals							
	0850	Sample completed							
	0855	Post sample parameters:							
		0.100	12.78	3.98	20.6	15.9	12	33.6	0.00

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803
NUS Source No. 19GW03 Source Location SITE 19

Total Well Depth: 25.39	Purge Data							
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Static Water Level: 14.32 TOC								
One Casing Volume: 7.22 GAL								
Start Purge (hrs.): 1435								
End Purge (hrs.): 1523								
Total Purge Time (min.): 48								
Total Amount Purged (gal.): 2								
Monitor Reading: NO HNU Readings above BKG PPM								
Purge Method: GEOGUARD								
Sample Method: GEOGUARD								
Depth Sampled: →	SEE PG 2							
Sample Date & Time: 7/24/95 1525	Sample Data							
	pH	S.C.	Temp. (°C)	TURB	DO	SAL		
Sampled By: AS/CM								

Signature(s):

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 11.07 = 7.22

Analysis:	Preservative
TCL Volatiles	HCL
TAL Metals	HNO_3

32
35

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 19GW03	SITE - 19
BASED ON:	DRAWING NUMBER:
BY: ASICM	CHECKED BY:
APPROVED BY:	DATE: 7/24/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
1435	0.220	14.39	4.06	19.4	20.9	23	9.8	0.00
1440	0.195	14.33	4.31	18.2	17.4	21	11.6	0.00
1445	0.105	14.30	4.34	18.3	18.3	—	13.5	0.00
1450	0.075	14.33	4.36	18.3	20.1	17	15.5	0.00
1455	0.095	14.33	4.34	17.9	20.4	15	16.8	0.00
1500	0.100	14.33	4.31	17.8	19.7	17	18.0	0.00
1505	0.180	14.33	4.31	17.5	17.1	15	18.7	0.00
1510	0.135	14.35	4.27	17.1	16.3	15	21.0	0.00
1515	0.150	14.35	4.22	16.8	16.1	15	20.2	0.00
1520	0.130	14.33	4.21	16.8	16.2	15	18.8	0.00
1523	Purging Complete after purging 2 gallons							
1525	Sample 19GW03 was taken							
1532	Sampling was completed							
	Post Sampling Parameters							
1535	0.125	14.35	4.11	16.1	16.1	15	22.9	0.00

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page _____ of _____
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number _____
NUS Source No. 19GW04 Source Location SITE 19

	Purge Data						
Total Well Depth: 15.99'							
Well Casing Size & Depth: 4" PVC 15.99 TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 15.97' TOC							
One Casing Volume:							
Start Purge (hrs.):							
End Purge (hrs.):							
Total Purge Time (min.):							
Total Amount Purged (gal.):							
Monitor Reading:							
Purge Method:							
Sample Method:							
Depth Sampled:							
Sample Date & Time: 7.25.95 0820	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS TR							

Signature(s): [signature]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:

DRY WELL - NO SAMPLE

NO PURGE IN THIS WELL

Analysis:	Preservative				

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803

NUS Source No. 19GW05 Source Location SITE 19

Total Well Depth: 20.05	Purge Data							
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Static Water Level: 14.25 TOC								
One Casing Volume: 3.79 GAL								
Start Purge (hrs.): 0910								
End Purge (hrs.): 1001								
Total Purge Time (min.): 51								
Total Amount Purged (gal.): 17.75								
Monitor Reading: NO HNU Readings about background PPM								
Purge Method: GEOGUARD								
Sample Method: GEOGUARD								
Depth Sampled: ——	SEE PG 2							
Sample Date & Time: 7/25/95 1002	Sample Data							
	pH	S.C.	Temp. (°C)	TURB	DO	SAL		
Sampled By: CMIAS								

Signature(s):

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 5.80 = 3.79

Analysis:	Preservative
TCL Volatiles	HCl
TAL Metals	HNO_3

CALCULATION WORKSHEET Order No. 19116 (01-91) PAGE ____ OF ____

CLIENT: NWS EARLE	JOB NUMBER: CTO 231 5803
SUBJECT: 196W05	Site 19
BASED ON:	DRAWING NUMBER:
BY: AS/CM	CHECKED BY:
APPROVED BY:	DATE: 7/25/95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	0910		14.25						
	0915	0.165	14.31	3.96	223.	18.0	32	37.9	0.00
	0920	0.165	14.29	3.95	248.	17.6	48	18.7	0.00
	0925	0.135	14.31	3.96	248.	17.5	22	41.1	0.00
	0930	0.140	14.33	3.97	249.	17.4	10	30.2	0.00
	0935	0.130	14.33	3.98	248.	17.5	6	40.9	0.00
	0940	0.130	14.33	4.00	245.	17.8	4	41.9	0.00
	0945	0.120	14.32	4.00	243.	17.8	2	41.6	0.00
	0950	0.130	14.33	4.00	247.	17.6	1	22.9	0.00
	0955	0.125	14.32	4.01	245.	17.5	1	38.1	0.00
	1000	0.125	14.33	4.00	244.	17.6	0	28.4	0.00
	1001	Complete purge 1.75 gallons							
	1002	Sampled for TCL Volatiles & TAL Metals							
	1010	Sample Complete							
	1015	Post sample parameters							
		0.125	14.32	4.03	243.	18.5	0	27.6	0.00

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 19GW06 Source Location SITE 19

Total Well Depth: 18.42	
Well Casing Size & Depth: 4" PVC TOC	
Static Water Level: 11.8 TOC	
One Casing Volume: 4.00 GAL	
Start Purge (hrs.): 1035	
End Purge (hrs.): 1142	
Total Purge Time (min.): 67	
Total Amount Purged (gal.): 1	
Monitor Reading: NO HNU readings above background PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: ———	
Sample Date & Time: 7/25/95 1143	
Sampled By: ASICM	

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL

SEE PG 2

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 6.62 = 4.00

Analysis:	Preservative
TAL Metals	HNO_3
Chrome +6	None
TCL Volatiles	HCl

CALCULATION WORKSHEET Order No. 19116 (01-91) PAGE ____ OF ____

CLIENT: NWS EARLE	JOB NUMBER: CTO 231 5803
SUBJECT: 19GW06	Site 19
BASED ON:	DRAWING NUMBER:
BY: ASICM	CHECKED BY: / APPROVED BY: / DATE: 7/25/95

	TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL %
START	1035		11.80						
	1040	0.190	12.48	4.16	15.6	16.2	6	33.1	0.00
	1045	0.135	12.71	4.15	15.7	16.9	4	28.2	0.00
	1050	0.055	12.76	4.13	15.7	18.2	—	27.9	—
	1055	0.055	12.84	4.15	15.8	19.1	2	25.1	0.00
	1100	0.050	12.90	4.17	16.0	19.2	2	24.7	0.00
	1105	0.060	13.00	4.18	15.8	19.0	5	24.4	0.00
	1110	0.045	13.02	4.18	16.0	20.1	—	24.2	—
	1115	0.035	13.06	4.19	16.0	20.0	—	24.0	0.00
	1120	0.035	13.07	4.19	16.4	20.4	6	26.0	0.00
	1125	0.030	13.14	4.20	16.4	20.2	—	25.1	—
	1130	0.030	13.15	4.22	16.3	20.2	6	24.4	0.50
	1135	0.030	13.13	4.23	16.6	21.7	—	22.7	—
	1140	0.035	13.15	4.21	16.7	21.1	6	22.2	0.00
	1142	Complete purge 1 gallon							
	1143	Sample for TCL Volatiles, TAL Metals, & Hexavalent Chromium							
	1200	Complete sampling							
		Post sampling parameters							
	1210	0.050	13.81	4.21	17.0	21.6	6	18.1	0.00

SAMPLE LOG SHEET

NUS CORPORATION
A Halliburton Company

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 2

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 196W06 Source Location Site 19

	Purge Data				
Total Well Depth: TOC 18.45					
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	Color & Turbidity
4" Casing					
Static Water Level: TOC 11.45					
One Casing Volume:					
Start Purge (hrs.): 1220					
End Purge (hrs.): 1256					
Total Purge Time (min.): 36					
Total Amount Purged (gal.): 0.5					
Monitor Reading: No HNU					
reading above Background					
Purge Method: Geoguard Pump					
Sample Method: Geoguard Pump					
Depth Sampled: —					

Sample Date & Time:	Sample Data			
8/14/95 12:57	pH	S.C.	Temp. (°C)	Color & Turbidity
Sampled By: AS/CM 12				

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:

RESAMPLE FOR CR^{+6} ONLY
MISSED HOLD TIME

Analysis:	Preservative		Organic	Inorganic
Chromium +6	None	Traffic Report #		
		Tag #		
		AB #		
		Date Shipped		
		Time Shipped		
		Lab		
		Volume		

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5903
SUBJECT: 19GW06	SITE - 19
BASED ON: Resample Chromium +6	DRAWING NUMBER:
BY: ASICM	CHECKED BY:
APPROVED BY:	DATE: 8/4/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
1220		11.95						
1225	0.235	12.57	4.00	58.8	18.3	7	47.0	0.00
1230	0.040	12.60	3.97	61.0	18.3	—	750.0	—
1235	0.050	12.62	3.94	62.0	19.6	6	43.4	0.00
1240	0.040	12.67	3.83	60.7	20.2	—	47.3	—
1245	0.040	12.69	3.90	61.8	20.4	6	42.9	0.00
1250	0.040	12.74	3.81	60.4	20.6	—	750.0	—
1255	0.040	12.80	3.85	62.0	20.7	4	41.3	0.00
1256	End	1/2 gallon purge						
1257	Begin	sample						
1300	End	sample						
1310	Post	sample	parameters		~~20.8~~			
	0.040	12.92	3.84	62.5	20.8	4	48.6	0.00

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803

NUS Source No. 19GW07 Source Location SITE 19

Total Well Depth: —	Purge Data						
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
4" PVC 2" PVC TOC							
Static Water Level: — TOC							
One Casing Volume: — GAL							
Start Purge (hrs.): 1515							
End Purge (hrs.): 1745							
Total Purge Time (min.): 150							
Total Amount Purged (gal.): 4.25							
Monitor Reading: no HNU readings above BKG PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: —	SEE PG 2						
Sample Date & Time:	Sample Data						
8/11/95 1750	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: ~~KS~~ AS/CM							

Signature(s):

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.163
~~.623~~ X =

Analysis:	Preservative
TCL volatiles	HCL
TAL Metals	HNO_3

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 19GW07
DATE: 8/11/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START 1515	NO H_2O ABOVE PUMP					~~22.7~~			
1520		0.151	17.2	4.48	478.0	22.7	0.01	358	
1525		0.170	16.0	4.34	499.0	32.4	0.02	190	
1530		0.135	16.1	4.26	511.0	32.4	0.02	173	
1535		0.135	15.9	4.27	511.0	27.3	0.02	233	
1540		0.145	15.7	4.26	523.0	25.5	0.02	213	
1545		0.150	15.5	4.25	514.0	24.1	0.02	170	
1550		0.155	15.3	4.23	513.0	15.1	0.02	153	
1555		0.150	15.3	4.21	514.0	18.9	0.02	142	
1600		0.150	15.4	4.20	509.0	20.6	0.02	127	
1605		0.150	15.3	4.23	507.0	17.0	0.02	121	
1610		0.150	15.2	4.36	507.0	23.6	0.02	114	
1615		0.150	15.4	4.25	509.0	24.8	0.02	108	
1620		0.155	15.3	4.26	502.0	17.7	0.02	103	
1625		0.130	15.9	4.24	498.0	24.0	0.02	97	
1630		0.100	16.5	4.21	503.0	38.0	0.02	94	
1635		0.125	15.8	4.25	494.0	32.4	0.02	91	
1640		0.130	15.7	4.27	490.0	32.8	0.02	86	
1645		0.120	16.1	4.34	495.0	22.7	0.02	75	
1650		0.100	16.3	4.28	499.0	18.8	0.02	67	
1655		0.105	16.4	4.30	495.0	17.3	0.02	67	
1700		0.090	16.9	4.27	488.0	18.9	0.02	58	
1705		0.060	17.6	4.30	496.0	19.3	—	—	
1710		0.095	16.4	4.30	499.0	17.1	0.02	48	
1715		0.100	16.1	4.32	495.0	20.5	0.02	43	
1720		0.100	16.2	4.32	494.0	26.8	0.02	37	
1725		0.095	15.9	4.30	490.0	22.6	0.02	35	
1730		0.095	16.0	4.29	489.0	23.9	0.02	33	
1735		0.080	16.5	4.30	494.0	20.9	0.02	34	
1740		0.090	16.2	4.24	487.0	20.9	0.02	34	

SIGNATURE(S) [illegible]

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 19GW07
DATE: 8/11/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1745	SEE PG. 2	0.085	16.7	4.30	494.00	24.3	0.02	34	
1745	END 4.25 GALLON PURGE								
1750	BEGIN SAMPLING								
1800	SAMPLING COMPLETE								
1805	POST SAMPLE PARAMETERS								
		0.090	16.5	4.29	477.0	22.2	0.02	36	

SIGNATURE(S) [signature]

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 3
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 23GW01 Source Location SITE 23

Total Well Depth: 29'	Purge Data							
Well Casing Size & Depth: 2" PVC 29' TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Static Water Level: TOC								
One Casing Volume: GAL								
Start Purge (hrs.): 1600								
End Purge (hrs.): 1835								
Total Purge Time (min.): 155								
Total Amount Purged (gal.): 3								
Monitor Reading: <0.1 PPM								
Purge Method: GEOGUARD								
Sample Method: GEOGUARD								
Depth Sampled: —	SEE PG 2							
Sample Date & Time: 8.11.95 1840	Sample Data							
	pH	S.C.	Temp. (°C)	TURB	DO	SAL		
Sampled By: KS LM								

Signature(s): [signature]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED
LT. OLIVE COLOR TO WATER

Analysis:	Preservative				
TCL VOC					
TCL SVOC	SEE COC				
TAL METALS					
TCL PEST					
EXPLOSIVES					

* TOP OF PUMP [illegible] WATER LEVEL 2" I D WITH PUMP = .166 GD

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 236W01
DATE: 8.1.95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. mS/CM	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START 1600	* SEE PG 1	200	18.0	3.96	0.156	4.36	0.00	52	
1605		150	17.5	3.93	0.157	3.36	—	—	
1610		80	16.6	3.96	0.159	3.37	0.00	335	
1615		105	17.6	4.00	0.159	2.76	0.00	610	
1620		85	18.0	4.00	0.160	2.66	0.00	855	
1625		85	17.9	4.00	0.155	2.70	—	—	
1630		85	17.9	4.00	0.157	2.42	—	—	
1635		85	17.8	3.98	0.157	2.37	—	—	
1640		85	17.6	3.96	0.158	2.21	0.00	910	
1645		90	16.8	3.94	0.164	2.16	0.00	845	
1650		80	17.87	3.93	0.159	2.16	—	—	
1655		75	18.64	3.93	0.160	2.08	0.00	588	
1700		75	18.79	3.94	0.160	2.08	—	—	
1705		75	18.83	3.94	0.161	2.09	—	—	
1710		75	18.89	3.94	0.161	2.01	0.00	516	
1715		75	18.2	3.93	0.161	1.91	0.00	496	
1720		75	17.8	3.92	0.162	1.84	0.00	435	
1725		75	17.8	3.92	0.162	1.91	—	—	
1730		75	17.8	3.92	0.162	1.94	0.00	358	
1735		75	17.6	3.92	0.162	1.94	—	—	
1740		75	17.0	3.91	0.162	1.88	0.00	341	
1745		75	16.8	3.91	0.162	1.88	—	—	
1750		75	16.5	3.91	0.162	1.91	0.00	317	
1755		75	16.3	3.90	0.161	2.04	—	—	
1800		75	16.0	3.91	0.161	2.02	0.00	341	
1805		75	15.9	3.92	0.162	2.01	—	—	
1810		80	15.6	3.91	0.162	1.96	0.00	480	
1815		80	16.2	3.93	0.161	1.99	0.00	463	
1820		80	16.8	3.93	0.161	1.80	—	—	
1825		80	16.7	3.93	0.162	1.81	0.00	480	

SIGNATURE(S) [illegible] LM

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 23GW01
DATE: 8.11.95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond.	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1830	SLIGHT	75	16.4	3.93	0.161	1.87	—	—	
1835	"	75	16.9	3.93	0.161	1.92	0.00	513	SAMPLE @ 1840hrs
POST	SAMPLING	READING							
1730		75	21.61	3.93	0.167	1.70	0.00	787	

SIGNATURE(S) [illegible] LM

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 3
Case # _____
By _____

Project Site Name: NWS EARLE
Project Site Number: CTO 231 5803
NUS Source No.: 23G-W02
Source Location: SITE 13

Total Well Depth: 28'	
Well Casing Size & Depth: 2" PVC 28' TOC	
Static Water Level: 21.56 TOC	
One Casing Volume: 1.1 GAL	
Start Purge (hrs.): 1545	
End Purge (hrs.): 1900	
Total Purge Time (min.): 0.5	
Total Amount Purged (gal.): 4	
Monitor Reading: <0.1 PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: —	
Sample Date & Time: 8/12/95 1905	
Sampled By: [illegible]	
Signature(s): [illegible]	

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL

SEE PG 2

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL

Type of Sample

☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:

DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED
LT. OLIVE COLOR PURGE/SAMPLE WATER
TURB. WOULD NOT COME DOWN
SEE PG 2 & 3

.163 X 1.1 = GAL./1 VOL

Analysis:	Preservative
TCL VOC	
TCL SVOC	SEE COC
TCL PEST	
TAL METALS	
EXPLOSIVES	
* TAL DISSOLVED MET	

* ADDED PER [illegible]

TUBING [illegible], FUNCTIONAL BUT [illegible]

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 23GW02
DATE: 8/12/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. MS/CM	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START 1545	21.56	55	17.02	3.71	0.262	4.83	—	—	
1550	21.58	55	[illegible]	[illegible]	0.256	3.96	—	—	(1) TURN OUT TO FIX LEAK IN PUMP RAISED @ 6
1555	21.58	55	[illegible]	[illegible]	0.249	3.32	0.00	821	
1600	21.58	55	23.80	3.81	0.248	[illegible]	—	—	
1605	21.56	15	24.38	3.81	0.249	2.76	—	—	
1610	21.58	50	23.52	3.82	0.250	2.60	—	—	SHUT PUMP DOWN TO FIX LEAK IN NITROGEN LINE
START 1625	* —	100	17.14	3.82	0.247	1.73	0.00	999+	
1630	—	100	15.00	3.82	0.235	0.25	0.00	999+	
1635	—	100	16.67	3.84	0.237	[illegible]	—	—	* PUMP TOP ABOVE WATER (1)
1640	—	50	18.53	3.85	0.240	0.75	0.00	999+	LEVEL CAN NOT READ WATER LEVEL
1645	—	80	19.65	3.86	0.243	1.04	—	—	
1650	—	55	21.10	3.87	0.245	1.39	—	—	
1655	—	50	21.63	3.87	0.245	1.33	0.00	999+	
1700	—	65	22.57	3.90	0.246	1.46	—	—	
1705	—	65	22.71	3.90	0.246	1.97	—	—	
1710	—	55	23.07	3.90	0.245	2.03	0.00	999+	
1715	—	55	23.60	3.90	0.246	1.82	—	—	
1720	—	50	23.63	3.91	0.246	1.83	—	—	
1725	—	50	23.74	3.90	0.246	1.71	0.00	999+	
1730	—	50	[illegible]	3.90	0.246	1.74	—	—	
1735	—	50	23.92	3.90	0.247	1.78	0.00	999+	
1740	—	50	23.98	3.91	0.247	1.74	—	—	
1745	—	55	24.00	3.91	0.247	1.79	—	—	
1750	—	55	23.98	3.91	0.247	1.57	0.00	999+	
1755	—			CLEAN CLEAR TUBE DRY					
1800	—	175	16.80	3.91	0.240	2.16	[illegible]	999+	TURN FLOW UP TRYING TO LOWER TURB.
1805	—	175	15.13	3.87	0.244	1.63	0.00	999+	
1810	—	180	15.24	3.87	0.240	1.57	0.00	999+	
1815	—	210	14.25	3.89	0.235	0.27	0.00	999+	
1820	—	210	14.53	3.93	0.230	0.37	0.00	999+	

SIGNATURE(S) [illegible]

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 236-W02
DATE: 8-12-95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. mS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1825	— SEE PG 2	210	14.31	3.92	0.225	0.31	0.00	999+	
1830	—	210	14.18	3.94	0.221	0.41	0.00	999+	
1835	—	30	14.36	3.93	0.218	0.40	0.00	999+	TURN PUMP RATE BACK DOWN
1840		50	16.97	3.93	0.214	0.67	—	—	
1845	—	55	17.85	3.94	0.212	0.89	—		
1850	—	55	18.91	3.96	0.220	0.95	0.00	999+	
1855	—	55	19.11	3.97	0.222	0.92	—	—	
1900	—	55	19.13	3.97	0.221	0.96	0.00	999+	
	SAMPLED	AT	1905						
POST 2005	—	60	14.83	3.92	0.210	2.19	0.00	457	GETTING DARK

SIGNATURE(S) [illegible]

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 23GW02 Source Location SITE 23

Total Well Depth: 24'	Purge Data						
Well Casing Size & Depth: 2" PVC 24' TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 16.88 TOC							
One Casing Volume: 1.2 GAL							
Start Purge (hrs.): 0920							
End Purge (hrs.): 1210							
Total Purge Time (min.): 170							
Total Amount Purged (gal.): 2							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: ——	SEE PG 2						
Sample Date & Time: 8.12.95 1215	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS LM							

Signature(s):

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED
FLUSH MT.
LT. OLIVE COLOR TO PURGE/SA[illegible]
.163 X 7.12 = 1.2 GAL/VOL

Analysis:	Preservative				
TCL VOC					
TCL SVOC	SEE VOC				
TCL PEST.					
TAL METALS					
EXPLOSIVES					
* TAL DISSOLVED	METALS				

* ADDED PER N. DIV.

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

FLUSH MT.
WELL I.D.: 236W03
DATE: 8.12.95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. (mS/cm)	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START 0920	16.88	100	15.43	5.14	0.276	1.66	0.01	565	FLUSH MT.
0925	17.57	50	16.04	5.10	0.277	1.54	—	—	
0930	17.29	50	17.34	5.06	0.275	1.58	0.00	968	
0935	17.20	60	19.29	5.02	0.275	1.92	—	—	
0940	17.14	50	20.89	4.99	0.280	1.92	—	—	
0945	17.10	65	22.86	4.98	0.280	2.06	0.00	989	↑ TEMP., LOW FLOW +
0950	17.09	55	23.40	4.91	0.286	1.74	—	—	TUBING IN DIRECT SUN
0955	17.06	60	22.80	4.89	0.285	1.55	0.00	983	
1000	17.04	60	23.04	4.89	0.284	1.48	—	—	
1005	17.04	45	23.43	4.89	0.282	1.38	—	—	
1010	17.04	60	23.02	4.89	0.282	1.34	0.00	895	
1015	17.04	60	22.95	4.91	0.279	1.21	—	—	
1020	17.04	60	22.70	4.92	0.279	1.11	—	—	
1025	17.06	50	22.73	4.93	0.276	1.09	0.00	987	
1030	17.07	65	23.18	4.94	0.276	1.07	—	—	
1035	17.07	80	23.80	4.94	0.274	1.26	—	—	
1040	17.06	80	24.40	4.95	0.271	1.07	—	—	
1045	17.06	75	25.17	4.95	0.274	1.02	0.06	743	
1050	17.04	75	24.91	4.96	0.271	1.14	—	—	
1055	17.03	55	23.65	4.99	0.269	0.91	—	—	
1100	17.05	70	21.80	5.02	0.266	0.80	0.00	999+	
1105	17.09	70	20.03	5.04	0.264	0.71	0.00	925	
1110	17.10	150	19.31	5.04	0.263	0.56	0.00	815	
1115	17.18	40	18.64	5.02	0.259	0.57	—	—	
1120	17.04	50	20.38	5.03	0.255	0.58	—	—	
1125	17.02	50	21.95	5.02	0.256	0.72	0.00	772	
1130	17.00	60	25.27	5.04	0.253	0.57	—	—	
1135	17.00	50	25.56	5.03	0.257	0.63	—	—	
1140	17.00	50	25.47	5.03	0.255	0.72	0.00	463	
1145	17.01	50	26.05	5.00	0.256	0.65	—	—	

SIGNATURE(S) [illegible] LM

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

FLUSH MT.

WELL I.D.: 23GW03

DATE: 8·12·95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	S. Cond. mS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1150	17.01	50	26.56	5.00	0.256	0.77	—	—	
1155	17.01	50	25.28	4.98	0.250	0.79	—	—	
1200	17.01	60	24.36	4.98	0.261	0.68	0.00	636	
1205	17.02	50	23.91	4.98	0.258	0.66	—	—	
1210	17.02	55	23.85	4.99	0.255	0.70	0.00	723	
	SAMPLED	AT	1215						SAMPLE TAKEN
POST 1325	17.07	65	20.80	4.96	0.238	1.38	0.00	871	

SIGNATURE(S) [illegible] LM

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 26GW01 Source Location SITE 26

Total Well Depth: 24.66	Purge Data						
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 12.73 TOC							
One Casing Volume: 7.80 GAL							
Start Purge (hrs.): 0840							
End Purge (hrs.): 1010							
Total Purge Time (min.): 90							
Total Amount Purged (gal.):							
Monitor Reading: PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: ——	SEE PG 2						
Sample Date & Time: 7/22/95 1012	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: IAS/CM 1012							

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 11.93 = 7.80

Analysis:	Preservative
TCL volatiles	HCl
TAL metals	HNO_3
Explosives	—

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 26GW01	SITE - 26
BASED ON:	DRAWING NUMBER:
BY: AS/CM	CHECKED BY:
APPROVED BY:	DATE: 7/22/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
0840	0.250	12.73	—	—	—	—	—	—
0845	0.140	12.84	5.56	30.1	16.7	60	50	0.00
0850	0.250	12.85	5.55	29.3	17.1	39	50	0.00
0855	0.070	12.82	5.55	28.7	17.9	34	50	0.00
0900	0.125	12.85	5.55	28.7	16.9	36	50	0.00
0905	0.155	12.87	5.53	28.5	16.0	39	50	0.00
0910	0.050	12.85	5.55	29.1	16.7	—	50	0.00
0915	0.060	12.80	5.63	28.9	18.4	41	50	0.00
0920	0.045	12.80	5.65	28.9	19.2	41	50	0.00
0925	0.045	12.80	5.65	29.0	19.2	—	50	0.00
0930	0.045	12.81	5.68	29.5	19.4	48	50	0.00
0935	0.055	12.82	5.69	29.0	19.2	—	50	0.00
0940	0.035	12.80	5.73	29.6	19.4	53	49.9	0.00
0945	0.040	12.80	5.76	29.8	19.6	63	45.3	0.00
0950	0.040	12.79	5.81	29.1	19.9	—	45.0	0.00
0955	0.035	12.80	5.82	28.9	20.0	—	40.3	0.00
1000	0.035	12.80	5.84	28.9	20.1	67	38.1	0.00
1005	0.040	12.80	5.84	29.1	20.4	—	36.9	0.00
1010	0.040	12.79	5.85	29.1	20.4	77	35.6	0.00
1010		Purging complete after taking out 3 gallons						
1012		Sampling of 26GW01 was begun						
1030		Post sampling parameters						
1035		12.87	5.88	29.0	20.9	74	20.3	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number GT0231 5803

NUS Source No. 26 GW 07 Source Location SITE

Total Well Depth: 18.92	Purge Data						
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 12.33 TOC							
One Casing Volume: 4.28 GAL							
Start Purge (hrs.): 1113							
End Purge (hrs.): 1308							
Total Purge Time (min.): 195							
Total Amount Purged (gal.): 4							
Monitor Reading: NO HNU reading above background PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: ———	SEE PG 2						
Sample Date & Time: 7/22/95 1309	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: ~~TS~~ JAS/CM							

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 6.54 = 4.28

Analysis:	Preservative
TCL volatiles	HCl
TAL metals	HNO_3
Explosives	—

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 26 GW 02	SITE - 26
BASED ON:	DRAWING NUMBER:
BY: ASICM	CHECKED BY:
APPROVED BY:	DATE: 7/22/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. MS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
1113	0.225	12.45	5.00	96.3	17.1	184	10.4	0.00
1118	0.225	12.45	4.91	94.3	16.1	105	9.7	0.00
1123	0.225	12.55	4.88	94.3	14.9	91	10.0	0.00
1128	0.230	12.55	4.85	95.0	15.3	87	10.0	0.00
1133	0.090	12.54	4.81	95.3	16.0	74	10.1	0.0
1138	0.120	12.48	4.86	97.3	16.4	70	10.3	0.00
1143	0.115	12.46	4.87	95.3	16.4	69	11.1	0.00
1148	0.115	12.45	4.82	97.3	16.5	63	10.8	0.00
1153	0.130	12.45	4.85	98.3	16.3	60	11.2	0.00
1158	0.120	12.45	4.84	97.3	16.1	58	11.7	0.00
1203	0.125	12.45	4.82	97.3	16.1	54	11.3	0.00
1208	0.135	12.48	4.81	95.3	15.9	54	11.1	0.00
1213	0.130	12.45	4.79	95.3	15.9	54	11.5	0.00
1223	0.070	12.45	4.81	95.3	15.8	54	11.5	0.00
1228	0.090	12.45	4.82	99.0	17.0	48	12.1	0.00
1233	0.095	12.45	4.83	98.00	17.3	—	11.9	0.00
1238	0.070	12.45	4.83	99.0	17.7	44	12.4	0.00
1243	0.070	12.45	4.83	97.0	17.7	42	12.5	0.00
1248	0.065	12.45	4.84	96.0	17.8	37	12.6	0.00
1253	0.060	12.50	4.84	98.0	18.1	—	12.1	0.00
1258	0.060	12.45	4.88	99.0	18.7	33	13.2	0.00
1303	0.060	12.45	4.88	99.0	18.8	—	12.7	0.00
1308	0.060	12.45	4.86	97.0	18.8	34	12.4	0.00
1313								
1308	Purging Stopped after purging 4 gallons							
1309	Sampling begun by Andy Spaugh							
	Post Sampling Parameters							
1332			4.96	96.0	20.0	33	11.8	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO231 5803
NUS Source No. 26GW03 Source Location SITE 26

Total Well Depth: 23.35	Purge Data							
Well Casing Size & Depth: 4" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Static Water Level: 12.98 TOC								
One Casing Volume: 6.79 GAL								
Start Purge (hrs.): 1345								
End Purge (hrs.): 1426								
Total Purge Time (min.): 41								
Total Amount Purged (gal.): 2								
Monitor Reading: PPM								
Purge Method: GEOGUARD								
Sample Method: GEOGUARD								
Depth Sampled: →	SEE PG 2							
Sample Date & Time: 7/22/95 1430	Sample Data							
	pH	S.C.	Temp. (°C)	TURB	DO	SAL		
Sampled By: ~~KS~~ IAS/CNA								

Signature(s):

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.653 X 10.40 = 6.79

Analysis:	Preservative
TCL Volatiles	HCl
TAL Metals	HNO_3
Explosives	—

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 26GW03	SITE - 26
BASED ON:	DRAWING NUMBER:
BY: ASICM	CHECKED BY:
APPROVED BY:	DATE: 7/22/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
1345	0.270	12.98	5.80	10.9	18.0	—	10.6	0.00
1350	0.260	13.11	5.78	12.8	15.7	11	10.4	0.00
1355	0.135	13.17	5.77	13.6	15.8	5	9.5	0.00
1400	0.165	13.09	5.75	13.3	15.9	1	10.8	0.00
1405	0.160	13.12	5.75	13.3	15.8	2	10.2	0.00
1410	0.155	13.10	5.71	13.3	15.9	5	12.1	0.00
1415	0.160	13.10	5.72	13.2	15.9	10	12.4	0.00
1420	0.160	13.00	5.70	13.1	15.8	12	12.1	0.00
1425	0.150	13.06	5.68	13.1	15.9	20	12.4	0.00
1426	Pursing was completed after pursing 2 gallons ~~Sampling Started~~							
1430	Sampling was begun By Andy Spayth							
1445	Post Sampling Run parameters							
1446		13.07	5.62	12.7	17.4	25	15.00	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 266W04 Source Location SITE 2K

Total Well Depth: 16.49	Purge Data
Well Casing Size & Depth: 4" PVC 16.49 TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: 13.54 TOC	
One Casing Volume: 1.91 GAL	
Start Purge (hrs.): 0885	
End Purge (hrs.): 1001	
Total Purge Time (min.): 86	
Total Amount Purged (gal.): 4	
Monitor Reading: no readings above background PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: ———	SEE PG 2
Sample Date & Time: 7/23/95 1005	Sample Data: pH / S.C. / Temp. (°C) / TURB / DO / SAL
Sampled By: ~~RS~~ / AS / CM	
Signature(s):	Observations / Notes: DEDICATED PUMP & TUBING; HORIBA, HNU, & GEOGUARD CELL USED

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

.653 X 2.95 = 1.91

Analysis:	Preservative
TCL volatiles	HCl
TAL Metals	HNO_3
Explosives	NO ?C

CALCULATION WORKSHEET Order No. 19116 (01-91)

CLIENT: NWS EARIE	JOB NUMBER: CTO 231 5803
SUBJECT: 26GW04	SITE - 26
BASED ON:	DRAWING NUMBER:
BY: ASICM	CHECKED BY:
APPROVED BY:	DATE: 7/22/95

TIME	PUMP RATE L/MIN	WATER LEVEL TOC'	PH S.U.	COND. µS	TEMP °C	TURB NTU	D.O. PPM	SAL. %
0835	0.055	13.49	5.04	14.5	21.9	39	8.9	0.00
0840	0.060	13.55	5.00	13.0	21.1	—	5.8	0.00
0845	0.125	13.63	4.94	12.8	19.4	34	5.7	0.00
0850	0.125	13.65	4.95	13.8	18.5	62	6.2	0.00
0855	0.120	13.61	4.93	13.3	18.3	140	6.5	0.00
0900	0.120	13.61	4.89	12.8	18.2	133	6.5	0.00
0905	0.120	13.61	4.94	12.7	18.2	111	6.6	0.00
0910	0.125	13.65	4.96	12.6	18.6	94	6.2	0.00
0915	0.125	13.65	4.97	12.1	18.7	72	12.3	0.00
0920	0.115	13.65	4.96	12.2	18.7	46	6.5	0.00
0925	0.110	13.65	4.95	11.9	18.5	42	12.4	0.00
0930	0.110	13.65	4.96	11.9	18.5	32	6.5	0.00
0935	0.130	13.65	4.96	11.7	18.5	26	12.0	0.00
0940	0.120	13.65	4.95	11.6	18.6	22	11.6	0.00
0945	0.120	13.65	4.95	11.4	18.6	17	11.9	0.00
0950	0.125	13.66	4.96	11.6	18.6	14	12.8	0.00
0955	0.120	13.65	4.90	11.3	18.5	12	10.8	0.00
1000	0.120	13.67	4.96	11.5	18.6	7	10.8	
1001	Purging complete after purging 4 gallons							
1005	Sampling of 26GW04 was begun							
1021	Sampling of 26GW04 was complete							
	Post Sampling Parameters							
1022	0.125	13.67	4.99	11.0	17.9	9	6.8	0.00

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page 1 of 2
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 26GW05 Source Location SITE 26

Total Well Depth: 21'	Purge Data							
Well Casing Size & Depth: 2" PVC TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Static Water Level: * — TOC								
One Casing Volume: — GAL								
Start Purge (hrs.): 1410								
End Purge (hrs.): 1620								
Total Purge Time (min.): 130								
Total Amount Purged (gal.): 1.5								
Monitor Reading: 0 PPM								
Purge Method: GEOGUARD								
Sample Method: GEOGUARD								
Depth Sampled: →	SEE PG 2							
Sample Date & Time: 8/15/95 1620	Sample Data							
Sampled By: CHAS HALL, ANDY SPAUGH	pH	S.C.	Temp. (°C)	TURB	DO	SAL		
Signature(s):								

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED
*WATER BELOW TOP OF GEOGUARD

.163 X =

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Analysis:	Preservative
TCL VOA	HCl
TAL METALS	HNO_3
EXPLOSIVES	—

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 26GW05
DATE: 08/15/95

	Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START	1409	NO H_2O ABOVE	PUMP							
	1415		65	24.6	5.32	20.0	29.6	—	—	
	1420		47	23.8	5.22	17.6	23.5	0.00	64	
	1425		31	24.5	5.17	17.4	29.8	—	—	
	1430		59	24.5	5.04	17.4	30.9	0.00	66	
	1435		60	22.7	5.14	17.3	30.6	—	—	
	1440		55	22.4	5.12	17.5	15.9	0.00	75	
	1445		46	23.1	5.09	18.1	25.5	—	—	
	1450		61	22.8	5.12	17.4	27.0	0.00	69	
	1455		70	22.2	5.10	17.6	25.0	—	—	
	1500		56	21.9	5.10	17.8	28.2	0.00	58	
	1505		50	22.0	5.14	17.8	17.7	—	—	
	1510		62	21.9	5.16	18.0	14.7	0.00	50	
	1515		70	21.7	5.16	18.1	27.9	—	—	
	1520		65	21.9	5.17	18.1	30.8	0.00	46	
	1525		60	22.0	5.18	18.0	31.5	—	—	
	1530		60	23.3	5.24	18.6	33.3	0.00	34	
	1535		60	22.8	5.26	18.3	34.3	—	—	
	1540		50	22.5	5.25	18.8	32.1	0.00	32	
	1545		65	22.5	5.28	18.8	30.8	—	—	
	1550		50	21.9	5.21	18.4	28.3	0.00	27	
	1555		49	22.1	5.26	18.4	29.7	—	—	
	1600		50	22.5	5.25	18.7	28.4	0.00	19	
	1605		50	22.7	5.30	18.8	27.2	—	—	
	1610		65	21.4	5.27	18.8	16.8	0.00	29	
	1615		60	21.5	5.28	18.6	26.3	—	—	
	1620		56	21.0	5.26	18.6	25.0	0.00	35	END PURGE 1.5 GALLON
	1620	BEGIN SAMPLING								
	1655	COMPLETE SAMPLING								
POST PARAMETERS	1700		60	21.1	5.31	18.8	31.2	0.00	37	

SIGNATURE(S) _____

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Page 1 of 3
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. 26GW06 Source Location SITE 26

Total Well Depth: 18'	Purge Data
Well Casing Size & Depth: 2" PVC 18' TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: * TOC	
One Casing Volume: * gal	
Start Purge (hrs.): 0810	
End Purge (hrs.): 1136	
Total Purge Time (min.): 206	
Total Amount Purged (gal.): 2.5	
Monitor Reading: 0 PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: —	SEE PG 2
Sample Date/& Time: 8/15/95 1140	Sample Data: pH / S.C. / Temp. (°C) / TURB / DO / SAL
Sampled By: L MARSHALL	
Signature(s): [signature]	Observations / Notes: DEDICATED PUMP & TUBING; HORIBA, HNU, & GEOGUARD CELL USED; * TOP OF WELL PUMP ABOVE WATER LEVEL

Type of Sample

- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

.163 x =

Analysis:	Preservative
TCL VOA	HCl
TAL METALS	HNO_3
EXPLOSIVES	—

140
26
206

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 26 GW 06
DATE: 08/15/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START 0810	No H2O ABOVE	PUMP							
0820		62	19.8	5.47	37.1	40.6	0.00	51	
0825		50	19.9	5.46	40.2	33.9	—	—	
0830		60	19.9	5.43	40.6	37.5	—	—	
0835		54	19.9	5.42	41.3	40.9	0.00	127	
0840		55	19.9	5.42	41.4	40.7	—	—	
0845		55	19.9	5.42	41.6	40.4	0.00	104	
0850		50	19.9	5.42	41.3	34.6	—	—	
0855		45	19.9	5.43	41.3	33.6	0.00	175	
0900		65	20.1	5.44	41.8	39.5	—	—	
0905		55	20.3	5.44	42.6	40.2	0.00	165	
0910		60	20.4	5.46	42.9	36.1	—	—	
0915		38	20.7	5.47	42.9	35.1	0.00	156	
0920		60	20.8	5.48	42.8	36.3	—	—	
0925		60	20.8	5.47	43.3	37.3	0.00	135	
0930		50	20.8	5.48	44.2	37.8	—	—	
0935		60	20.7	5.47	43.9	37.4	0.00	112	
0940		60	20.5	5.49	44.2	35.6	—	—	
0945		60	20.5	5.50	44.2	33.6	0.00	98	
0950		50	21.0	5.49	42.8	30.1	—	—	
0955		50	21.9	5.50	44.2	30.4	0.00	93	
1000		55	21.9	5.48	44.2	33.1	—	—	
1005		56	22.2	5.47	44.2	34.2	0.00	93	
1010		57	22.5	5.46	43.7	33.5	—	—	
1015		46	22.5	5.47	44.2	32.8	0.00	89	
1020		54	22.5	5.46	44.2	32.3	—	—	
1025		54	22.0	5.46	44.6	29.2	0.00	89	
1030		53	21.9	5.44	44.2	32.8	—	—	
1035		48	21.9	5.46	44.2	33.3	0.00	75	
1040		50	22.0	5.44	44.2	31.2	—	—	

SIGNATURE(S) [illegible]

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 26GW06
DATE: 8/15/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS/cm	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1045		50	~~[illegible]~~ 22.5	5.44	151	32.2	0.00	65	RECALIBRATED
1050		50	22.5	5.42	151	30.8	—	—	EQUIPMENT
1055		50	22.5	5.42	151	28.4	0.00	60	
1100		50	22.7	5.43	152	31.2	—	—	
1105		55	22.8	5.42	148	29.8	0.00	51	
1110		50	22.8	5.42	149	30.7	—	—	
1115		50	22.6	5.41	151	27.9	0.00	48	
1120		50	22.9	5.40	151	30.1	—	—	
1125		90	22.5	5.40	151	31.3	0.00	48	
1130		50	22.2	5.41	150	29.5	—	—	
1135		50	22.0	5.38	149	28.7	—	48	
1136	END 2.5 GALLON PURGE								
1140	BEGIN SAMPLING								
1230	SAMPLING COMPLETED								
1240	POST SAMPLE PARAMETERS								
		50	23.3	5.39	145	26.1	0.00	65	

SIGNATURE(S) [illegible]

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page 1 of ~~2~~ 3 (15)

- [x] Monitoring Well Data
- [ ] Domestic Well Data
- [ ] Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CT0231 5803

NUS Source No. 29GW01 Source Location SITE 29

Total Well Depth: 18	Purge Data						
Well Casing Size & Depth: 4" PVC 18' TOC	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Static Water Level: 10.34 TOC							
One Casing Volume: 1.3 GAL							
Start Purge (hrs.): 1515							
End Purge (hrs.): 1830							
Total Purge Time (min.): 165							
Total Amount Purged (gal.): 3							
Monitor Reading: <0.1 PPM							
Purge Method: GEOGUARD							
Sample Method: GEOGUARD							
Depth Sampled: →	SEE PG 2						
Sample Date & Time: 8.8.95 1835	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: KS LM							

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:
DEDICATED PUMP & TUBING
HORIBA, HNU, & GEOGUARD CELL USED

.163 X 7.66 = 1.3

Analysis:	Preservative				
TCL VOC					
TCL SVOC	SEE COC				
TAL METALS					

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 296W01
DATE: 8.8.95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1515	10.34	150	17.7	6.25	49.3	1.60	0.02	470	
1520	10.34	45	18.7	6.28	50.2	1.66	—	—	
1525	10.34	60	18.8	6.29	50.2	2.10	0.02	22.6	
1530	10.34	60	19.3	6.29	50.5	2.34	—	—	
1535	10.34	55	19.6	6.27	50.4	2.20	—	—	
1540	10.35	50	19.7	6.26	50.4	2.18	—	—	
1545	10.35	50	19.6	6.26	50.5	2.45	0.02	184	
1550	10.35	60	19.6	6.25	50.3	2.04	—	—	
1555	10.35	50	19.6	6.25	50.2	2.02	0.02	145	
1600	10.35	50	19.6	6.25	50.0	2.06	—	—	
1605	10.35	60	19.5	6.25	49.9	1.80	0.02	126	
1610	10.35	60	19.4	6.25	49.8	1.79	—	—	
1615	10.35	50	19.4	6.25	49.7	1.87	—	—	
1620	10.35	50	19.2	6.26	49.8	1.56	0.02	95	
1625	10.35	60	19.2	6.25	49.7	1.62	—	—	
1630	10.35	50	19.0	6.25	49.6	1.43	—	—	LOW BATTERY ON HORIBA
1635	10.35	60	18.9	6.24	49.5	1.33	—	—	- NO %SAL OR TURB
1640	10.35	50	18.9	6.25	49.4	1.32	—	—	
1645	10.35	50	19.1	6.25	49.4	1.39	—	—	
1650	10.35	60	19.0	6.25	49.4	1.31	—	—	- BATTERY CHANGED
1655	10.35	60	18.9	6.25	49.3	1.07	0.02	8	
1700	10.35	60	19.0	6.24	49.3	1.15	—	—	-RECALIBRATE HORIBA
1705	10.35	60	19.0	6.24	49.3	1.09	—	—	
1710	10.35	60	19.1	6.25	49.2	1.04	0.02	81	
1715	10.35	45	19.2	6.24	49.1	1.08	—	—	
1720	10.35	50	19.3	6.24	49.2	1.00	0.01	72	
1725	10.35	50	19.4	6.24	49.2	1.06	0.01	72	
1730	10.35	50	19.3	6.24	49.3	0.97	—	—	ERROR MESSAGE - HORIBA
1735	10.35	50	19.2	6.24	49.3	0.96	—	—	" " "
1740	10.35	40	19.19	6.24	49.3	0.83	—	—	" " "

SIGNATURE(S) [illegible]

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 296W01
DATE: 8.8.95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1745	10.35	50	19.1	6.24	49.3	0.88	0.02	51	CHANGED HORIBAS
1750	10.35	65	19.0	6.24	49.3	0.80	—	—	NOT ENOUGH WATER FOR TURB
1755	10.35	75	19.0	6.23	49.3	0.72	0.02	47	
1800	10.35	70	19.0	6.24	49.3	0.52	—	—	Not Enough H2O for Horiba
1805	10.35	100	18.2	6.24	49.1	0.52	0.02	40	
1810	10.35	75	17.8	6.23	49.1	0.41	0.02	33	
1815	10.35	75	18.0	6.23	48.7	0.55	0.02	30	
1820	10.35	80	18.2	6.22	48.6	0.50	—	—	
1825	10.35	75	18.3	6.22	48.5	0.47	0.02	27	
1830	10.35	75	18.3	6.22	48.4	0.53	0.02	30	
1835	SAMPLED @	1835							
POST → 1935	10.35	100	16.9	6.17	116.3	0.22	0.02	21	

SIGNATURE(S) [illegible]

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 29GW02 Source Location SITE - 29

Total Well Depth: 17.00	Purge Data
Well Casing Size & Depth: 2" PVC TOC	Volume / pH / S.C. / Temp. (°C) / TURB / DO / SAL
Static Water Level: 11.48 TOC	
One Casing Volume: 0.899 GAL	
Start Purge (hrs.): 0753	
End Purge (hrs.): 1115	
Total Purge Time (min.): 202	
Total Amount Purged (gal.): 5	
Monitor Reading: no HNU reading above background PPM	
Purge Method: GEOGUARD	
Sample Method: GEOGUARD	
Depth Sampled: —	SEE PG 2
Sample Date & Time: 8/12/95 1118	Sample Data: pH / S.C. / Temp. (°C) / TURB / DO / SAL
Sampled By: ASICM	
Signature(s):	Observations / Notes: DEDICATED PUMP & TUBING; HORIBA, HNU, & GEOGUARD CELL USED

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

.163 X 5.52 = 0.89

Analysis:	Preservative
TCL Volatiles	HCL
TCL SVOC's	None
TCL PCB's	None
TAL Metals	HNO3

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 296W02
DATE: 8/12/95

	Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
START	0753	11.48								
	0800	11.48	0.195	18.2	6.37	361.0	49.8	0.01	134	
	0805	11.48	0.105	18.5	6.38	343.0	21.6	0.01	250	
	0810	11.48	0.100	18.7	6.40	342.0	48.8	0.01	364	
	0815	11.48	0.110	18.7	6.41	343.0	47.7	0.01	422	
	0820	11.48	0.100	18.8	6.42	340.0	25.6	0.01	450	
	0825	11.48	0.100	18.9	6.41	340.0	21.6	0.01	465	
	0830	11.48	0.105	19.1	6.42	342.0	31.8	0.01	459	
	0835	11.48	0.100	19.0	6.42	337.0	22.4	0.01	454	
	0840	11.48	0.100	19.1	6.42	345.0	45.5	0.01	405	
	0845	11.48	0.100	19.2	6.43	345.0	23.2	0.01	372	
	0850	11.48	0.095	19.3	6.45	345.0	20.7	0.01	341	
	0855	11.48	0.100	19.3	6.45	343.0	45.3	0.01	319	
	0900	11.48	0.100	19.5	6.45	345.0	48.7	0.01	286	
	0905	11.48	0.115	19.5	6.47	345.0	>50.0	0.01	256	
	0910	11.48	0.115	19.7	6.48	342.0	30.2	0.01	228	
	0915	11.48	0.090	20.6	6.49	338.0	23.8	0.01	206	
	0920	11.48	0.090	20.3	6.48	338.0	20.0	0.01	188	
	0925	11.48	0.085	20.3	6.50	337.0	20.9	0.01	174	
	0930	11.48	0.090	20.1	6.50	337.0	19.4	0.01	160	
	0935	11.48	0.090	20.4	6.52	337.0	18.4	0.01	142	
	0940	11.48	0.090	20.6	6.51	339.0	18.8	0.01	126	
	0945	11.48	0.080	20.7	6.51	338.0	19.5	0.01	119	
	0950	11.48	0.085	20.4	6.51	337.0	18.4	0.01	117	
	0955	11.48	0.090	20.1	6.50	332.0	>50.0	0.01	106	
	1000	11.48	0.095	20.0	6.52	331.0	20.6	0.01	101	
	1005	11.48	0.110	19.9	6.52	328.0	40.5	0.01	96	
	1010	11.48	0.110	19.9	6.53	328.0	37.5	0.01	87	
	1015	11.49	0.105	19.9	6.54	328.0	35.0	0.01	83	
	1020	11.49	0.100	20.2	6.54	330.0	38.0	0.01	75	

SIGNATURE(S) [illegible]

NWS EARLE, NJ

LOW FLOW PURGE DATA SHEET

Halliburton NUS CORPORATION

PROJECT NUMBER: 5803

WELL I.D.: 29GW~~05~~02
DATE: 8/12/95

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	Temp. (Celcius)	pH (S.U.)	Cond. µS	DO (mg/L)	Sal. %	Turb. (NTU)	Comments
1025	11.50	0.095	20.6	6.53	332.0	22.7	0.01	75	
1030	11.50	0.095	20.3	6.54	330.0	22.9	0.01	81	
1035	11.50	0.090	20.9	6.56	330.0	23.2	0.01	71	
1040	11.50	0.090	21.0	6.55	331.0	27.0	—	—	
1045	11.51	0.085	21.4	6.54	333.0	>50.0	0.01	56	
1050	11.51	0.095	21.9	6.54	332.0	"	0.01	52	
1055	11.51	0.090	21.3	6.53	335.0	"	0.01	49	
1100	11.51	0.100	21.0	6.53	330.0	"	0.01	42	
1105	11.51	0.100	20.4	6.52	334.0	"	0.01	38	
1110	11.51	0.090	20.7	6.55	332.0	22.3	0.01	38	
1115	11.51	0.100	21.0	6.55	330.0	31.4	0.01	38	
~~1120~~ AS									
1115	END 5 GALLON PURGE								
1118	BEGIN SAMPLE COLLECTION								
1202	SAMPLE COMPLETED								
1209	POST SAMPLE PARAMETERS								
	11.50	0.110	21.5	6.50	322.0	47.8	0.01	38	

SIGNATURE(S) _____

APPENDIX D.b.

HYDROPUNCH SAMPLE LOGS

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other Hydro Punch

Page ____ of ____
Case # ____
By SJC

HP01

Project Site Name NWS EARLE
Project Site Number 5803
NUS Source No. 01HP01
Source Location SITE 1 - HYDROPUNCH

Total Well Depth: 9' (12.5') TPC	Purge Data						
Well Casing Size & Depth: 1 1/4" @ 9' (12.5)	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
	0	6.08	.062	16.4	999	4.70	0
Static Water Level: 7.5'	1	5.48	.045	16.0	540	4.60	0
One Casing Volume: 1.3 L	2	5.21	.040	16.2	999	5.55	0
Start Purge (hrs.): 0745	3	5.04	.039	16.1	999	5.60	0
End Purge (hrs.): 0815							
Total Purge Time (min.): 30							
Total Amount Purged (gal.): 3.9							
Monitor Reading: —							
Purge Method: BAILER 1" Ø							
Sample Method: " "							
Depth Sampled: —							

Sample Date & Time:	Sample Data					
6/13/95 @ 0820	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: SJ Conti	5.04	.039	16.1	999	5.60	0

Signature(s): SJ Conti

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:

TOP OF HYDROPUNCH ROD ≈ 3.5' STICKUP
AUGERS TO 5' (G.S)
DROVE HP TO 9' (G.S)

Analysis:	Preservative	Bottle Req	No Bottles		
TCL VOCS	HCL	40 ml VOA	2	✓	
TCL SVOCS	—	1 L Amber	3	✓	
TCL PESTICIDES	—	1 L "	2	✓	
EXPLOSIVES		1 L Amber	2	✓	
COD, TOC	H_2SO_4	1 L Glass	1	✓	
NITRATE/NITRITE		1 L PE	1	✓	
TPH	H_2SO_4	1 L Glass	1	✓	
BOD		1 L PE	1	✓	

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other Hydropunch

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE
Project Site Number 5803
NUS Source No. 01 HP 02
Source Location SITE 1 - HYDROPUNCH

	Purge Data						
Total Well Depth: 12.5 ~~TPVC~~ CAS							
Well Casing Size & Depth: 1¼" Φ @ 12.5	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
	0	4.92	.125	15.7	999	5.25	0
Static Water Level: 8.5 T CAS	1	4.74	.120	15.3	999	4.53	0
One Casing Volume: 1 L	2	4.45	.104	15.0	999	4.30	0
Start Purge (hrs.): 0855	3	4.37	.099	15.0	999	4.72	0
End Purge (hrs.): 0915							
Total Purge Time (min.): 20							
Total Amount Purged (gal.): 3							
Monitor Reading: 1" —							
Purge Method: ~~1~~ ½" TEF BAILER							
Sample Method: 1" TEF "							
Depth Sampled: —							

Sample Date & Time: 6-13-95 @ 1000	Sample Data					
	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: SJ Conti	4.37	.099	15.0	999	4.72	0

Signature(s): SJ Conti

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:

TOP OF HP RODS ≈ 3.5' STICKUP OF RODS.
AUGERS TO 5'
DROVE HP FROM 5' TO 9'
START TO PULL SAMPLE @ 1000 HRS.
END SAMPLING @ ≈ 1100 HRS

Analysis:	Preservative	Bottle Req	No Bottles		
TCL VOCS	HCL	40 ml VOA	2	✓	
TCL SVOCS	—	1 L Amber	3	✓	
TCL PESTICIDES	—	1 L "	2	✓	
~~TAL METALS~~	~~HNO3~~	~~1 L PE~~	~~1~~		
EXPLOSIVES		1 L Amber	2	✓	
COD, TOC	H_2SO_4	1 L Glass	1	✓	
NITRATE/NITRITE		1 L PE	1	✓	
TPH	H_2SO_4	1 L Glass	1	✓	
BOD		1 L PE	1	✓	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other Hydropunch

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE Project Site Number 5803
NUS Source No. 01HP03 Source Location SITE 1 - HYDROPUNCH

Total Well Depth: 12.5' T CAS	Purge Data						
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
1¼" ⌀ @ 12.5	0	4.82	.034	16.2	540	5.89	0
Static Water Level: 7.5' T CAS	1	4.90	.031	15.6	999	6.79	0
One Casing Volume: 1.3	2	4.91	.029	15.6	999	7.00	0
Start Purge (hrs.): 1040	3	4.92	.025	15.6	999	7.25	0
End Purge (hrs.): 1110							
Total Purge Time (min.): 30							
Total Amount Purged (gal.): 3.9							
Monitor Reading:							
Purge Method: 1" TEF BAILER							
Sample Method: " " "							
Depth Sampled: —							
Sample Date & Time:	Sample Data						
6-13-95 @ 1130	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: SJ Conti	4.91	.029	15.6	999	7.00	0	

Signature(s): SJ Conti

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
HSA TO 5'
DROVE HP FROM 5 TO 9 ±
≈ 3.5 STICK UP OF
WELL DEPTH 9' GR SUR
WL 4.5 GR SUR
DONE SAMPLING ≈ 1220 HRS

Analysis:	Preservative	Bottle Req	No Bottles		
TCL VOCS	HCL	40 ml VOA	2	✓	
TCL SVOCS	—	1 L Amber	3	✓	
TCL PESTICIDES	—	1 L "	2	✓	
~~TAL METALS~~	~~HNO3~~	~~1 L PE~~	~~1~~	~~—~~	NO METALS
EXPLOSIVES		1 L Amber	2	✓	
COD, TOC	H2SO4	1 L Glass	1	✓	
NITRATE/NITRITE		1 L PE	1	✓	
TPH	H2SO4	1 L Glass	1	✓	
BOD		1 L PE	1	✓	

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other Hydropunch

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE Project Site Number 5803
NUS Source No. 01HP04 Source Location SITE 1 - HYDROPUNCH

Total Well Depth: 8' GS	Purge Data						
Well Casing Size & Depth: 1¼" ϕ @ 8'	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
	0	4.88	.030	17.9	224	6.33	0
Static Water Level: 4.5' GR SUR	1	4.79	.029	17.3	734	5.96	0
One Casing Volume: 1 L	2	4.77	.029	17.1	564	6.67	0
Start Purge (hrs.): ~~1300 HRS~~ 1258 SJC	3	4.75	.029	17.0	999	7.10	0
End Purge (hrs.): 1310							
Total Purge Time (min.): 20							
Total Amount Purged (gal.): 3L							
Monitor Reading: —							
Purge Method: 1" TEFLON BAILER							
Sample Method: " " "			mS/cm			mg/l	%
Depth Sampled: —							
Sample Date & Time: 6/13/95 @ 1320	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: SJ Conti	4.75	.029	17.0	999	7.10	0	

Signature(s): SJ Conti

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
~~12'~~ SJC
BOTT 8' GR. SUR
WL 4.5' GR SUR.
HSA TO ≈ 4' ±
HP DRIVEN TO 8' FROM 2
KYLE LOST BAILER IN WELL
HAD TO MOVE.
1405 DONE SAMPLING

Analysis:	Preservative	Bottle Req	No Bottles		
TCL VOCS	HCL	40 ml VOA	2	✓	
TCL SVOCS	—	1 L Amber	3	✓	
TCL PESTICIDES	—	1 L "	2	✓	
~~TAL METALS~~	~~HNO3~~	~~1 L PE~~	~~1~~	~~—~~	
EXPLOSIVES		1 L Amber	2	✓	
COD, TOC	H_2SO_4	1 L Glass	1	✓	
NITRATE/NITRITE		1 L PE	1	✓	
TPH	H_2SO_4	1 L Glass	1	✓	
BOD		1 L PE	1	✓	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page _____ of _____
Case # _____
By SJC

Project Site Name NWS EARLE Project Site Number 5803
NUS Source No. 01HP05 Source Location SITE 1 - HYDROPUNCH

Total Well Depth: 7'± GSUR	Purge Data						
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
1¼" ϕ @ 7'	0	4.75	.044	17.6	430	3.96	0
Static Water Level: 4.9' G.SUR	1	4.70	.039	16.5	628	6.61	0
One Casing Volume: .6 L	2	4.67	.038	16.0	999	6.34	0
Start Purge (hrs.): 1450	3	4.63	.036	15.9	999	6.40	0
End Purge (hrs.): 1500							
Total Purge Time (min.): 10 min							
Total Amount Purged (gal.): 1.8							
Monitor Reading: _____							
Purge Method: 1" TEFLON BAILER							
Sample Method: " "							
Depth Sampled: ——							
Sample Date & Time:	Sample Data						
6/13/95 @ 1500	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: SJ Conti	4.63	.036	15.9	999	6.40	0	
Signature(s): SJ Conti	Observations / Notes: HSA TO 4'± GR SUR. HP BRAVEN TO ≈ 7' GR SUR						

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Analysis:	Preservative	Bottle Req	No Bottles		
TCL VOCS	HCL	40 ml VOA	3	✓	
TCL SVOCS	—	1 L Amber	3	✓	
TCL PESTICIDES	—	1 L "	2	✓	
~~TAL METALS~~	~~HNO3~~	~~1 L PE~~	~~1~~		NO METALS
EXPLOSIVES		1 L Amber	2	✓	
COD, TOC	H_2SO_4	1 L Glass	1	✓	
NITRATE/NITRITE		1 L PE	1	✓	
TPH	H_2SO_4	1 L Glass	1	✓	
BOD		1 L PE	1	✓	

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other Hydropunch

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE
Project Site Number 5803
NUS Source No. 01HP06
Source Location SITE 1 - HYDROPUNCH

Total Well Depth: 7' GSURF
Well Casing Size & Depth: 1¼" ϕ @ 7'
Static Water Level: 4.5' GR SUR
One Casing Volume: .7L
Start Purge (hrs.): 1500
End Purge (hrs.): 1530
Total Purge Time (min.): 30
Total Amount Purged (gal.): 2.1L
Monitor Reading: —
Purge Method: 1" TEFLON BAILER
Sample Method: " " "
Depth Sampled: —
Sample Date & Time: 6/13/95 @ 1545
Sampled By: SJ Conti
Signature(s): SJ Conti

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
0	4.70	.032	18.0	999	6.05	0
1	4.75	.029	17.5	999	6.83	0
2	4.78	.028	17.3	999	6.97	0
3	4.80	.028	17.2	999	6.00	0

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL
4.80	.028	17.2	999	6.00	0

Observations / Notes:
HSA to 4' ±
HP DRIVEN TO 7'
WL ≈ 4.5' From Gr Surface

Analysis:	Preservative	Bottle Req	No Bottles		
TCL VOCS	HCL	40 ml VOA	3	✓	
TCL SVOCS	—	1 L Amber	3	✓	
TCL PESTICIDES	—	1 L "	2	✓	
~~TAL METALS~~	~~HNO3~~	~~1 L PE~~	~~1~~	—	NO METALS
EXPLOSIVES		1 L Amber	2	✓	
COD, TOC	H2SO4	1 L Glass	1	✓	
NITRATE/NITRITE		1 L PE	1	✓	
TPH	H2SO4	1 L Glass	1	✓	
BOD		1 L PE	1	✓	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other Hydropunch

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE
Project Site Number 5803
NUS Source No. 01HP07
Source Location SITE 1 - HYDROPUNCH

Total Well Depth: 7.5' GS.
Well Casing Size & Depth: 1¼" ϕ @ 7.5' GS.
Static Water Level: 4.5 GS
One Casing Volume: .8 L
Start Purge (hrs.): 1635
End Purge (hrs.): 1650
Total Purge Time (min.): 15
Total Amount Purged (gal.): 2.4
Monitor Reading: ——
Purge Method: 1" BAILER TEFLON
Sample Method: "
Depth Sampled: ——
Sample Date & Time: 6-13-95 @ 1700
Sampled By: SJ Conti
Signature(s): SJ Conti

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
0	4.60	.041	18.2	875	6.80	0
1	4.58	.037	17.5	999	6.40	0
2	4.58	.040	17.3	999	6.60	0
3	4.57	.041	17.2	999	6.40	0

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL
4.57	.041	17.2	999	6.40	0

Observations / Notes:
HSA TO 4.0
DRIVE HP TO 7.5
WL ≈ 4.5' GS.

Analysis:	Preservative	Bottle Req	No Bottles		
TCL VOCS	HCL	40 ml VOA	3	✓	
TCL SVOCS	—	1 L Amber	3	✓	
TCL PESTICIDES	—	1 L "	2	✓	
~~TAL METALS~~	~~HNO3~~	~~1 L PE~~	~~1~~		NO METALS
EXPLOSIVES		1 L Amber	2	✓	
COD, TOC	H2SO4	1 L Glass	1	✓	
NITRATE/NITRITE		1 L PE	1	✓	
TPH	H2SO4	1 L Glass	1	✓	
BOD		1 L PE	1	✓	

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other Hydropunch

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE
Project Site Number 5803
NUS Source No. 01HP08
Source Location SITE 1 - HYDROPUNCH

	Purge Data						
Total Well Depth: 7'							
Well Casing Size & Depth: 1¼" ϕ @ 7'	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
	0	4.22	.151	17.1	—	5.00	0
Static Water Level: 4.5	1	4.69	.096	16.8	228	4.85	0
One Casing Volume: ≈ .8	2	4.67	.093	16.6	999	6.05	0
Start Purge (hrs.): 0840	3	4.65	.092	16.7	752	7.00	0
End Purge (hrs.):							
Total Purge Time (min.):							
Total Amount Purged (gal.):							
Monitor Reading: —							
Purge Method: 1" TEFLON BAILER							
Sample Method: " "							
Depth Sampled: —							

Sample Date & Time: 6-14-95 @	Sample Data					
	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: SJ Conti						

Signature(s): SJ Conti

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:

HSA TO 4'
DROVE HP TO 7' ±
WL AT 5' EVEN FROM GS. ROSE TO 4.5' FROM GS.

Analysis:	Preservative	Bottle Req	No Bottles		
TCL VOCS	HCL	40 ml VOA	3	✓	
TCL SVOCS	—	1 L Amber	3	✓	
TCL PESTICIDES	—	1 L "	2	✓	
~~TAL METALS~~	~~HNO3~~	~~1 L PE~~	~~1~~	~~—~~	NO METALS
EXPLOSIVES		1 L Amber	2	✓	
COD, TOC	H_2SO_4	1 L Glass	1	✓	
NITRATE/NITRITE		1 L PE	1	✓	
TPH	H_2SO_4	1 L Glass	1	✓	
BOD		1 L PE	1	✓	

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Monitoring Well Data
☐ Domestic Well Data
☐ Other _____

Page ____ of ____
Case # _____
By SJC

Project Site Name NWS EARLE Project Site Number 5803
NUS Source No. 04HP01-0508 Source Location SITE 4 - HYDROPUNCH

Total Well Depth: 8' 6S.	Purge Data						
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
1¼" ϕ @ 8'	0	6.21	.660	17.8	—	-4.52	.02
Static Water Level: 3.5	1	6.41	.655	17.8	—	~~10.40~~	.02
One Casing Volume: 1.3L	2	6.63	.705	17.4	—	-4.35	.03
Start Purge (hrs.): 1110 HRS	3	6.50	.715	17.2	—	-4.40	.03
End Purge (hrs.): 1125 HRS							
Total Purge Time (min.): 15							
Total Amount Purged (gal.): 3.9							
Monitor Reading: —							
Purge Method: 1" BAILER (TEFLON)							
Sample Method: " "							
Depth Sampled: —							

Sample Date & Time:	Sample Data					
6-14-95 @ 1130 HRS	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: SJ Conti						

Signature(s): SJ Conti

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:
HSA TO 5'
DROVE HP TO 8'
WL ≈ 3.5 AT TIME OF PURGEING

Analysis:	Preservative	Bottle Requir	No Bottles		
TCL VOCS	HCL	40 ml Vial	3		
TCL SVOCS	—	1 L Amber	2 OR 3		Depending on Volume of Water @ Location
Ammonia COD/TOC Phosphate	H_2SO_4	1 L Glass	2		
Nitrate Turb/Cl Nitrite	—	1 L PE	1		
BOD	—	1 L PE	1		

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other HYDROPUNCH

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE Project Site Number 5803
NUS Source No. 04HP02-1013 Source Location SITE 4 - HYDROPUNCH

Total Well Depth: 13'
Well Casing Size & Depth: 1¼" Φ @ 13'
Static Water Level: 6.5
One Casing Volume: 1.7
Start Purge (hrs.): 0835
End Purge (hrs.):
Total Purge Time (min.): 20
Total Amount Purged (~~gal.~~): 5.1 L
Monitor Reading: 0
Purge Method: 1" TEF BAILER
Sample Method: " "
Depth Sampled: ←

Purge Data

Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
0	5.81	.256	15.7	607	3.49	.01
1	6.04	.236	15.5	274	3.13	.00
2	6.04	.236	15.2	223	3.11	.00
3	6.06	.238	15.0	223	2.63	.00

Sample Date & Time: 6/19/95 @ 0900
Sampled By: SJ Conti
Signature(s): SJ Conti

Sample Data

pH	S.C.	Temp. (°C)	TURB	DO	SAL
6.06	.238	15.0	223	2.63	0.00

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
HSA TO : 10
DRIVE HP : 10 TO 13
WL :

1.7
3
5.1

Analysis:	Preservative	Bottle Requir	No Bottles		
TCL VOCS	HCL	40 ml Vial	3	✓	
TCL SVOCS	—	1 L Amber	2 ok	✓	Depending on volume of water @ location
Ammonia Phosphorus COD/TOC	H_2SO_4	1 L Glass	2	✓	
Nitrate Nitrite Turb/Cl	—	1 L ~~PE~~ Amber	1	✓	
BOD	—	1 L ~~PE~~ Amber	1	✓	

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other HYDROPUNCH

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE
Project Site Number 5803
NUS Source No. 04HP02-2528
Source Location SITE 4 - HYDROPUNCH

Total Well Depth: 28' G.S	Purge Data						
Well Casing Size & Depth: 1¼" Φ @ 28'	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
	0	5.57	.073	17.2	—	6.61	0.00
Static Water Level: 22.5' GS.	1	5.57	.081	16.0	—	6.53	0.00
One Casing Volume: 1.5L	2	5.60	.083	15.3	—	7.24	0.00
Start Purge (hrs.): 0955	3	5.63	.085	14.9	—	8.00	0.00
End Purge (hrs.): 1015	4	5.65	.087	14.8	—	8.25	0.00
Total Purge Time (min.): 20							
Total Amount Purged (~~gal.~~): 6.0L							
Monitor Reading: 0							
Purge Method: 1" TEF BAILER							
Sample Method: " "							
Depth Sampled: —							
Sample Date & Time: 6-19-95 @ 1020 HRS	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: SJ Conti	5.65	.087	14.8	~~8.25~~ NA (SJC)	8.25	0.00	

Signature(s): SJ Conti

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:

HSA TO : 25'
DRIVE HP : 25-28
WL : 22.5 UPON PURGING

1.5
4
6.0

Analysis:	Preservative	Bottle Requir	No Bottles		
TCL VOCS	HCL	40 ml Vial	3	✓	
TCL SVOCS	—	1 L Amber	2 OK	✓	Depending on Volume of water @ Location
Ammonia Phosphorus COD/TOC	H2SO4	1 L Glass	2	✓	
Nitrate Nitrite Turb/Cl	—	1 L ~~PE~~ Amber	1	✓	
BOD	—	1 L ~~PE~~ Amber	1	✓	

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [ ] Monitoring Well Data
- [x] Domestic Well Data
- [ ] Other _____

Page ____ of ____

Case # _____

By SJC

Project Site Name NWS EARLE Project Site Number 5803

NUS Source No. 04HP03-1518 Source Location SITE 4 - HYDROPUNCH

	Purge Data						
Total Well Depth: 17.5							%
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
1¼" Φ @ 17.5	0	5.72	.093	15.3	999	6.11	0
Static Water Level: 12'±	1	5.86	.097	14.5	999	4.40	0.00
One Casing Volume: 1.5L	2	5.83	.090	14.1	999	6.00	0.00
Start Purge (hrs.): 1610	3	5.79	.087	13.9	999	6.03	0.00
End Purge (hrs.): 1625							
Total Purge Time (min.): 15							
Total Amount Purged (gal.): 4.5							
Monitor Reading: _____							
Purge Method: 1" TEFLON BAILER							
Sample Method: " "			mS/cm			mg/l	
Depth Sampled:							

Sample Date & Time: 6/15/95 @ 1630	Sample Data					
	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: SJ Conti						

Signature(s): SJ Conti

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:

HSA TO 15
DRIVE HP 15-18
WL = 12' GR SUR.

1720 DONE FILLING BOTTLES

Analysis:	Preservative	Bottle Requir	No Bottles		
TCL VOCS	HCL	40 ml Vial	3		
TCL SVOCS	—	1 L Amber	2 OR [redacted]		Depending on volume of water @ location
Ammonia COD/TOC Phosphate	H_2SO_4	1 L Glass	2		
Nitrate Turb/Cl Nitrite	—	1 L PE	1		
BOD	—	1 L PE	1		

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other HYDROPUNCH

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE Project Site Number 5803
NUS Source No. 04HP03-2730 Source Location SITE 4 - HYDROPUNCH

	Purge Data						
Total Well Depth: 30	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Well Casing Size & Depth: 1¼" Φ @ 30	0	6.18	.111	11.7	999	3.87	0
Static Water Level: 13.5	1	6.33	.114	11.6	999	4.62	0.00
One Casing Volume: 1L	2	6.37	.116	11.6	999	5.65	0.00
Start Purge (hrs.): 0756	3	6.40	.118	11.4	999	6.54	0.00
End Purge (hrs.): 0805							
Total Purge Time (min.): 15							
Total Amount Purged (gal.): 3L							
Monitor Reading: 0							
Purge Method: 1" TEF BAILER							
Sample Method: " "							
Depth Sampled: —							

Sample Date & Time:	Sample Data					
6/16/95 @ 0810	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: SJ Conti	6.40	.118	11.4	999	654	0.00

Signature(s): SJ Conti

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:

HSA TO : 25
DRIVE HP : 27-30
WL : 13.5 ON 6/16/95

USED SCREEN OPENING FOR WELL VOLUME
DONE SAMPLING @ 0940

Analysis:	Preservative	Bottle Requir	No Bottles		
TCL VOCs	HCL	40 ml Vial	3	✓	
TCL SVOCs	—	1 L Amber	2 OR 3	✓	Depending on volume of water @ Location
Ammonia, Phosphorus, COD/TOC	H_2SO_4	1 L Glass	2	✓	
Nitrate, Nitrite, Turb/Cl	—	1 L ~~PE~~ Amber	1	✓	
BOD	—	1 L ~~PE~~ Amber	1	✓	
				✓	
			out of PE		

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other HYDROPUNCH

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE Project Site Number 5803
NUS Source No. 04HP03-3942 Source Location SITE 4 - HYDROPUNCH

Total Well Depth: 42	Purge Data						
Well Casing Size & Depth: 1¼" Φ @ 42'	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
	0	4.89	.025	16.1	—	-1.77	0.00
Static Water Level: 31' NOT STATIC	1	4.81	.024	15.4	—	.56	0.00
One Casing Volume: ~1L	2	4.81	.025	15.3	—	.88	0.00
Start Purge (hrs.): 105	3	4.88	.027	15.2	—	-3.47	0.00
End Purge (hrs.): 1040	4	4.85	.028	15.1	—	-3.00	0.00
Total Purge Time (min.): 25							
Total Amount Purged (gal.): 4							
Monitor Reading: 0							
Purge Method: 1" TEF BAILER							
Sample Method: "							
Depth Sampled: —							

Sample Date & Time: 6/16/95 @ 1045	Sample Data					
	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: SJ Conti	4.85	.028	15.1	—	-3.00	0.00

Signature(s): SJ Conti

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:

OLIVE BRN SILTY SAND VERY TURBID TO START

HSA TO : 39'
DRIVE HP : 39-42
WL : 31' UPON MEASURING AFTER POINT WAS DRIVEN

USED SCREEN LENGTH (3') TO CAL WELL VOL.

Analysis:	Preservative	Bottle Requir	No. Bottles	✓ IF TAKEN
TCL VOCS	HCL	40 ml Vial	3	
TCL SVOCS	—	1 L Amber	2 OR 1	Depending on volume of water & location
Ammonia, Phosphorus, COD/TOC	H_2SO_4	1 L Glass	2	
Nitrate, Nitrite, Turb, Cl	—	1 L PE	1	
BOD	—	1 L PE	1	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other HYDROPUNCH

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE Project Site Number 5803
NUS Source No. 04HP04 Source Location SITE 4 - HYDROPUNCH

Total Well Depth:	Purge Data						
Well Casing Size & Depth: 1¼" Φ @	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
	0						
Static Water Level:	1	5.08	0.076	19.0	222	1.71	
One Casing Volume: 1L	2	5.03	0.080	18.6	360	2.92	
Start Purge (hrs.): 13:05	3	5.09	0.088	16.4	OFFSCL	3.87	
End Purge (hrs.): 13:50							
Total Purge Time (min.): 45							
Total Amount Purged (gal.): 3 L							
Monitor Reading: 0							
Purge Method: 1" TEF BAILER							
Sample Method: "							
Depth Sampled: —							
Sample Date & Time: 13:50	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: JB Holden	5.09	.088	16.4	—	3.87		

Signature(s):

Observations / Notes:

HSA TO : 21.6 13:05
DRIVE HP :
WL : 19.5
14:50
Drive 2nd HP to get better Recovery / more WATER

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Analysis:	Preservative	Bottle Requir	No Bottles		
TCL VOCS	HCL	40 ml Vial	3	✓	
TCL SVOCS	—	1 L Amber	2 OR	✓	Depending on volume of water @ Location
Ammonia Phosphorus COD/TOC	H2SO4	1 L Glass	2	✓	
Nitrate Nitrite Turb/Cl	—	1 L ~~PE~~ Amber	1	✓	
BOD	—	1 L ~~PE~~ Amber	1	✓	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other HYDROPUNCH

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE Project Site Number 5803
NUS Source No. 04HP05 Source Location SITE 4 - HYDROPUNCH

Total Well Depth: 18'	Purge Data						
Well Casing Size & Depth: 1¼" Φ @ 18'	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
	1	5.36	0.080	17.5	400	6.23	—
Static Water Level: 15'	2	5.19	0.072	17.8	860	5.41	—
One Casing Volume: SAY 1L	3	5.23	0.075	18.4	850	5.34	—
Start Purge (hrs.): 1550							
End Purge (hrs.): 16:10							
Total Purge Time (min.): 20							
Total Amount Purged (gal.): 3 L							
Monitor Reading: 0							
Purge Method: 1" TEF BAILER							
Sample Method: "							
Depth Sampled: "							

Sample Date & Time: 16:10	Sample Data					
	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: SJ Conti	5.23	.075	18.4	850	5.34	—

Signature(s): SJ Conti

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
HSA TO : 14.5
DRIVE HP : 17.2 , 18.7 (2nd HP)
WL : 15 ~~15.0~~ 15.6
Re Drove to 18'
WL @ 15'

Analysis:	Preservative	Bottle Requir	No Bottles		
TCL VOCS	HCL	40 ml Vial	3	✓	
TCL SVOCS	—	1 L Amber	2 OR 3	✓	Depending on Volume of water & Location
Ammonia COD/TOC Phosphorus	H2SO4	1 L Glass	2	✓	
Nitrate Turb/Cl Nitrite	—	1 L ~~PE~~ Amber	1	✓	
BOD	—	1 L ~~PE~~ Amber	1	✓	

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other HYDROPUNCH

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE
Project Site Number 5803
NUS Source No. 05HP01
Source Location SITE 5 HYDROPUNCH

Total Well Depth: 25'	Purge Data						
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
1¼" Φ @ 25'	0	4.52	.536	14.5	—	.20	.02
Static Water Level: 22.4	1	4.66	.492	15.4	—	4.06	.02
One Casing Volume: ≈ .8L	2	4.70	.407	15.2	228	5.70	.01
Start Purge (hrs.): 0930	3	4.68	.422	15.4	363	6.02	.01
End Purge (hrs.): 0955							
Total Purge Time (min.): 25							
Total Amount Purged (gal.): 2.4L							
Monitor Reading: 0							
Purge Method: 1" TEF. BAILER							
Sample Method: " "							
Depth Sampled: —							

Sample Date & Time:	Sample Data					
6/15/95 @ 1000	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: SJ Conti	4.68	.422	15.4	363	6.02	.01

Signature(s): SJ Conti

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Observations / Notes:

HSA TO 22
DROVE HP 22 TO 25
WL ≈ 22.4 GSWR.

OLIVE BRN COLOR

RECHARGE IS SLOW AFTER 3rd VOLUME - ALMOST DRY
BUT MADE ENOUGH WATER FOR VOAS

Analysis:	Preservative	Bottle Req.	No. of Bottles	✓ IF TAKEN
TCL VOCs	HCl	40 ml VOA	3	✓

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other HYDROPUNCH

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE Project Site Number 5803
NUS Source No. 05HP02 Source Location SITE 5 HYDROPUNCH

	Purge Data						
Total Well Depth: 25'							
Well Casing Size & Depth: 1¼" Φ @ 25'	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
	0	4.73	.205	15.7	—	-.86	0.00
Static Water Level: 21.5	1	5.37	.318	16.1	965	1.51	0.01
One Casing Volume: 1L	2	5.36	.297	15.7	945	1.80	0.01
Start Purge (hrs.): 1040	3	5.29	.262	15.7	719	2.40	0.00
End Purge (hrs.): 1055							
Total Purge Time (min.): 15							
Total Amount Purged (gal.): 3L							
Monitor Reading: 0							
Purge Method: 1" TEF BAILER							
Sample Method: " "							
Depth Sampled: —							

Sample Date & Time: 6/15/95 @ 1100	Sample Data					
	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: SJ Conti	5.29	.262	15.7	719	2.40	0.00

Signature(s): SJ Conti

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
HSA TO 22
Drive HP 22-25
WL = 21.5 Gr Sur.
SLIGHT ODOR NOTICED (LANDFILL ODOR)

Analysis:	Preservative	Bottle Req.	No of Bottles	✓ if taken
TCL VOCs	HCl	40 ml VIALS	3	✓

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other HYDROPUNCH

Page ____ of ____
Case # ____
By ____

Project Site Name NWS EARLE Project Site Number 5803
NUS Source No. 05H03 Source Location SITE 5 HYDROPUNCH

Total Well Depth: 25'	Purge Data						
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	TURB	DO mg/l	SAL%
1¼" ϕ @ 25'	0	4.74	.259	17.1	999	-1.29	.01
Static Water Level: 19.5	1	4.67	.244	17.3	—	3.00	.00
One Casing Volume: 1.5L	2	4.65	.240	16.9	517	.52	.00
Start Purge (hrs.): 1140	3	4.61	.234	17.0	228	1.43	.00
End Purge (hrs.): 1200							
Total Purge Time (min.): 20							
Total Amount Purged (gal.): 4.5							
Monitor Reading: 0							
Purge Method: 1" TEFLON BAILER							
Sample Method: " "							
Depth Sampled: —							

Sample Date & Time:	Sample Data					
6/15/95 @ 1205	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: SJ Conti	4.61	.234	17.0	228	1.43	0.00

Signature(s): SJ Conti

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
HSA TO: 22'
DRIVE HP: 25'
WL: 19.5

Analysis:	Preservative	Bottle Req	No of Bottles	✓ if taken
TCL VOCs	HCL	40 ml VIAL	3	✓

HALLIBURTON NUS
Environmental Corporation

05HP04

SAMPLE LOG SHEET

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other HYDROPUNCH

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE
Project Site Number 5803
NUS Source No. 05HP04
Source Location SITE 5 HYDROPUNCH

Total Well Depth:	Purge Data						
Well Casing Size & Depth: 1¼"Φ @	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
	0	5.17	.083	17.4	999	2.15	.00
Static Water Level: 22'±	1						
One Casing Volume: 1.0 L	2			NA			
Start Purge (hrs.): 1250	3						
End Purge (hrs.): 1305							
Total Purge Time (min.): 15							
Total Amount Purged (gal.): 1 L							
Monitor Reading: 0							
Purge Method: 1"Φ TEFLON BAILER							
Sample Method: " "							
Depth Sampled: —							

Sample Date & Time:	Sample Data					
6/15/95 @ 1310	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: SJ Conti	5.17	.083	17.4	999	2.15	.00

Signature(s): SJ Conti

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
HSA : 22'
DROVE HP : 25.5
WL : 22 ± RISING SLOWLY

WENT DRY AFTER 1 LITER
WILL SAMPLE UPON REC.

Analysis:	Preservative	Bottle Req	No Bottles	✓ if TAKEN
TCL VOCs	HCL	40ml VIAL	3	✓

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other HYDROPUNCH

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE
Project Site Number 5803
NUS Source No. 05HP05
Source Location SITE 5 HYDROPUNCH

Total Well Depth:	Purge Data						
Well Casing Size & Depth: 1 1/4" Φ c	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
	0	4.80	.069	15.1	999	-.53	.00
Static Water Level: 21.6	1	4.92	.073	15.4	926	2.54	.00
One Casing Volume: 1.3	2	4.95	.071	15.4	999	3.00	.00
Start Purge (hrs.): 1420	3	4.94	.070	15.6	999	3.10	.00
End Purge (hrs.): 1440							
Total Purge Time (min.): 20							
Total Amount Purged (gal.): 3.9							
Monitor Reading: — 0							
Purge Method: 1" TEFLON BAILER							
Sample Method: " "							
Depth Sampled: —							
Sample Date & Time: 6/15/95 @ 1445	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: SJ Conti	4.94	.070	15.6	999	3.10	.00	

Signature(s): SJ Conti

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
HSA TO : 22
DRIVE HP : 22-26
WL = : 21.6

Analysis:	Preservative	Bottle Req.	No Bottles	✓ if Taken
TCL VOCs	HCL	40 ml VIAL	3	✓

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other HYDROPUNCH

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE Project Site Number 5803
NUS Source No. 05HP06 Source Location SITE 5 - HYDROPUNCH

Total Well Depth: 25'	Purge Data						
Well Casing Size & Depth: 1¼" Φ @ 25'	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
	0						
Static Water Level: 24'	1						
One Casing Volume: ~2	2			NA			
Start Purge (hrs.): —	3						
End Purge (hrs.): —							
Total Purge Time (min.): —							
Total Amount Purged (gal.): —							
Monitor Reading: 0							
Purge Method: —							
Sample Method: 1" TEFLON BAILER							
Depth Sampled: —							
Sample Date & Time: 6/15/95 @ 0715	Sample Data						
	pH	S.C.	Temp. (°C)	TURB	DO	SAL	
Sampled By: SJ Conti							

Signature(s): SJ Conti

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:

HSA TO 22' GR SUR
HP 22 → 25
WL 24' ON 6/15/95

WAS ABLE TO GET VOAS THEN BAILED DRY.

DID NOT TAKE PARAMETERS DUE TO SMALL AMT OF WATER IN WELL AND DUE TO LOW RECHARGE RATE

Analysis:	Preservative	Bottle Req	No of Bot	✓	
TCL VOCS	HCL	40 ml VOAS	3	✓	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ Monitoring Well Data
☐ Domestic Well Data
☒ Other Hydropunch

Page ____ of ____
Case # ____
By SJC

Project Site Name NWS EARLE Project Site Number 5803
NUS Source No. 05HP07 Source Location SITE 5 HYDROPUNCH

	Purge Data						
Total Well Depth: 25							
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	TURB	DO	SAL
1¼" @ 25'	0	4.04	.780	12.9	—	.02	.03
Static Water Level: 22'	1	4.11	.785	13.0	999	2.90	.03
One Casing Volume: .8L	2	4.12	.800	12.9	999	2.65	.03
Start Purge (hrs.): 0815	3	4.14	.805	12.9	999	2.89	.03
End Purge (hrs.): 0835							
Total Purge Time (min.): 20							
Total Amount Purged (gal.): 2.4							
Monitor Reading: 0							
Purge Method: 1" TEF BAILER							
Sample Method: " "							
Depth Sampled:							

Sample Date & Time:	Sample Data					
6/15/95 @ 0840	pH	S.C.	Temp. (°C)	TURB	DO	SAL
Sampled By: SJ Conti	4.14	.805	12.9	999	2.89	.03

Signature(s): SJ Conti

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Observations / Notes:
HSA TO 22
DRIVE HP 22-25
WL = 22'

Analysis:	Preservative	Bottle Req.	No of Bottles	V IF TAKEN.
TCL VOCs	HCL	40 ml VOA	3	✓

SAMPLE LOG SHEET

Halliburton NUS CORPORATION

Page _____ of _____

- ☐ Spring
- ☐ Lake
- ☐ Stream
- ☐ Lagoon/Pond
- ☐ Other_____

Case No. _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 (5803)

HNUS Source No. Q - HP-02 Source Location Site Q

Sample Method: Disposable Bailer	Composite Sample Data		
	Sample	Time	Color/Description
Depth Sampled: ~ 12'-13' bgs			
Sample Date & Time: 12-5-95 @ 1010			
Sampled By: Paul Davis		N.A.	
Signature(s): [signature]			
Type of Sample			
☒ Low Concentration			
☐ High Concentration			
☒ Grab			
☐ Composite			
☐ Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc)
Olive green	very Fine sand

Analysis:	Observation/Notes
TCL VOC	No HNU readings
TCL SVOC	Temporary well
TPH	No parameters were collected
	well was not purged
	T.D. = 20' bgs
	Screen = 10'-20' bgs
	W.L. = 12' bgs

	Organic	Inorganic
Traffic Report No.		
Tag No.		
AB No.	2505133002	
Date Shipped	12-5-95	
Time Shipped	1800	
Laboratory	Lancaster	
Volume		

SAMPLE LOG SHEET

Halliburton NUS CORPORATION

Page _____ of _____

- ☐ Spring
- ☐ Lake
- ☐ Stream
- ☐ Lagoon/Pond
- ☒ Other Groundwater

Case No. _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 (5803)

HNUS Source No. Q-HP-03 Source Location Site Q

Sample Method: Disposable Bailer	Composite Sample Data		
	Sample	Time	Color/Description
Depth Sampled: ≈ 6' bgs			
Sample Date & Time: 12-5-95 @ 0945			
Sampled By: Paul Davis			
Signature(s): Paul D.			
Type of Sample			
☒ Low Concentration			
☐ High Concentration			
☒ Grab			
☐ Composite			
☐ Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc)
Olive	Slightly turbid

Analysis:	Observation/Notes
TCL VOC	No HNU readings
TCL SVOC	(Temporary well)
TPH	No parameters were collected
	well was not purged
	T.D = 10' bgs
	Screen = 4'-10' bgs
	W.L. = 6' bgs

	Organic	Inorganic
Traffic Report No.		
Tag No.		
AB No.		
Date Shipped	2505133002	
Time Shipped	12-5-95	
Laboratory	1800	
Volume	Lancaster	

SAMPLE LOG SHEET

Halliburton NUS CORPORATION

Page _____ of _____

- ☐ Spring
- ☐ Lake
- ☐ Stream
- ☐ Lagoon/Pond
- ☒ Other Groundwater

Case No. _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 (5803)

HNUS Source No. Q-HP-04 Source Location Site Q

Sample Method: Disposable bailer	Composite Sample Data		
	Sample	Time	Color/Description
Depth Sampled: 5'-6' bgs			
Sample Date & Time: 12-5-95 @ 0830			
Sampled By: Paul Davis			
Signature(s): Paul Davis		N.A.	
Type of Sample			
☒ Low Concentration			
☐ High Concentration			
☒ Grab			
☐ Composite			
☐ Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc)
olive green	slightly turbid

Analysis:	Observation/Notes
TCL VOC	(Temporary well)
TCL SVOC	NO purging
TPH	NO parameters were collected
	T.D = 10' bgs
	Screen = 4'-10' bgs
	w.l. = ≈ 5' bgs

	Organic	Inorganic
Traffic Report No.		
Tag No.		
AB No.	2505133002	
Date Shipped	12-5-95	
Time Shipped	1800	
Laboratory	Lancaster	
Volume		

APPENDIX D.c.

AQUEOUS SAMPLE LOG

SAMPLE LOG SHEET

NUS CORPORATION
A Halliburton Company

SAMPLE LOG SHEET

- [ ] Monitoring Well Data
- [ ] Domestic Well Data
- [x] Other Septic Tank

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. AQW-01 Source Location Site 20

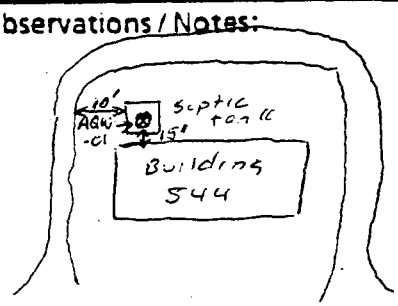
Total Well Depth: 8'	Purge Data				
Well Casing Size & Depth:	Volume	pH	S.C.	Temp. (°C)	Color & Turbidity
Static Water Level: 5'					
One Casing Volume:					
Start Purge (hrs.):					
End Purge (hrs.):					
Total Purge Time (min.):					
Total Amount Purged (gal.):					
Monitor Reading: No HNU readings above Background					
Purge Method:					
Sample Method:					
Depth Sampled:					

Sample Date & Time:	Sample Data			
8/5/95 0915	pH	S.C.	Temp. (°C)	Color & Turbidity
Sampled By: AS/CM				

Signature(s):

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Observations / Notes:



There were no HNU readings above background during samples. The site is an active building using the tank.

Analysis:	Preservative		Organic	Inorganic
TCL Volatiles	HCl	Traffic Report #		
TCL SVOC's	None	Tag #		
TAL Metals	HNO_3			
		AB #		
		Date Shipped		
		Time Shipped		
		Lab		
		Volume		

SCW-01 NOT SAMPLED NO SED IN TANK

SAMPLE LOG SHEET

Halliburton NUS CORPORATION

Page _____ of _____

- ☐ Spring
- ☐ Lake
- ☐ Stream
- ☐ Lagoon/Pond
- ☒ Other Septic Tank

Case No. _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 (5803)

HNUS Source No. 26-AQW CT Source Location Site 26

Sample Method: Direct fill	Composite Sample Data		
	Sample	Time	Color/Description
Depth Sampled: Surface			
Sample Date & Time: 12-5-95 @ 1320			
Sampled By: Paul Davis		N/A	
Signature(s): Paul Davis			
Type of Sample			
☒ Low Concentration			
☐ High Concentration			
☒ Grab	Sample Data		
☐ Composite	Color	Description: (Sand, Clay, Dry, Moist, Wet, etc)	
☐ Grab - Composite	Clear		

Analysis:

TCL VOC

Observation/Notes

HNU = 1.5 ppm (when lid was opened)

Septic Tank is 6' deep below slab. pad is 1 foot lower than surrounding area. (in a depression)

	Organic	Inorganic
Traffic Report No.		
Tag No.		
AB No.	2505133002	
Date Shipped	12-5-95	
Time Shipped	1800	
Laboratory	Lancaster	
Volume		

APPENDIX D.d.

SURFACE WATER SAMPLE LOGS

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other _____

Page ____ of ____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number 231 5803

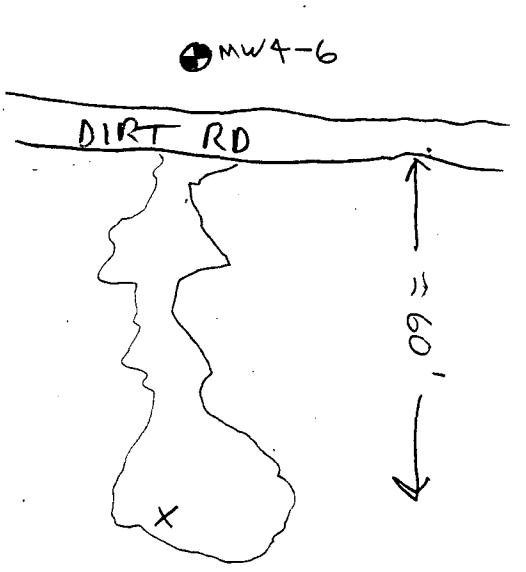
NUS Source No. 045W01 Source Location SITE 4

Sample Method: DIRECT FILL	S.U.	MS/CM	Sample Data		NTU
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled: SW	3.66	.051	14.5	LT TEA TO CLEAR	27
Sample Date & Time: 6·13·95 1040	MG/L DO	Eh	SALINITY		
Sampled By: KS/TS	1.53	N/A	0		

Signatures: [illegible]

Type of Sample

- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
VOC	HCL 4°C	3 40 ML VIALS
SVOC	4°C	3 L GLASS
METALS	HNO_3 4°C	1 L PE
N/N, TURB	4°C	1 L PE
CHLORIDE		
AMMONIA, PHOS	H_2SO_4	2 L GLASS
TOC, COD		
BOD	4°C	1 L PE
PCB	4°C	2 GLASS

NO FLOW NOTED PONDED WATER

≈6" DEEP MAX

SOME SOLIDS IN SAMPLE DUE TO LOW FLOW

ACROSS RD. FROM MW4-6

2 PHOTOS TAKEN
NEW ROLL

X = SAMPLE POINT

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

Page 1 of 1

Case # _____

By _____

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 04SW02 Source Location SITE 4

Sample Method: DIRECT FILL	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW	6.16	.352	18.6	CLEAR TO LT. RUST	38
Sample Date & Time: 8.21.95 1225	MG/L DO	Eh	SALINITY %		
Sampled By: KS	5.11	—	0.01		

Signature: [signature]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

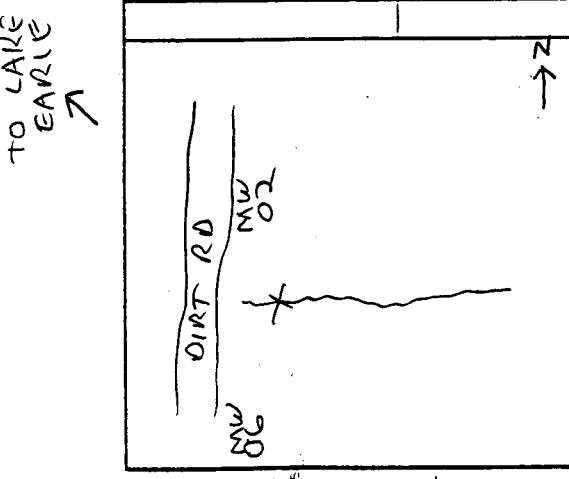
SMALL STREAM ≈ 2.5 GPM

RUST COLOR BOTTOM WITH IRON FLOCK

SAMPLE POINT MOVED FROM LOCATION IN WORK PLAN; PER JOHN MAYHEW (1ST POINT DRY) MOVED EAST ACROSS DIRT RD. ≈ 200'

STREAM IS 12 TO 18" WIDE AND 2" DEEP

Analysis:	Preservative	Bottle Req.



2 PHOTOS TAKEN

X = SW POINT 04SW02

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

Page _____ of _____

Case # _____

By _____

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other _____

Project Site Name NWS EARLE Project Site Number 231 5803

NUS Source No. 04SW02 Source Location SITE 4

Sample Method:	S.U.	MS/CM	Sample Data		NTU
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled:					
Sample Date & Time: 6.13.95 1110	MG/L DO	Eh	SALINITY		
Sampled By: RS / TS		N/A			

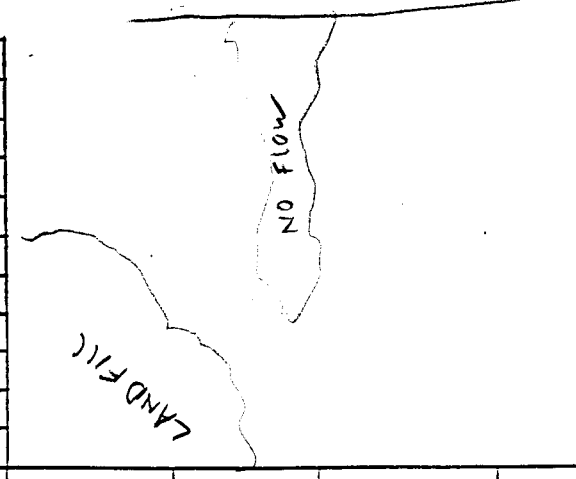
Signatures: [illegible]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

NO SAMPLE / NO FLOW

WETTED AREA (TO 04SW01 →)

MAY SAMPLE DURING STORM EVENT.



Analysis:	Preservative	Bottle Req.
VOC	HCL 4°C	40 ML VIALS
SVOC	4°C	3 L GLASS
METALS	HNO_3 4°C	1 L PE
N/N, TURB	4°C	1 L PE
CHLORIDE		
AMMONIA PHOS	H_2SO_4	2 L GLASS
TOC, COD		
BOD	4°C	1 L PE
PCB	4°C	2 L GLASS

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

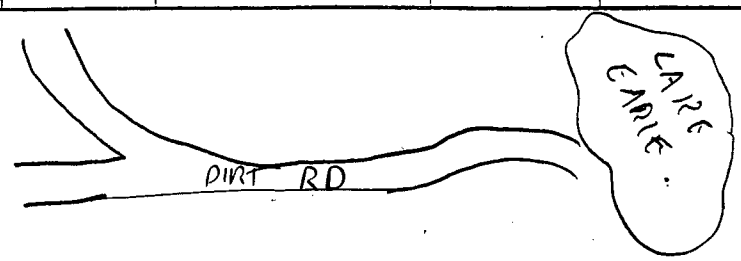
Project Site Name NWS EARLE Project Site Number 231 5803

NUS Source No. 04SW03 Source Location SITE 4

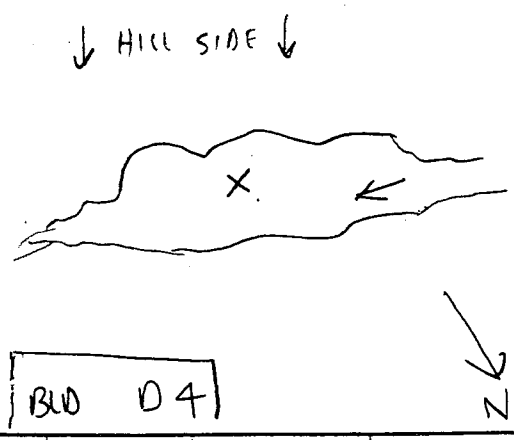
Sample Method: DIRECT FILL	S.U.	MS/CM	Sample Data		NTU
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled: SW	5.35	0.051	15.6		95
Sample Date & Time: 6.13.95 1220	Mg/L				
	DO	Eh	SALINITY		
Sampled By: KS/TS	2.48	N/A	0		

Signatures: [illegible]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
VOC	HCL 4°C	40 ML VIALS
SVOC	4°C	3 L GLASS
METALS	HNO_3 4°C	1 L PE
N/N, TURB	4°C	1 L PE
CHLORIDE		
AMMONIA, PHOS	H_2SO_4	2 L GLASS
TOC, COD		
BOD	4°C	1 L PE
PCB	4°C	2 L GLASS



PONDED AREA 6' W
6" DEEP
≈ 50' LONG
PONDED WATER
VERY LOW FLOW
≈ .25 GPM

2 PHOTOS TAKEN

X = SW

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

Page _____ of _____

Case # _____

By _____

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other _____

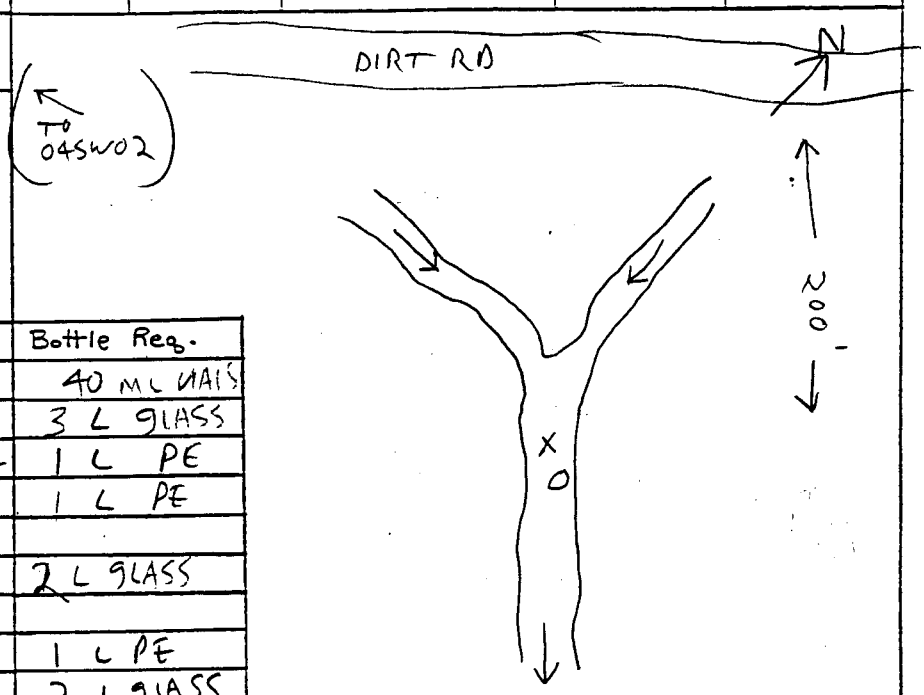
Project Site Name NWS EARLE Project Site Number 231 5803

NUS Source No. 04SW4B5 Source Location SITE 4

Sample Method: DIRECT FILL	S.U. / pH	MS/CM / S.C.	Sample Data: Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW	5.82	.181	15.1	LT TEA TO CLEAR	60
Sample Date & Time: 6.13.95 1125	mg/L DO	Eh	SALINITY		
Sampled By: KS / TS	10.35	N/A	0		
Signatures: KS / TS					

Type of Sample

- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
VOC	HCL 4°C	40 ML VIALS
SVOC	4°C	3 L GLASS
METALS	HNO_3 4°C	1 L PE
N/N, TURB	4°C	1 L PE
CHLORIDE		
AMMONIA PHOS	H_2SO_4	2 L GLASS
TOC, COD		
BOD	4°C	1 L PE
PCB	4°C	2 L GLASS

STREAM 8" WIDE
3" DEEP
FLOW ≈ 4 GPM

2 PHOTOS TAKEN

SED. SAMPLE ALSO TAKEN AT THIS LOCATION AT 1145

X SW
O SED

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Page ____ of ____
Case # _____
By _____

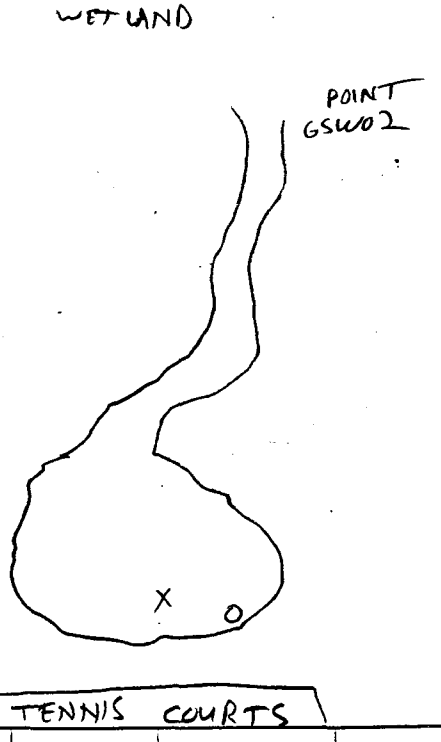
Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. GSW01 Source Location SITE 6

Sample Method: DIRECT FILL	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW	6.07	.381	17.3	yellow TO LT BRN	28
Sample Date & Time: 6.15.95 1225	MG/L DO	Eh	SALINITY		
Sampled By: RS / TS	3.57	NA	0.01		

Signatures: [illegible]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Analysis:	Preservative	Bottle Req.
SEE COC		



PONDED AREA (HEAD WATERS)

POND = 18' Ø

SED SAMPLE ALSO TAKEN

2 PHOTOS TAKEN
LOOKING TOWARDS POINT 02

X = SW
O = SED

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

Page _____ of _____

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number 231 5803

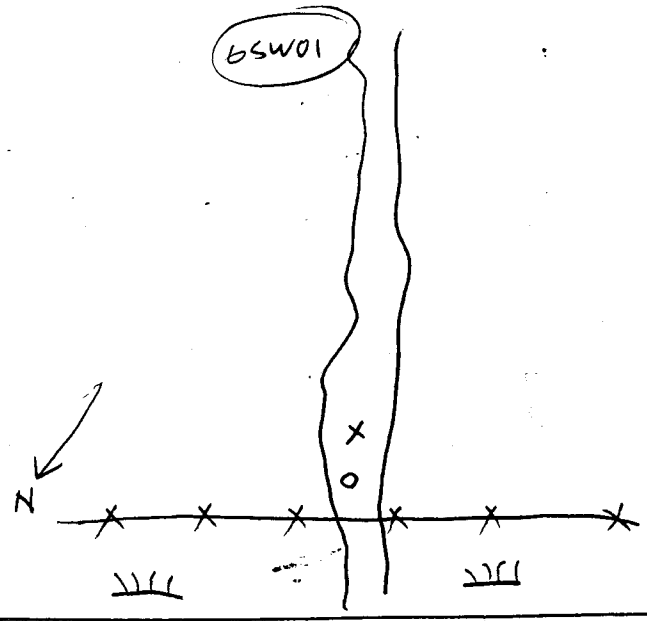
NUS Source No. 6SW02 Source Location SITE 6

Sample Method: DIRECT FILL	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW	5.93	.392	18.4	CLEAR TO LT. TEA	35
Sample Date & Time: 6.15.95 1155	mg/L DO	Eh	SALINITY		
Sampled By: KS/TS	3.70		.01		
Signatures:					

Type of Sample

☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite

Analysis:	Preservative	Bottle Req.
SEE COC		



FLOW EST. 15 GPM
STREAM = 2' W
4" DEEP

2 PHOTOS TAKEN

SED ALSO SAMPLED

X = SW
O = SED

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number 231 5803

NUS Source No. 135W 01 Source Location SITE 13

Sample Method: DIRECT FILL	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW					
Sample Date & Time: 6.14.95 1410	mg/L DO	Eh	SALINITY		
Sampled By: RS / TS					

Signatures: RS / S. [illegible]

NO FLOW / DRY

NEED TO SAMPLE DURING A STORM EVENT

Type of Sample

- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Analysis:	Preservative	Bottle Req.

SED POINT ALSO AT THIS LOCATION NOT SAMPLED

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number 231 5803

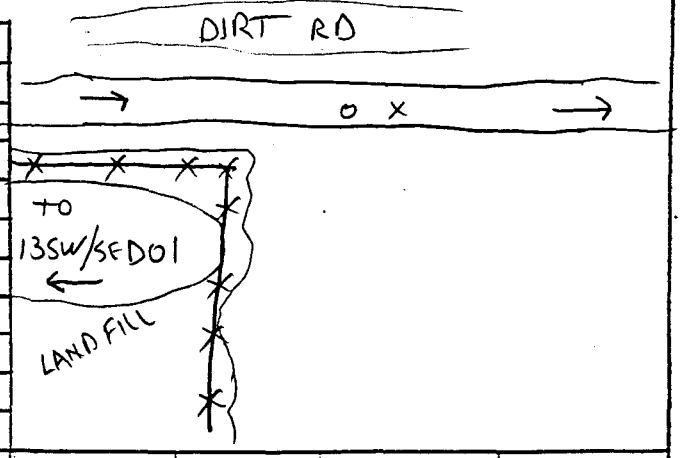
NUS Source No. 135W02 Source Location SITE 13

Sample Method: DIRECT FILL	S.U.	MS/CM	Sample Data		NTU
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled: SW	4.54	.076	14.0	CLEAR	1.0
Sample Date & Time: 6.14.95 1030	MG/L DO	Eh	SALINITY		
Sampled By: KS / TS	6.09	NA	0.00		

Signatures:

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Analysis:	Preservative	Bottle Req.
SEE COC	DATED	6.14.95



DUP-03 TAKEN

STREAM 3' WIDE
10" DEEP
LOW FLOW EST, 20 GPM

3 PHOTOS TAKEN

SED SAMPLE ALSO TAKEN

X = SW
O = SED

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. 13 SW03 Source Location SITE 13

Sample Method:	S.U.	MS/CM	Sample Data		NTU
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled:					
Sample Date & Time: 6.14.95 1300	mg/L				
	DO	Eh	SALINITY		
Sampled By: RS / TS					

Signatures: RS / S. [illegible]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

NO FLOW / DRY

NEED TO SAMPLE DURING A STORM EVENT

Analysis:	Preservative	Bottle Req.

SED POINT AT THIS LOCATION NOT SAMPLED

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

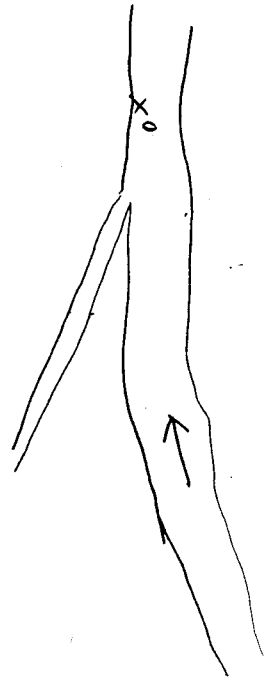
Page _____ of _____
Case # _____
By _____

Project Site Name NWS EARLE Project Site Number 231 5803
NUS Source No. 155W01 Source Location SITE 15

Sample Method: DF	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW	5.45	.490	16.0	CLEAR	2
Sample Date & Time: 6.16.95 0815	mg/L DO	Eh	SALINITY		
Sampled By: KS & TS	2.61	NA	0.02		

Signatures: K-J S [illegible]

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite



BD
R4B

Analysis:	Preservative	Bottle Req.
SEE COC		

SED ALSO SAMPLED
STREAM 3' W
3" DEEP
LOW FLOW ≈ 3 GPM

TO BG22W
GATE

2 PHOTOS TAKEN

X = SW
O = SED

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number 231 5803

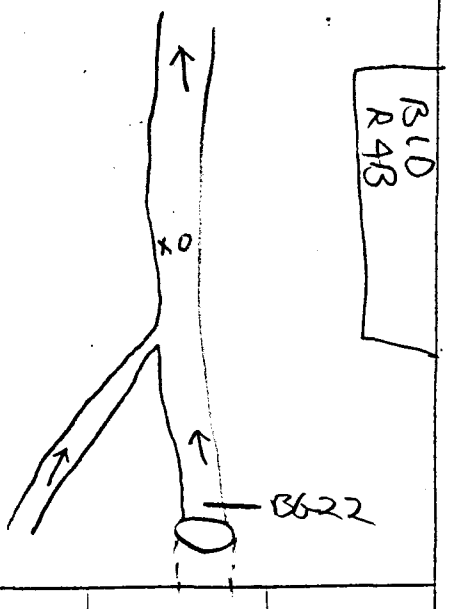
NUS Source No. 15SW02 Source Location SITE 15

Sample Method: DF	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW	5.17	.588	16.5	CLEAR	5
Sample Date & Time: 6.16.95 0905	mg/L DO	Eh	SALINITY		
Sampled By: KS/TS	4.14	NA	0.02		

Signature: KS/TS

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Analysis:	Preservative	Bottle Req.
SEE COC		



STREAM ≈ 4' W WITH
2' OF WATER
1" DEEP
LOW FLOW ≈ 1.5 GPM

GATE

2 PHOTOS TAKEN

SED ALSO TAKEN

X = SW
O = SED

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number 231 5803

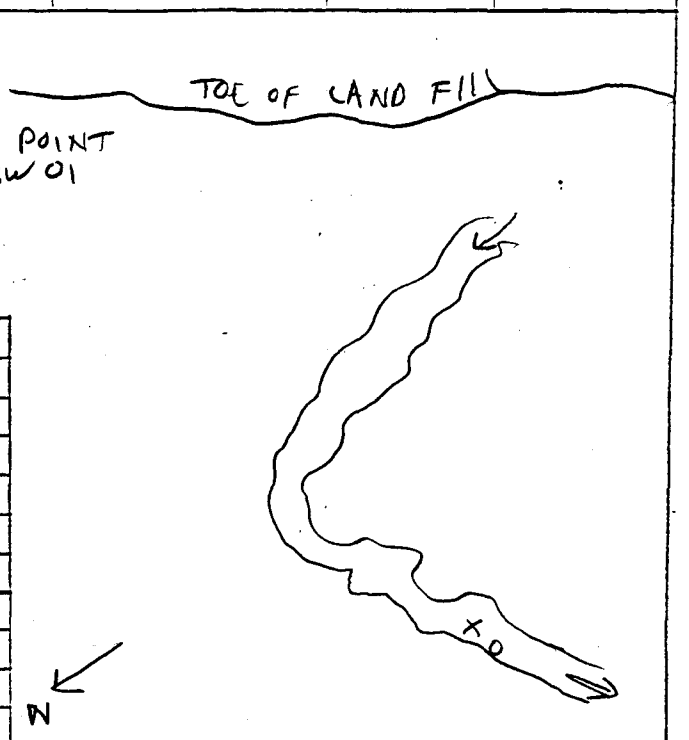
NUS Source No. 175W02 Source Location SITE 17

Sample Method: DIRECT FILL	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW	6.70	.414	18.7	LT TEA COLOR	89
Sample Date & Time: 6.15.95 1500	mg/L DO	Eh	SALINITY	TO BRN	
Sampled By: KS/TS	0.86	NA	0.01		

Signature: KS/TS

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Analysis:	Preservative	Bottle Req.
SEE COC		



STREAM ≈ 2' W
2" DEEP
VERY LOW FLOW

SOME SOLIDS IN SAMPLE
SHALLOW + SLOW FLOW
TSS STIRRED UP SAMPLING

END OF ROLL
2 PHOTOS TAKEN

SED ALSO TAKEN

X = SW
O SED

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Page ____ of ____

Case # _____

By _____

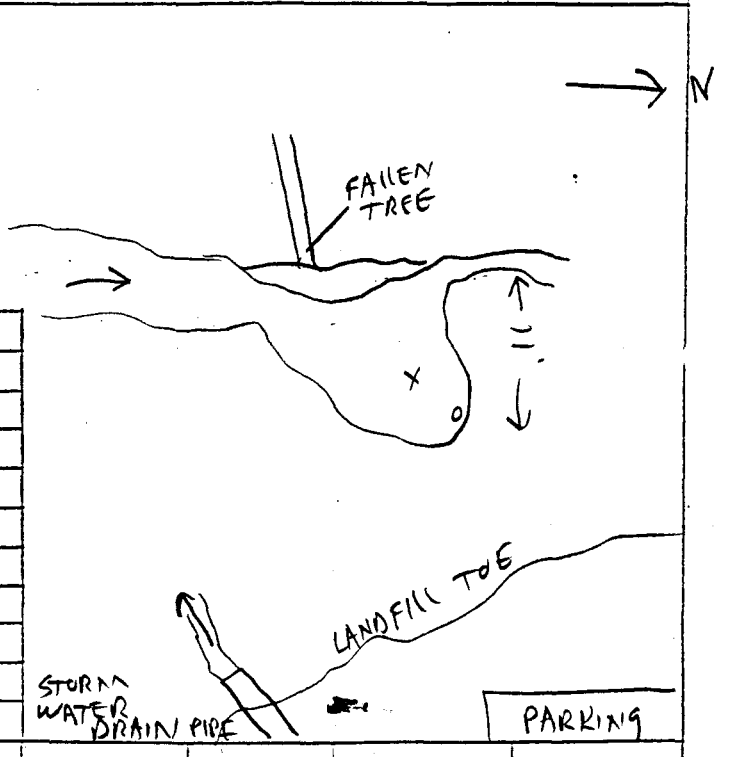
Project Site Name NWS EARLE Project Site Number 231 5801

NUS Source No. 175W03 Source Location SITE 17

Sample Method: DF	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW	6.27	.333	17.6	CLOUDY LT GRAY	60
Sample Date & Time: 6-15-95 1535	MG/L DO	Eh	SALINITY		
Sampled By: RS/TS	2.51	NA	0.01		

Signatures: [signature]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
SEE COC		

PONDED WATER
VERY LOW IF ANY FLOW

NEW ROLL
2 PHOTOS TAKEN
SED ALSO

			BLD	
			R-4B	

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [ ] Spring
- [ ] Lake
- [ ] Stream
- [x] Other _____

Page _____ of _____

Case # _____

By _____

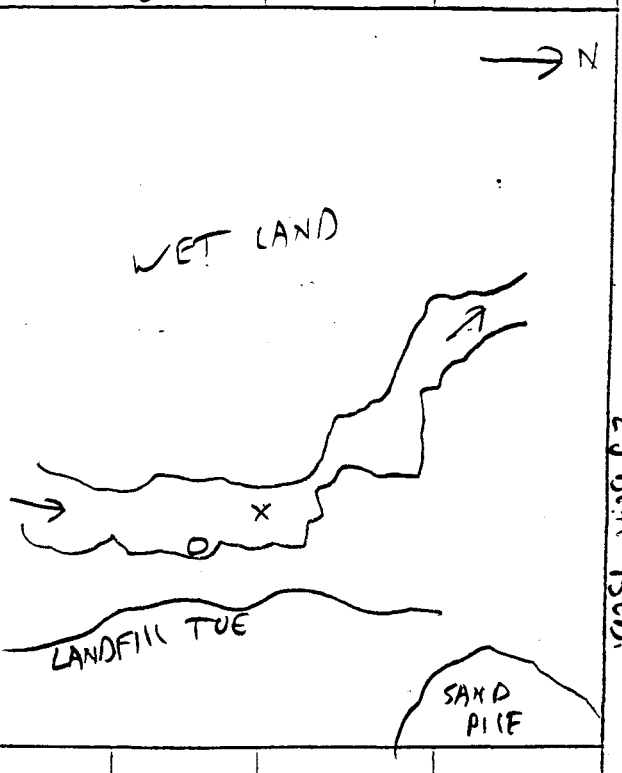
Project Site Name NWS EARLE Project Site Number 231 5903

NUS Source No. 175W04 Source Location SITE 17

Sample Method: DIRECT FILL	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW	5.89	12.9	29.1	COPPER COLOR	64
Sample Date & Time: 6.15.95 1420	MG/L DO	Eh	SALINITY		
Sampled By: RS/TS	3.63	NA	0.68		
Signatures: [illegible]					

Type of Sample

- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite



Analysis:	Preservative	Bottle Req.
SEE COC		

VERY SLOW MOVING STREAM
LOW FLOW

≈ 40' FROM TOE OF LANDFILL

2 PHOTOS TAKEN

SED AT 1435

X = SW
O SED

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [ ] Spring
- [ ] Lake
- [x] Stream
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number 231 5803

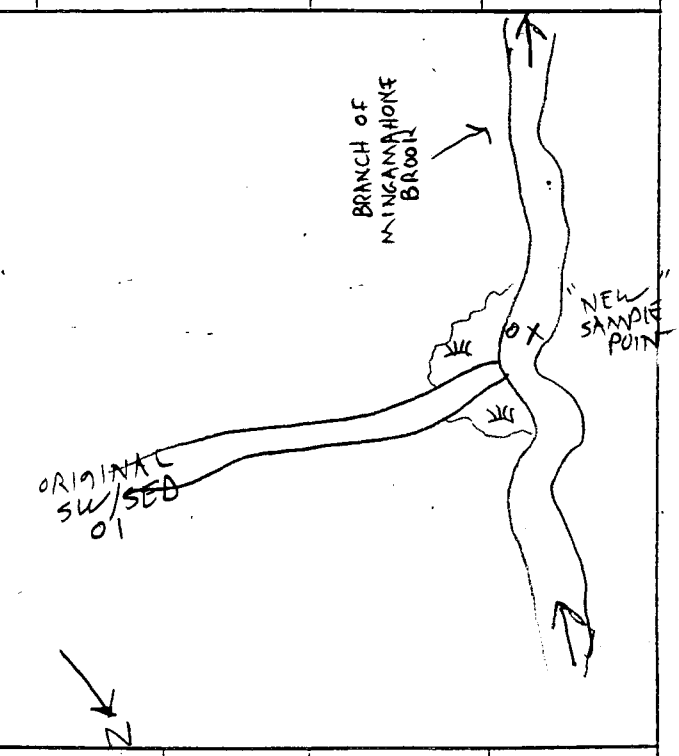
NUS Source No. 19SW01 Source Location SITE 19

Sample Method: DIRECT FILL	S.U. / pH	MS/CM / S.C.	Sample Data / Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW	5.38	.052	20.6	CLEAR	4
Sample Date & Time: 6.13.95 1455	mg/L DO	Eh	SALINITY		
Sampled By: KS / TS	6.16	NA	0		

Signatures: [illegible]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Analysis:	Preservative	Bottle Req.
SEE COC DATED 6.13.95		



*SAMPLE POINT MOVED DOWN STREAM TO CONFLUENCE WITH STREAM.
SAMPLED STREAM FOR SW & SED
NO FLOW AT ORGINAL SAMPLE POINT

2 PHOTOS TAKEN

+2 OF ORIGINAL POINT (DRY)

SED SAMPLE TAKEN AT 1500

X SW
O SED

* JOHN K N. DIV SEE LOG BOOK 2284 PG 47

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ☐ Subsurface Soil
- ☑ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 23SW\SED03 Source Location Site

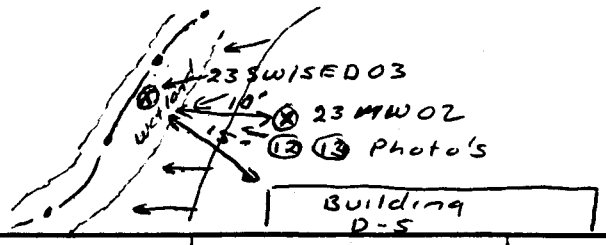
Sample Method: Stainless Steel Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/15/95 1210			
Sampled By: Chuck Meyer			
Signature(s): Chuck Meyer			
Type of Sample: ☑ Low Concentration ☐ High Concentration ☑ Grab ☐ Composite ☐ Grab - Composite			

Sample Data	
Color: Tan to Med Brown	Description: (Sand, Clay, Dry, Moist, Wet, etc.) Wet Silty Clay

Analysis:
- TCL Volatiles
- TCL SVOC's
- TCL Pest
- TAL Metals
- Explosives

Observations / Notes

No HNU Readings above background



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ☐ Subsurface Soil
- ☑ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 23 SW/SED04 Source Location Site - 23

Sample Method: Stainless Steel Trowel

Depth Sampled: 0-6"

Sample Date & Time: 8/15/95 1355

Sampled By: Chuck Meyer

Signature(s): [signature]

Type of Sample

- ☑ Low Concentration
- ☐ High Concentration
- ☑ Grab
- ☐ Composite
- ☐ Grab - Composite

Composite Sample Data

Sample	Time	Color / Description

Sample Data

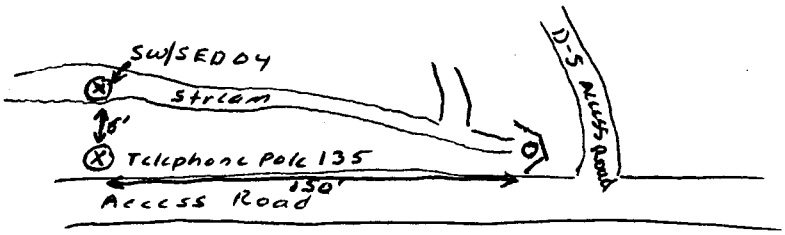
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Orange to Gray	Coarse grained silty Sand

Analysis:

- TCL Volatiles
- TCL SVOC's
- TCL Pest
- TAL Metals
- Explosives

Observations / Notes

No HNU Readings above background



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ☐ Subsurface Soil
- ☑ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 23 SW/SED 05 DUP 20 Source Location Site - 23

Sample Method: Stainless Steel Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/15/95 1505			
Sampled By: Chuck Meyer			
Signature(s): Chuck Meyer			

Type of Sample

- ☑ Low Concentration
- ☐ High Concentration
- ☑ Grab
- ☐ Composite
- ☐ Grab - Composite

Sample Data

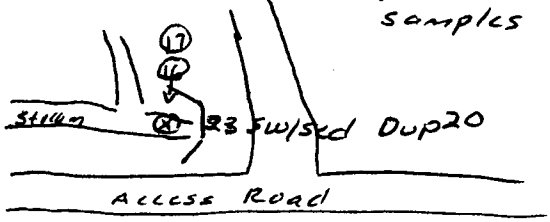
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Brown to Gray	Sandy Silt with rocks

Analysis:

- TCL Volatiles
- TCL SVOC's
- TCL Pest
- TAL Metals
- Explosives

Observations / Notes

No HNU readings above background
Duplicate sample Dup 20 - 081595 both Aqueous + Solid samples



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

Page _____ of _____

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE

Project Site Number ~~BG SW01 SED~~ 5803

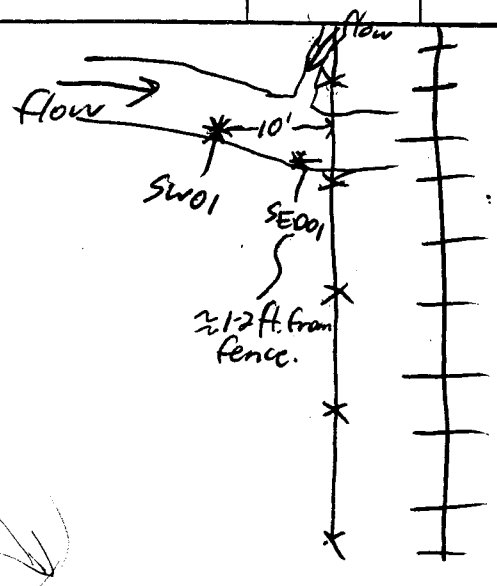
NUS Source No. BG SW01

Source Location _____

Sample Method:	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled:	5.93	.120	20.2	Clear	1
Sample Date & Time: 6/8/95 0945	DO	Eh	SALINITY		
Sampled By: S.C	6.99		0		

Signatures:

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
TCL VOC	HCl	3-40ml
TCL SVOC	—	3-1L
Ammonia, Phos, COD	H_2SO_4	2-1L
TAL Metals	HNO_3	1-1L
Cyanide	NaOH	1-1L
PCB/Pest	—	2-1L
Explosives	—	2-1L
TPH	—	2-1L
NO_2/NO_3/Turb, Bacteria	—	2-1L
Hardness	HNO_3	1-500ml

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

Page _____ of _____

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Case # _____

By _____

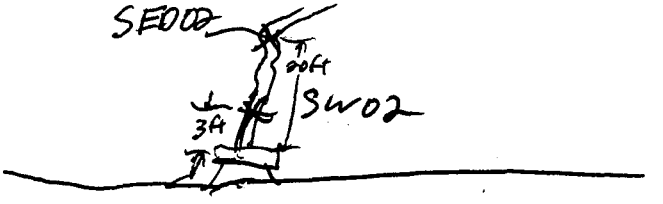
Project Site Name NWS EARLE Project Site Number ~~BG SW 02~~ 5803

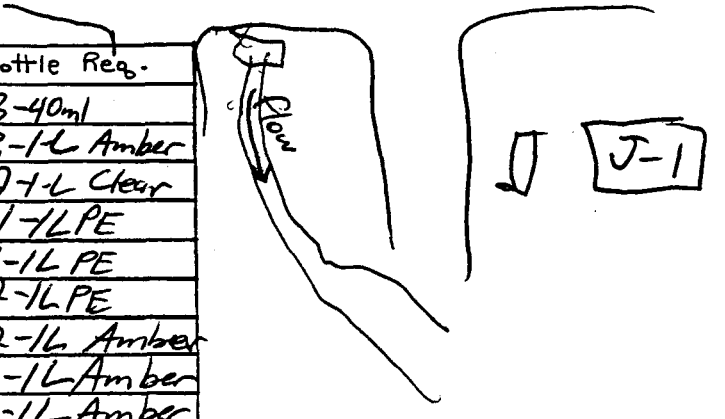
NUS Source No. BG-SW02 Source Location _____

Sample Method:	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled:	3.91	.063	18.7	clear	9
Sample Date & Time: 6/8/95 1138	DO	Eh	SALINITY		
Sampled By: S.C	3.34		0		

Signatures:

Type of Sample
- ☒ Low Concentration
- ☒ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite





Analysis:	Preservative	Bottle Req.
TCL VOC	HCl	3-40ml
TCL SVOC	—	3-1L Amber
Ammonia, Phos, COD	H_2SO_4	2-1L Clear
TAL Metals	HNO_3	1-1L PE
Cyanide	NaOH	1-1L PE
NO_3/NO_2/Turb/BOD/Cl-	—	2-1L PE
PCB/Pest	—	2-1L Amber
Explosives	—	2-1L Amber
TPH	—	2-1L Amber
Hardness	HNO_3	1-500ml PE.

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

Page _____ of _____

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE

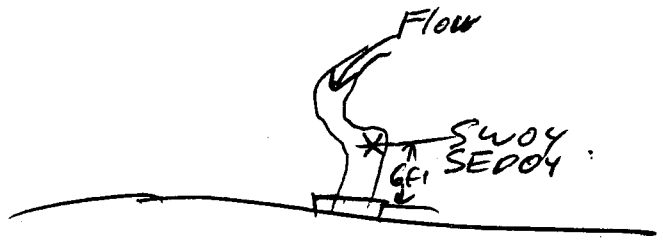
Project Site Number 5803 ~~BGSW04~~

NUS Source No. BGSW04 MS/MSD Local Source Location _____

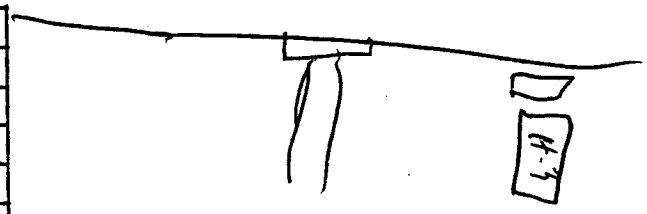
Sample Method:	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled:	5.13	.091	18.1	Clear	12
Sample Date & Time: 6/8/95 1357	DO	Eh	SALINITY		
Sampled By: S.C.	5.40	—	0		

Signatures:

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
TCL VOC	HCl	3-40ml
TCL SVOC	—	3-1L Amber
Ammonia, Phos, COD	H_2SO_4	2-1L Clear
TAL Metals	HNO_3	1-1L PE
Cyanide	NaOH	1-1L PE
NO_2/NO_3/Turb/BOD/Cl-	—	2-1L PE
PCB/Pest	—	2-1L Amber
Explosives	—	2-1L Amber
TPH	—	2-1L Amber
Hardness	HNO_3	1-500ml PE



SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Page _____ of _____

Case # _____

By KES

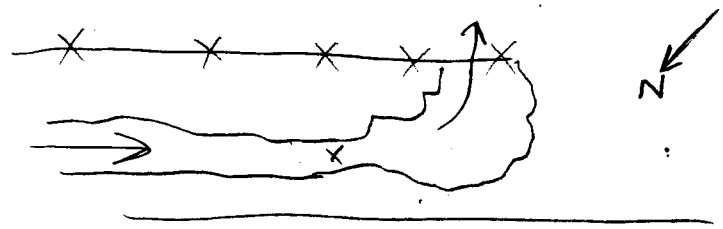
Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. BG-SW05 Source Location BACKGROUND

Sample Method: DIRECT FILL	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled: SURFACE TO 3"	5.01	0.057	17.5	CLEAR	2 NTU
Sample Date & Time: 5.18.95 1210	DO	Eh	SALINITY		
Sampled By: KEITH SIMPSON	7.05	—	0.0		

Signatures: [illegible]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



X = SAMPLE POINT PERIMETER RD.

Analysis:	Preservative	Bottle Req.
SEE COC	DATED	5.18.95

SAMPLED ≈ 6' FROM FENCE

STREAM ≈ 3' W 6" DEEP
FLOW THUR CHANELED AREAS
LEAF LITTER ≈ 2" THICK ON BOTTOM

PHOTO #1 ROLL 1

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page _____ of _____

Case # _____

By _____

- ☐ Surface Soil
- ☐ Subsurface Soil
- ☑ Sediment
- ☐ Lagoon / Pond
- ☑ Other Stream Aqueous

Project Site Name NWS EARLE

Project Site Number CTO 231

NUS Source No. BG SD/SW-05

Source Location BG

Sample Method: Trowel and Amber liter	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 7/19/95 1456			
Sampled By: Chuck Meyer			
Signature(s): Chuck Meyer			

Type of Sample

- ☑ Low Concentration
- ☐ High Concentration
- ☑ Grab
- ☐ Composite
- ☐ Grab - Composite

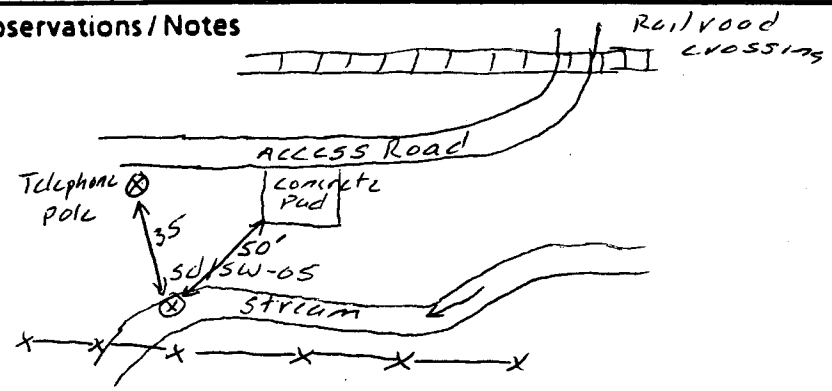
Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)

Analysis:

TCL Pest/PCB's

Observations / Notes



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Page ____ of ____

Case # _____

By KES

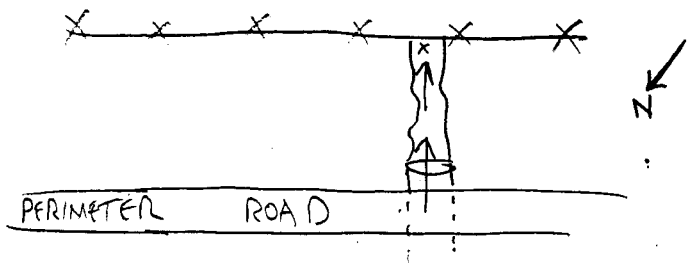
Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. BG-SW06 Source Location BACKGROUND

Sample Method: DIRECT FILL	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled: SURFACE TO 3"	4.86	0.092	18.0	CLEAR TO LT. YELLOW	1.0
Sample Date & Time: 5.18.95 1120	DO	Eh	SALINITY		
Sampled By: KEITH SIMPSON	9.72 mg/l	N/A	0.0		

Signatures: KJS

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



STREAM ≈ 3' W 6-8" DEEP
≈ 2" LEAF LITTER ON TOP OF SEDIMENT, VERY LOW FLOW "PONDED"

X = SAMPLE POINT

SAMPLE STARTED TAKEN AT FENCE

Analysis:	Preservative	Bottle Req.
SEE COC	DATED 5.18.95	

2 PHOTOS ROLL 1

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

Page ____ of ____

☐ Spring
☐ Lake
☒ Stream
☐ Other ____

Case # ____

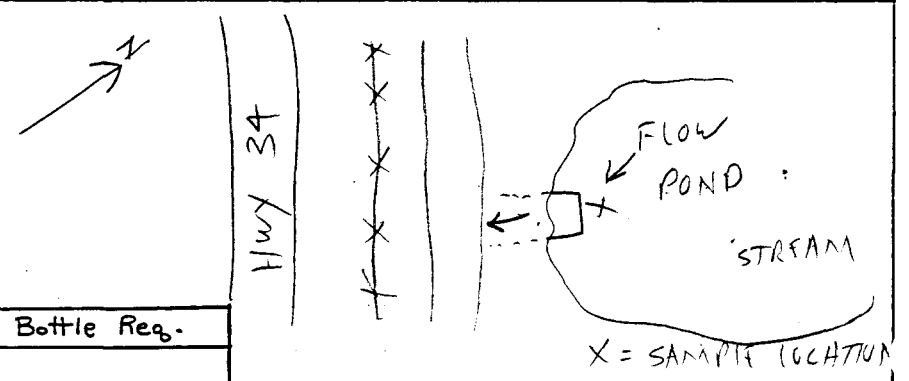
By RES

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. BG-SW 07 Source Location BACKGROUND

Sample Method: DIRECT FILL	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled: SURFACE TO 3"	4.09	0.075	21.0	CLEAR TO VERY LT TAN	1 NTU
Sample Date & Time: 5·18·95 1355	DO	Eh	SALINITY		
Sampled By: KEITH SIMPSON	5.80	—	0.0		

Signature: [signature]

Type of Sample
- ☑ Low Concentration
- ☐ High Concentration
- ☑ Grab
- ☐ Composite
- ☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
SEE COC DATED		5.18.95

SAMPLED OF PERIMETER RD
NEXT TO HWY 34
2' CEMENT PIPE
WATER ≈ 20' DEEP

2 PHOTOS, ROLL 1

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

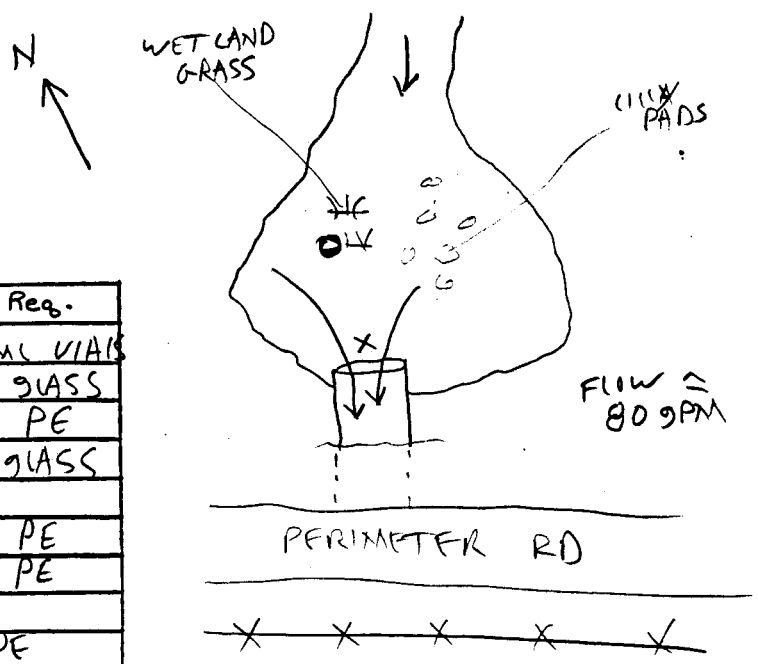
Page ____ of ____
Case # _____
By KES

Project Site Name NWS EARLE
Project Site Number CTO 231 5803
NUS Source No. BG-SW08
Source Location BACKGROUND

Sample Method: DIRECT FILL	S.U.	MS/CM	Sample Data		NTU
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled: SW 3"	5.68	.070	15.5	CLEAR TO LT. TEA	7
Sample Date & Time: 5·24·95 1000 RS	MG/L				
	DO	Eh	SALINITY %		
Sampled By: KEITH SIMPSON	9.10	N/A	0		

Signatures: KES

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
VOC's	~~HCL~~ - 4°C	2 40 ML VIALS
SVOC'S	4°C	2-L GLASS
METALS	HNO_3 - 4°C	1-L PE
N/N, AMMO, TOC,	H_2SO_4 - 4°C	1-L GLASS
COD & PHOS,		
BOD	4°C	1-L PE
TURB, CHLORIDE	4°C	1-L PE
HARDNESS		
CYANIDE	NaOH PH>12	1-L PE
	4°C	

HCL REMOVED FROM VIALS

ALSO SAMPLED FOR MS/MSD 3X VOL.

3 PHOTOS ROLL 1

WATER DEPTH AT SAMPLE POINT:
SW 6"
AT SED 0-4" WATER COVER

X WATER SAMPLE
O SEDIMENT SAMPLE

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Page _____ of _____

Case # _____

By KES

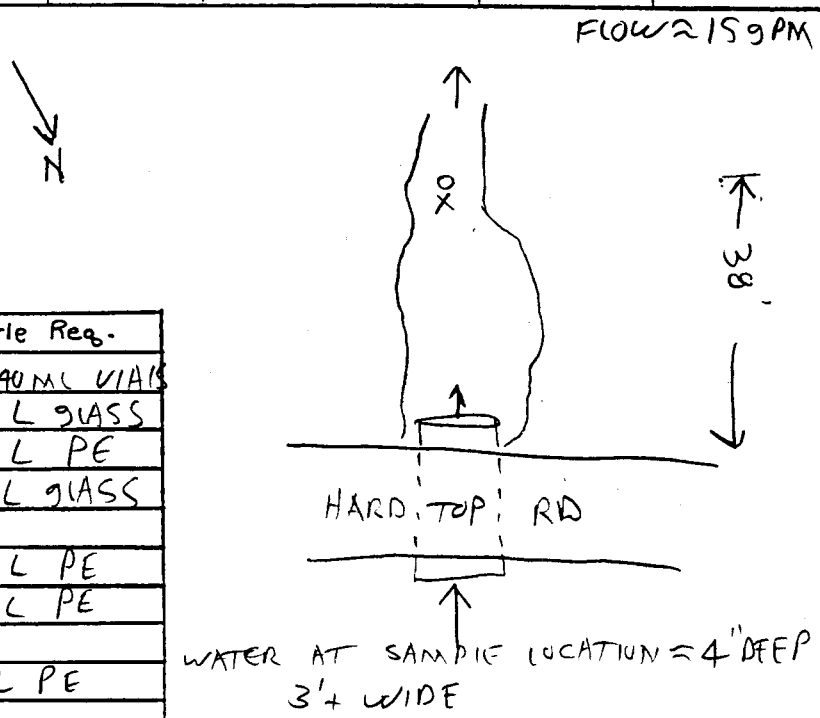
Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. BG-SW09 Source Location BACKGROUND

Sample Method: DIRECT FILL	S.U.	MS/CM	Sample Data		NTU
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled: SW 2"	5.99	0.064	20.6	CLEAR TO LT TEA	5
Sample Date & Time: 5.24.95 1125	MG/L				
	DO	Eh	SALINITY %		
Sampled By: KEITH SIMPSON	8.58	N/A	0.00		

Signatures: [illegible]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
VOC's	~~HCL~~ - 4°C	2 40 ML VIALS
SVOC's	4°C	2 - L GLASS
METALS	HNO_3 - 4°C	1 - L PE
N/N, AMMO, TOC,	H_2SO_4 - 4°C	1 - L GLASS
COD & PHOS,		
BOD	4°C	1 - L PE
TURB, CHLORIDE	4°C	1 - L PE
HARDNESS		
CYANIDE	NaOH PH>12	1 - L PE
	4°C	

HCL REMOVED FROM VIALS

DUP-01 TAKEN SW & SED

2 PHOTOS TAKEN, ROLL 1

X WATER SAMPLE

O SEDIMENT

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Page ____ of ____

Case # _____

By KES

Project Site Name NWS EARLE Project Site Number CTO 231 5803

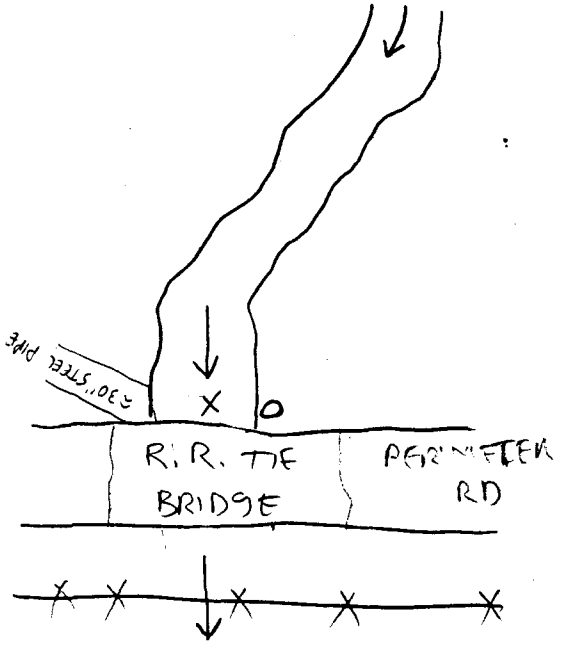
NUS Source No. BG-SW10 Source Location BACKGROUND

Sample Method: DIRECT FILL	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW 1-2"	6.71	.113	20.7	CLEAR TO LT. YELLOW "TEA"	0
Sample Date & Time: 5/24/95 1355	MG/L DO	Eh	SALINITY %		
Sampled By: KEITH SIMPSON	6.86	N/A	0		

Signatures: KES

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Analysis:	Preservative	Bottle Req.
VOC's	~~HCL~~ 4°C	2 40 ML VIALS
SVOC's	4°C	2-L GLASS
METALS	HNO_3 4°C	1-L PE
N/N, AMMO, TOC, COD & PHOS.	H_2SO_4 4°C	1-L GLASS
BOD	4°C	1-L PE
TURB, CHLORIDE, HARDNESS	4°C	1-L PE
CYANIDE	NaOH PH>12 4°C	1-L PE



HCL REMOVED FROM VIALS

STREAM DEPTH ≈ 4"
3' WIDE

FLOW ≈ 15 GPM

2 PHOTOS ROLL 1

X = WATER SAMPLE
O SEDIMENT

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Page ____ of ____

Case # _____

By KES

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. BG-SW10 Source Location BACKGROUND

Sample Method: DIRECT FILL	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW 1-2"	6.20	.106	13.5	CLEAR	7
Sample Date & Time: 5.26.95 0820	MG/L DO	Eh	SALINITY %		
Sampled By: KEITH SIMPSON	6.07	N/A	0		

Signatures: [signature]

RESAMPLED FOR EXPLOSIVES ONLY
ALL OTHER SAMPLING ON
5.24.95

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Analysis:	Preservative	Bottle Req.
VOC's	~~HCL~~ - 4°C	2 40 ML VIALS
SVOC's	4°C	2 - L GLASS
METALS	HNO_3 - 4°C	1 - L PE
N/N, AMMO, TOC,	H_2SO_4 - 4°C	1 - L GLASS
COD & PHOS,		
BOD	4°C	1 - L PE
TURB, CHLORIDE	4°C	1 - L PE
HARDNESS		
~~CYANIDE~~	~~NaOH PH>12~~	~~1 - L PE~~
	~~4°C~~	

SW 2 L GLASS
SED 1 L W/M GLASS

~~HCL REMOVED FROM VIALS~~

SED AT 0825
STAINLESS TROWEL

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Page ____ of ____

Case # _____

By KES

Project Site Name NWS EARLE Project Site Number CTO 231 5803

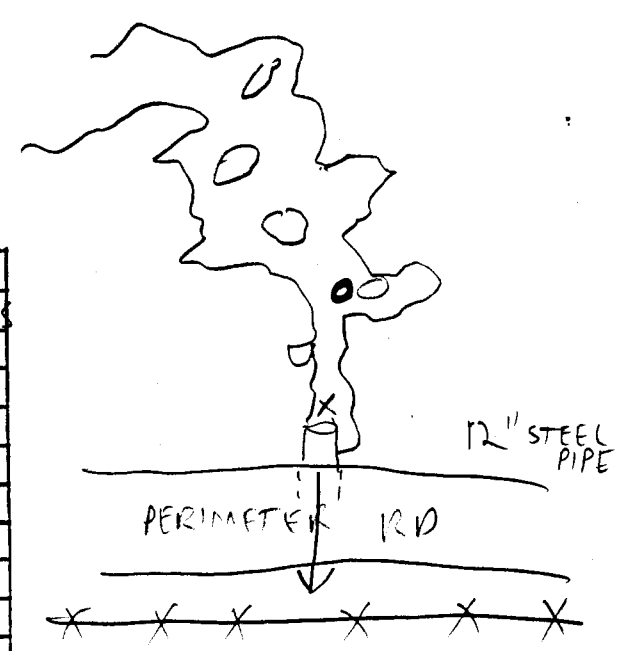
NUS Source No. BG-SW11 Source Location BACKGROUND

Sample Method: DIRECT FILL	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW 3"	5.97	0.068	22.3	CLEAR 0	0
Sample Date & Time: 5.24.95 1430	MG/L DO	Eh	SALINITY %		
Sampled By: KEITH SIMPSON	3.10	N/A	0		

Signatures: [signature]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Analysis:	Preservative	Bottle Req.
VOC's	~~HCL~~ - 4°C	2 40 ML VIALS
SVOC's	4°C	2 - L GLASS
METALS	HNO_3 - 4°C	1 - L PE
N/N, AMMO, TOC,	H_2SO_4 - 4°C	1 - L GLASS
COD & PHOS,		
BOD	4°C	1 - L PE
TURB, CHLORIDE	4°C	1 - L PE
HARDNESS		
CYANIDE	NaOH PH>12	1 - L PE
	4°C	



HCL REMOVED FROM VIALS

LOW FLOW ≈ 3 PM

WATER DEPTH 5"
WIDTH AT SAMPLE POINT 14"

1 PHOTO (1ST ROLL #12 LAST PICTURE)

X = WATER SAMPLE
O = SEDIMENT

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Page ____ of ____

Case # _____

By KES

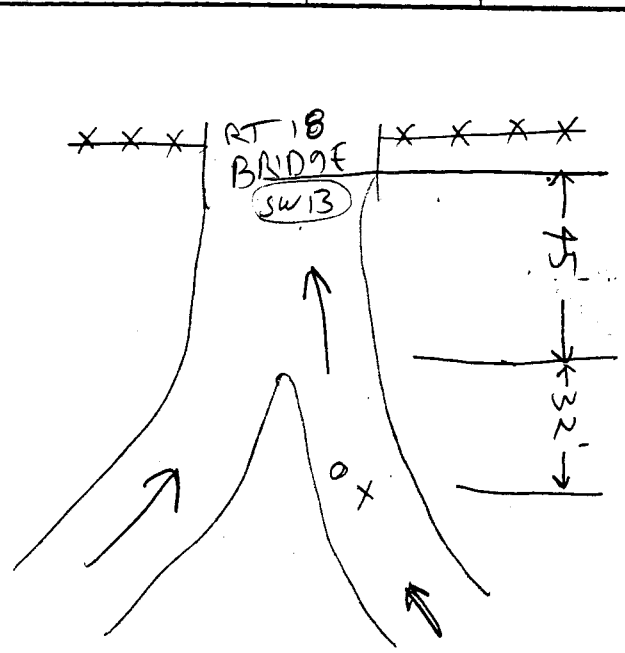
Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. BG-SW12 Source Location BACKGROUND

Sample Method: DIRECT FILL	S.U.	MS/CM	Sample Data		NTU
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled: SW 2"	5.77	.078	20.2	RUST COLOR	13
Sample Date & Time: 5.24.95 1555	MG/L			SOME ORANGE FLOCK	
	DO	Eh	SALINITY %		
Sampled By: KEITH SIMPSON	10.13	N/A	0		

Signatures: [signature]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
VOC's	~~HCL~~ - 4°C	2 40 ML VIALS
SVOC'S	4°C	2 - L GLASS
METALS	HNO_3 - 4°C	1 - L PE
N/N, AMMO, TOC,	H_2SO_4 - 4°C	1 - L GLASS
COD & PHOS,		
BOD	4°C	1 - L PE
TURB, CHLORIDE	4°C	1 - L PE
HARDNESS		
CYANIDE	NaOH PH>12	1 - L PE

HCL REMOVED FROM VIALS

STREAM 36' W
DEPTH 4"
"GOOD" FLOW RATE
≈ 150+ GPM (EST.)

2 PHOTOS ROLL 2

X SW
O SED

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- [ ] Spring
- [ ] Lake
- [x] Stream
- [ ] Other _____

Page _____ of _____

Case # _____

By KES

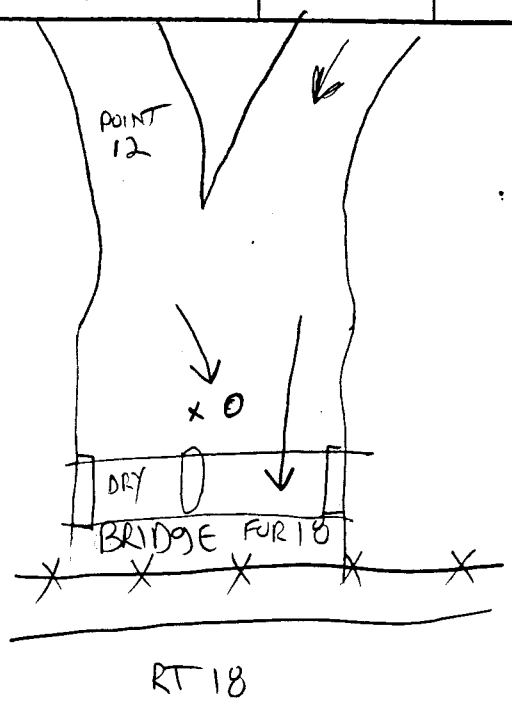
Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. BG-SW13 Source Location BACKGROUND

Sample Method: DIRECT FILL	S.U.	MS/CM	Sample Data		NTU
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled: SW 3"	5.13	0.173	19.3	RUST COLOR WITH SOME ORANGE FLOCK	12
Sample Date & Time: 5/24/95 : 1530	MG/L				
	DO	Eh	SALINITY %		
Sampled By: KEITH SIMPSON	8.75	N/A	0		

Signatures: KS / S. [illegible]

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite



Analysis:	Preservative	Bottle Req.
VOC's	~~HCL~~ - 4°C	2 40 ML VIALS
SVOC'S	4°C	2 - L GLASS
METALS	HNO_3 - 4°C	1 - L PE
N/N, AMMO, TOC,	H_2SO_4 - 4°C	1 - L GLASS
COD & PHOS,		
BOD	4°C	1 - L PE
TURB, CHLORIDE	4°C	1 - L PE
HARDNESS		
CYANIDE	NaOH PH>12	1 - L PE
	4°C	

HCL REMOVED FROM VIALS

FLOW AREA HALF BRIDGE
≈ 12' W
WATER DEPTH 6"
LO FLOW

2 PHOTOS, ROLL 2

X SW
O SED

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Page ____ of ____

Case # _____

By KES

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. BG-SW13 Source Location BACKGROUND

Sample Method: DIRECT FILL	S.U.	MS/CM	Sample Data		NTU
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled: SW 3"	5.48	.164	13.9	Brown	40
Sample Date & Time: 5.26.95 0850	MG/L DO	Eh	SALINITY %		
Sampled By: KEITH SIMPSON	6.14	N/A	0		

Signatures: [illegible]

RESAMPLE FOR EXPLOSIVES ONLY
ALL OTHER SAMPLING ON
5.24.95

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Analysis:	Preservative	Bottle Req.
VOC's	~~HCL~~ - 4°C	2 40 ml VIALS
SVOC's	4°C	2-L GLASS
METALS	HNO_3 - 4°C	1-L PE
N/N, AMMO, TOC,	H_2SO_4 - 4°C	1-L GLASS
COD & PHOS,		
BOD	4°C	1-L PE
TURB, CHLORIDE	4°C	1-L PE
HARDNESS		
~~CYANIDE~~	~~NaOH PH>12~~	~~1-L PE~~
	4°C	

SW 2 L GLASS
SED 1 L W/M GLASS

~~HCL REMOVED FROM VIALS~~

SED 0855
STAINLESS TROWEL

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Page ____ of ____

Case # _____

By KES

Project Site Name NWS EARLE Project Site Number CTO 231 · 5803

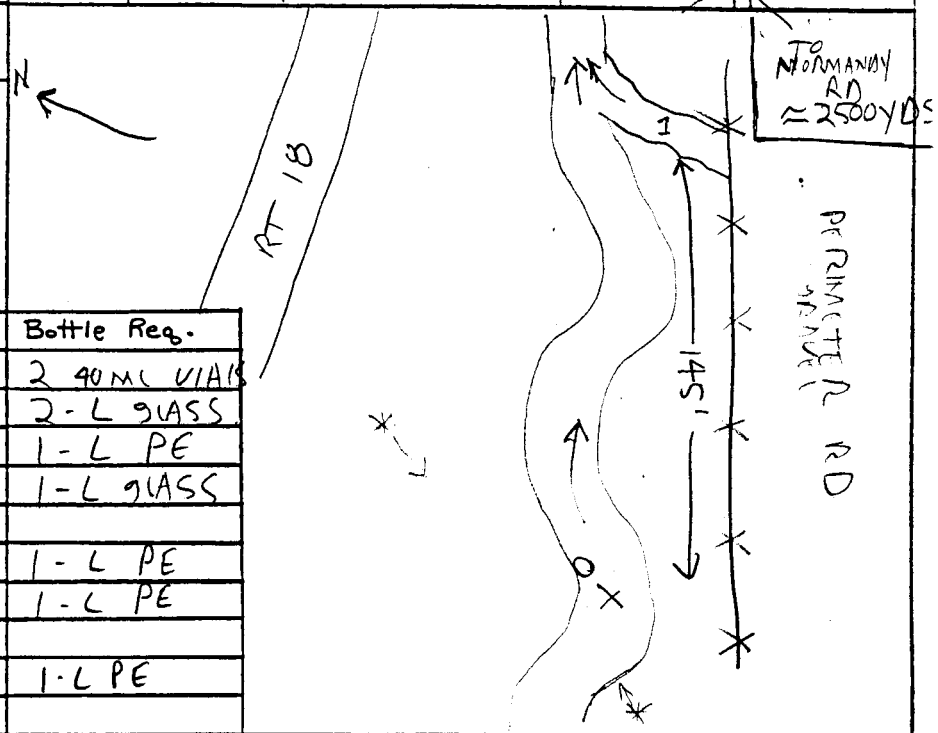
NUS Source No. BG-SW14 Source Location BACKGROUND

Sample Method: DIRECT FILL	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW 2"	6.14	.169	14.7	Brown	30
Sample Date & Time: 5.26.95 0928	MG/L DO	Eh	SALINITY %		
Sampled By: KEITH SIMPSON	4.71	N/A	0		

Signatures: [signature]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Analysis:	Preservative	Bottle Req.
VOC's	~~HCL~~ - 4°C	2 40 ML VIALS
SVOC'S	4°C	2 - L GLASS
METALS	HNO_3 - 4°C	1 - L PE
N/N, AMMO, TOC,	H_2SO_4 - 4°C	1 - L GLASS
COD & PHOS.		
BOD	4°C	1 - L PE
TURB, CHLORIDE	4°C	1 - L PE
HARDNESS		
CYANIDE	NaOH PH>12	1 - L PE
	4°C	



HCL REMOVED FROM VIALS

☆ 2 PHOTO TAKEN DOWN STREAM NOT A SAMPLE POINT

2 PHOTOS TAKEN ✗
1 LOOKING UP
1 DOWN STREAM

SED AT 0938
SAND TR SILT
RUST COLOR

1 = SMALL STREAM FROM SITE 13 DARK BRN PH: 4.0 2 PHOTOS TAKEN

X SW
O SED

STREAM 30" W
6" DEEP

TOTAL 4 PHOTOS

OVER

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Page ____ of ____

Case # _____

By KES

Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. BG-SW15 Source Location BACKGROUND

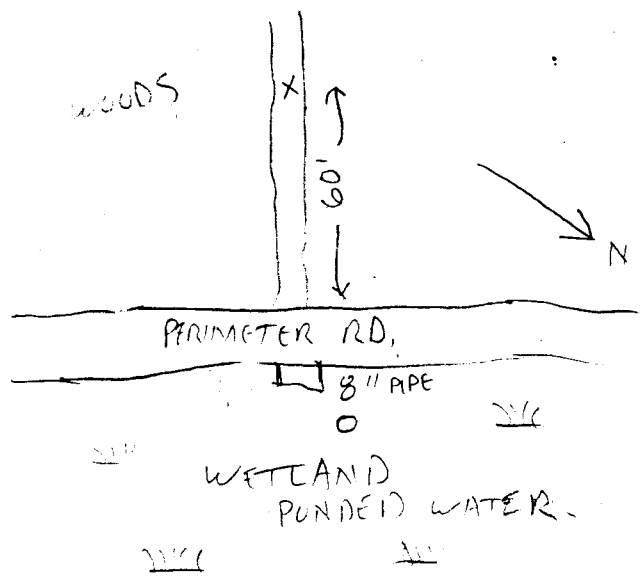
Sample Method: DIRECT FILL	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW 2"	5.15	.046	16.6	light Tea	18
Sample Date & Time: 5.26.95 1110	MG/L DO	Eh	SALINITY %		
Sampled By: KEITH SIMPSON	0.8	N/A	0		

Signatures: [signature]

VERY LOW FLOW
18" W 4" DEEP
SMALL STREAM

TO FIRE SCHOOL

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
VOC's	~~HCL~~ - 4°C	2 40ML VIALS
SVOC's	4°C	2-L GLASS
METALS	HNO_3 - 4°C	1-L PE
N/N, AMMO, TOC,	H_2SO_4 - 4°C	1-L GLASS
COD & PHOS.		
BOD	4°C	1-L PE
TURB, CHLORIDE	4°C	1-L PE
HARDNESS		
CN	NaOH	1-L PE
	4°C	

HCL REMOVED FROM VIALS

2 PHOTOS AT WETLAND SIDE

X = SW
O = SED

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Page _____ of _____

Case # _____

By KES

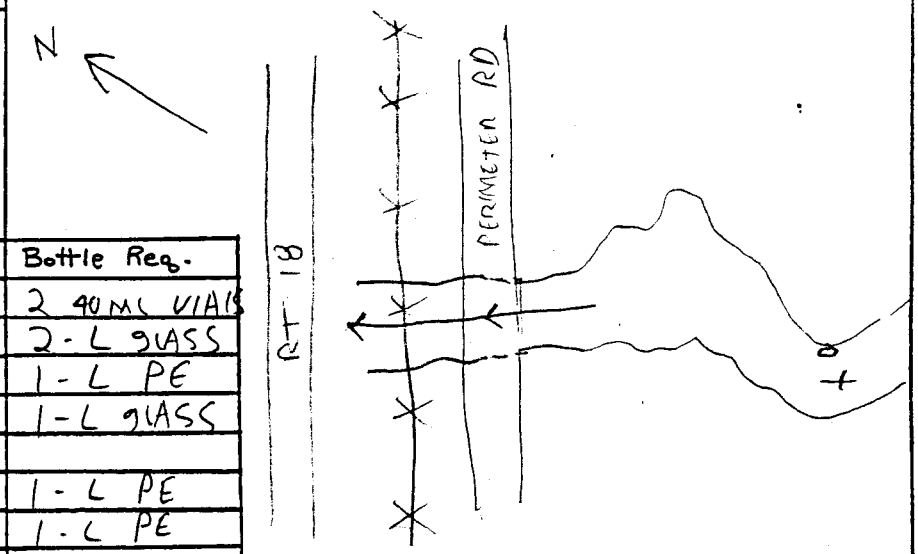
Project Site Name NWS EARLE Project Site Number CTO 231 5803

NUS Source No. BG-SW16 Source Location BACKGROUND

Sample Method: DIRECT FILL	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW 3"	5.31	.055	13.6	CLEAR VERY LT. TEA	3
Sample Date & Time: 5.26.95 1210	MG/L DO	Eh	SALINITY %		
Sampled By: KEITH SIMPSON	7.50	N/A	0		

Signatures: [illegible]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
VOC's	~~HCL~~ - 4°C	2 40 ML VIALS
SVOC's	4°C	2 - L GLASS
METALS	HNO_3 - 4°C	1 - L PE
N/N, AMMO, TOC, COD & PHOS.	H_2SO_4 - 4°C	1 - L GLASS
BOD	4°C	1 - L PE
TURB, CHLORIDE HARDNESS	4°C	1 - L PE
CYANIDE	NaOH PH>12 4°C	1 - L PE

HCL REMOVED FROM VIALS

STREAM AT SAMPLE POINT 4' W X 30" DEEP

LG. STREAM "GOOD" FLOW RATE

2 PHOTOS

X = SW
O = SED

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

Page _____ of _____

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE

Project Site Number ~~BG SW17 + 18~~ 5803

NUS Source No. BGSW17

Source Location _____

Sample Method: 500ml Jar Depth in Stream ≈ 3"	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled:	5.87	.088	23.5		57
Sample Date & Time: 6/8/95 1704	DO	Eh	SALINITY		
Sampled By: S.C.	10.58		0		

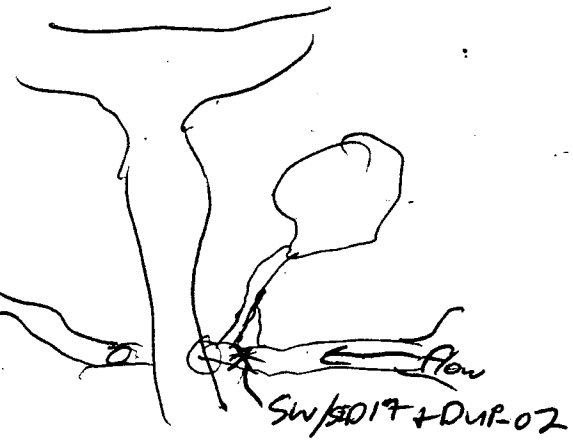
Signatures:

Note: ~~BGSW18~~ Dup-02 Assigned Time of 00:00

Type of Sample

- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Analysis:	Preservative	Bottle Req.	DUP
TCL VOC	HCl	3-40ml	3
TCL SVOC	—	3-1L Amber	3
TAL Metals	HNO_3	1-1L PE	1
Cyanide	NaOH	1-1L PE	1
Ammonia Phos COD	H_2SO_4	2-1L Clear	2
Nitrate, Nitrite, Phenols, BOD, Cl-	—	2-1L PE	2
Hardness	HNO_3	1-500ml PE	1



SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number 5803

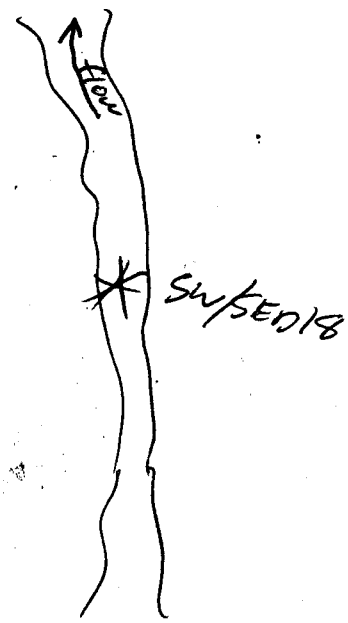
NUS Source No. BG-SW 18 Source Location _____

Sample Method:	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled:	4.93	0.082	14.2	Clear	28
Sample Date & Time: 6/9/95 1113	DO	Eh	SALINITY		
Sampled By: S.C.	11.70	—	0		

Signatures:

Type of Sample

- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
TCL VOC	HCl	3-40ml
TCL SVOC	—	3-1-L
TAL Metals	HNO_3	1-1L
Cyanide	NaOH	1-L
Ammonia, Phos, COD	H_2SO_4	2-1L
NO_2/NO_3/Turb/BOD/Cl⁻	—	2-1L
Hardness	HNO_3	1-500ml

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

Page _____ of _____

Case # _____

By _____

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other _____

Project Site Name NWS EARLE Project Site Number 5803

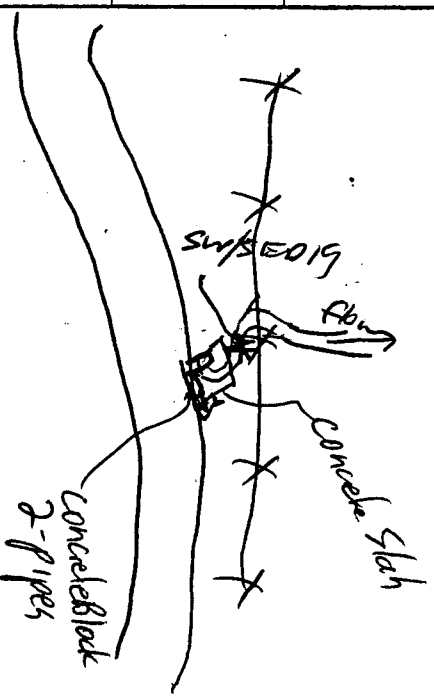
NUS Source No. BGSW 19 Source Location _____

Sample Method:	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled:	~~5.85~~ 6.94 6.35	0.109	15.8	Clear	32
Sample Date & Time: 6/9/95 0927	DO	Eh	SALINITY		
Sampled By: S.C	7.03	—	0		

Signatures:

Type of Sample

- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
TCL VOC	HCl	3-40ml Vial
TCL SVOC	—	3-1L Amber
TAL Metals	HNO_3	1-1L Poly
Cyanide	NaOH	1-1L Poly
Ammonia, Phos, COD	H_2SO_4	2-1L Clear
NO_2/NO_3/Turb/Bod/Cl-	—	2-1L Poly
Hardness	HNO_3	1-500ml Poly

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number 5803

NUS Source No. BGSW20 Source Location _____

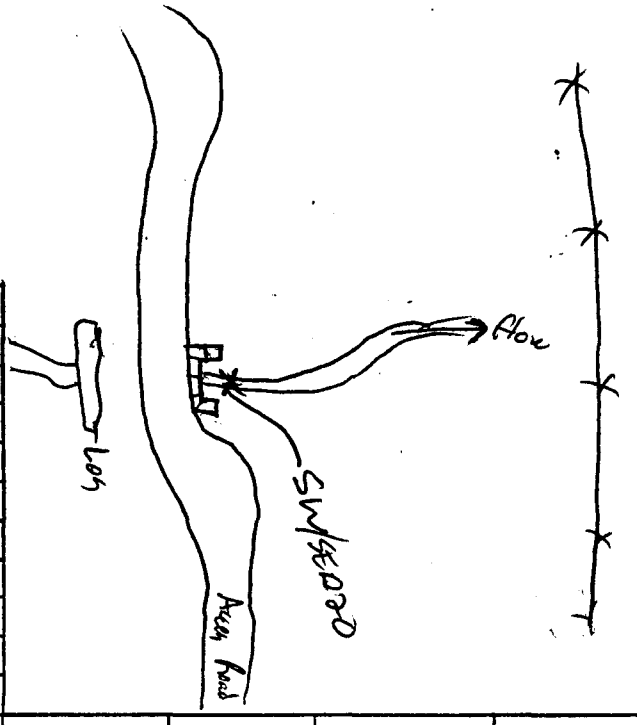
Sample Method:	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled:	6.10	0.131	16.5	Clear - Slight Tan Turbidity	.60
Sample Date & Time: 6/9/95 : 1020	DO	Eh	SALINITY		
Sampled By: S.C.	9.61	—	0		

Signatures:

Type of Sample

- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Analysis:	Preservative	Bottle Req.
TCL VOC	HCl	3-40ml Vial
TCL SVOC	—	3-1L Amber
TAL Metals	HNO_3	1-1L Poly
Cyanide	NaOH	1-1L Poly
Ammonia, Phos, COD	H_2SO_4	2-1L Clear
NO_2/NO_3/Turb/Bod/Cl	—	2-1L Poly
Hardness	HNO_3	1-500ml Poly



SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

Page ____ of ____

Case # ____

By ____

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other ____

Project Site Name NWS EARLE Project Site Number 5803

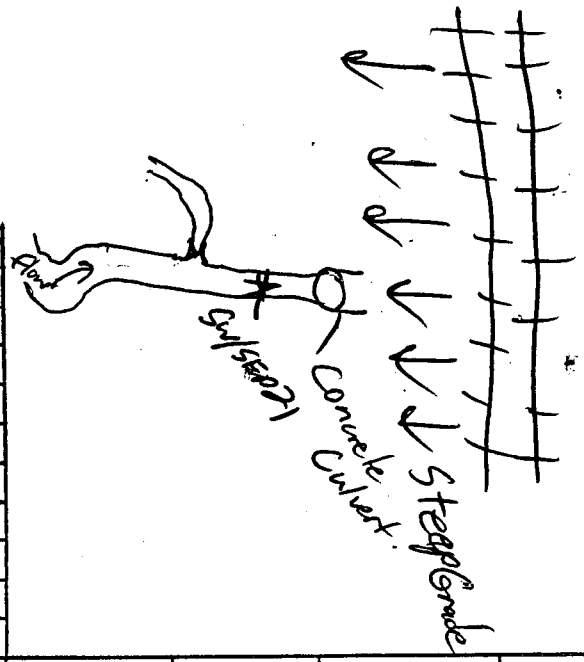
NUS Source No. BGSW 21 Source Location ____

Sample Method:	Sample Data				
	pH	S.C.	Temp. (°C)	Color & Turbidity	
Depth Sampled:	6.00	0.162	17.9	Clear	10
Sample Date & Time: 6/9/95 1213	DO	Eh	SALINITY		
Sampled By: S.C.	6.56	—	0		

Signatures:

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Analysis:	Preservative	Bottle Req.
TCL VOC	HCl	3-40ml Vial
TCL SVOC	—	3-1L Amber
TAL Metals	HNO_3	1-1L Poly
Cyanide	NaOH	1-1L Poly
Ammonia, Phos, COD	H_2SO_4	2-1L Clear
NO_2/NO_3, Turb, Boiler	—	2-1L Poly
Hardness	HNO_3	1-500ml Poly



SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

- ☐ Spring
- ☐ Lake
- ☒ Stream
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number 231 5803

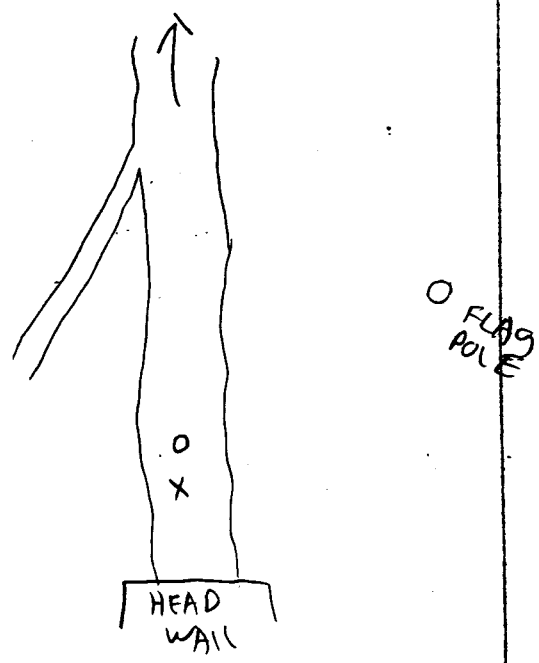
NUS Source No. BGSW22 Source Location BACKGROUND (AT SITE 15)

Sample Method: DR	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SW	5.40	.771	19.5	LT RUST	19
Sample Date & Time: 6.16.95 0950	mg/L DO	Eh	SALINITY		
Sampled By: KS - TS	1.96	NA	0.03		

Signature: K. S. [illegible]

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

LT. OIL SHEEN ON WATER SURFACE



Analysis:	Preservative	Bottle Req.
SEE COC		

STREAM 4' WIDE WITH 2' W. FLOW
1" DEEP
RUS COLOR STREAM BED
SAMPLED IN SMALL POOL
SOME TSS STIRRED UP SAMPLING

2 PHOTOS TAKEN

GUARD GATE

SED ALSO SAMPLED

SW = X
SED = O

SAMPLE LOG SHEET

HALLIBURTON NUS
Environmental Corporation

☐ Spring
☐ Lake
☒ Stream
☐ Other _____

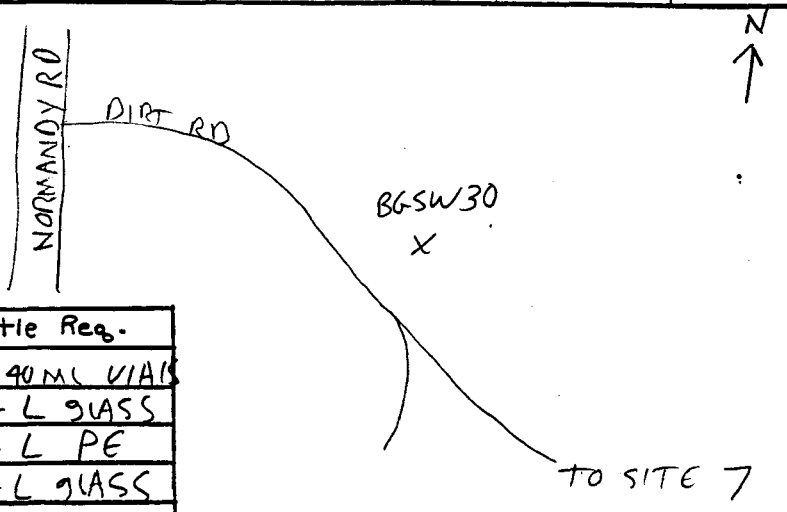
Page ____ of ____
Case # _____
By KES

Project Site Name NWS EARLE Project Site Number CTO 231 5803
NUS Source No. BGSW30 Source Location BACKGROUND

Sample Method: DIRECT FILL	S.U. pH	MS/CM S.C.	Sample Data Temp. (°C)	Color & Turbidity	NTU
Depth Sampled: SURFACE TO 3"	5.08	0.104	18.2	CLEAR	3
Sample Date & Time: 8.24.95 0835	MG/L DO	Eh	SALINITY %		
Sampled By: KEITH SIMPSON A'S	4.66	N/A	0.00		

Signatures:

Type of Sample
☒ Low Concentration
☐ High Concentration
☒ Grab
☐ Composite
☐ Grab - Composite



Analysis:	Preservative	Bottle Req.
VOC's	HCL- 4°C	2 40ML VIALS
SVOC's	4°C	2-L GLASS
METALS	HNO_3- 4°C	1-L PE
N/N, AMMO, TOC,	H_2SO_4-4°C	1-L GLASS
COD & PHOS,		
BOD	4°C	1-L PE
TURB, CHLORIDE	4°C	1-L PE
HARDNESS		
CYANIDE	NaOH PH>12	1-L PE
EXPLOSIVES	4°C	

SMALL STREAM
1' WIDE, 1" TO 3" DEEP
LOW FLOW ≈0.25 GPM

2 PHOTOS TAKEN

APPENDIX D.e.

SEDIMENT SAMPLE LOGS

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

PAGE ___ OF ___

☐ SURFACE SOIL
☐ SUBSURFACE SOIL
☒ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE [illegible]

SITE NAME NWS EARLE

SITE NUMBER 4 & 19

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	VOC	SVOC	METALS	METALS, N/N CHLOR., AMMON.)	PHOS, COD, TOC				No. OF CONT TOTAL	SOIL DESCRIPTION
04SED4B5	SS	0-.5'	6.13.95	1145	KS/TS	L	G	1	1		1					3	WHITE SAND TR GRAVEL MAX Ø .5" SOME SILT
19SED01	SS	0-.5	6.13.95	1455	KS/TS	L	G	1	1	1						3	FINE SILT WITH ORG. MATERIA DK. BRN.

ANALYSES

REMARKS: SS = STAINLESS STEEL SPOON

LAB: LANCASTER

ACAD: FORMS\LOG.DWG 2/11/93 MB

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ SURFACE SOIL
☐ SUBSURFACE SOIL
☒ SEDIMENT
● LAGOON/POND
☐ OTHER

PAGE____OF____

SAMPLERS SIGNATURE [illegible]

SITE NAME NWS EARLE

SITE NUMBER CTO 231 5803

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOC 4 oz GLASS	SVOC, PEST/PCB QT w/M GLASS	TAL METALS 16 oz w/M GLASS	EXPLO, TOC, GRAIN SIZE QT w/M GLASS	TAL MET. TOC G.S. 16 oz GLASS	SVOC, PEST QT w/M GLASS		No. OF CONT TOTAL	SOIL DESCRIPTION
13SED02 *	SS	0.5'	6.14.95	1050	KS	L	G	1	1	1	1				4	SAND SOME GRAVEL MAX. Ø 1.5" TR. SILT, LT BR.
06SED02	SS	0.5	6.15.95	1205	KS	L	G	1				1	1		3	SAND TR ORGANIC MAT LT. BRN.
06SED01	SS	0.5	6.15.95	1235	KS	L	G	1				1	1		3	SILT SOME ORGANIC MAT. DR. BRN.
06SED03	SS	0.5	6.15.95	1345	KS	L	G	1				1	1		3	SAND & SILT BRN
06SED04	SS	0.5	6.15.95	1400	KS	L	G	1				1	1		3	DR. BRN. SILT & FINE SAND
17SED04	SS	0.5	6.15.95	1435	KS	L	G	1				1	1		3	SAND TR SILT/ORG. MAT. LT. BRN.
17SED02	SS	0.5	6.15.95	1515	KS	L	G	1				1	1		3	DR. BRN SILT & ORG. MATERIAL
17SED03	SS	0.5	6.15.95	1545	KS	L	G	1				1	1		3	GRAY TO BLACK SILT/CLAY SOME ORGANIC

REMARKS: SS = STAINLESS STEEL SPOON.

*DUP 03 TAKEN

LAB: [illegible]

ACAD: FORMS\LOG.DWG 2 93 MB

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

PAGE ___ OF ___

☐ SURFACE SOIL
☐ SUBSURFACE SOIL
☒ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE K-15. [illegible]

SITE NAME NWS EARLE

SITE NUMBER WATER FRONT 15 & BG

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSIS: TCL VOL	4 OZ GLASS SVOC, PEST/PCB	QT WM GLASS EXPLOSIVES	QT GLASS TPH, L.F. MET. CN TOC G.S.	QT GLASS TAL MET., TPH	QT GLASS			No. OF CONT TOTAL	SOIL DESCRIPTION
15SED01	SS	0-.5'	6.16.95	0825	KS	L	G	1	1			1				3	RUST COLOR (IRON) SILT & ORG. MATERIL
15SED02	SS	0-.5'	↓	0915	KS	L	G	1	1			1				3	SILT & SAND TR ORG. MAT DR. BRN TO GRAY
15SED03	SS	0-.5'		0940	KS	L	G	1	1			1				3	DR BRN. SILT, IN ROOT MASS.
BG-SED22	SS	0-.5'		1010	KS	L	G	1	1	1	1					4	RUST COLOR - TO BLACK SILT & ORG. MATERIAL

REMARKS: SS = STAINLESS STEEL SPOON

LAB: LANCASTER LAB

ACAD: FORMS\LOG.DWG 2/11/93 MB

CTO 281 SB03

HALLIBURTON NUS Environmental Corporation

SAMPLE LOG SHEET

PAGE ___ OF ___

☒ SURFACE SOIL ☐ SUBSURFACE SOIL ☒ SEDIMENT ☐ LAGOON/POND ☐ OTHER

SAMPLERS SIGNATURE [signature]

SITE NAME NWS EARLE

SITE NUMBER 165 & 15

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOC 4 oz GLASS	TCL SVOC, TAL MET. RCB, TPH TOC 4 oz GLASS	GRAIN SIZE 16 oz GLASS	TCL SVOC, MET., RCB, TPH QT GLASS	TCL SVOC PEST/PCB TPH METALS QT GLASS		HNU PPM	No. OF CONT TOTAL	SOIL DESCRIPTION 2 PHOTOS + WELL 16-2
165D02 *	ST	0-.5	7.11.95	1045	KS/CM	L	G	1	1	1				<0.1	3	BRN SILTY SAND TR ROOTS MOIST
165D03	ST	0-.5	↓	1110	KS/CM	L	G	1	1	1				<0.1	3	SAME
165D01 ▲	ST	0-.5		1145	KS/CM	L	G	1	1	1				<0.1	3	IN CATCH BASIN, COARSE SAND TR GRAVEL MAX Ø .25" MOIST
165S01	ST	0-.5		1345	KS/CM	L	G	1			1			<0.1	2	SAND & GRAVEL MAX 1.5" Ø BRN
165S02	ST	0-.5		1355	KS/CM	L	G	1			1			<0.1	2	SILT WITH SOME PEAT DARK BRN TO GRAY AT ≈5" COARSE SAND
165S03	ST	0-.5		1410	KS/CM	L	G	1			1			29	2	SILTY SAND TR GRAVEL 1" Ø TR ROOTS DR BRN, FUEL ODOR
155B01	AUGER	1-2		1610	KS/CM	L	G	1				1		4	2	SILTY SAND DR BRN TO BLACK, MOIST
155S01	ST	0-.5		1615	KS/CM	L	G	1				1		<0.1	2	SILTY SAND, BLACK TR ROOTS, TR BRN CLAY
155B02	AUGER	1-2		1640	KS/CM	L	G	1				1		1	2	GRAY TO BRN SILTY SAND TR CLAY
155B04 ■	AUGER	2-3		1705	KS/CM	L	G	1				1		<0.1	2	GRAY TO BRN CLAY TR FINE SAND, MOIST
155S02	ST	0-.5		1720	KS/CM	L	G	1				1		<0.1	2	TAN SILTY SAND TR ROOTS
155B03	AUGER	2-3		1730	KS/CM	L	G	1				1		8	2	TAN TO GRAY SILTY SAND TR ORGANIC MATL

REMARKS: ST STAINLESS STEEL TROWEL

* DUP 11 TAKEN

■ DUP [illegible]

▲ DUP 12 TAKEN

LAB: LANCASTER LAB

ACAD: FORMS\LOG.DWG '93 MB

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 12SED01 Source Location Site 12

Sample Method: Stainless Steel Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/7/95 1110			
Sampled By: AS/CM			
Signature(s): [signature]			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

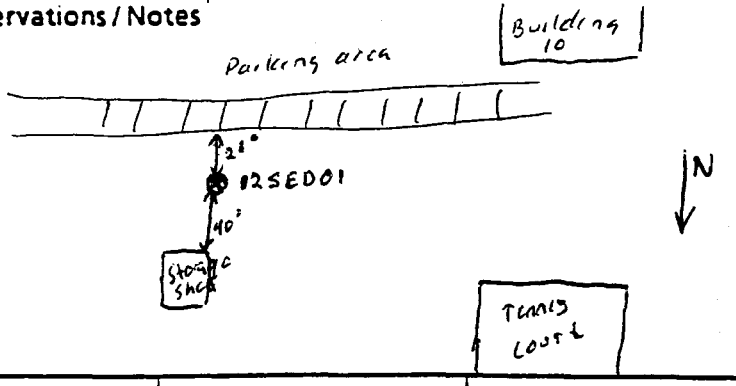
Sample Data

Color	Description: (Sand, Clay, Dry; Moist, Wet, etc.)
orange to black	sand rocks and gravel damp

Analysis:

- TCL volatiles
- TCL SVOC's
- TAL Metals
- TCL Pest

Observations / Notes



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 12SED02 Source Location Site 12

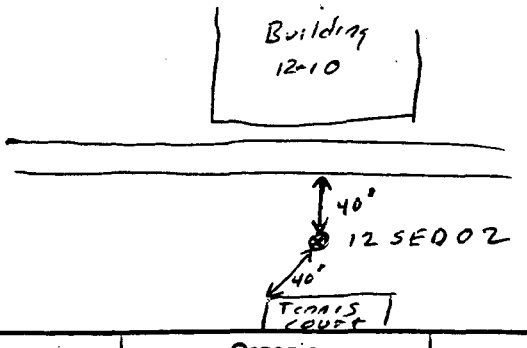
Sample Method:	Composite Sample Data		
Stainless Steel Trowel	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/7/95			
Sampled By: AS / CM			
Signature(s): [signature]			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
dark Brown	coarse grained sands and gravel

Analysis:

- TCL Volatiles
- TCL SVOC's
- TAL Metals
- TCL Pest

Observations / Notes



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

Halliburton NUS
CORPORATION

SINGLE SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: NWS EARLE

Project No.: CTO 231 5803

- ☐ Surface Soil
- ☐ Subsurface Soil
- ☒ Sediment
- ☐ Other _____
- ☐ QA Sample Type: _____

Sample ID No.: 13SED01

Sample Location: SITE 13

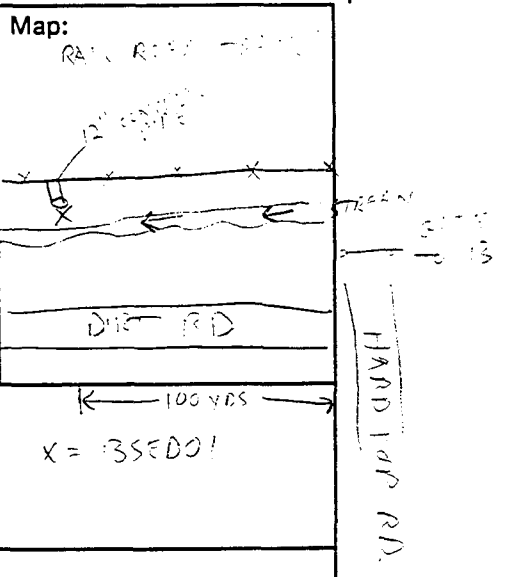
Sampled By: KS AS

C.O.C. No.: DATED 8.24.95

Sample Method: STAINLESS TROWEL	Composite Sample Data		
	Sample	Time	Color/Description
Depth Sampled: 0 - 0.5'			
Sample Date and Time: 8.24.95 1115			
Type of Sample			
☒ Grab			
☐ Composite			
☐ Grab-Composite	Grab Sample Data		
☐ High Concentration	Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)	
☒ Low Concentration			

Analysis	Container Requirements	Collected (✓)
TCL VOC	4 oz glass	
GRAIN SIZE	16 oz glass	
SUPPORTIVES	32 oz glass	
TAL METALS		
TCL PEST / PCB	2-32 oz glass	
TPH		
TOC		

Map:



Observations/Notes: DRY MED BROWN SILTY SAND
[illegible] 1" ø

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No:	[illegible]

2 PHOTOS TAKEN

Halliburton NUS CORPORATION

SINGLE SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: NWS EARLE

Project No.: CTO 23[illegible] 5803

- ☐ Surface Soil
- ☐ Subsurface Soil
- ☒ Sediment
- ☐ Other _____
- ☐ QA Sample Type: _____

Sample ID No.: 13SED03

Sample Location: SITE 13

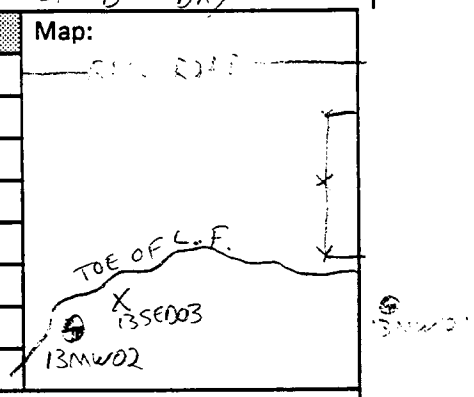
Sampled By: KS AS

C.O.C. No.: DATED 8.24.95

Sample Method: STAINLESS TROWEL	Composite Sample Data		
	Sample	Time	Color/Description
Depth Sampled: 0-0.5'			
Sample Date and Time: 8.24.95 1140			
Type of Sample			
☒ Grab			
☐ Composite			
☐ Grab-Composite	**Grab Sample Data**		
☐ High Concentration	Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)	
☒ Low Concentration	TAN/GRAY	SILTY SAND DRY	

Analysis	Container Requirements	Collected (✓)
TCL VOC	4 oz GLASS	
GRAIN SIZE	16 oz "	
EXPLOSIVES	32 oz "	
TAL METALS	"	
TCL PEST/PCB	2-32 oz "	
TPH		
TOC		

Map:



Observations/Notes: DRY LT BRN TO LT GRAY. SILTY SAND TO GRAVEL [illegible]

DRY EROSION AREA FROM "TOP" OF LANDFILL

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No:	[illegible]

2 PHOTOS TAKEN

Halliburton NUS CORPORATION

SINGLE SAMPLE LOG SHEET

Project Site Name: NUS FARE

Project No.: CTO 231 5803

- ☐ Surface Soil
- ☐ Subsurface Soil
- ☒ Sediment
- ☐ Other _____
- ☐ QA Sample Type: _____

Sample ID No.: 17SED01

Sample Location: SITE 17

Sampled By: KS AS

C.O.C. No.: DATE 8.24.95

Sample Method: STAINLESS TROWEL

Depth Sampled: 0 - 0.5'

Sample Date and Time: 8.24.95 0940

Type of Sample
- ☒ Grab
- ☐ Composite
- ☐ Grab-Composite
- ☐ High Concentration
- ☒ Low Concentration

Composite Sample Data

Sample	Time	Color/Description

Grab Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)

Analysis	Container Requirements	Collected (✓)
TCL VOC	4 oz	✓
TCL SVOC	* SEE COC	✓
TAL METALS	* 1-32 oz	✓
TCC	*	✓
[illegible] SITE	16 oz	✓
TCL PEST	*	✓

Map: SITE 17

PARKING LOT

17NUS05

X 17SED01

Observations/Notes: DRY SEEP EROSION AREA, SILTY SAND TAN TO LT BRN. COLOR

SAMPLED WITH STAINLESS TROWEL 2 PHOTOS TAKEN

Circle if Applicable:

MS/MSD — Duplicate ID No: —

Signature(s): [illegible]

Halliburton NUS CORPORATION

SINGLE SAMPLE LOG SHEET

Project Site Name: NWS EARLE

Project No.: CTO 231 5803

- ☐ Surface Soil
- ☐ Subsurface Soil
- ☒ Sediment
- ☐ Other _____
- ☐ QA Sample Type: _____

Sample ID No.: 20SED01

Sample Location: SITE 20

Sampled By: KS AS

C.O.C. No.: DATED 8.24.95

Sample Method: STAINLESS TROWEL

Depth Sampled: 0-0.5'

Sample Date and Time: 8.24.95 1500

Type of Sample
- ☒ Grab
- ☐ Composite
- ☐ Grab-Composite
- ☐ High Concentration
- ☑ Low Concentration

Composite Sample Data

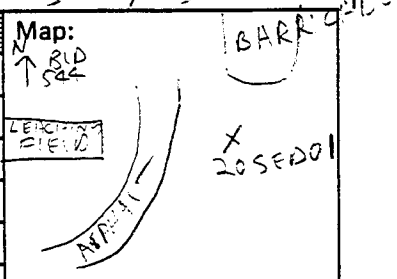
Sample	Time	Color/Description

Grab Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
BROWN	DRY SILTY SAND

Analysis	Container Requirements	Collected (✓)
TCL VOC	4 oz GLASS	
TCL SVOC	QT GLASS	
TAL METALS		
TOC		
GRAIN SIZE	16 oz GLASS	

Map:



Observations/Notes: GRASS AREA - GRASS REMOVED

BROWN SILTY/SAND TR GRAVEL ROOTED MATERIAL

Circle if Applicable:

MS/MSD _____ Duplicate ID No: _____

Signature(s): [illegible]

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [ ] Surface Soil
- [ ] Subsurface Soil
- [x] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 23 SED 01 Source Location Site 23

Sample Method:	Composite Sample Data		
Stainless Steel Trowel	Sample	Time	Color / Description
Depth Sampled: 6-12"			
Sample Date & Time: 8/15/95 0955			
Sampled By: Chuck Meyer			
Signature(s): Chuck Meyer			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

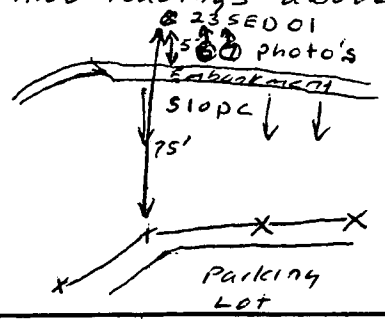
Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Lt Gray to Black	wet sandy clay

Analysis:

- TCL volatiles
- TCL SVOC's
- TCL pest
- TAL Metals
- Explosives

Observations / Notes

No HNU readings above background



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page 1 of 1

Case # _____

By _____

- ☐ Surface Soil
- ☐ Subsurface Soil
- ☑ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Project Site Name: NWS EARLE
Project Site Number: CTO 231
NUS Source No.: 23 SED 02
Source Location: Site - 23

Sample Method: Stainless Steel Trowel

Depth Sampled: 0 - 6"

Sample Date & Time: 8/15/95 1023

Sampled By: Chuck Mcgrr

Signature(s): Chuck Mcgrr

Type of Sample
- ☑ Low Concentration
- ☐ High Concentration
- ☑ Grab
- ☐ Composite
- ☐ Grab - Composite

Composite Sample Data

Sample	Time	Color / Description

Sample Data

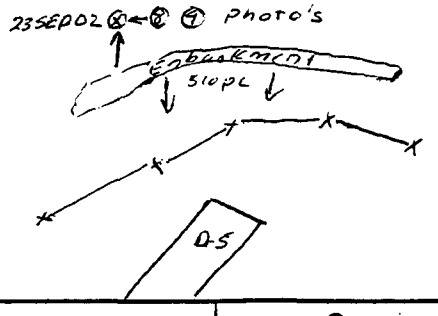
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Brown to Gray	Fine to coarse grained dry sand

Analysis:
- TCL Volatiles
- TCL SVOC's
- TCL Pest
- TAL Metals
- Explosives

Observations / Notes

No HNU readings above background

23SED02 ⊗ ← ⊗ ⊗ Photo's



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page 1 of 1

Case # _____

By _____

- ☐ Surface Soil
- ☐ Subsurface Soil
- ☑ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Project Site Name: NWS EARLE

Project Site Number: CTO 231

NUS Source No.: 23SW\SED03

Source Location: Site

Sample Method: Stainless Steel Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/15/95 1210			
Sampled By: Chuck Meyer			
Signature(s): Chuck Meyer			
Type of Sample: ☑ Low Concentration ☐ High Concentration ☑ Grab ☐ Composite ☐ Grab - Composite			

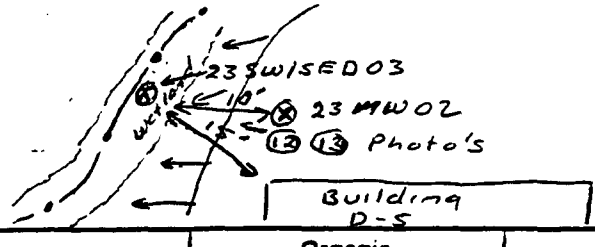
Sample Data	
Color: Tan to Med Brown	Description: (Sand, Clay, Dry, Moist, Wet, etc.): Wet Silty Clay

Analysis:

- TCL Volatiles
- TCL SVOC's
- TCL Pest
- TAL Metals
- Explosives

Observations / Notes

No HNU Readings above background



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ☐ Subsurface Soil
- ☑ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 23 SW/SED04 Source Location Site-23

Sample Method:	Composite Sample Data		
Stainless Steel Trowel	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/15/95 1355			
Sampled By: Chuck Meyer			
Signature(s): [signature]			
Type of Sample			
☑ Low Concentration			
☐ High Concentration			
☑ Grab			
☐ Composite			
☐ Grab - Composite			

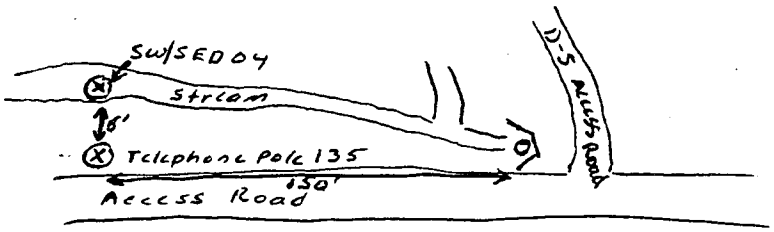
Sample Data	
Color	Description: (Sand, Clay, Dry; Moist, Wet, etc.)
Orange to Gray	Coarse grained silty sand

Analysis:

- TCL Volatiles
- TCL SVOC's
- TCL Pest
- TAL Metals
- Explosives

Observations / Notes

No HNU Readings above background



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ☐ Subsurface Soil
- ☑ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 23 SW/SED 05 DUP 20 Source Location Site - 23

Sample Method: Stainless Steel Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/15/95 1505			
Sampled By: Chuck Meyer			
Signature(s): Chuck Meyer			
Type of Sample: ☑ Low Concentration ☐ High Concentration ☑ Grab ☐ Composite ☐ Grab - Composite			

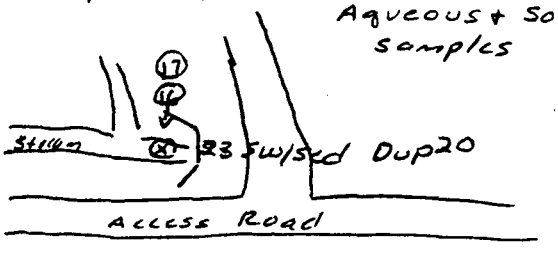
Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Brown to Gray	Sandy Silt with rocks

Analysis:

- TCL Volatiles
- TCL SVOC's
- TCL Pest
- TAL Metals
- Explosives

Observations / Notes

No HNU readings above background
Duplicate sample Dup 20 - 081595 both Aqueous + Solid samples



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ☐ Subsurface Soil
- ■ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name: NWS Earle

Project Site Number: CTO 231 (5803)

NUS Source No.: Q - SD - 01

Source Location: Site Q

	Composite Sample Data		
	Sample	Time	Color / Description
Sample Method: Shovel			
Depth Sampled: pond is 18" deep — Sediment Sample 0-6"			
Sample Date & Time: 12-4-95 @ 1345			
Sampled By: Vince Shickora		N.A.	
Signature(s):			
Type of Sample: ☒ Low Concentration, ☐ High Concentration, ☒ Grab, ☐ Composite, ☐ Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Black	mud / clay (some organic matter)

Analysis:
- TCL VOC
- TCL SVOC
- TPH

Observations / Notes

We have readings

The sample was collected 4 feet from end of pier and 10 feet from shore.

See p. 199 of log book # 2286 for sketch

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	250513 5485	
Date Shipped	12-4-95	
Time Shipped	1900	
Lab	Lancaster Lab	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ SURFACE SOIL
☐ SUBSURFACE SOIL
☒ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE _____

SITE NAME NWS EARLE

SITE NUMBER _____

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOC 4oz w/m	TCL SVOC Landfill 1-4oz w/m	TAL metals Grab 1-500ml w/m	TPH Refined Explosives 1-500ml w/m				No. OF CONT TOTAL	SOIL DESCRIPTION
BG SED 01	Trowel		6/8/95	1002	SC	L	G	1	1	1	1				4	Brown Fine Gravel Sand w/organics
BG SED 02	Trowel		6/8/95	1157	SC	L	G	1	1	1	1				4	Brown Sand + Peat w/Gravel
BG SED 04	Trowel		6/8/95	1424	SC	L	G	3	3	3	3				12	Brown Silty Sand w/Gravel
BG SED 17 Dup	Trowel		6/8/95	1722	SC	L	G	2	2	2					6	Brown Silty Peat w/Roots + trace Sand
BG SED 19	Trowel		6/9/95	0939	SC	L	G	1	1	1					3	Brown Silty Fine Sand w/some roots
BG SED 20	Trowel		6/9/95	1032	SC	L	G	1	1	1					3	Brown Silty Sand w/some Coarse Gravel + Roots
BG SED 16	Trowel		6/9/95	1125	SC	L	G	1	1	1					3	Tan-Brown Silty U. Fine Sand w/trace Roots
BG SED 21	Trowel		6/9/95	1223	SC	L	G	1	1	1					3	Red-Brown Silty Fine Sand

REMARKS:

LAB:

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [ ] Surface Soil
- [ ] Subsurface Soil
- [x] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By Chuck Meyer

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. BGSD06 Source Location BG

Sample Method:	Composite Sample Data		
Stainless Steel Trowel	Sample	Time	Color / Description
Depth Sampled: 0 - 6"			
Sample Date & Time: 7/19/95 1420			
Sampled By: Chuck Meyer			
Signature(s): Chuck Meyer			

Type of Sample

- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

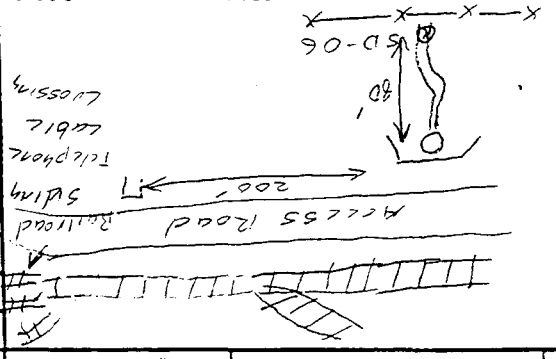
Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Dark Brown	Silty with course grained sand very moist

Analysis:

TCL Pest / PCB's

Observations / Notes



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

PAGE ___ OF ___

☐ SURFACE SOIL
☐ SUBSURFACE SOIL
☒ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE K. S. [illegible]

SITE NAME NWS EARLE

SITE NUMBER C10 D31 S303

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOC's	TCL SVOC's	TAL METALS	LANDFILL PAR.	GRAIN SIZE			No. OF CONT (TOTAL)	SOIL DESCRIPTION
BG-SED06	S.T.	0-.5'	5-18-95	1125	KS	L	G	✓	✓	✓	✓	✓			5	ROOTS/GRASS SOME ORGANIC MATL. LT. BRN SAND TR SILT
BGSED05	↓	↓	↓	1125	KS	L	G	✓	✓	✓	✓	✓			5	"
BGSED 07	↓	↓	↓	1400	KS	L	G	✓	✓	✓	✓	✓			5	VERY LITTLE REAL LITTER GRAY TO LT. BRN. SAND SOME SILT TR. ORANIC MAX .5" Ø

REMARKS: ST = STAINLESS TROWEL

LAB: LANCASTER LAB.

ACAD: FORMS\LOG.DWG 2/11/93 MB

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

PAGE ___ OF ___

☐ SURFACE SOIL
☐ SUBSURFACE SOIL
☒ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE [illegible]

SITE NAME NWS EARLE

SITE NUMBER BACKGROUND / WATER SHED

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOC 4 oz GLASS	TCL SVOC 1 GLASS	TAL METALS + CN 16 oz GLASS	LANDFILL PAR. 1 GLASS	GRAIN SIZE 1 GLASS			No. OF CONT TOTAL	SOIL DESCRIPTION
BGSED08	SS	0-.5'	5.29.95	1025	KS	L	G	3	3	3	3	3			15*	TR. ORGANIC MATERIAL BRN TO DARK BRN. SILT TR FINE SAND
BGSED09 ■	SS	0-5'	↓	1150	KS	L	G	1	1	1	1	1			5	SILT & SAND LT. BRN SOME ORGANIC MATERIAL
DUP-01	SS	0-5'		0000	KS	L	G	1	1	1	1	1			5	"
BGSED10	SS	0-5'		1400	KS	L	G	1	1	1	1	1			5	SILT TR SAND SOME ORGANIC MATERIAL ROOTS/GRASS
BGSED11	SS	0-5'		1435	KS	L	G	1	1	1	1	1			5	SAND & ORGANIC MATERIAL BRN. VERY LITTLE SILT
BGSED13	S.T.	0-5'		1540	KS	L	G	1	1	1	1	1			5	SILTY SAND [illegible] TR. ORGANIC MATERIAL
BGSED12	SS	0.5'		1600	KS	L	G	1	1	1	1	1			5	RUST COLOR TO BLACK SANDY [illegible]

* RUN ALSO MS/MSD

REMARKS: SS [illegible] STAINLESS POOP
[illegible] STAINLESS TROWEL

■ DUP TAKEN AT BGSED09, DUP-01

LAB: LANCASTER LAB

ACAD: FORMS\LOG.DWG '93 MB

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

PAGE ___ OF ___

☐ SURFACE SOIL
☐ SUBSURFACE SOIL
☒ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE [illegible]

SITE NAME NWS EARLE

SITE NUMBER BACKGROUND / WATERSHED

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOC 4 oz GLASS	TCL SVOC L GLASS	TAL METALS TCN 16 oz GLASS	LANDFILL PAR. L GLASS	GRAIN SIZE L GLASS			No. OF CONT TOTAL	SOIL DESCRIPTION
BGSED14	SS	0-.5'	[illegible]	0938	KS	L	G	1	1	1	1	1			[illegible]	SAND TR SILT RUST TO BLACK COLOR TR ORGANIC MAT
BGSED15	SS	0-.5'	↓	1128	KS	L	G	1	1	1	1	1			5	DRK BRN SILT SOME SAND TR GRAVEL SOME ORGANIC MAT
BGSED 16	SS	0-.5'		1220	KS	L	G	1	1	1	1	1			5	SAND TR SILT RUST ORANGE TO BLACK SOME ORGANIC MAT.

REMARKS: [illegible] STAINLESS STEEL

LAB: SHIPPED TO LANCASTER LAB.

ACAD: FORMS\LOG.DWG 2/11/93 MB

APPENDIX D.f.

SOIL BORING SAMPLE LOGS

SAMPLE LOG SHEET

HALLIBURTON NUS Environmental Corporation

☒ SURFACE SOIL
☒ SUBSURFACE SOIL
☐ SEDIMENT
☐ LAGOON/POND
☐ OTHER

PAGE ___ OF ___

SAMPLERS SIGNATURE [signature]

SITE NAME NWS EARLE

SITE NUMBER 5803-CTO 231

BACKGROUND AND SITE 1 SAMPLES

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)OW (H)IGH	(G)RAB (C)OMPOSITE	TCL VOC 4 oz JARS	SVOC, PESTICIDES, TPH, MET + MERCURY, CN 8 oz JARS	N/N CHLOR, TOC, COD, PHOS, AMMONIA, G.S. 8 oz JARS	EXPLOSIVES ⊗ 4 oz GLASS	MEANS/TPH/N/N 8 oz GLASS			No. OF CONT TOTAL	SOIL DESCRIPTION
BG-SB 02-00	SS	0-.5'	6.20.95	1400	KS/SC	L	G	1	1	1	1			⊗4	3*	LT. BRN/TAN SAND SOME GRAVEL MAX Ø 1"
BG-SB02-05	SP	5'-7'	6-21-95	0845	KS/SC	L	G	1	1	1	1			⊗4	3*	YELLOW BRN SILTY SAND MOIST
BG-SB01-00	SS	0--.5	6-22-95	1545	SJC	L	G	1	1	1	1				4	YELLOW BRN SILTY SAND
BG-SB01-05	SP	5'-7	"	1600	SJC	"	"	1	1	1	1				4	OLIVE BRN SILTY SAND
																⊗ EXPL NOW TO GPES LAB
01SB01-00	SP	.5-2.0	6/25/95	0935	SJC/KS	L	G	1			1	1			3	YELLOW BRN SILTY SAND
01SB01-02	SP	2.0-4.0	"	0940	"	"	"	1			1	1			3	" " " "
01SB02-00	SP	.5-2.0	"	1000	"	"	"	1			1	1			3	" " " "
01SB02-02	SP	2.0-4.0	"	1005	"	"	"	1			1	1			3	" " " "
01SB03-00	SP	.5-2.0	"	1025	"	"	"	1			1	1			3	" SILTY SAND - TR RK FRAG
01SB03-02	SP	2-4	"	1030	"	"	"	1			1	1			3	" SILTY SAND
01SB04-00	SP	.5-2.0	"	1045	"	"	"	1			1	1			3	YELLOW BRN SILTY SAND TR ROAD GR.
01SB04-02	SP	2-4	"	1050	"	"	"	1			1	1			3	YELLOW BRN SILTY SAND
01SB05-00	SP	.5-2.0	"	1110	"	"	"	1			1	1			3	" " " "
01SB05-02	SP	2'-4'	"	1115	"	"	"	1			1	1			3	" " " "

REMARKS: SS = STAINLESS STEEL SPOON
SP = SPLIT SPOON

* DUP 04 TAKEN WITH THIS SAMPLE

LAB: LANCASTER / GPES

EXPLOSIVES NOW TO

ACAD: FORMS\LOG.DWG 2/11/93 MB

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

PAGE ___ OF ___

☐ SURFACE SOIL
☐ SUBSURFACE SOIL
☐ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE S. Conti

SITE NAME NWS EARLE

SITE NUMBER 5803-CTO 231

SITE 1

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE 1995	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOCS 4 oz GLASS	METALS, TPH NITRATE/NITRITE QT GLASS	EXPLOSIVES 4 oz GLASS					No. OF CONT TOTAL	SOIL DESCRIPTION
01SB06-00	SP	.5-2	6-25	1305	SJC	L	G	1	1	1					3	SEE BORING LOGS FOR
01SB06-02	SP	2-4	"	1310	"	"	"	1	1	1					3	DESCRIPTION
01SB07-00	SP	.5-2	"	1325	"	"	"	1	1	1					3	"
DUP-05	SP	.5-2	"	1325	"	"	"	1	1	1					3	DUP OF 01SB07-00
01SB07-02	SP	2-4	"	1330	"	"	"	1	1	1					3	
~~05~~ 01SB08-00	SP	.5-2	"	1400	"	"	"	1	1	1					3	
01SB08-02	SP	2-4	"	1405	"	"	"	1	1	1					3	
01SB09-00	SP	.5-2	"	1420	"	"	"	1	1	1					3	
01SB09-02	SP	2-4	"	1425	"	"	"	1	1	1					3	
01SB10-00	SP	.5-2	"	1445	"	"	"	3	3	3					9	MS/MSD HERE
01SB10-02	SP	2-4	"	1500	"	"	"	1	1	1					3	

REMARKS: SP = SPLIT SPOON
SS = STAINLESS ST. TROWEL.

LAB: LANCASTER/GPES (EXPLOSIVES)

ACAD: FORMS\LOG.DWG 3 MB

CTO 231 5803

HALLIBURTON NUS Environmental Corporation

SAMPLE LOG SHEET

PAGE ___ OF ___

☒ SURFACE SOIL ☐ LAGOON/POND
☐ SUBSURFACE SOIL ☐ OTHER
☒ SEDIMENT

SAMPLERS SIGNATURE [illegible]

SITE NAME NWS EARLE

SITE NUMBER 16 & 15

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOC 4 OZ GLASS	TCL SVOC, TAL MET. 4 OZ GLASS	PCB, TPH TOC GRAIN SIZE 16 OZ GLASS	TCL SVOC, MET., PCB, TPH 8T GLASS	TCL SVOC PEST/PCB TPH METALS 8T GLASS		HNU PPM	No. OF CONT TOTAL	SOIL DESCRIPTION
																2 PHOTOS + WELL 16-2
16SD02 *	ST	0-.5	7.11.95	1045	KS/CM	L	G	1	1	1				<0.1	3	BRN SILTY SAND TR ROOTS MOIST
16SD03	ST	0-.5	↓	1110	KS/CM	L	G	1	1	1				<0.1	3	SAME
16SD01 ▲	ST	0-.5		1145	KS/CM	L	G	1	1	1				<0.1	3	IN CATCH BASIN, COARSE SAND TR GRAVEL MAX Ø .25" MOI
16SS01	ST	0-.5		1345	KS/CM	L	G	1			1			<0.1	2	SAND & GRAVEL MAX 1.5" Ø BRN
16SS02	ST	0-.5		1355	KS/CM	L	G	1			1			<0.1	2	SILT WITH SOME PEAT DARK BRN TO GRAY AT ≈5" COARSE SAND
16SS03	ST	0-.5		1410	KS/CM	L	G	1			1			29	2	SILTY SAND TR GRAVEL 1" Ø TR ROOTS DR BRN, FUEL ODO
15SB01	AUGER	1-2		1610	KS/CM	L	G	1				1		4	2	SILTY SAND DR BRN TO BLACK, MOIST
15SS01	ST	0-.5		1615	KS/CM	L	G	1				1		<0.1	2	SILTY SAND, BLACK TR ROOTS TR BRN CLAY
15SB02	AUGER	1-2		1640	KS/CM	L	G	1				1		1	2	GRAY TO BRN SILTY SAND TR CLAY
15SB04 ■	AUGER	2-3		1705	KS/CM	L	G	1				1		<0.1	2	GRAY TO BRN CLAY TR FINE SAND, MOIST
15SS02	ST	0-.5		1720	KS/CM	L	G	1				1		<0.1	2	TAN SILTY SAND TR ROOTS
15SB03	AUGER	2-3		1730	KS/CM	L	G	1				1		8	2	TAN TO GRAY SILTY SAND TR ORGANIC MAT.

REMARKS: ST = STAINLESS STEEL TROWELL.

* DUP 11 TAKEN ■ DUP 13 TAKEN

LAB: LANCASTER LAB

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ SURFACE SOIL
☐ SUBSURFACE SOIL
☐ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE Sgconti

SITE NAME NWS CARLE

SITE NUMBER CTO 231 5803

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: 4 OZ GLASS TCL VOCS	ANALYSES: QT GLASS SVOC, METALS PB, TPH							No. OF CONT TOTAL	SOIL DESCRIPTION
16SB01-00	SP	0-2	7-9-95	0900	SJC/KCS	L	G	1	1							2	120 PPM SAND
16SB01-06	"	6-8	"	0920	"	"	"	1	1							2	1 PPM SAND
16SB02-04	"	4-6	"	1030	"	"	"	1	1							2	
16SB06-02	"	2-4	"	1255	"	"	"	1	1							2	
16SB06-06	"	6-8	"	1305	"	"	"	1	1							2	
16SB04-08	"	8-10	"	1526	"	"	"	1	1							2	DUP TAKEN HERE DUP 10
16SB04-10	"	10-12	"	1540	"	"	"	1	1							2	
16SB01-06	"	6-8	"	0914	PD/KM	"	"	1	1							2	
16SB13-02	"	0-2	"	1031	"	"	"	1	1							2	
16SB13-06	"	6-8	"	1044	"	"	"	1	1							2	
16SB12-02	"	0-2	"	1114	"	"	"	1	1							2	
16SB12-06	"	6-8	"	1124	"	"	"	1	1							2	
16SB03-02	"	0-2	"	1250	"	"	"	1	1							2	
16SB03-06	"	6-8	"	1304	"	"	"	1	1							2	
16SB05-06	"	6-8	"	1453	"	"	"	1	1							2	

REMARKS:

LAB:

ACAD: FORMS\LOG.DWG '93 MB

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

PAGE____OF____

☐ SURFACE SOIL
☐ SUBSURFACE SOIL
☐ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE S. J. Conti

SITE NAME NWS CARLE

SITE NUMBER CTO 231 - 5803

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: 4 OZ GLASS	TCL VOCS	TCL SVOC, TAL MET POB/TPH (OT GLASS)						No. OF CONT TOTAL	SOIL DESCRIPTION
16SB20-02	SP	2-4	7/8/95	0955	SJC/KS	L	G	1	1							2	YELLOW BRN F TO C SAND
16SB20-06	SP	6-8	"	1010	"	"	"	1	1							2	OLIVE BRN SILTY FINE SAND
16SB19-06	"	6-8	"	1112	"	"	"	1	1							2	
16SB19-08	"	8-10	"	1123	"	"	"	1	1							2	
16SB11-09	"	9-11	"	0955	PD	"	"	1	1							2	
16SB08-06	"	6-8	"	1040	PD	"	"	1	1							2	
16SB07-04	"	4-6	"	1115	PD	"	"	1	1							2	
16SB17-04	"	4-6	"	1300	SJC/KS	"	"	1	1							2	DUP TAKEN HERE
16SB17-06	"	6-8	"	1315	"	"	"	1	1							2	
16SB18-02	"	2-4	"	1350	"	"	"	1	1							2	
16SB18-06	"	6-8	"	1405	"	"	"	1	1							2	
16SB10-00	"	0-2	"	1245	PD	"	"	1	1							2	
16SB16-04	"	4-6	"	1254	PD	"	"	1	1							2	
16SB15-06	"	6-8	"	1345	PD	"	"	1	1							2	
16SB16-06	"	6-8	"	1435	PD	"	"	1	1							2	
16SB14-04	"	4-8	"	1505	PD	"	"	3	3							6	

REMARKS:

LAB:

ACAD: FORMS\LOG.DWG

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ SURFACE SOIL
☐ SUBSURFACE SOIL
☐ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE S. Conti

SITE NAME NWS EARLE

SITE NUMBER CTO 231 5803

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: 4oz GLASS TCL VOLATILES	TCL SVOC, TPH, PCBs/TPH 8oz GLASS	QT GLASS TCL PCBs/TPH						No. OF CONT TOTAL	SOIL DESCRIPTION
165B05-01	SP	8-10	7/10/95	1140	[illegible]	L	G	1	1							2	
29SB02-02	SP	2-4	7/10/95	1310	SJC/TS	L	G			1						1	FROM MW29-2 SENT W/ COC DATED 7/10/95

REMARKS: SP = SPLIT SPOON

LAB: LANCASTER

ACAD: FORMS\LOG.DWG '93 MB

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ☑ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 16SB02-03 Source Location Site 16

Sample Method:	Composite Sample Data		
Hand Auger	Sample	Time	Color / Description
Depth Sampled: 36-42"			
Sample Date & Time: 8/4/95 0930			
Sampled By: Andy Spaugh			
Signature(s):			
Type of Sample			
☑ Low Concentration			
☐ High Concentration			
☑ Grab			
☐ Composite			
☐ Grab - Composite			

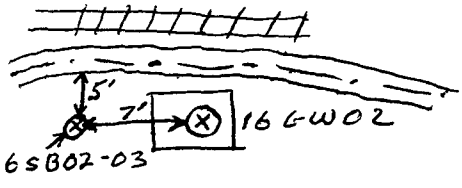
Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
tt Brown	Sand very moist

Analysis:

TCL Pest / PCB's

Observations / Notes

No HNu readings above Background



Resampling for Pest/PCB's due to lab ERROR

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ SURFACE SOIL
☐ SUBSURFACE SOIL
☐ SEDIMENT
☐ LAGOON/POND
☐ OTHER

PAGE ___ OF ___

SAMPLERS SIGNATURE [illegible]

SITE NAME NWS EARLE

SITE NUMBER 19 & 20

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOC 4 oz GLASS	TAL METALS QT GLASS	TAL METALS 4 oz GLASS QT GLASS	TCL SVOCS TAL METALS QT GLASS				No. OF CONT TOTAL	SOIL DESCRIPTION
19SB03-00	A	0-3'	6-27-95	1200	KS	L	G	1		1					2	SAND & GRAVEL SUB ANGULAR LAMINATED WITH PAINT CHIPS
19SB03-03	A	3-5'	"	1210	KS	L	G	1		1					2	SILT TO SAND [illegible] BR
DUP-06	A	0-3'	"	1200	KS	L	G	1		1					2	SAME AS 03-00
19SB04-00	A	0-3	"	1230	KS	L	G	1	1						2	[illegible] TR ROOTS TR GRAVEL [illegible]
19SB04-03	A	3-5	"	1235	KS	L	G	1	1						2	SILTY SAND BRN TR FINE GRAVEL
19SB01-01	A	1-3	"	[illegible]	KS	L	G	1	1						2	[illegible] SILTY SAND BRN 1-3' [illegible]
19SB01-03	A	3-5	"	1305	KS	L	G	1	1						2	SILTY SAND TR GRAVEL MAX Ø 1" [illegible] AS CLAY
19SB02-00	A	0-3	"	1330	KS	L	G	1		1					2	[illegible] TR GRAVEL [illegible] 1"
19SB02-03	A	3-5	"	1335	KS	L	G	1		1					2	SAND AND SILT DRK BRN TR GRAVEL MAX Ø 1"
[illegible]	A	3-5	"	1400	KS	L	G		1						1	SILT [illegible]
20SB02-03	A	3-5	6-28-95	0910	KS	L	G	1			1				2	DARK GRAY OH SILT/CLAY (LEACH FIELD)
20SB03-03	A	3-5	"	0930	KS	L	G	3			3				6	DARK GRAY TR GRAVEL Ø 1" MAX SILT/CLAY TR ROOTS
20SB01-03	A	3-5	"	0950	KS	L	G	1			1				2	"

REMARKS: [illegible] ▲ MS/MSD [illegible] do

LAB: LANCASTER

ACAD: FORMS\LOG.DWG 2 '3 MB

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☐ SURFACE SOIL
☒ SUBSURFACE SOIL
☐ SEDIMENT
☐ LAGOON/POND
☒ OTHER

SAMPLERS SIGNATURE SJC

SITE NAME NWS CARLE

SITE NUMBER CTO 231 - 5803

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOCS 4 OZ GLASS	TCL SVOCS, PEST TAL METALS QT GLASS	EXPLOSIVES 4 OZ GLASS *	PCBS/TPH QT GLASS				No. OF CONT TOTAL	SOIL DESCRIPTION
23SB02 - 02	SP	2-4	7-7-95	0830	SJC	L	G	1	1	1					3	YELLOW BRN SILTY SAND/ CLAYEY SILT
23SB02 - 16	"	16-18	"	0940	SJC	"	"	1	1	1					3	ORANG BRN F TO M SAND
23-SB03 - 06	"	6-8	"	0903	PD	"	"	1	1	1					3	
23-SB03 - 14	"	14-16	"	0928	PD	"	"	1	1	1					3	
23-SB01 - 04	"	4'-6'	"	1325	SJC	"	"	1	1	1					3	OLIVE SILTY F/M SAND
23-SB01 - 16	"	16'-18	"	1430	SJC	"	"	1	1	1					3	ORANG BRN F/M SAND
29-SB01 - 02	"	2'-4'	"	1300	PD	"	"				1				1	DK GRAY - COARSE SAND/SLAG.

REMARKS: SP = SPLIT SPOON

LAB: LANCASTER
* EXPLOSIVES TO GPES LAB

ACAD: FORMS\LOG.DWG 2/11/93 MB

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page 1 of 1

Case # _____

By _____

- ☐ Surface Soil
- ☑ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Project Site Name: NWS EARLE
Project Site Number: CTO 231
NUS Source No.: 235302-02
Source Location: Site-23

Sample Method: Stainless Steel Auger	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 18 - 30			
Sample Date & Time: 8/15/95 1130			
Sampled By: Chuck Meyer			
Signature(s): [signature]			
Type of Sample			
☑ Low Concentration			
☐ High Concentration			
☑ Grab			
☐ Composite			
☐ Grab - Composite			

Sample Data

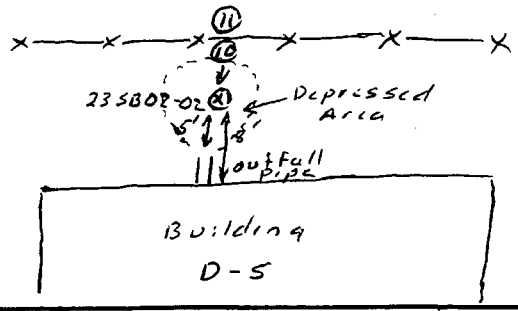
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Gray mud Brown	dry sand

Analysis:

- TCL volatiles
- TCL SVOC's
- TCL Pest
- TAL metals
- Explosives

Observations / Notes

No HNU readings above background



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ☑ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 245B01 - Shot Count Source Location Site 24

Sample Method: Hand Auger	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0 - 42"			
Sample Date & Time: 8/6/95 0950			
Sampled By: ASICM			
Signature(s): [signature]			
Type of Sample			
☑ Low Concentration			
☐ High Concentration			
☑ Grab			
☐ Composite			
☐ Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry; Moist, Wet, etc.)

Analysis:

Shot Count

Observations / Notes

Auger Depth	Shot Count
0-6"	1
6-12"	2
12-18"	3
18-24"	1
24-30"	1
30-36"	0
36-42"	0

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [ ] Surface Soil
- [x] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 245301-05 Source Location Site 24

Sample Method: Hand Auger	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 60-72"			
Sample Date & Time: 8/6/95 0955			
Sampled By: ASICM			
Signature(s): [signature]			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

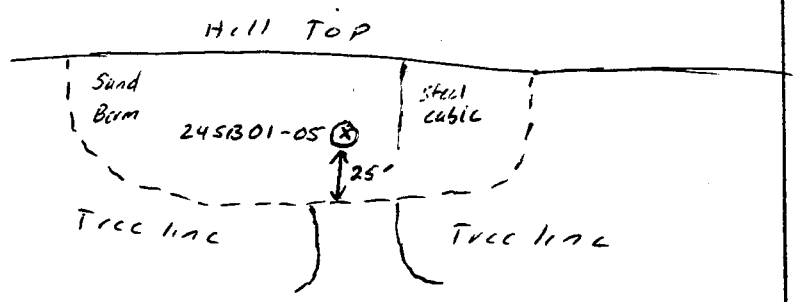
Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Red Gray Brown	medium grained damp sand

Analysis:

TAL Metals
Nitrates / Nitrites

Observations / Notes



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	-	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page 1 of 1

Case # _____

By _____

- [ ] Surface Soil
- [x] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Project Site Name: NWS EARLE
Project Site Number: CTO 231
NUS Source No.: 24SB01-08
Source Location: Site 24

Sample Method:	Composite Sample Data		
Hand Auger	Sample	Time	Color / Description
Depth Sampled: 96 - 108"			
Sample Date & Time: 8/6/95 1000			
Sampled By: AS/CM			
Signature(s): Charles Moyer			

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

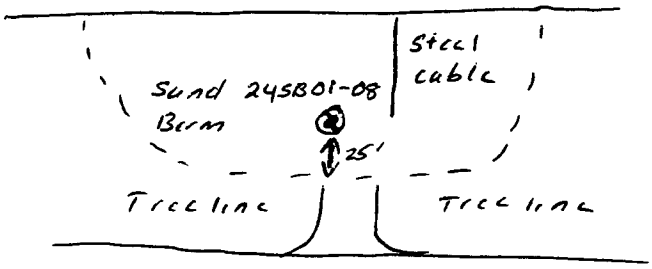
Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Med Brown	Coarse grained damp sand

Analysis:

Observations / Notes

Duplicate sample No Dup 18-080695 was obtained at this sample location

Hill Top



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	-	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ☑ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 245B02 - Shot Count Source Location Site 24

Sample Method: Hand Auger	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0 - 18"			
Sample Date & Time: 8/6/95 1005			
Sampled By: ASICM			
Signature(s): [signature]			
Type of Sample			
☑ Low Concentration			
☐ High Concentration			
☑ Grab			
☐ Composite			
☐ Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry; Moist, Wet, etc.)

Analysis:

Shot Count

Observations / Notes

Auger Depth	Shot Count
0-6"	2
6-12"	1
12-18"	0

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	-	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page 1 of 1

Case # _____

By _____

- ☐ Surface Soil
- ☑ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Project Site Name: NWS EARLE
Project Site Number: CTO 231
NUS Source No.: 245B02-03
Source Location: Site 24

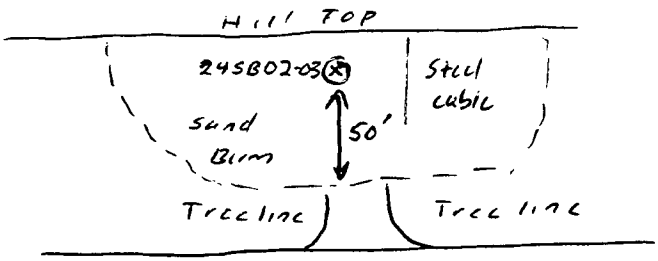
Sample Method:	Composite Sample Data		
Hand Auger	Sample	Time	Color / Description
Depth Sampled: 36-48			
Sample Date & Time: 8/6/95 1015			
Sampled By: ASICM			
Signature(s): Charles Meyer			

Type of Sample
- ☑ Low Concentration
- ☐ High Concentration
- ☑ Grab
- ☐ Composite
- ☐ Grab - Composite

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Tan-Gray	Medium grained damp sand

Analysis:
- TAL Metals
- Nitrate / Nitrite

Observations / Notes



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	-	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page 1 of 1

Case # _____

By _____

- [ ] Surface Soil
- [x] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

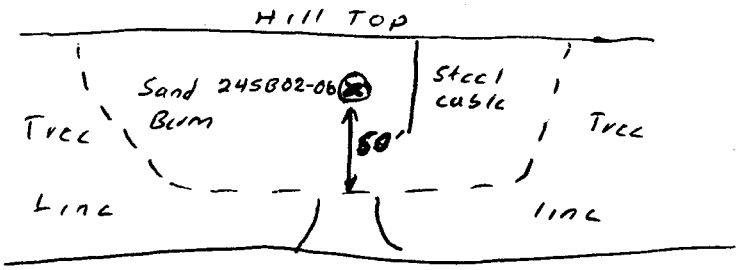
Project Site Name: WWS EARLE
Project Site Number: CTO 231
NUS Source No.: 24 SB 02-06
Source Location: Site 24

Sample Method:	Composite Sample Data		
Hand Auger	Sample	Time	Color / Description
Depth Sampled: 72-84"			
Sample Date & Time: 8/6/95 1020			
Sampled By: ASICM			
Signature(s): Chuck Mayer			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Mid Gray	Coarse grained damp sand

Analysis:
- TAL Metals
- Nitrates / Nitrites

Observations / Notes



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [ ] Surface Soil
- [x] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 25SB01 - Shot Count Source Location Site 25

Sample Method: Hand Auger	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0 - 42"			
Sample Date & Time: 8/6/95 0748			
Sampled By: ASICM			
Signature(s): [signature]			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)

Analysis:

Shot Count

Observations / Notes

Auger Depth	No Shots
0 - 6"	4
6 - 12"	8
12 - 18"	9
18 - 24"	2
24 - 30"	2
30 - 36"	1
36 - 42"	0

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ☑ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 25SB01-05 Source Location Site 25

Sample Method: Hand Auger	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 60-72"			
Sample Date & Time: 8/6/95 0836			
Sampled By: ASI CM			
Signature(s): [illegible]			
Type of Sample			
☑ Low Concentration			
☐ High Concentration			
☑ Grab			
☐ Composite			
☐ Grab - Composite			

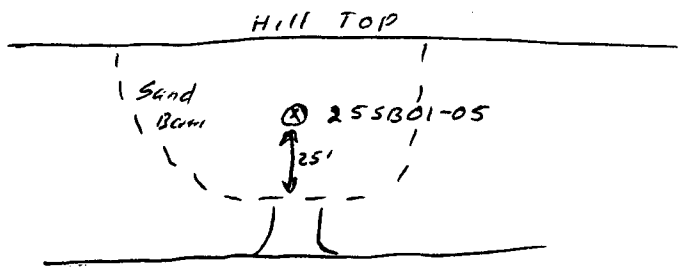
Sample Data

Color	Description: (Sand, Clay, Dry; Moist, Wet, etc.)
Lt Brown	coarse to medium grained damp sand

Analysis:

TAL Metals
Nitrates/Nitrites

Observations / Notes



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	-	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [ ] Surface Soil
- [x] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 25SB01-08 Source Location Site 25

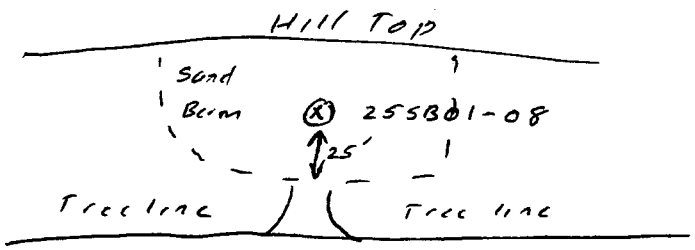
Sample Method: Hand Auger	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 96 - 108"			
Sample Date & Time: 8/6/95 0835			
Sampled By: ASICM			
Signature(s): Charles Meyer			

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Sample Data	
Color	Description: (Sand, Clay, Dry; Moist, Wet, etc.)
Lt Brown Gray	coarse to medium Grained damp sand

Analysis:
- TAL Metals
- Nitrates / Nitrites

Observations / Notes



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	-	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page 1 of 1

- ☐ Surface Soil
- ☑ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 25SB02 - Shot Count Source Location Site 25

Sample Method: Hand Auger	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0 - 18"			
Sample Date & Time: 8/6/95 0842			
Sampled By: ASICM			
Signature(s): [signature]			
Type of Sample			
☑ Low Concentration			
☐ High Concentration			
☑ Grab			
☐ Composite			
☐ Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)

Analysis:

Shot count

Observations / Notes

Auger Depth	Shot Count
0-6"	1
6-12"	0
12-18"	0

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ☑ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 25SB02-03 Source Location Site 25

Sample Method: Hand Auger	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 36 - 48"			
Sample Date & Time: 816/95 0850			
Sampled By: ASICM			
Signature(s): [signature]			
Type of Sample			
☑ Low Concentration			
☐ High Concentration			
☑ Grab			
☐ Composite			
☐ Grab - Composite			

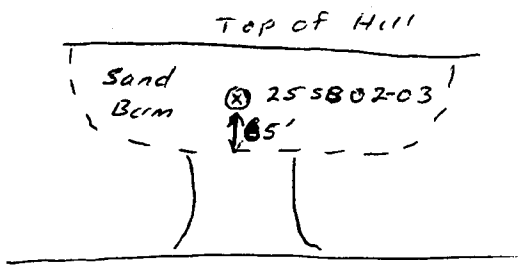
Sample Data	
Color	Description: (Sand, Clay, Dry; Moist, Wet, etc.)
Lt gray Brown	medium grained Sand damp

Analysis:

TAL Metals

Nitrates/Nitrites

Observations / Notes



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	-	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [ ] Surface Soil
- [x] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 25SB02-06 Source Location Site 25

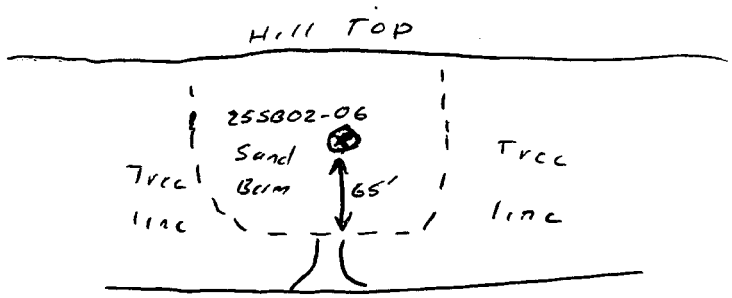
Sample Method: Hand Auger	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 72 - 84"			
Sample Date & Time: 816195 0855			
Sampled By: ASICM			
Signature(s): [signature]			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
LT Brown	Medium grained damp sand

Analysis:

TAL Metals
Nitrates / Nitrites

Observations / Notes



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	-	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

PAGE____OF____

☐ SURFACE SOIL
☒ SUBSURFACE SOIL
☐ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE Sg Conti

SITE NAME NWS EARLE

SITE 26,

SITE NUMBER C10 231 SB03

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOCS 4 OZ GLASS	TAL METALS 1 QT GLASS	EXPLOSIVES 4 OZ GL.						No. OF CONT TOTAL	SOIL DESCRIPTION
26SB01-02	SP	2-4	6/26/95	0930	SJC	L	G	1	1	1						3	SEE BORING LOGS.
26SB04-06	"	6-8	"	0945	"	"	"	1	1	1						3	"
26SB03-04	"	4-6	"	1015	"	"	"	1	1	1						3	"
26SB03-06	"	6-8	"	1020	"	"	"	1	1	1						3	"
26SB01-02	"	2-4	"	1315	"	"	"	1	1	1						3	"
26SB02-04	"	4-6	"	1445	"	"	"	1	1	1						3	"

REMARKS:

LAB:

ACAD: FORMS\LOG.DWG 2/11/93 MB

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ■ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS - EARLE Project Site Number CTO-231 (5803)

NUS Source No. 26-SB DEC95-01 Source Location Site 26

Sample Method: Split spoon / trowel	
Depth Sampled: 8' to 10' bgs	
Sample Date & Time: 12-5-95 @ 1416	
Sampled By: Paul Davis	
Signature(s): Paul Davis	
Type of Sample ☒ Low Concentration ☐ High Concentration ☒ Grab ☐ Composite ☐ Grab - Composite	

Composite Sample Data

Sample	Time	Color / Description
	N.A.	

Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Grayish brn	silty very fine grained sand wet

Analysis:

TCL VOC's

Observations / Notes

HNU = 150 ppm

Solvent odors

This location 11' SW of septic tank

See p. 107 in logbook # 2285 for detailed sketch

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	2505133002	
Date Shipped	12-5-95	
Time Shipped	1800	
Lab	Lancaster	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ■ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS · EARLE Project Site Number CTO-231 (5803)

NUS Source No. 26-SB DEC 95-02 Source Location Site 26

Sample Method: split spoon / trowel	
Depth Sampled: 10' to 12' bgs	
Sample Date & Time: 12-5-95 @ 1440	
Sampled By: Paul Davis	
Signature(s): Paul Davis	
Type of Sample ☒ Low Concentration ☐ High Concentration ☒ Grab ☐ Composite ☐ Grab - Composite	
Analysis: TCL VOC	

Composite Sample Data

Sample	Time	Color / Description

N.A.

Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Yellow Brn	Silty fine grained sand

Observations / Notes

wet

HNU = 6 ppm

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	2505133002	
Date Shipped	12-5-95	
Time Shipped	1800	
Lab	Lancaster	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ■ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS · EARLE Project Site Number CTO-231 (5803)

NUS Source No. 27-SB01-01 Source Location Site 27

	Composite Sample Data		
	Sample	Time	Color / Description
Sample Method: split spoon / trowel			
Depth Sampled: 1' to 2' bgs			
Sample Date & Time: 12-5-95 @ 1200			
Sampled By: Paul Davis		N/A	
Signature(s): Paul Davis			

Type of Sample

- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Light brn.	Silty fine grained sand w/ many pebbles

Analysis:

- TCL VOC
- TAL metals
- TCL SVOC
- TCL pesticides / PCB's

Observations / Notes Some blue/green paint chips.

Dry

No HNU readings

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	250513300Z	
Date Shipped	12-5-95	
Time Shipped	1800	
Lab	Lancaster	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ■ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS - EARLE Project Site Number CTO-231 (5803)

NUS Source No. 27-SB01-03 Source Location Site 27

Sample Method:	Spit spoon / trowel
Depth Sampled:	3' to 4' bgs
Sample Date & Time:	12-5-95 @ 1206
Sampled By:	Paul Davis
Signature(s):	Paul Davis

Type of Sample

- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Composite Sample Data

Sample	Time	Color / Description

Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Light Brown	Silty fine grained sand with pebbles

Analysis:

- TCL VOC
- TAL metals
- TCL SVOC
- TCL pesticides / PCB's

Observations / Notes

Dry to moist

No HNu readings

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	250513300Z	
Date Shipped	12-5-95	
Time Shipped	1800	
Lab	Lancaster	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ■ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS · EARLE Project Site Number CTO-231 (5803)

NUS Source No. 27-SB01-10 Source Location Site 27

Sample Method: Split spoon / trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 10' to 12' bgs			
Sample Date & Time: 12-5-95 @ 1215			
Sampled By: Paul Davis		N.A.	
Signature(s): Paul Davis			
Type of Sample			
☒ Low Concentration			
☐ High Concentration			
☒ Grab			
☐ Composite			
☐ Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Brown	Clayey Sand

Analysis:
TCL VOC
TAL metals
TCL SVOC
TCL pesticides / PCB'S

Observations / Notes

wet

NO HNU readings

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	250513300C	
Date Shipped	12-5-95	
Time Shipped	1800	
Lab	Lancaster	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ■ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS · EARLE Project Site Number CTO-231 (5803)

NUS Source No. 27-SB02-01 Source Location Site 27

	Composite Sample Data		
Sample Method: Split spoon / trowel	Sample	Time	Color / Description
Depth Sampled: 1' to 2' bgs			
Sample Date & Time: 12-5-95 @ 1115			
Sampled By: Paul Davis		N/A	
Signature(s): Paul Davis			

Type of Sample

- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Sample Data	
Color	Description: (Sand, Clay, Dry; Moist, Wet, etc.)
Light Brown	Silty fine grained sand w/ pebbles

Analysis:

- TCL VOC
- TCL SVOC
- TCL pesticides / PCB's
- TAL metals

Observations / Notes

moist

No HNU readings

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	2505133002	
Date Shipped	12-5-95	
Time Shipped	1800	
Lab	Lancaster Labs	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ■ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS · EARLE Project Site Number CTO-231 (5803)

NUS Source No. 27-SB02-03 Source Location Site 27

	Composite Sample Data		
	Sample	Time	Color / Description
Sample Method: split spoon / trowel			
Depth Sampled: 3' to 4' bgs			
Sample Date & Time: 12-5-95 @ 1120			
Sampled By: Paul Davis			
Signature(s): Paul Davis			
Type of Sample			

- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Light Brown	Silty fine grained sand w/ pebbles

Analysis:

- TCL VOC
- TAL metals
- TCL SVOC
- TCL pesticides / PCB'S

Observations / Notes

moist - wet

No HNu readings

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	250513 3002	
Date Shipped	12-5-95	
Time Shipped	1800	
Lab	Lancaster	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [ ] Surface Soil
- [x] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS · EARLE Project Site Number CTO-231 (5803)

NUS Source No. 27-SB02-10 Source Location Site 27

Sample Method:	Composite Sample Data		
Split Spoon / trowel	Sample	Time	Color / Description
Depth Sampled: 10' to 12' bgs			
Sample Date & Time: 12-5-95 @ 1140			
Sampled By: Paul Davis			
Signature(s): Paul Davis			

Type of Sample

- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Sample Data

Color	Description: (Sand, Clay, Dry; Moist, Wet, etc.)
Brown	Silty fine grained sand w/ pebbles

Analysis:

- TCL VOC
- TAL metals
- TCL SVOC
- TCL pesticides / PCB's

Observations / Notes

wet

no HNU readings

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	2505133602	
Date Shipped	12-5-95	
Time Shipped	1800	
Lab	Lancaster	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [ ] Surface Soil
- [x] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS - EARLE Project Site Number CTO-231 (5803)

NUS Source No. 27-5803-01 Source Location Site 27

Sample Method: Hand Auger / trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 1' to 2' bgs			
Sample Date & Time: 12-6-95 @ 1435			
Sampled By: Chuck meyer			
Signature(s):		N/A	

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
dark brown	silty fine to medium grained sand

Analysis:
- TCL VOC
- TCL SVOC
- TAL metals
- TCL pest. / PCB'S

Observations / Notes Some pebbles

No HNU reading

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	2505132991	
Date Shipped	12-6-95	
Time Shipped	1830	
Lab	Lancaster Labs	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ■ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS - EARLE Project Site Number CTO-231 (5803)

NUS Source No. 27-5803-03 Source Location Site 27

Sample Method: Hand Auger / Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 3' to 4' bgs			
Sample Date & Time: 12-6-95 @ 1455			
Sampled By: C. Meyer		N.A.	
Signature(s):			
Type of Sample: ☒ Low Concentration ☐ High Concentration ☒ Grab ☐ Composite ☐ Grab - Composite			

Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Orange brown	Silty fine to medium grained sand

Analysis:

- TCL VOC
- TCL SVOC
- TAL metals
- TCL pest / PCBS

Observations / Notes

No HNU readings

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	250513 2991	
Date Shipped	12-6-95	
Time Shipped	1830	
Lab	Cancaster Labs	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ■ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS · EARLE Project Site Number CTO-231 (5803)

NUS Source No. 27-SB03-06 Source Location Site 27

Sample Method: Hand Auger / trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 6' to 7' bgs			
Sample Date & Time: 12-6-95 @ 1540			
Sampled By: Chuck Meyer			
Signature(s):			

Type of Sample
- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
orange-grayish brown	Silty clayey fine grained sand.

Analysis:
- TCL VOC
- TCL SVOC
- TAL metals
- TCL pest. / PCB's

Observations / Notes

No HNu readings

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	2505132991	
Date Shipped	12-6-95	
Time Shipped	1830	
Lab	Lancaster Labs	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ■ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS · EARLE Project Site Number CTO-231 (5803)

NUS Source No. Q-5802-02 Source Location Site Q

Sample Method: Split Spoon	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 2'-4' bgs			
Sample Date & Time: 12-4-95 @ 1420			
Sampled By: Paul M Davis			
Signature(s): Paul M Davis			
Type of Sample			
☒ Low Concentration			
☐ High Concentration			
☒ Grab			
☐ Composite			
☐ Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Olive green	Clayey silty fine grained sand

Analysis:
TCL VOC
TCL SVOC

Observations / Notes

moist to wet

HNU = 6 ppm

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	250513 5485	
Date Shipped	12-4-95	
Time Shipped	1900	
Lab	Lancaster Lab	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ■ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS · EARLE Project Site Number CTO-231 (5803)

NUS Source No. Q-SB02-04 Source Location Site Q

Sample Method:	Composite Sample Data		
split spoon	Sample	Time	Color / Description
Depth Sampled: 4'-6' bgs			
Sample Date & Time: 12-4-95 @ 1430			
Sampled By: Paul Davis		N.A.	
Signature(s): Paul Davis			
Type of Sample			
☒ Low Concentration			
☐ High Concentration			
☒ Grab			
☐ Composite			
☐ Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
olive green	clayey silty fine grained sand

Analysis:
TCL VOC
TCL SVOC

Observations / Notes

wet

HNU = 10 ppm

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	2565135485	
Date Shipped	12-4-95	
Time Shipped	1900	
Lab	Lancaster Lab	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- ☐ Surface Soil
- ■ Subsurface Soil
- ☐ Sediment
- ☐ Lagoon / Pond
- ☐ Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS · EARLE Project Site Number CTO-231 (5803)

NUS Source No. Q-SB03-01 Source Location Site Q

Sample Method: Hand Auger	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0.5' to 1.0' bgs			
Sample Date & Time: 12-4-95 @ 1438			
Sampled By: Vince Shickora		N.A.	
Signature(s):			

Type of Sample

- ☒ Low Concentration
- ☐ High Concentration
- ☒ Grab
- ☐ Composite
- ☐ Grab - Composite

Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Orange brown	Clayey silty fine grained sand with some well rounded quartz pebbles.

Analysis:

- TCL VOC
- TCL SVOC
- TPH

Observations / Notes

NO HNu readings

See p. 200 in log book # 2286 for sketch

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	250513 5485	
Date Shipped	12-4-95	
Time Shipped	1900	
Lab	Lancaster Labs	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ SURFACE SOIL
☒ SUBSURFACE SOIL
☐ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE Teresa Acuerzer

SITE NAME NWS EARLE

SITE NUMBER CTO 231 / 5803

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOC'S	TCL SVOC'S Pesticides Metals TPH Cyanide	Nitrate, Nitrite, Ammonia, COD, BOD, TOC, Chloride, Sulfate, phosphate	Explosives				No. OF CONT TOTAL	SOIL DESCRIPTION
BG-SB03-00	SS	0-6"	6/26/95	1000	TRS	L	G	1	1	1	1				4	brown silty SAND
BG-SB03-05	SS	5-7	6/26/95	1030	TRS	L	G	1	1	1	1				4	orange silty SAND
BG-SB04-00	SS	0-6"	6/28/95	0800	TRS	L	G	1	1	1	1				4	brown silty SAND
BG-SB04-05	SS	5-7	6/28/95	0910	TRS	L	G	1	1	1	1				4	tan + brown silty SAND

REMARKS:

LAB:

ACAD: FORMS\LOG.DWG 03 MB

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. BKSB04-00 Source Location BK Water front

Sample Method:	Composite Sample Data		
Stainless Steel Trowel	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 7/19/95 1559			
Sampled By: Chuck Meyer			
Signature(s): Chuck Meyer			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

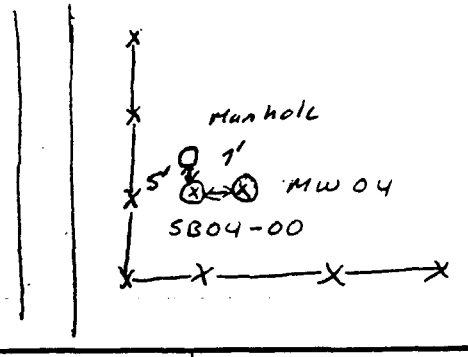
Sample Data

Color	Description: (Sand, Clay, Dry; Moist, Wet, etc.)
Medium Brown	Silty Fine Sand very Dry

Analysis:

TCL Pest / PCB's

Observations / Notes



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

APPENDIX D.g.

SURFACE SOIL SAMPLE LOGS

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page 1 of 1

Case # _____

By _____

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 025501 Source Location Site 2

Sample Method: ~~Hand Auger~~ Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 814195 1746			
Sampled By: ASICM			
Signature(s): [signature]			

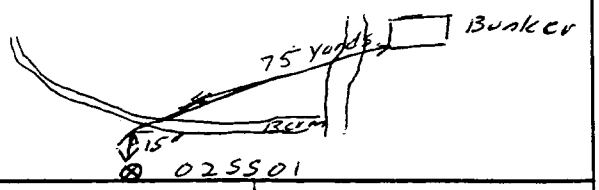
Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Lt-Med Grey	Fine dry Sand

Analysis:
- TCL SVOC's
- TAL Metals
- Chromium +3
- Chromium +6
- Explosives

Observations / Notes

No HNU readings above Background



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	–	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 025S02 Source Location Site 02

Sample Method: stainless steel ~~Hand Auger~~ Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/4/95 1744			
Sampled By: AS / CM			
Signature(s): [signature]			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

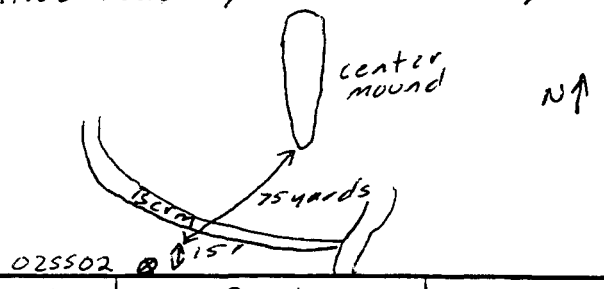
Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Lt Gray	Dry Sand

Analysis:

- TCL SVOC's
- TAL Metals
- Chromium +3
- Chromium +6
- Explosives

Observations / Notes

The sample was for MS/MSD
No HNU readings above background



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	–	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [x] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 025503 Source Location SITE 02

Sample Method: Stainless Steel Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/4/95 1625			
Sampled By: Chuck Meyer			
Signature(s): [signature]			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

Sample Data

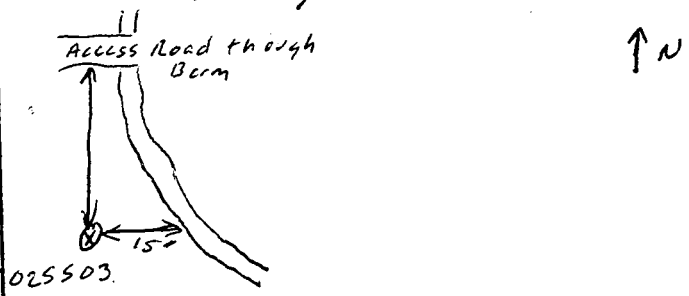
Color	Description: (Sand, Clay, Dry; Moist, Wet, etc.)
Med Gray	Fine grained dry sandy loam

Analysis:

TCL SVOC's
TAL Metals
Chromium+3
Chromium+6
Explosives

Observations / Notes

No HNU readings above background



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	–	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 025504 Source Location SITE 02

Sample Method:	Composite Sample Data		
Stainless Steel Trowel	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/4/95 1550			
Sampled By: CM			
Signature(s): [signature]			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

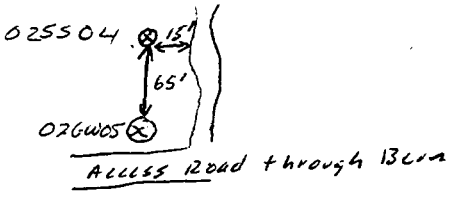
Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Gray to Dark Gray	Fine grained silty sand

Analysis:

- TCL SVOC's
- TAL Metals
- Chromium +3
- Chromium +6
- Explosives

Observations / Notes No HNu readings above Background



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 025505 Source Location Site 02

Sample Method:	Composite Sample Data		
Stainless Steel Trowel	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 814195 1435			
Sampled By: CM			
Signature(s): [signature]			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

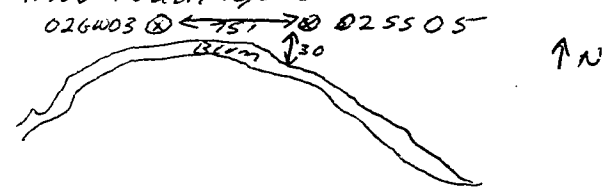
Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Gray to Black	medium grained dry sand

Analysis:

- TCL SVOC's
- TAL Metals
- Chromium +3
- Chromium +6
- Explosives

Observations / Notes

No HNU readings above background



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 025506 Source Location Site 02

Sample Method:	Composite Sample Data		
Stainless Steel Trowel	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/4/95 1505			
Sampled By: CM			
Signature(s): [signature]			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

Sample Data

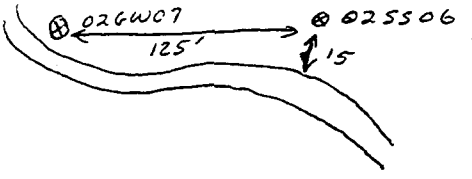
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Black	Fine grained sandy loam

Analysis:

- TCL SVOC's
- TAL Metals
- Chromium +3
- Chromium +6
- Explosives

Observations / Notes

No HNU readings above background



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 025S07 Source Location Site 2

Sample Method:	Composite Sample Data		
Stainless Steel Trowel	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 814195 1710			
Sampled By: ASI CM			
Signature(s): [signature]			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

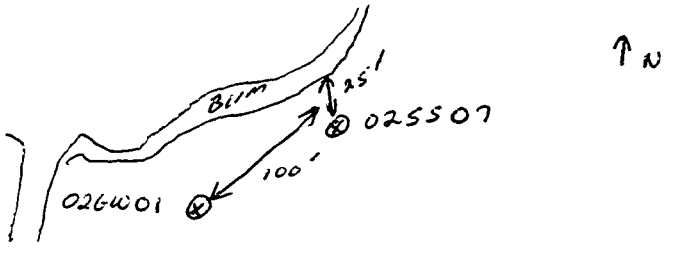
Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Med Brown	Fine grained Sand very dry

Analysis:

- TCL SVOC's
- TAL Metals
- Chromium +3
- Chromium +6
- Explosives

Observations / Notes

No HNu readings above background



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	-	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 025508 Source Location SITE 031

Sample Method: Stainless Steel Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/4/95 1709			
Sampled By: AS/CM			
Signature(s): [signature]			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Med Gray	Fine grained dry sand

Analysis:

- TCL SVOC's
- TAL Metals
- Chromium +3
- Chromium +6
- Explosives

Observations / Notes

No HNU reading above background

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	-	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page 1 of 1

Case # _____

By _____

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Project Site Name: NWS EARLE
Project Site Number: CTO 231
NUS Source No.: WET 3A-1
Source Location: Site 3

Sample Method:	Composite Sample Data		
Stainless steel trowel	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/5/95 1113			
Sampled By: ASI CM			
Signature(s): [signature]			

Type of Sample

- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Black	humus with sand mixed in moist

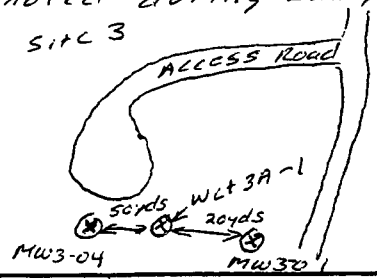
Analysis:

- TCL volatiles
- TCL SVOC's
- TAL Metals
- TCL Pest

Observations / Notes

No HNU readings above background were noted during sampling

Site 3



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 07 WET 07-B2 Source Location Site 07

Sample Method: Stainless Steel Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/7/95 1010			
Sampled By: AS / CM			
Signature(s): Chuck Mayer			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

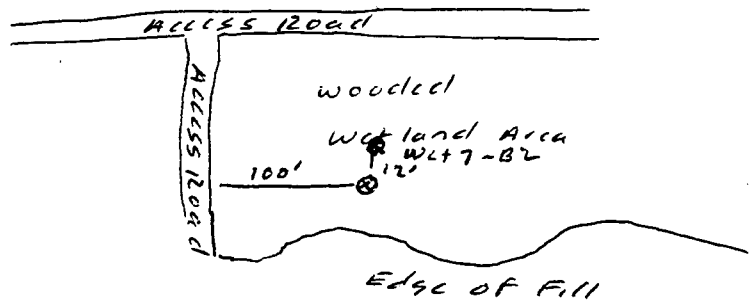
Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
dark orange to Brown	Silty Sand very damp

Analysis:

- TCL Volatiles
- TAL Metals
- Landfill Parameters

Observations / Notes



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	-	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 125501 Source Location Site 12

Sample Method:	Composite Sample Data		
Stainless Steel Trowel	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/5/95			
Sampled By: AS / CM			
Signature(s): [illegible]			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

Sample Data

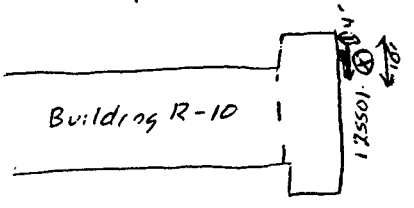
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
med brown	Coarse grained sand with rock and gravel dry

Analysis:

- TCL Volatiles
- TCL Pest
- TCL SVOC's
- TAL Metals

Observations / Notes

There were no HNu readings above background while sampling



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	-	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page 1 of 1

Case # _____

By _____

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Project Site Name: NWS EARLE
Project Site Number: CTO 231
NUS Source No.: 125502
Source Location: Site 12

Sample Method:	Composite Sample Data		
Stainless Steel Trowel	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 8/5/95 1435			
Sampled By: AS/CM			
Signature(s): [signature]			

Type of Sample

- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Sample Data

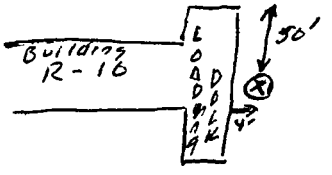
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Black	Coarse grained Fill Material dry

Analysis:

- TCL Volatiles
- TCL SVOC's
- TAL Metals
- TCL Pest

Observations / Notes

No HNU readings above background were noted during sampling



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume	–	

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page 1 of 1

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. 125503 Source Location Site 12

Sample Method:	Composite Sample Data		
Stainless Steel trowel	Sample	Time	Color / Description
Depth Sampled: 0 - 6"			
Sample Date & Time: 815195 1420			
Sampled By: Chuck Meyer			
Signature(s): [signature]			
Type of Sample			
- [x] Low Concentration			
- [ ] High Concentration			
- [x] Grab			
- [ ] Composite			
- [ ] Grab - Composite			

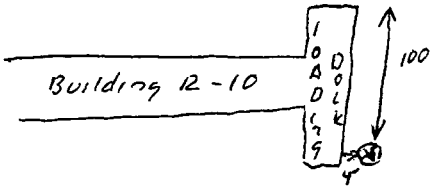
Sample Data	
Color	Description: (Sand, Clay, Dry; Moist, Wet, etc.)

Analysis:

- TCL Volatiles
- TCL SVOC's
- TAL Metals
- TCL Pest

Observations / Notes

Duplicate Sample Dup 18-080595 was taken. There were no HNU readings above background.



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

CTO 231 5803

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

PAGE ___ OF ___

☒ SURFACE SOIL
☐ SUBSURFACE SOIL
☒ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE [illegible]

SITE NAME NWS EARLE

SITE NUMBER 16 & 15

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOC 4 OZ GLASS	TCL SVOC, TAL MET. 4 OZ GLASS	PCB, TPH TOC GRAIN SIZE 16 OZ GLASS	TCL SVOC, MET., PCB, TPH 8 OZ GLASS	TCL SVOC PEST/PCB TAL METALS 8 OZ GLASS		HNU PPM	No. OF CONT TOTAL	SOIL DESCRIPTION 2 PHOTOS + WELL 16-2
16SD02 *	ST	0-.5	7.11.95	1045	KS/CM	L	G	1	1	1				<0.1	3	BRN SILTY SAND TR ROOTS MOIST
16SD03	ST	0-.5	↓	1110	KS/CM	L	G	1	1	1				<0.1	3	SAME
16SD01 ▲	ST	0-.5		1145	KS/CM	L	G	1	1	1				<0.1	3	IN CATCH BASIN, COARSE SAND TR GRAVEL MAX Ø .25" MOI
16SS01	ST	0-.5		1345	KS/CM	L	G	1			1			<0.1	2	SAND & GRAVEL MAX 1.5" Ø BRN
16SS02	ST	0-.5		1355	KS/CM	L	G	1			1			<0.1	2	SILT WITH SOME PEAT DARK BRN TO GRAY AT ≈5" COARSE SAND
16SS03	ST	0-.5		1410	KS/CM	L	G	1			1			29	2	SILTY SAND TR GRAVEL 1" Ø TR ROOTS DR BRN, FUEL ODO
15SB01	AUGER	1-2		1610	KS/CM	L	G	1				1		4	2	SILTY SAND DR BRN TO BLACK, MOIST
15SS01	ST	0-.5		1615	KS/CM	L	G	1				1		<0.1	2	SILTY SAND, BLACK TR ROOTS TR BRN CLAY
15SB02	AUGER	1-2		1640	KS/CM	L	G	1				1		1	2	GRAY TO BRN SILTY SAND TR CLAY
15SB04 ■	AUGER	2-3		1705	KS/CM	L	G	1				1		<0.1	2	GRAY TO BRN CLAY TR FINE SAND, MOIST
15SS02	ST	0-.5		1720	KS/CM	L	G	1				1		<0.1	2	TAN SILTY SAND TR ROOTS
15SB03	AUGER	2-3		1730	KS/CM	L	G	1				1		8	2	TAN TO GRAY SILTY SAND TR ORGANIC MAT.

REMARKS: ST = STAINLESS STEEL TROWELL.

* DUP #1 TAKEN ■ DUP 13 TAKEN

LAB: LANCASTER LAB

Halliburton NUS
CORPORATION

SINGLE SAMPLE LOG SHEET

Project Site Name: NWS EARLE

Project No.: CTO 231 C803

Sample ID No.: 17SS01

Sample Location: SITE 17

Sampled By: KS AS

C.O.C. No.: DATED 8-24-05

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Other _____
- [ ] QA Sample Type: _____

Sample Method: SPLIT ESS SPOON

Depth Sampled: 0 - 0.5'

Sample Date and Time: 8-24-05 1005

Type of Sample
- [x] Grab
- [ ] Composite
- [ ] Grab-Composite
- [ ] High Concentration
- [x] Low Concentration

Composite Sample Data

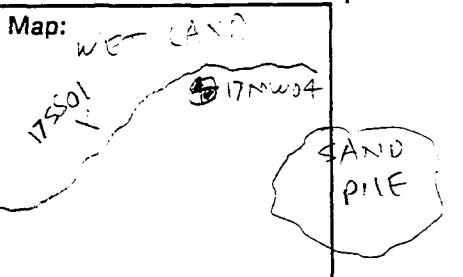
Sample	Time	Color/Description

Grab Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)

Analysis	Container Requirements	Collected (✓)
TCL VOC	4 oz	
TCL SVOC	SEE COC	
TAL METALS	16 OZ	
TCL PEST	> 32 OZ	
TCL PCB	>	

Map:



Observations/Notes: SILTY SAND EROSION AREA SOME TRASH, CIG BUTTS, POP CANS/BOTTLES ETC.
LT BRN / TAN COLOR
3 PHOTOS TAKEN

Circle if Applicable:

MS/MSD

Duplicate ID No:

Signature(s):

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

PAGE ___ OF ___

☐ SURFACE SOIL
☒ SUBSURFACE SOIL
☐ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE K. S. [illegible]

SITE NAME NWS EARLE

SITE NUMBER 19 & 20

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	TCL VOC 4 oz GLASS	TAL METALS QT GLASS	TAL METALS CR+6 QT GLASS	TCL SVOCS TAL METALS QT GLASS GM				No. OF CONT TOTAL	SOIL DESCRIPTION
195B03-00	A	0-2'	6.27.95	1200	KS	L	G	1		1					2*	SAND & GRAVEL SUB ANGULAR TAN/GRAY WITH PAINT CHIPS
195B03-03	A	3-5'	"	1210	KS	L	G	1		1					2	SILT TR SAND (CLAY) LT BR
DUP-06	A	0-2'	"	1200	KS	L	G	1		1					2	SAME AS 03-00
195B04-00	A	0-2	"	1230	KS	L	G	1	1						2	SILTY SAND BRN TO TAN TR ROOTS, TR GRAVEL Ø.5'
195B04-03	A	3-5	"	1245	KS	L	G	1	1						2	SILTY SAND BRN TR FINE GRAVEL
195B01-01	A	1-3	"	1255	KS	L	G	1	1						2	REMOVED 1' GRAVEL/SLAG COVER SILTY SAND BRN. 1→3' TR
195B01-03	A	3-5	"	1305	KS	L	G	1	1						2	SILTY SAND TR GRAVEL MAX Ø 1" MOIST AT BTM
195B02-00	A	0-2	"	1335	KS	L	G	1		1					2	SILTY SAND, TAN TO GRAY TR GRAVEL MAX Ø 1"
195B02-03	A	3-5	"	1345	KS	L	G	1		1					2	SAND AND SILT DRK. BRN TR GRAVEL MAX Ø 1"
195B05-02	A	2-3	"	1400	KS	L	G		1						1	SILT SAND BRN/TAN WET
20SB02-03	A	3-5	6.28.95	0910	KS	L	G	1			1				2	DARK GRAY OH SILT/CLAY (LEACH FIELD)
20SB03-03	A	3-5	"	0930	KS	L	G	3			3				▲6	DARK GRAY TR GRAVEL Ø 1" M SILT/CLAY TR ROOTS
20SB01-03	A	3-5	"	0950	KS	L	G	1			1				2	"

REMARKS: A = AUGER
▲ MS/MSD
* DUP 06 TAKEN

LAB: LANCASTER

Halliburton NUS
CORPORATION

SINGLE SAMPLE LOG SHEET

Project Site Name: NWS EARLE

Project No.: CTO 231 5803

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Other _____
- [ ] QA Sample Type: _____

Sample ID No.: 20SS01

Sample Location: SITE 20

Sampled By: KS AS

C.O.C. No.: DATED 8.24.95

Sample Method: STAINLESS TROWEL

Depth Sampled: 0 - 0.5'

Sample Date and Time: 8.24.95 1420

Type of Sample
- [x] Grab
- [ ] Composite
- [ ] Grab-Composite
- [ ] High Concentration
- [x] Low Concentration

Composite Sample Data		
Sample	Time	Color/Description

Grab Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
BROWN	DRY SANDY SILT & GRAVEL

Analysis	Container Requirements	Collected (✓)
TCL VOC	4 oz GLASS	✓
TCL SVOC	> QT GLASS	✓
TAL METALS		✓

Map: SEE WORK PLAN Pg 21-2

Observations/Notes: GRAVEL MAY Ø 1"

Circle if Applicable:	
MS/MSD	Duplicate ID No:

Signature(s): [signature]

2 PHOTOS TAKEN

Halliburton NUS
CORPORATION

SINGLE SAMPLE LOG SHEET

Project Site Name: NUS EARIE

Project No.: CTO 231 5803

☒ Surface Soil
☐ Subsurface Soil
☐ Sediment
☐ Other _____
☐ QA Sample Type: _____

Sample ID No.: 20SS02

Sample Location: SITE 20

Sampled By: KS AS

C.O.C. No.: DATED 8.24.95

Sample Method: STAINLESS TROWEL

Depth Sampled: 0-0.5

Sample Date and Time: 8.24.95 1430

Type of Sample
☒ Grab
☐ Composite
☐ Grab-Composite
☐ High Concentration
☒ Low Concentration

Composite Sample Data

Sample	Time	Color/Description

Grab Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
[illegible]	DRY SILTY SAND

Analysis	Container Requirements	Collected (✓)
TCL VOC	4 oz [illegible]	—
TCL SVOC	[illegible]	✓
TAL METALS	[illegible]	—

Map: SEE WORK PLAN pg 21-2

Observations/Notes: SILTY SAND WITH [illegible] (ANGULAR) [illegible]
TAKEN ≈ 3' SOUTH OF TIRE RUT IN PHOTO
[illegible]

Circle if Applicable:

MS/MSD	Duplicate ID No:
—	DUP 22 TAKEN

Signature(s): [illegible]

2 PHOTOS TAKEN

Halliburton NUS CORPORATION

SINGLE SAMPLE LOG SHEET

Project Site Name: NWS EARE

Project No.: CTO 231 5933

Sample ID No.: 20SS03

Sample Location: SITE 20

Sampled By: KS AS

C.O.C. No.: DATED 8.24.95

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Other _____
- [ ] QA Sample Type: _____

Sample Method: STAINESS TROWEL

Depth Sampled: 0 - 0.5

Sample Date and Time: 8.24.95 1445

Type of Sample
- [x] Grab
- [ ] Composite
- [ ] Grab-Composite
- [ ] High Concentration
- [x] Low Concentration

Composite Sample Data

Sample	Time	Color/Description

Grab Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
LT BRN	DRY

Analysis	Container Requirements	Collected (✓)
TCL VOC	4 oz GLASS	
TCL SVOC	QT GLASS	
TAL METALS	QT GLASS	
TOC	QT GLASS	
GRAIN SIZE	16 oz GLASS	

Map: SEE WORK PLAN pg 21-2

Observations/Notes: SILT & GRAVEL MAX Φ 1.5" ROUNDED & PARTIALLY LIMESTONE ORGANIC IN DITCH

Circle if Applicable:

MS/MSD

Duplicate ID No:

Signature(s):

2 PHOTOS TAKEN

Halliburton NUS CORPORATION

SINGLE SAMPLE LOG SHEET

Project Site Name: NWS EARIE

Project No.: CTO 231 5903

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Other _____
- [ ] QA Sample Type: _____

Sample ID No.: 205504

Sample Location: SITE 20

Sampled By: KS AS

C.O.C. No.: DATED 8.24.95

Sample Method: STAINLESS STEEL	Composite Sample Data		
	Sample	Time	Color/Description
Depth Sampled: 0-0.5'			
Sample Date and Time: 8.24.95 1450			
Type of Sample			
[x] Grab			
[ ] Composite			
[ ] Grab-Composite	**Grab Sample Data**		
[ ] High Concentration	Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)	
[x] Low Concentration	YELLOW/BRN	DRY	

Analysis	Container Requirements	Collected (✓)	Map:
TCL VOC	4 OZ GLASS		SEE WORK PLAN PG 21-2
TCL SVOC	QT GLASS		
TAL METALS			
TOC			
GRAIN SIZE	16 OZ GLASS		

Observations/Notes: DRY SILTY/SAND W/ GRASS ROOTS IN DITCH

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No:	[signature]

Halliburton NUS
CORPORATION

SINGLE SAMPLE LOG SHEET

Project Site Name: NWS EARLE

Project No.: CTO 231 5803

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Other _____
- [ ] QA Sample Type: _____

Sample ID No.: 205505

Sample Location: SITE 20

Sampled By: KS AS

C.O.C. No.: DATED 8.24.95

Sample Method: STAINLESS TOWEL

Depth Sampled: 0-0.5

Sample Date and Time: 8.24.95 1440

Type of Sample
- [x] Grab
- [ ] Composite
- [ ] Grab-Composite
- [ ] High Concentration
- [x] Low Concentration

Composite Sample Data		
Sample	Time	Color/Description

Grab Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
LT TAN/WHITE	DRY

Analysis	Container Requirements	Collected (✓)
TCL VOC	4 OZ GLASS	
TCL SVOC		
TAL METALS	8 OZ GLASS	

Map: SEE WORK PLAN PG 2-2

Observations/Notes: DRY SAND TOP 3" (FINE GRAIN) SOIL/SAND 3-6" DRY, TR ROOTS

Circle if Applicable:	
MS/MSD	Duplicate ID No:

Signature(s): [illegible]

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 C5863

NUS Source No. L-SS-01 Source Location Site L

Sample Method: Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0 - 6" bgs			
Sample Date & Time: 12-6-95 @ 0950			
Sampled By: Chuck Meyer			
Signature(s):			
Type of Sample [x] Low Concentration [ ] High Concentration [x] Grab [ ] Composite [ ] Grab - Composite			

Sample Data	
Color blk	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Grayish	Silty fine grained sand - some organics

Analysis:
TCL VOC
TCL SVOC
TCL pest./PCB's
TAL metals
TPH

Observations / Notes

No HNU readings

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	2505132991	
Date Shipped	12-6-95	
Time Shipped	1830	
Lab	Lancaster	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 C5803

NUS Source No. L-SS-02 Source Location Site L

Sample Method: Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0 to 6" bgs			
Sample Date & Time: 12-6-95 @ 1050			
Sampled By: Chuck Meyer			
Signature(s):			

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
dark brown	Silty fine to medium grained sand

Analysis:
- TCL VOC
- TCL SVOC
- TAL metals
- TPH
- TCL Pest / PCB's

Observations / Notes Some coarse grains and pebbles

No HNu readings

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	2505132991	
Date Shipped	12-6-95	
Time Shipped	1830	
Lab	Lancaster Labs	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 (5863

NUS Source No. L-SS-03 Source Location Site L

Sample Method: Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6" bgs			
Sample Date & Time: 12-6-95 @ 0900			
Sampled By: Chuck Meyer			
Signature(s):			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Grayish brown	Silty fine to med. grained sand

Analysis:

- TCL VOC
- TCL SVOC
- TCL pesticides / PCBs
- TAL metals
- TPH

Observations / Notes No HNU readings

MS/MSD taken here

Blind duplicate (L-SS-08) taken here

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	2505132791	
Date Shipped	12-6-95	
Time Shipped	1830	
Lab	Lancaster	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 C5803

NUS Source No. L-SS-04 Source Location Site L

Sample Method: Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6" bgs			
Sample Date & Time: 12-6-95 @ 1110			
Sampled By: C. Meyer			
Signature(s):			

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Brown	Silty fine grained sand - Some pebbles

Analysis:
- TCL VOC
- TCL SVOC
- TAL metals
- TPH
- TCL pest. / PCB'S

Observations / Notes

No HNu reading

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	250513299 1	
Date Shipped	12-6-95	
Time Shipped	1830	
Lab	Lancaster Labs	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name: NWS EARLE Project Site Number: CTO 231 (5803

NUS Source No.: L-SS-05 Source Location: Site L

Sample Method: Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0 to 6" bgs			
Sample Date & Time: 12-6-95 @ 1035			
Sampled By: C. Meyer			
Signature(s):		N/A	
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Med. Brown	Silty fine grained sand w/ pebbles

Analysis:
TCL VOC
TCL SVOC
TCL Pest. / PCB's
TAL metals
TPH

Observations / Notes

- No HNU readings

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	2505132991	
Date Shipped	12-6-95	
Time Shipped	1830	
Lab	Lancaster Labs	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 C5803

NUS Source No. L-SS-06 Source Location Site L

Sample Method: Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6" bgs			
Sample Date & Time: 12-6-95 @ 1015			
Sampled By: Chuck Meyer			
Signature(s):			

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Sample Data

Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Med. Brown	Silty fine grained sand w/ gravel

Analysis:
- TCL VOC
- TCL SVOC
- TCL pest. / PCB
- TAL metals
- TPH

Observations / Notes

No HNU readings

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	2505132991	
Date Shipped	12-6-95	
Time Shipped	1830	
Lab	Lancaster	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page _____ of _____

Case # _____

By _____

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Project Site Name NWS Earle Project Site Number 5803

NUS Source No. L-SS-06-Resample Source Location _____

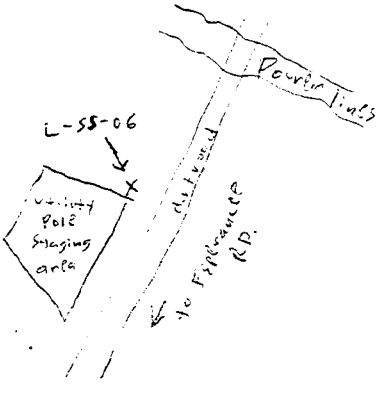
Sample Method:	Composite Sample Data		
Stainless steel trowel	Sample	Time	Color / Description
Depth Sampled: 0"-6"			
Sample Date & Time: 12-22-95 1005			
Sampled By: DW			
Signature(s): Donald Whalen			

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Brown	silty sand

Analysis:
TCL VOA

Observations / Notes
ground was frozen



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231 C5803

NUS Source No. L-SS-07 Source Location Site L

Sample Method: Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0 to 6" bgs			
Sample Date & Time: 12-6-95 @ 1130			
Sampled By: Chuck Meyers			
Signature(s):		N.A.	

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [x] Grab
- [ ] Composite
- [ ] Grab - Composite

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Brownish	Clayey, Silty fine to medium grained Sand

Analysis:
- TCL VOC
- TCL SVOC
- TAL metals
- TPH
- TCL pest. / PCB'S

Observations / Notes Some coarse grains

No Hnu readings

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	2505132991	
Date Shipped	12-6-95	
Time Shipped	1530	
Lab	Lancaster Labs	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name: NWS EARLE Project Site Number: CTO 231 (5863

NUS Source No.: L-SS-08 Source Location: Site L (QA/GC)

Sample Method: Trowel	Composite Sample Data		
	Sample	Time	Color / Description
Depth Sampled: 0-6" bgs			
Sample Date & Time: 12-6-95 @ 0915			
Sampled By: Chuck Meyers			
Signature(s):			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

Sample Data	
Color	Description: (Sand, Clay, Dry; Moist, Wet, etc.)
gray brn.	silty fine to medium grained sand

Analysis:
- TCL VOC
- TCL SVOC
- TCL pest./PCB's
- TAL metals
- TPH

Observations / Notes

Blind duplicate of L-SS-03

No Hnu readings

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	2505132991	
Date Shipped	12-6-95	
Time Shipped	1830	
Lab	Lancaster	
Volume		

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

☒ SURFACE SOIL
☒ SUBSURFACE SOIL
☐ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE Teresa Aeuzer

SITE NAME NWS EARLE

SITE NUMBER CTO 231 / 5803

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOC'S	TCL SVOC'S PESTICIDES PCB'S TPH	Nitrate, Nitrite, Ammonia, COD, BOD, TOC, Chloride, Sulfate, phosphate	EXPLOSIVES				No. OF CONT TOTAL	SOIL DESCRIPTION
BG-SB03-00	SS	0-6"	6/26/95	1000	TRS	L	G	1	1	1	1				4	brown silty SAND
BG-SB03-05	SS	5-7	6/26/95	1030	TRS	L	G	1	1	1	1				4	orange silty SAND
BG-SB04-00	SS	0-6"	6/28/95	0800	TRS	L	G	1	1	1	1				4	brown silty SAND
BG-SB04-05	SS	5-7	6/28/95	0910	TRS	L	G	1	1	1	1				4	tan + brown silty SAND

REMARKS:

LAB:

ACAD: FORMS\LOG.DWG 2/11/93 MB

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

- [x] Surface Soil
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [ ] Other _____

Page _____ of _____

Case # _____

By _____

Project Site Name NWS EARLE Project Site Number CTO 231

NUS Source No. BK SB 04-00 Source Location BK Water front

Sample Method:	Composite Sample Data		
Stainless Steel Trowel	Sample	Time	Color / Description
Depth Sampled: 0-6"			
Sample Date & Time: 7/19/95 1559			
Sampled By: Chuck Meyer			
Signature(s): Chuck Meyer			
Type of Sample			
[x] Low Concentration			
[ ] High Concentration			
[x] Grab			
[ ] Composite			
[ ] Grab - Composite			

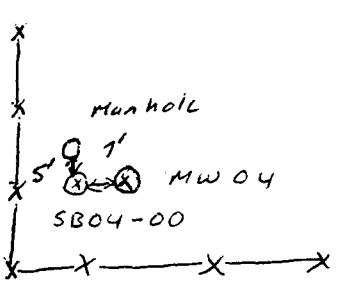
Sample Data

Color	Description: (Sand, Clay, Dry; Moist, Wet, etc.)
Medium Brown	Silty Fine Sand very Dry

Analysis:

TCL Pest / PCB's

Observations / Notes



	Organic	Inorganic
Traffic Report #		
Tag #		
AB #		
Date Shipped		
Time Shipped		
Lab		
Volume		

HALLIBURTON NUS Environmental Corporation

SAMPLE LOG SHEET

PAGE ___ OF ___

☒ SURFACE SOIL
☒ SUBSURFACE SOIL
☐ SEDIMENT
☐ LAGOON/POND
☐ OTHER

SAMPLERS SIGNATURE [illegible]

SITE NAME NWS EARLE

SITE NUMBER 5803-CTO 231

BACKGROUND AND SITE 1 SAMPLES

SAMPLE No.	SAMPLE METHOD	DEPTH (FT)	DATE	TIME	SAMPLED BY	CONCENTRATION (L)LOW (H)HIGH	(G)GRAB (C)COMPOSITE	ANALYSES: TCL VOC	4 OZ JAR SS	SVOC, PESTICIDES, TPH, MET + MERCURY	CN QT PLASTIC	N/N CHLOR, TOC, COD, PHS, GS, QT PLASTIC	EXPLOSIVES ⊗	4 OZ GLASS	MERCURY/TPH N/N	QT GLASS			No. OF CONT TOTAL	SOIL DESCRIPTION
BG-SB 02-00	SS	0-.5'	6.20.95	1400	KS/SC	L	G	1	1		1	1					⊗4		~~3~~*	LT. BRN/TAN SAND SOME GRAVEL MAX Ø 1"
BG-SB02-05	SP	5'-7'	6-21-95	0845	KS/SC	L	G	1	1		1	1					⊗4		~~3~~*	YELLOW BRN SILTY SAND MOIST
BG-SB01-00	SS	0--.5	6-22-95	1545	SJC	L	G	1	1		1	1							4	YELLOW BRN SILTY SAND
BG-SB01-05	SP	5'-7	"	1600	SJC	"	"	1	1		1	1							4	OLIVE BRN SILTY SAND
																				⊗ EXPL NOW TO GPES LAB
01SB01-00	SP	.5-2.0	6/25/95	0935	SJC/KS	L	G	1				1	1						3	YELLOW BRN SILTY SAND
01SB01-02	SP	2.0-4.0	"	0940	"	"	"	1				1	1						3	" " " "
01SB02-00	SP	.5-2.0	"	1000	"	"	"	1				1	1						3	" " " "
01SB02-02	SP	2.0-4.0	"	1005	"	"	"	1				1	1						3	" " " "
01SB03-00	SP	.5-2.0	"	1025	"	"	"	1				1	1						3	" SILTY SAND. TR RK FRAG
01SB03-02	SP	2-4	"	1030	"	"	"	1				1	1						3	" SILTY SAND
01SB04-00	SP	.5-2.0	"	1045	"	"	"	1				1	1						3	YELLOW BRN SILTY SAND TR ROAD GR.
01SB04-02	SP	2-4	"	1050	"	"	"	1				1	1						3	YELLOW BRN SILTY SAND
01SB05-00	SP	.5-2.0	"	1110	"	"	"	1				1	1						3	" " " "
01SB05-02	SP	2'-4'	"	1115	"	"	"	1				1	1						3	" " " "

REMARKS: SS = STAINLESS STEEL SPOON
SP = SPLIT SPOON

* DUP 04 TAKEN WITH THIS SAMPLE

LAB: LANCASTER / GPES

EXPLOSIVES NOW TO GPES

ACAD: FORMS\LOG.DWG 2/11/93 MB

APPENDIX D.h.

FLOOR SWEEPINGS SAMPLE LOG

HALLIBURTON NUS
Environmental Corporation

SAMPLE LOG SHEET

Page _____ of _____

Case # _____

By _____

- [x] Surface
- [ ] Subsurface Soil
- [ ] Sediment
- [ ] Lagoon / Pond
- [x] Other Floor Sweepings

Project Site Name NWS EARLE Project Site Number CTO 231 C5803

NUS Source No. 14-FS-01 Source Location Site 14

	Composite Sample Data		
Sample Method: Trowel / Broom	Sample	Time	Color / Description
Depth Sampled: Surface (Floor)			
Sample Date & Time: 12-6-95 @ 1410	— See Below —		
Sampled By: Chuck meyer			
Signature(s):			

Type of Sample
- [x] Low Concentration
- [ ] High Concentration
- [ ] Grab
- [ ] Composite
- [x] Grab - Composite

Sample Data	
Color	Description: (Sand, Clay, Dry, Moist, Wet, etc.)
Gray	Dust & fines (Floor sweepings)

Analysis:
mercury

Observations / Notes

collected (5) grab sample points and composited the grabs.

(1) South wall of Bldg C-33; between columns G & H
(2) doorway west of pt. 1 (near grouted-up pipe)
(3) near south exit doorway - near column 8C21
(4) NW loading dock (inside area) (by racks)
(5) NE loading dock (inside area) - locker room

	Organic	Inorganic
Traffic Report #		
Tag #		
AB #	250513 2491	
Date Shipped	12-6-95	
Time Shipped	1830	
Lab	Lancaster Labs	
Volume		

APPENDIX E

TEST PIT DOCUMENTATION

APPENDIX E.a.

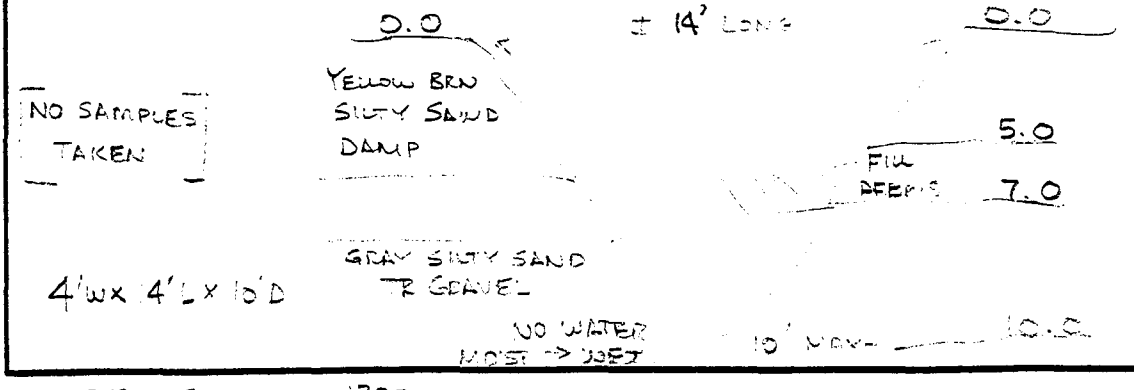
TEST PIT LOGS

TEST PIT LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE TEST PIT NO.: 03TP1
PROJECT NO.: 5803 DATE: 6-6-95
LOCATION: SITE 3
FIELD GEOLOGIST: CONTI

DEPTH (ft.)	LITHOLOGY CHANGE (Depth ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0.0		LOOSE - YELLOW BRN SILTY SAND	SM	FILL DEBRIS - PLASTIC
		W/ DEBRIS (GEN TRASH)		SIZE "D" BATTERY, WOOD
				OLD NEWSPAPER, GLASS
				BOTTLES (HEINZ, PEPSI)
5.0	5.0	LAYER OF		
		TRASH LAYER (2' ±) PLASTIC @ 5'		
7.0	7.0			AMBER BOTTLE @ 8' ± (5PPM) INSIDE
8.0		GRAY - SILTY SAND - TR GRAVEL		BOTTLE - NO DESIG ON BOTTLE. NO FLUID INSIDE.
				MOIST TO WET - NO SIGN
10.0	10.0		SM	OF WATER
		MOST OF THE PIT CONSISTED OF SILTY		FILL LAYER = 5 TO 7'
		SAND - WITH THE SMALL 2' LAYER OF		SLIGHT LANDFILL ODOR, BUT
		TRASH - BUT MOSTLY PLASTIC - BOTTLES		NO HNU READING. IN H-SP
		AND WOOD - NO VISIBLE GROSS CONTAM.		
		ANYWHERE IN PIT.		

Test Pit Cross Section and / or Plan View



REMARKS START @ 1320 HRS, CANT FIND DATE ON NEWSPAPER. GAS CASULTY SET BOX FOUND - EMPTY ± 2'x3' W/ HANDLES. NO SUSTAINED RDGS ON SOIL FROM PIT.

PHOTO LOG ROW 1 PHOTOS 1, 2, 3
SEE NB 2885 FOR DESCRIPTION

TEST PIT 03TP1

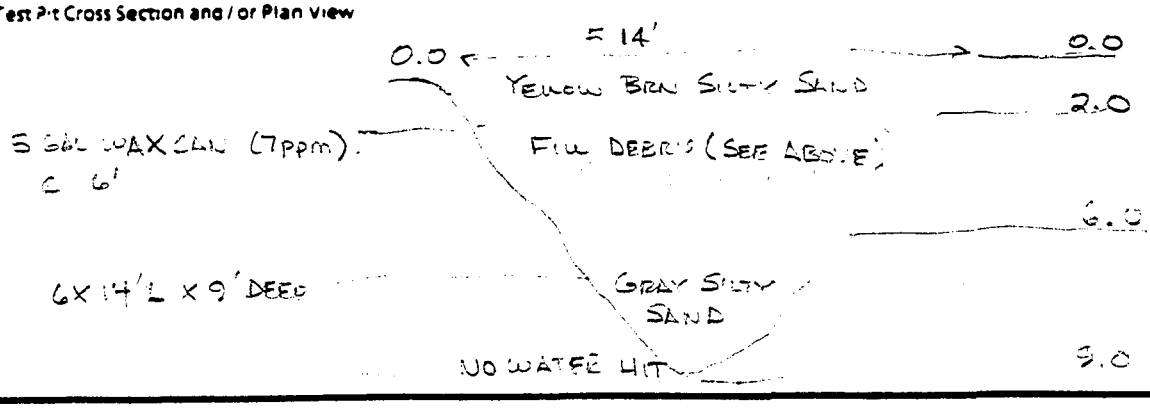
PAGE 1 OF 1

TEST PIT LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE TEST PIT NO.: 03TP2
PROJECT NO.: 5803 DATE: 6-6-95
LOCATION: SITE 3
FIELD GEOLOGIST: CONTI

DEPTH (ft.)	LITHOLOGY CHANGE (Depth/ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0.0		LOOSE YELLOW BRN SILTY SAND	SM	
	2.0			2' HIT TRASH - MID 60's
		FILL DEBRIS STARTS (HOUSEHOLD		NEWSPAPER, PLASTIC, BOTTLES
		TRASH.		RUBBER HOSE (9 PPM)
		MOSTLY)		INSIDE OIL FILTER (50 PPM) @ 2'.
6.0	6.0			PUROLATOR OIL FILTERS
				ANTIFREEZE CAN (PRESTONE)
	8.0			ALUM PAINT CAN
9.0	9.0	LOOSE GRAY SILTY SAND (MOIST)	SM	ACME ANTI FREEZE
				PRINTERS INK NOTED
		BOTH @ 9'		2ND OIL FILTER (50 PPM)
		MOST OF PIT WAS SILTY SAND W/		AMMONIA HYD BOTTLE SMALL AMT FLUID IN IT
		THE ± 4' LAYER OF TRASH - NO VIS		
		GROSS CONTAM OF SOIL ANYWHERE		
		IN PIT - NO WATER AT 9'.		

Test Pit Cross Section and / or Plan View



REMARKS START 1440
NO SUSTAINED READINGS ON SOIL. NO SOIL SAMPLES TAKEN
MAX 9 PPM ON SOIL
[illegible] STATES NOT [illegible]

PHOTO LOG ROLL 1 PHOTOS 4, 5, 6, 7, 8 TEST PIT 03TP2

PAGE 1 OF 1

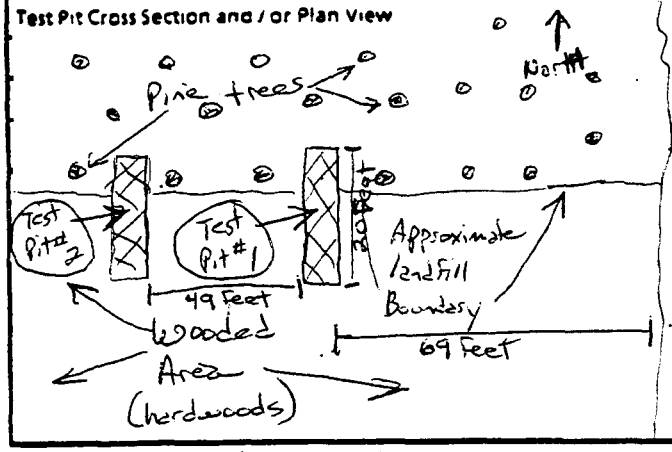
TEST PIT LOG

Brown & Root Environmental

PROJECT: NWS Earle CTO-147 TEST PIT NO.: TP01
PROJECT NO.: 5803 DATE: 12-05-95
LOCATION: Landfill southeast of "P" barracks (Site #9)
FIELD GEOLOGIST: Vincent Shickora

DEPTH (ft.)	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0.0		Olive Brown silt and clay with small		0 ppm HNU
		amount of weathered sandstone/siltstone		clean fill or native soil
		fragments. (dry to damp)		No waste or debris seen
1.5				
		Orange Brown Sandy silt and clay		0 ppm
		with small amount of weathered		Clean fill or Native soil
		sandstone fragments (moist)		No wastes or debris seen
4.8				
		orange-brown very fine silty clay		0 ppm
		with large amount of highly weathered		clean fill or native soil
		sandstone/siltstone fragments.		No wastes
7.0		(dry to damp)		
		Greenish gray - Black highly weathered		0 ppm
		Sandstone (possible saprolite)		clean fill or native soil
8.5				No wastes

Test Pit Cross Section and / or Plan View



See above for cross section description

REMARKS Test Pit excavated approximately 7 feet into Pine tree at the Pine tree/wooded Area boundary and extended into wooded area roughly 12 feet
Total Test Pit length → 20 feet Total Test Pit width → 3 feet
Total depth excavated → 8.5 feet

PHOTO LOG
No photos collected

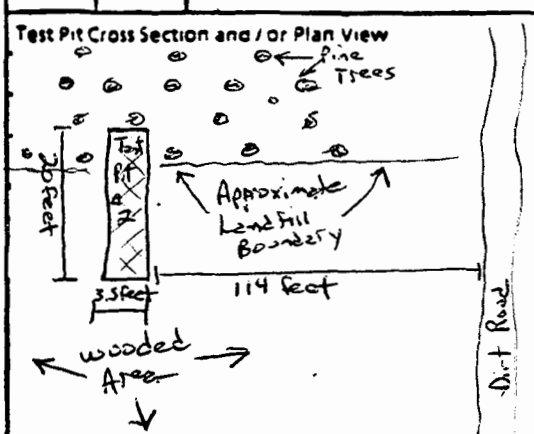
TEST PIT TP01

TEST PIT LOG **Brown & Root Environmental**

PROJECT: NWS Earle CTO-147 TEST PIT NO.: TP02
PROJECT NO.: 5803 DATE: 12-05-95
LOCATION: LandFill southeast of "P" barracks (site #9)
FIELD GEOLOGIST: Vincent Shickora

DEPTH (ft.)	LITHOLOGY CHANGE (Depth ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0.0		Olive-Brown silt and clay with		0 ppm HNU
		small amount of weathered sandstone		No waste material or
2.2		fragments (damp to moist)		landfill debris seen
		Orange brown sandy silt and clay		0 ppm
		with small amount of highly		clean fill or native soil
		weathered sandstone fragments (moist)		No wastes seen.
5.0				
		orange-rust-brown very fine silty clay		0 ppm
		with large amount of highly weathered		clean fill or native soil
7.5		sandstone/siltstone frags (moist)		No wastes seen.
		(possible saprolite)		
		Greenish Gray highly weathered sandstone		0 ppm - Native soil
8.5		(dry to damp)		No wastes seen

Test Pit Cross Section and / or Plan View



See above for cross section description

REMARKS Test pit was placed approximately 8 feet into the pine trees at the pine tree/wooded area boundary and extended into wooded area roughly 12 feet
Total Test Pit length → 20 feet Test Pit width → 3.5 feet
Total depth → 8.5 feet

PHOTO LOG
No photos collected

TEST PIT TP02

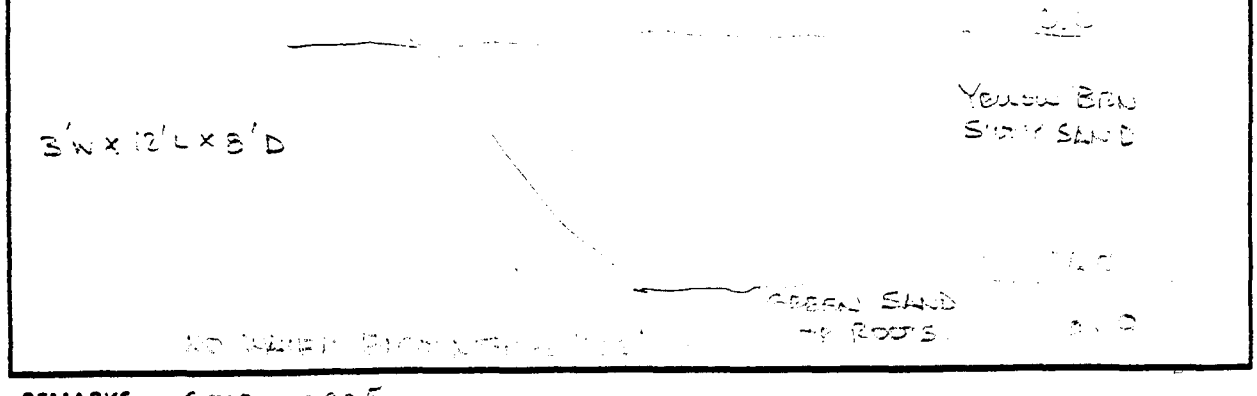
PAGE 2 OF 2

TEST PIT LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE TEST PIT NO.: 13TP1
PROJECT NO.: 5803 DATE: 6-7-95
LOCATION: SITE 13
FIELD GEOLOGIST: CONTI

DEPTH (ft.)	LITHOLOGY CHANGE (Depth/ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0.0		LOOSE YELLOW BRN - SILTY SAND -	SM	MOIST 3" LAYER OF
		TR GRAVEL		BLACK SLAG
				THEN SILTY SAND
	7.0			
8.0	8.0	GRAY GREEN SILTY SAND - TR ROOTS	SM	MOIST TO WET
		AND GRAVEL		CLOSE TO WT - SIDE WALLS
				KEEP CAVING
		BOTTOM @ 8'		LOOK NATURAL
		NO SIGN OF FILL DEBRIS - TOP 7'		
		COULD BE NAT SAND PLACED AS		
		FILL		NO HNU READINGS

Test Pit Cross Section and / or Plan View



REMARKS START 0925
DONE 1045

PHOTO LOG ROLL 1 PHOTOS 11, 12, 13 TEST PIT 13TP1

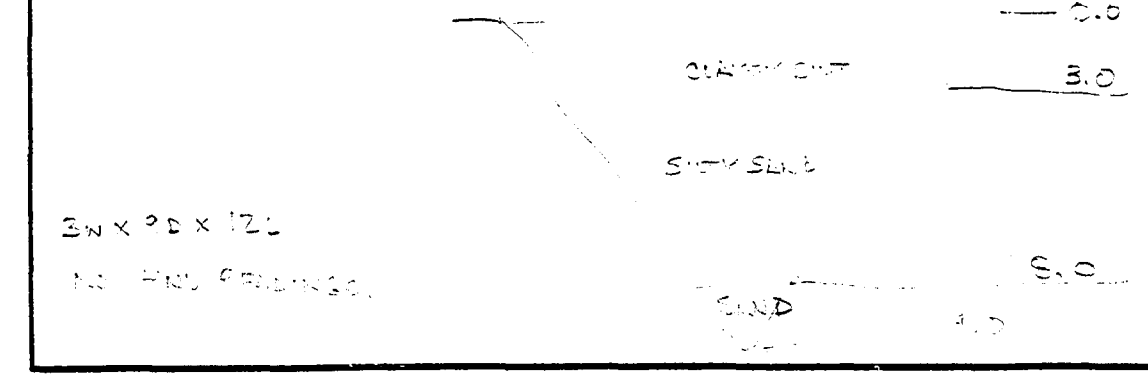
PAGE 1 OF 1

TEST PIT LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE TEST PIT NO.: 13TP2
PROJECT NO.: 5803 DATE: 6-7-95
LOCATION: SITE 13
FIELD GEOLOGIST: CONTI

DEPTH (ft.)	LITHOLOGY CHANGE (Depth,ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0		LOOSE OLIVE BRN - PLAYEY SILT -	ML	
		SOME SAND	/SM	1 HOLE 4'6" PC OF 8"
3.0	3.0			CONC. STORM DRAIN PIPE
		LOOSE YELLOW BRN SILTY SAND -		REST OF PIT FAIRLY CLEAN
		TR GRAVEL.		NAT MATL PLACED AS FILL
				TO APPROX 8'
8.0	8.0			
9.0	9.0	LOOSE DK GRAY SILTY SAND - TR	ML	LOOKS NATURAL HERE
		BOTTOM @ 9' ROOTS		MOIST TO WET.
				NO SIGN OF WATER IN PIT
		NO SIGN OF ANY INDUSTRIAL		
		PLACED FILL MATL		

Test Pit Cross Section and / or Plan View



REMARKS START @ 0945
DONE @ 1003

PHOTO LOG ROLL 1 PHOTOS 14, 15 - SOIL LOOSE & DOWN AT PIT AND NAT MATL

TEST PIT 13TP2

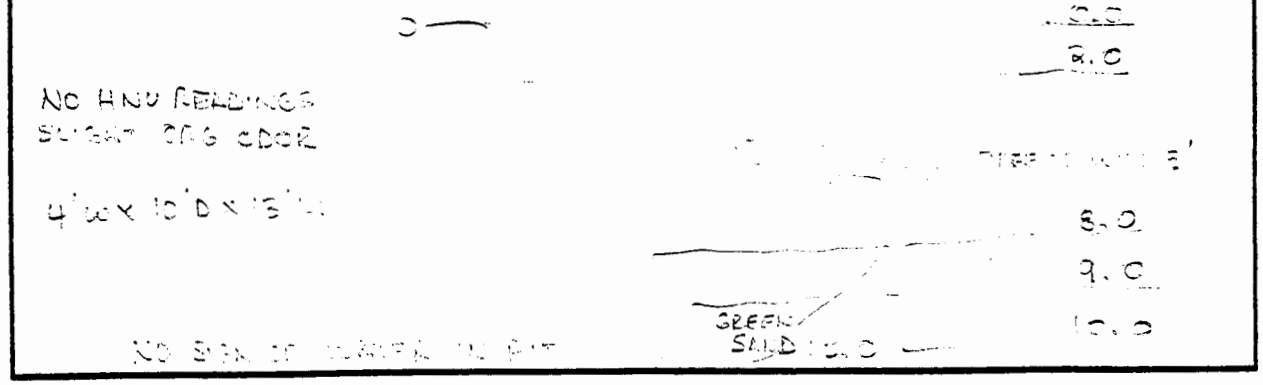
PAGE 1 OF 1

TEST PIT LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE TEST PIT NO.: 13TP3
PROJECT NO.: 5803 DATE: 6-7-95
LOCATION: SITE 13
FIELD GEOLOGIST: CONTI

DEPTH (FT.)	LITHOLOGY CHANGE (Depth/Ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0.0		LOOSE BRN GRAY SILTY SAND - SOME		FILL MATL.
2.0	2.0	SLAG GRAVEL SILT		DAMP
		YELLOW BRN SILTY SAND TO		
		8'		
5.0		LARGE 10" Φ X 7' LONG TREE		
		TRUNK		MOIST
8.0	8.0			
9.0	9.0	LOOSE BLACK SANDY SILT - TR ROOTS		
10.0	10.0	LOOSE GREEN SILTY SAND	SM/SP	MOIST → WET - CLOSE TO WATER TABLE.
		BOTTOM 10'		
		NO SIGN OF FILL WASTE - 1 TREE		
		TRUNK & SOME ROOTS		

Test Pit Cross Section and / or Plan View



NO HNU READINGS
SLIGHT ORG ODOR

4' W X 10' D X 13' L

NO SIGN OF WATER IN PIT

REMARKS STARTED 1010
DONE @ 1035

PHOTO LOG ROLL 1 PHOTOS 16, 17 LOOKING S. S.E. @ PIT AND TREE TRUNK.

TEST PIT 13TP3

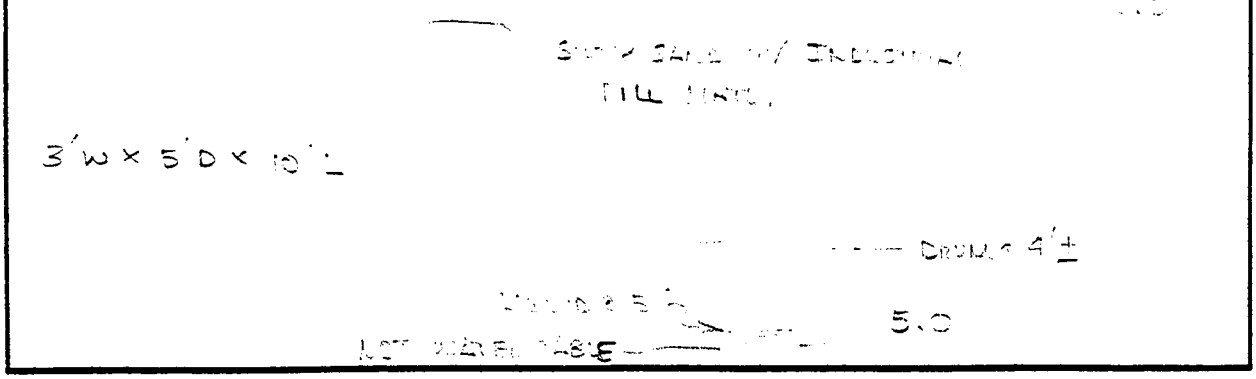
PAGE 1 OF 1

TEST PIT LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE TEST PIT NO.: 13TP4
PROJECT NO.: 5803 DATE: 6-7-95
LOCATION: SITE 13
FIELD GEOLOGIST: CONTI

DEPTH (FT.)	LITHOLOGY CHANGE (Depth, Ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0.0		LOOSE BRN SILTY SAND - TR GRAVEL		
		W/ INDUSTRIAL WASTE FROM		HITTING METAL - DUMPING
		"6" FROM GS		6"Ø SHELL CASINGS (4 TOTAL)
				OLD COMPRESSOR ? - 1 BRICK
				DRUM W/ FUEL ODOR.
5.0	5.0			≈ 50 TO 90 PPM
				LIQUID IN HOLE W/ SHEEN
		BOTM @ 5'		
				DID NOT / COULD NOT GO
		ALSO - ELEC CABLE.		DEEPER DUE TO FLUID IN
				HOLE & CAVING.
		BOTTOM OF DRUM HAD "GREASE"		
		MATL ADHERED TO IT.		

Test Pit Cross Section and / or Plan View



REMARKS START @ 1045 MOVED 2.15' SSW FROM THIS PIT TO
DONE @ 1100 DO TP 5.

JOHN M. WAS AT LUNCH SKIPPED THIS PIT.

PHOTO LOG ROLL 1 PHOTOS 16 TO 20 TEST PIT 13TP4

PAGE 1 OF 1

TEST PIT LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE TEST PIT NO.: 13TP5
PROJECT NO.: 5803 DATE: 6-7-95
LOCATION: SITE 13
FIELD GEOLOGIST: CONTI

DEPTH (ft.)	LITHOLOGY CHANGE (Depth/ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0.0		LOOSE BRN SILTY SAND - SOME		CABLES, METAL
		GRAVEL		POSSIBLE CRUSHED DRUM
		W/ INDUS FILL.		1 MORE DUMMY SHEET.
	4.0			RUBBER HOSE.
		BOTTOM @ 4'		
		STOPPED @ 4' - WILL MOVE TO TRY		
		AND DETERMINE BOUNDARY		NO HNU READINGS HERE
		OF FILL		

Test Pit Cross Section and / or Plan View

SILTY SAND W/
FILL MATL (IND)

4' W x 4' D x 1' L

REMARKS SAMPLE NO.
DONE 1130

PHOTO LOG ROLL [illegible] PHOTOS 21, 22 TEST PIT 13TP5

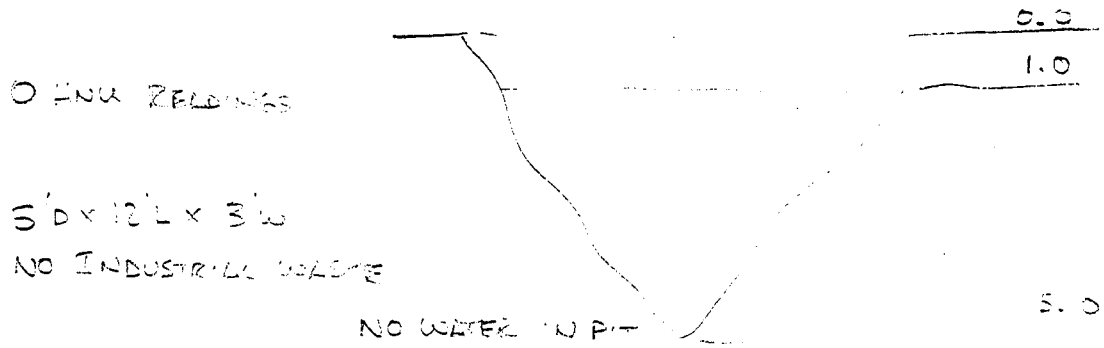
PAGE ___ OF ___

TEST PIT LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE TEST PIT NO.: 13TP6
PROJECT NO.: 5803 DATE: 6-7-95
LOCATION:
FIELD GEOLOGIST: CONTI

DEPTH (ft.)	LITHOLOGY CHANGE (Depth/ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
	1.0	LOOSE TAN BRN SANDY SILT	ML	
		LOOSE ORANG BRN SILTY SAND	SM	TR-WOOD
		-SOME GRAVEL	/SP	CONCRETE ANCHOR BLOCK
		-WOOD FRAG.		BUT SO FAR REFUSAL
	5.0			CLEAN OF IND WASTE
				SOME PCS OF WIRE
		BOTM @ 5'		SOME LG 8"d PCS OF
				WOOD

Test Pit Cross Section and / or Plan View



REMARKS START @ 1320 HRS
END 1340

PHOTO LOG ROLL 2 PICS 2, 3, 4 of PIT

TEST PIT 13TP6

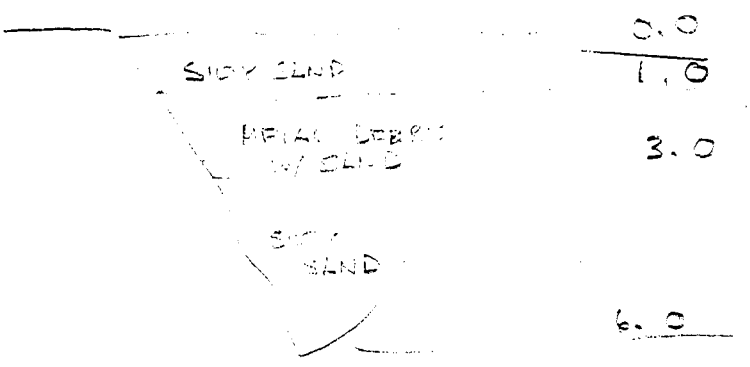
PAGE 1 OF 1

TEST PIT LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE TEST PIT NO.: 13TP7
PROJECT NO.: 5803 DATE: 6-7-95
LOCATION: SITE 13
FIELD GEOLOGIST: CONTI

DEPTH (ft.)	LITHOLOGY CHANGE (Depth/ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0.0	1.0	LOOSE BRN SILTY SAND - TR ROOTS	SM	
		THEN METAL DEBRIS		
	3.0	CRUSHED DRUM		(IND. FILL)
		LOOSE YELLOW BRN SILTY SAND	SM	
				SOUTH END OF PIT LOOKS
6.0	6.0			CLEAN. LIMIT OF FILL
				IN THIS AREA @ SOUTH
		BOTM @ 6'		END OF THIS PIT.
				METAL DOORS W/HINGE

Test Pit Cross Section and / or Plan View



REMARKS START @ 1345
END @ 1350 END LOGGING

PHOTO LOG ROW 2 PHOTOS 5 TEST PIT 13TP7

PAGE ___ OF ___

TEST PIT LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE TEST PIT NO.: TP 3
PROJECT NO.: 5803 DATE: 6-7-95
LOCATION:
FIELD GEOLOGIST: CONTI

DEPTH (ft.)	LITHOLOGY CHANGE (Depth, ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0.0		LOOSE MOTTLED ORANG, BRN, GRAY		
		SILTY SAND - TR GRAVEL		
4.0	4.0			
		BOTT @ 4'		
		NO INDUS WASTE		COULD BE NAT PLACED
				AS FILL -
				NO WATER ENCOUNTERED

Test Pit Cross Section and / or Plan View

NO HNU READINGS

SILTY SAND

3' L x 1' D x 3' W

4.0

REMARKS START @ 1350
END 1355

PHOTO LOG ROW 2 PHOTO 6 LOOKING S

TEST PIT TP3

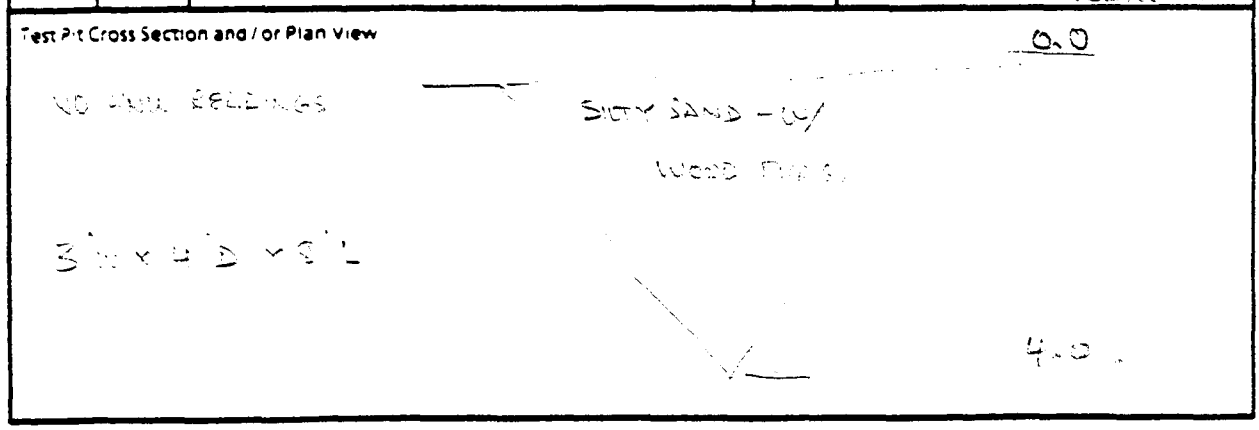
PAGE 1 OF 1

TEST PIT LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE TEST PIT NO.: 13TP9
PROJECT NO.: 5803 DATE: 6-7-95
LOCATION:
FIELD GEOLOGIST: CONTI

DEPTH (ft.)	LITHOLOGY CHANGE (Depth ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0.0		LOOSE YELLOW BRN SILTY SAND	SM	MOIST
		SOME WOOD PCS.		
		(FILL)		CLEAN FILL MATL.
4.0	4.0	TR GRAVEL		
		BOTM @ 4'		
		NO IND WASTE		
		OBSERVED		
				I. MAYHEW - AGREE TO
		NO WATER ENCOUNTERED		I. KRATZ MOVE TO
				NEXT PIT.

Test Pit Cross Section and / or Plan View



REMARKS 1355 START
1425 END

PHOTO LOG ROLL 2 FRAME 7 TEST PIT 13TP9

PAGE 1 OF

TEST PIT LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE TEST PIT NO.: 13TP10
PROJECT NO.: 5803 DATE: 6-7-95
LOCATION: SITE 13
FIELD GEOLOGIST: CONTI

DEPTH (FT.)	LITHOLOGY CHANGE (Depth/ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0.0	1.0	LOOSE TAN BRN SILTY SAND - TR		
		WOOD - ROOTS GRAVEL		CLEAN FILL W/ ROOTS
	3.0			WOOD 1'-3'
		LOOSE ORANG BRN SAND	SP	MOIST
5.0	5.0			
		BOTM @ 5'		
		NO IND. WASTE OBSERVED		
		NO WATER		

Test Pit Cross Section and / or Plan View

NO ANOM READINGS

SILTY SAND 0.0

1.0

SILTY SAND W/ WOOD ROOTS 3.0

5'L x 3'W x 10'L

5.0

REMARKS START: 1415
END: 1435

PHOTO LOG ROLL 2 PHOTO 8, 9 LOOKING N

TEST PIT 13TP10

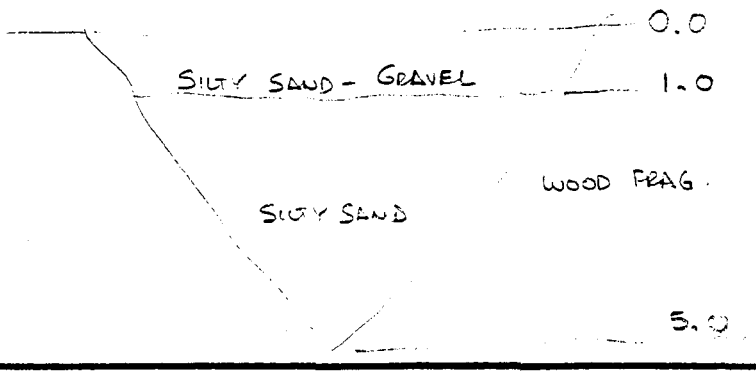
PAGE OF

TEST PIT LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE TEST PIT NO.: 13TP11
PROJECT NO.: 5803 DATE: 6-7-95
LOCATION: SITE 13
FIELD GEOLOGIST: CONTI

DEPTH (ft.)	LITHOLOGY CHANGE (Depth ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0.0	1.0	ORANG BRN SILTY SAND - SOME GRAVEL	SP	DAMP
		TAN BRN SILTY SAND - SOME WOOD		
		FRAGMENTS		
5.0	5.0			
		BOTTM @ 5'		CLEAN FILL.
		NO IND WASTE		
		NO SIGN OF IND WASTE		
		CLEAN FILL		
		NO WATER IN PIT.		

Test Pit Cross Section and / or Plan View



REMARKS STAG 1500
FIN 1510 75'+14.5' 89' FROM NEAST CORNER FENCE
10' FROM N "

PHOTO LOG ROLL 3 PHOTO 11, 12 TEST PIT 13TP11

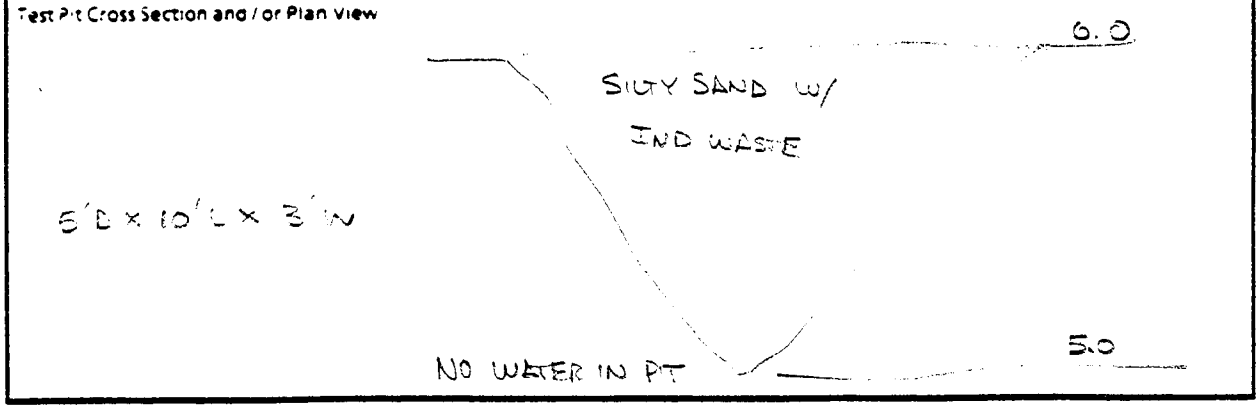
PAGE 1 OF 1

TEST PIT LOG **HALLIBURTON NUS**

PROJECT: NWS EARLE TEST PIT NO.: 13TP12
PROJECT NO.: 5803 DATE: 6-7-95
LOCATION: SITE 13
FIELD GEOLOGIST: CONTI

DEPTH (ft.)	LITHOLOGY CHANGE (Depth/ft.)	MATERIAL DESCRIPTION (Soil Density / Consistency, Color)	USCS	REMARKS
0.0		LOOSE BRN SILTY SAND W/	SM	MOIST
		IND FILL - METAL - DRUM		
		LIDS - WIRE ETC.		
	3.0'		SM	MOIST → WET
		BOTM @ 5'		
		HIT IND WASTE - METAL - DRUM LIDS		≈ 40% OF PIT - FILL MATLS.
		SLIGHT ODOR (PETROLEUM TYPE)		
		5 PPM MAX HNU		

Test Pit Cross Section and / or Plan View



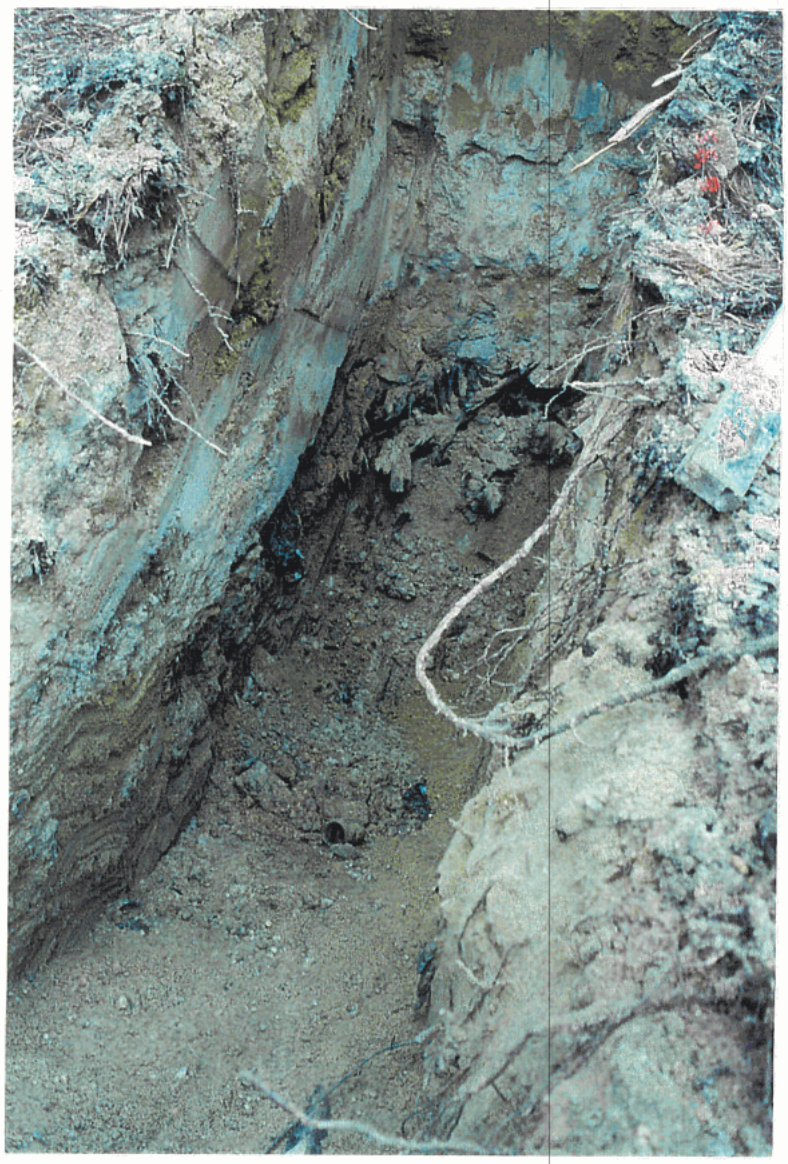
REMARKS START @ 1315
END ≈ 1545 59'+50 = 3' FROM NE COR FENCE
20' FROM N. EDGE OF FENCE

PHOTO LOG Roll 2 PHOTOS 13, 14 TEST PIT 13TP12

PAGE 1 OF 1

APPENDIX E.b.

TEST PIT PHOTOS

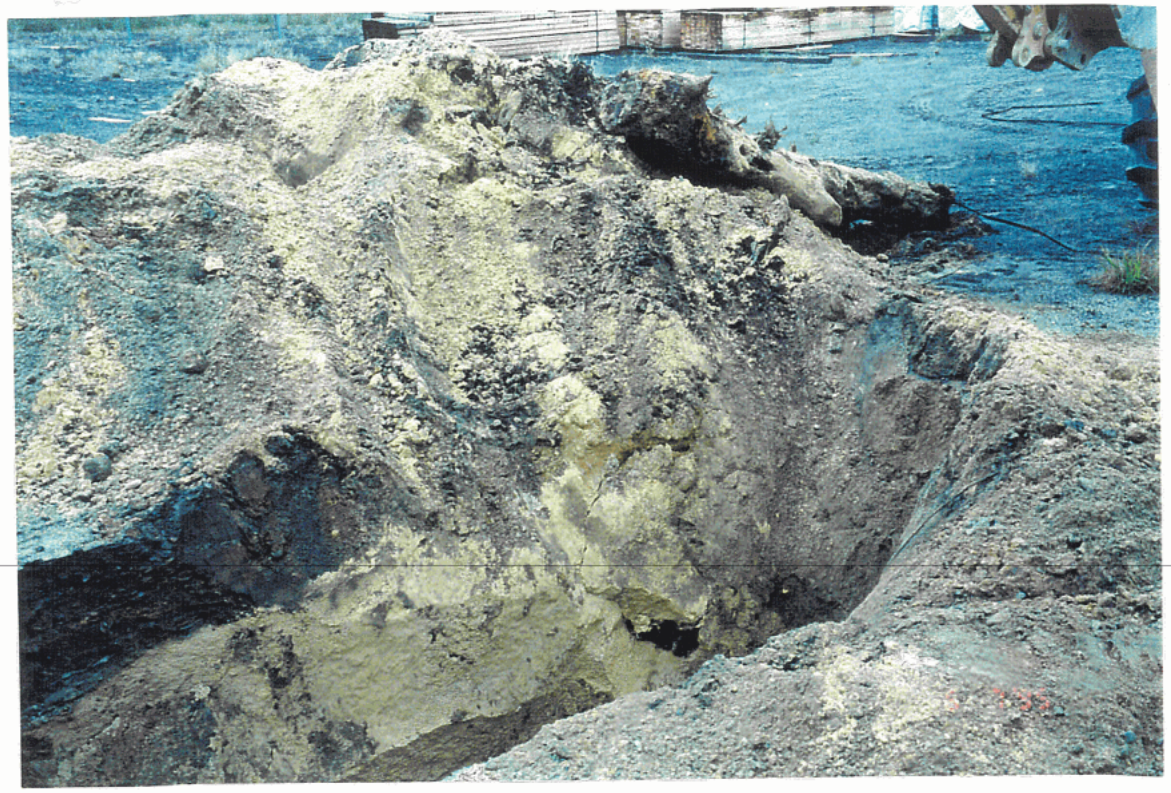


03TP1, installed 06/06/95

03TP2, installed 06/06/95

13TP1, installed 06/07/95

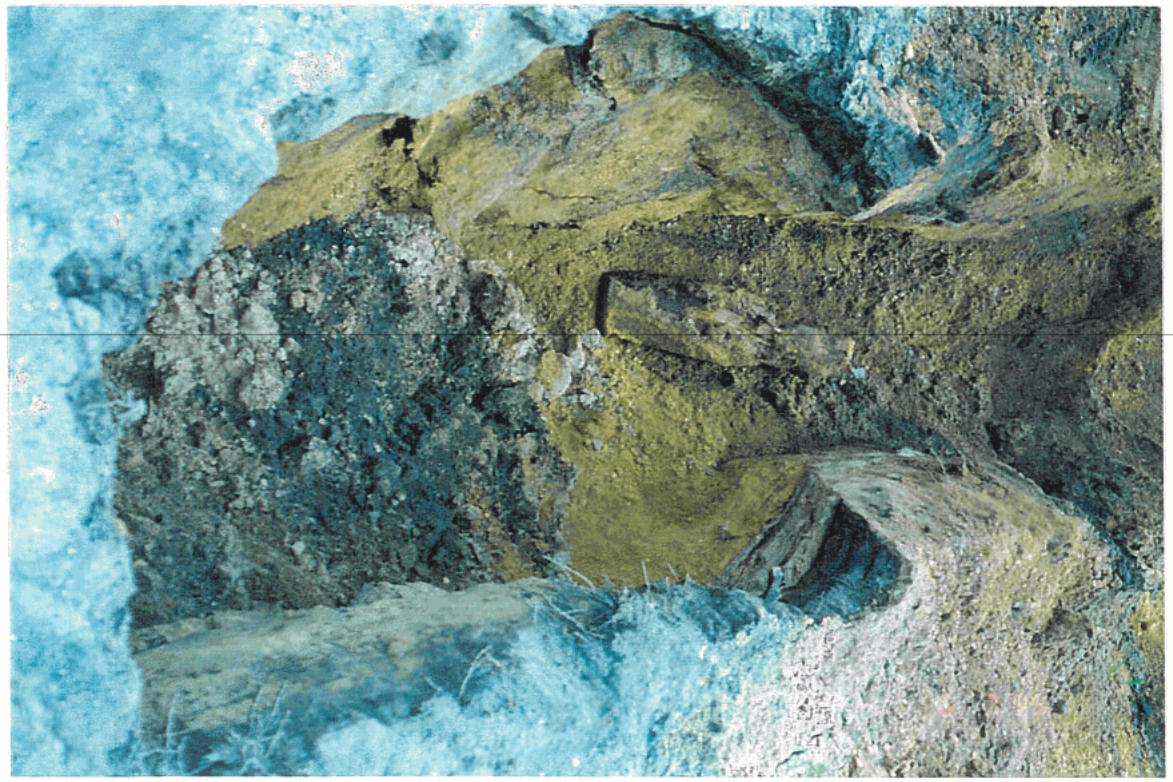
13TP2, installed 06/07/95



13TP3, installed 06/07/95

13TP4, installed 06/07/95

13TP5, installed 06/07/95



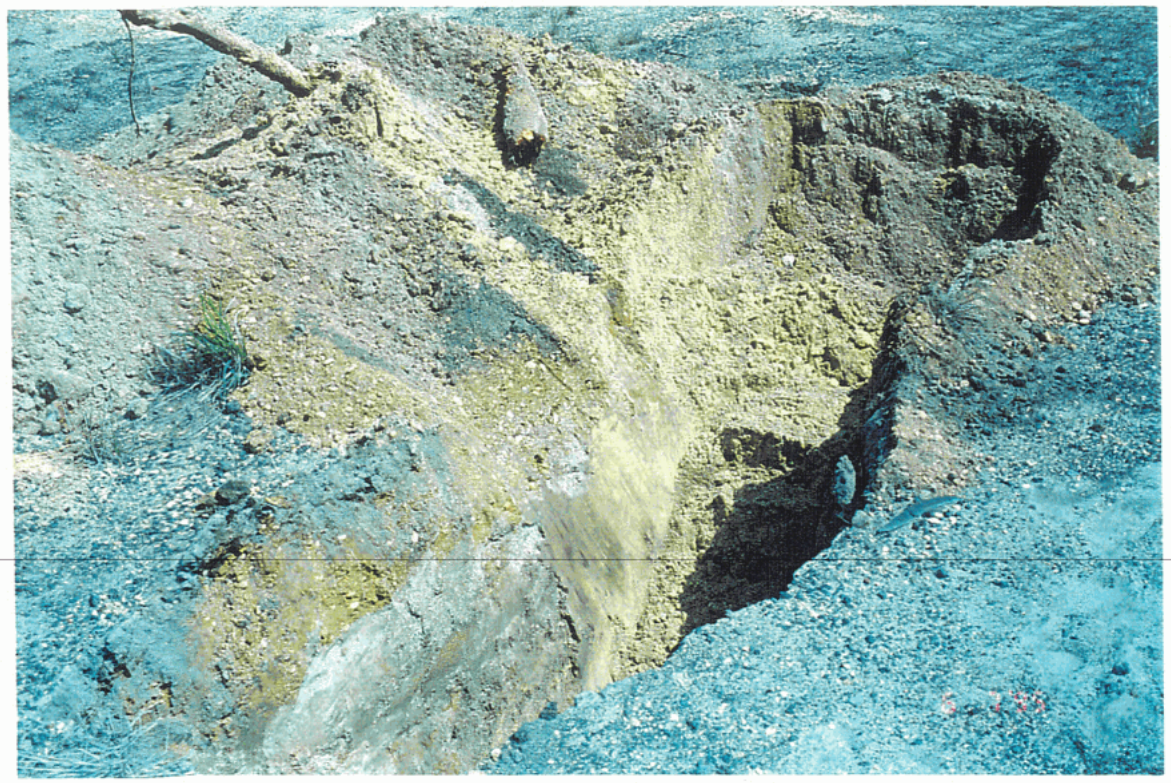
13TP6, installed 06/07/95

13TP7, installed 06/07/95

13TP8, installed 06/07/95

13TP9, installed 06/07/95

13TP10, installed 06/07/95



13TP11, installed 06/07/95

13TP12, installed 06/07/95

APPENDIX F

SURVEY DATA

SURVEY REPORT
NWS EARLE - COLTS NECK, NEW JERSEY

This project involved establishing seventy GPS control points and the running of 12 miles of traverse and 14 miles of bench levels to establish the horizontal and vertical control for the sampling points.

The horizontal control was performed utilizing WILD System 200 GPS receivers and a WILD T1000/DI1000 theodolite/EDM.

Bench levels were performed utilizing a Wild NA-2 automatic level.

HORIZONTAL CONTROL

Two Main Side on-site GPS control points, Station 104 and Station 105, were established from NGS First Order Monument Throckmorton 3. Ties were then made to New Jersey Geodetic Survey second order monuments (13 I 1) and (13 J 1). The on-site stations were used to establish additional GPS control points on the Main Side area. Traverse lines were run from the additional GPS control points as needed to locate the sampling points. The Water Front control points were established from New Jersey Geodetic Survey Second Order monument (13 F 1).

Traverse control was performed to NGS Third Order Class II procedures.

Direct and reverse angle were turned at each station and distances were measured in both directions for all traverse lines. The lines were adjusted by Least Squares methods and all coordinates were computed on the New Jersey State Grid with scale & sea level factors applied to the distances.

Horizontal Datum: North American Datum 83

Monuments Used:	NJGS 13-F-1	NGS Throckmorton 3
	NJGS 13-I-1	NJGS 12286
	NJGS 13-J-1	

SURVEY REPORT
NWS EARLE - COLTS NECK, NEW JERSEY

VERTICAL CONTROL

The vertical control was performed to NGS Third Order procedures as follows:

The level circuit was established using a standard level rod graduated to one hundredth of a foot and estimated to one thousandth of a foot. The levels were adjusted by prorating the error by the number of turns between ties.

Vertical Datum: North American Vertical Datum 88

Monuments Used: NJGS 13-F-1
NGS J-36
NJGS 12286

James M Stuart

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
			BACKGROUND POINTS		
BGMW-01	94.16	96.31	96.79	526,269.05	605,570.80
BGMW-02	231.19	233.70	233.32	516,601.20	580,785.90
BGMW-03	201.75	203.80	204.20	570,350.71	611,729.55
BGMW-04	26.82	28.96	29.51	577,080.38	611,704.54
BGSW/SED-01	66.2			525,205.34	602,103.36
BGSW/SED-02	139.6			514,322.72	580,458.88
BGSW/SED-04	115.9			514,779.55	587,174.87
BGSW/SED-05	95.1			513,694.59	595,754. 4
BGSW/SED-06	88.1			509,315.61	593,515.74
BGSW/SED-07	94.4			509,977.64	590,385.38
BGSW/SED-08	83.5			508,267.61	585,931.81
BGSW/SED-10	76.4			524,056.76	599,481.85
BGSW/SED-11	68.8			525,585.69	597,194.63
BGSW/SED-12	63.1			527,692.25	592,767.24
BGSW/SED-13	61.8			527,760.48	592,757.15
BGSW/SED-14	63.1			527,824.15	592,102.51
BGSW/SED-15	100.6			509,307.53	576,398.50
BGSW/SED-16	89.5			521,040.71	577,707.18
BGSW/SED-17	69.7			572,776.92	612,844.68
BGSW/SED-18	94.5			572,133.48	612,126.56
BGSW/SED-19	39.6			573,172.23	613,698.87
BGSW/SED-20	33.2			573,985.07	613,407.86
BGSW/SED-21	21.2			522,944.50	591,169.90
BGSW/SED-22	10.8			577,305.61	611,479.89

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
		BACKGROUND POINTS (CONTINUED)			
BGSW/SED-20	33.2			573,985.07	613,407.86
BGSW/SED-21	21.2			522,944.50	591,169.90
BGSW/SED-22	10.8			577,305.61	611,479.89
BGSW/SED-9	99.0			511,881.82	584,429.56
		BUILDING S86			
BLDS86-SS	122.2			522,362.37	588,771.48
BLDS86-SB	115.6			522,468.55	588,782.93
		SITE # 1			
MW01-01	92.03	93.66	94.09	525,315.66	588,860.74
MW01-04	92.04	93.93	94.59	525,390.62	588,770.32
MW01-05	92.37	94.20	94.77	525,214.20	589,035.03
HP01-01	90.3			525,348.69	588,684.21
HP01-02	91.4			525,350.60	588,788.01
HP01-03	92.0			525,266.98	588,900.92
HP01-04	90.8			525,067.13	588,903.53
HP01-05	90.8			524,969.57	588,844.80
HP01-06	90.6			525,113.59	588,654.23
HP01-07	90.5			525,244.17	588,603.55
HP01-08	90.6			525,166.53	588,815.02

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
		SITE # 1 (CONTINUED)			
SB01-01	90.2			525,373.92	588,647.15
SB01-02	90.7			525,384.35	588,712.71
SB01-03	92.1			525,395.13	588,776.76
SB01-04	91.8			525,365.27	588,850.59
SB01-05	91.6			525,307.67	588,881.33
SB01-06	90.6			525,262.35	588,600.60
SB01-07	90.2			525,273.75	588,666.50
SB01-08	90.4			525,190.00	588,672.43
SB01-09	90.4			525,152.73	588,626.86
SB01-10	90.2			525,059.82	588,664.93
		SITE # 2			
MW02-06	91.84	93.92	94.09	521,928.64	598,373.23
SS02-01	96.3			521,425.00	598,131.09
SS02-02	100.9			521,516.21	598,042.25
SS02-03	95.5			521,865.45	597,978.51
SS02-04	90.3			522,253.45	598,176.12
SS02-05	88.1			522,403.70	598,503.09
SS02-06	86.5			521,973.73	598,839.55
SS02-07	99.7			521,305.08	598,473.89
SS02-08	105.6			521,311.46	598,238.26

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
			SITE # 3		
MW03-04	120.63	122.16	122.90	510,703.97	591,611.40
MW03-08	116.11	118.22	118.84	510,626.47	591,620.78
SG03-04	121.4			510,793.90	591,585.06
SG03-06	120.2			510,778.60	591,633.49
SG03-07	123.4			510,792.03	591,507.34
SG03-08	122.5			510,782.55	591,532.51
SG03-11	121.0			510,761.98	591,602.42
SG03-13	123.2			510,767.65	591,504.48
SG03-14	122.9			510,759.19	591,526.61
SG03-15	121.6			510,726.25	591,545.21
SG03-19	122.7			510,742.31	591,500.67
SG03-20	122.6			510,734.72	591,521.54
SG03-22	121.6			510,714.41	591,559.80
SG03-24	119.9			510,705.39	591,616.05
SG03-25	122.1			510,701.92	591,540.42
SG03-26	122.5			510,710.56	591,515.92
TP03-01	121.1			510,758.30	591,567.51
TP03-01	121.2			510,764.01	591,565.73
TP03-01	121.5			510,758.30	591,551.43
TP03-01	121.1			510,752.39	591,553.90
TP03-02	121.2			510,741.85	591,573.16
TP03-02	121.3			510,739.08	591,567.59
TP03-02	121.1			510,752.73	591,561.22
TP03-02	121.1			510,755.39	591,568.30
WET03A-01	111.8			510,657.22	591,755.59

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
			SITE # 4		
MW04-01	170.00	171.65	171.81	520,157.27	589,442.22
MW04-05	164.26	164.15	164.26	520,120.07	589,869.69
MW04-07	162.52	164.50	165.32	520,250.72	589,789.94
HP04-01	150.6			519,767.84	589,884.63
HP04-02	153.7			519,915.57	589,912.67
HP04-03	157.8			520,018.13	589,892.89
HP04-04	169.0			520,136.16	589,638.29
HP04-05	162.4			520,249.58	589,795.31
SW04-01	145.2			519,364.04	589,945.45
SW04-02	140.2			519,659.93	589,977.41
SW04-03	137.7			520,362.49	589,886.86
SW04-04B5	137.7			519,815.84	590,050.07
			SITE # 5		
MW05-06	114.86	116.15	116.29	520,301.07	598,162.48
HP05-01	112.1			520,363.08	598,050.80
HP05-02	111.1			520,431.68	597,927.08
HP05-03	109.6			520,556.52	597,927.55
HP05-04	113.2			520,671.33	597,991.37
HP05-05	109.5			520,814.32	598,083.22
HP05-06	113.6			520,515.46	598,158.91
HP05-07	112.2			520,174.07	598,222.90

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
			SITE # 6		
MW06-01	16.50	17.75	18.04	578,271.96	611,720.99
MW06-02	11.11	12.68	12.90	578,383.21	611,383.43
MW06-03	11.48	13.64	13.85	578,523.53	611,504.13
MW06-04	12.79	14.58	14.75	578,590.41	611,705.43
SED06-03	5.8			578,576.54	611,625.70
SED06-04	4.5			578,626.21	611,669.96
SW/SED06-01	3.1			578,353.58	611,359.02
SW/SED06-02	2.4			578,386.07	611,336.50
			SITE # 7		
MW-07-02	125.86	126.94	127.92	571,200.48	611,234.00
SW/SED07-30	102.7			571,436.44	610,767.30
WET07-B2	125.3			571,206.32	611,228.00
			SITE # 9		
TP-7	98.6			573,380.72	611,977.32
TP-9	99.1			573,346.42	612,040.90
			SITE # 10		
MW10-06	103.58	106.35	106.50	519,268.74	592,712.39
MW10-07	106.07	107.97	108.20	519,230.86	592,807.94

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
			SITE # 11		
MW11-01	85.94	87.91	88.01	523,963.23	590,481.54
MW11-02	87.88	89.66	90.68	523,724.83	590,680.16
MW11-03	94.91	97.20	97.41	523,470.14	590,253.64
MW11-04	88.48	91.00	91.11	523,702.64	590,309.09
MW11-05	87.08	89.46	89.60	523,884.86	590,308.32
			SITE # 12		
SED12-01	11.4			578,197.93	611,431.27
SED12-02	11.7			578,218.64	611,385.68
SS12-01	13.4			578,168.42	611,315.46
SS12-02	12.8			578,165.38	611,354.39
SS12-03	13.2			578,162.47	611,389.49
			SITE # 13		
MW13-01	84.19	86.04	86.43	523,795.23	592,065.02
MW13-02	83.04	85.09	85.44	523,925.62	592,201.90
MW13-03	81.28	83.26	83.69	524,111.37	592,288.33
MW13-04	92.18	93.85	94.30	523,558.11	592,380.46
MW13-05	93.67	95.54	96.06	523,492.82	592,101.12
SED13-01	84.9			523,347.54	592,115.18
SW/SED13-02	77.1			523,818.51	591,954.09
SED13-03	83.9			523,872.18	592,212.59

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
			SITE # 13 Cont....		
TP13-01	91.6			523,589.27	592,303.36
TP13-02	91.7			523,643.74	592,299.39
TP13-03	91.0			523,695.47	592,319.30
TP13-04	91.6			523,713.82	592,221.23
TP13-05	90.8			523,690.20	592,223.17
TP13-06	90.9			523,644.94	592,230.07
TP13-07	90.9			523,671.06	592,222.25
TP13-08	91.7			523,632.94	592,145.99
TP13-09	91.5			523,637.38	592,118.08
TP13-10	91.9			523,662.15	592,070.45
TP13-11	90.5			523,758.08	592,309.48
TP13-12	90.3			523,746.40	592,253.28
			SITE # 15		
SB15-01	9.9			577,263.80	611,282.46
SB15-02	9.7			577,267.18	611,356.98
SB15-03	16.8			577,171.45	611,371.86
SB15-04	13.8			577,184.45	611,433.57
SED15-03	15.6			577,179.08	611,379.37
SS15-01	9.6			577,267.83	611,325.96
SS15-02	15.9			577,172.95	611,388.23
SW/SED15-01	7.1			577,322.83	611,290.49
SW/SED15-02	8.7			577,298.56	611,418.01

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
			SITE # 16		
MW16-01	101.05	102.34	103.01	523,117.90	588,646.95
MW16-02	96.57	98.48	99.03	523,531.58	588,602.18
MW16-03	99.85	99.59	99.86	523,453.00	588,414.54
MW16-04	102.29	104.30	104.84	523,281.89	588,275.60
MW16-05	102.27	104.14	104.80	523,240.23	588,186.36
MW16-06	96.99	98.73	99.31	523,755.06	588,231.35
SB16-07	99.4			523,350.49	588,640.48
SB16-08	101.8			523,314.19	588,614.65
SB16-09	98.6			523,526.78	588,513.66
SB16-10	100.5			523,349.51	588,551.24
SB16-11	102.6			523,268.36	588,551.89
SB16-14	100.4			523,390.95	588,469.70
SB16-15	100.9			523,299.83	588,432.59
SB16-16	102.3			523,218.16	588,475.25
SB16-17	100.3			523,317.84	588,321.15
SB16-18	102.3			523,285.87	588,363.15
SB16-19	102.6			523,170.47	588,294.49
SB16-20	100.5			523,122.97	588,341.68
SED16-01	96.1			523,800.66	588,231.62
SED16-02	95.3			523,561.57	588,590.16
SED16-03	96.8			523,405.26	588,633.83
SG16-01	99.7			523,433.82	588,391.14
SG16-02	99.9			523,406.61	588,400.15

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
		SITE # 16 (CONTINUED)			
SG16-13	100.5			523,390.33	588,466.04
SG16-15	101.4			523,312.31	588,483.35
SG16-23	96.4			523,784.14	588,262.94
SG16-24	96.4			523,743.33	588,281.72
SG16-25	96.1			523,843.00	588,247.14
SG16-26	96.0			523,807.10	588,282.91
SG16-27	95.5			523,779.06	588,322.55
SG16-31	100.2			523,337.03	588,640.46
SG16-32	101.5			523,318.32	588,650.97
SG16-33	102.5			523,291.30	588,672.37
SG16-37	99.2			523,341.63	588,670.56
SG16-52	97.9			523,601.35	588,485.58
SG16-55	100.6			523,346.01	588,548.98
SG16-56	102.7			523,251.78	588,565.24
SG16-59	99.1			523,484.02	588,391.08
SG16-61	97.4			523,840.29	588,197.36
SG16-87	101.8			523,311.37	588,274.77
SG16-93	102.5			523,103.00	588,388.86
SG16-96	99.0			523,555.99	588,527.28
SG16-97	99.1			523,508.51	588,536.88
SS16-01	101.3			523,268.36	588,433.81
SS16-02	102.6			523,262.53	588,404.92
SS16-03	100.8			523,206.70	588,349.48

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
			SITE # 17		
MW17-01	16.88	18.58	18.82	577,651.94	611,152.23
MW17-02	12.10	11.55	12.04	577,590.82	611,009.58
MW17-03	11.84	14.09	14.24	577,750.64	611,035.94
MW17-04	12.58	14.95	15.15	577,874.84	610,968.10
MW17-05	15.24	14.56	14.70	577,567.98	611,012.36
SED17-01	7.6			577,633.18	610,980.05
SS17-01	8.1			577,788.92	610,991.42
SW/SED17-01	4.4			577,574.16	610,927.52
SW/SED17-03	6.1			577,415.09	611,035.91
SW/SED17-04	3.7			577,820.93	610,921.30
			SITE # 19		
MW19-05	112.59	114.08	114.21	512,309.39	584,833.45
MW19-06	107.46	109.32	109.56	512,451.20	584,666.49
MW19-07	111.68	113.78	114.35	512,247.06	584,826.73
SB19-01	110.7			512,336.03	584,838.27
SB19-02	109.3			512,342.16	584,871.80
SB19-03	109.2			512,311.66	584,860.52
SB19-04	109.3			512,326.20	584,852.62
SW/SED19-01	101.7			512,139.09	584,559.94

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
			SITE # 20		
AQW/SLW20-01(MH)	116.1			518,322.32	591,907.59
SB20-01	114.9			518,220.31	591,897.73
SB20-02	114.8			518,245.14	591,927.24
SB20-03	114.5			518,272.14	591,942.41
SED20-01	111.9			518,311.79	592,012.56
SS20-01	115.1			518,238.74	591,812.14
SS20-02	114.6			518,176.65	591,870.85
SS20-03	113.1			518,170.13	591,950.48
SS20-04	111.6			518,224.75	592,001.23
SS20-05	115.5			518,105.32	591,896.80
			SITE # 23		
MW23-01	117.69	119.62	112.18	520,889.58	590,571.74
MW23-02	115.98	118.22	118.85	520,787.82	590,651.11
MW23-03	113.41	113.19	113.46	520,970.56	590,675.37
SB23-02-01	116.5			520,837.21	590,625.75
SW/SED23-01	127.6			521,068.69	590,477.00
SW/SED23-02	126.2			520,890.86	590,470.14
SW/SED23-03	114.5			520,776.26	590,657.53
SW/SED23-04	108.2			520,615.35	590,686.56
SW/SED23-05	105.2			520,627.74	590,889.73

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
			SITE # 24		
SB24-01-04-07	190.1			521,327.85	589,274.59
SB24-02-02-05	203.7			521,329.52	589,299.86
			SITE # 25		
SB25-01-05-08	187.3			520,887.15	589,179.01
SB25-02-03-06	196.3			520,877.36	589,190.97
			SITE # 26		
MW26-04	147.90	149.96	150.09	516,893.31	590,109.37
MW26-05	147.70	149.68	150.23	516,710.98	589,987.85
MW26-06	144.94	146.82	147.38	516,663.40	590,107.80
SB26-01	146.5			516,849.78	590,110.01
SB26-DEC 95-01	146.8			516,830.06	590,100.82
SB26-02	146.7			516,837.83	590,119.89
SB26-DEC 95-02	146.4			516,810.61	590,100.17
SB26-03	144.4			516,939.94	590,098.44
SB26-04	144.2			516,926.25	590,093.37
SG26-14	146.5			516,817.36	590,098.03
SG26-15	146.6			516,836.28	590,114.97
SG26-16	147.1			516,855.37	590,131.83

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
			SITE 26 CONTINUED...		
SG26-20	147.2			516,937.46	590,200.50
SG26-23	147.1			516,796.60	590,044.81
SG26-43	147.1			516,804.96	590,034.62
SG26-45	147.8			516,828.00	590,005.91
SG26-46	147.4			516,849.98	590,021.67
SG26-47	147.0			516,873.28	590,044.29
SG26-48	147.1			516,888.62	590,059.42
SG26-69	147.2			517,006.92	590,057.87
SG26-69	147.2			517,006.93	590,057.86
			SITE # 27		
SB27-01	134.6			513,724.91	590,435.34
SB27-02	134.3			513,745.35	590,430.84
SB27-03	131.4			513,726.80	590,452.88
			SITE # 29		
MW29-01	97.36	99.42	100.02	524,059.89	587,837.64
MW29-02	98.44	100.39	101.10	524,076.78	588,031.52

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

JAMES M. STEWART, INC.
FILE# 1463LIST
CHECKED BY: ELP

JOB # 1463
MARCH 11, 1996

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

SAMPLE #	ELEVATIONS (FEET) GROUND	INNER CASING	PROTECTIVE OUTER CASING	COORDINATES (FEET) NORTH	EAST
			SITE L		
SSL-01	104.1			520,153.45	594,575.89
SSL-02	102.6			520,387.17	594,821.42
SSL-03	103.7			520,305.21	594,825.72
SSL-04	103.5			520,319.82	594,977.61
SSL-05	102.2			520,408.85	594,756.95
SSL-06	102.2			520,362.47	594,704.05
SSL-07	103.0			520,299.92	594,865.56
			SITE Q		
SBQ-02	105.2			509,164.61	575,942.98
SBQ-03	103.5			509,083.60	575,985.08
HPQ-02	112.0			509,386.65	575,888.25
HPQ-03	103.6			509,113.32	575,976.10
HPQ-04	104.0			508,978.97	575,909.15
SEDQ-01	99.9			508,915.45	575,951.56

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

NAVAL WEAPONS STATION - EARLE
WELL LOCATIONS

	ELEVATIONS (FEET)			COORDINATES (FEET)	
SAMPLE #	GROUND	INNER CASING	PROTECTIVE OUTER CASING	NORTH	EAST
UST/C8-01	104.98	104.58	104.98	522,622.90	587,432.64
UST/C28-01	109.72	109.30	109.74	523,507.40	586,111.04
UST/R4B-01	16.26	15.96	16.26	577,567.95	611,173.35
UST/R11-01	18.51	18.13	18.51	577,525.64	611,664.92
UST/617-01	134.34	133.98	134.36	520,711.34	586,979.97

HORIZONTAL DATUM: NEW JERSEY PLANE COORDINATES NAD 83
VERTICAL DATUM: NAVD 88

Leica SKI Software 10/08/95 6:20 PM
JAMES M. STEWART, INC.

Coordinate set: 1463-2
Coordinate type: Grid
Reference ellipsoid: WGS 1984
Projection set: NEW JERSEY
Unit: fts

Point id	Easting	Northing	Orth. height	N
1-SPK	611609.6266	577694.7772	17.6758	-107.2340
100-PK	590403.8651	509666.0954	99.1684	-107.7426
101-PK	590147.7746	510414.3012	105.0091	-107.7229
102-SPK	591716.5563	518338.9040	120.1134	-107.6081
103-SPK	591810.1328	518443.0521	118.6269	-107.6081
~~104 TACK~~	~~586881.3055~~	~~524090.4494~~	~~101.4255~~	~~-107.4210~~
136-SPK	588999.7427	525067.5687	94.3206	-107.4440
137-SPK	588933.9680	525430.6331	91.5159	-107.4374
138-SPK	587893.6701	524134.5387	97.5895	-107.4374
139-SPK	588002.0013	523580.7387	101.6439	-107.4473
140 I PIN	592353.0329	523180.9473	94.1036	-107.5392
141-PIN	592371.2087	523737.6498	92.1869	-107.5293
149 DH	597948.8772	520318.5683	112.9151	-107.7098
150 I PIN	597812.8265	520386.6950	111.5436	-107.7065
151 SPK/PIPE	598343.7309	521429.9945	111.5920	-107.6966
152 I PIN	598572.0358	521940.9660	95.5890	-107.6934
153-DH	588546.4879	522106.4863	124.6930	-107.4834
155- NAIL	577774.4076	521078.5393	92.0543	-107.3095
156-NAIL	577647.5897	521042.4890	92.7878	-107.3095
157-L.NAIL	576299.3464	509386.4936	100.9573	-107.4670
158-L.NAIL	576374.0358	509494.7416	101.4651	-107.4670
164-PK	587244.3522	514742.7102	121.7260	-107.5818
165-PK	587386.0415	514793.4217	123.0269	-107.5851
166/SPK	589157.2978	519836.3129	178.6377	-107.5293
167-PIN/CAP	588843.4736	520199.4422	169.6690	-107.5195
169 PK	589092.0418	520992.1740	176.5264	-107.5096
16F-104/TACK	588203.5607	523391.3770	130.5681	-107.4539
170 PK	589105.6776	521272.9017	176.4024	-107.5063
19-SPK	611819.7905	578325.9051	18.1080	-107.2308
193-PK/RAILROAD	592443.7736	527744.7472	74.8238	-107.4703
194-PK RR X ROAD	592555.8128	525783.8438	86.8235	-107.4998
2-SPK	611607.3163	578123.9530	14.4982	-107.2308
205-PK	588115.1800	523153.7064	101.3416	-107.4571
206-PK	588209.6637	522862.9144	102.3054	-107.4637
209-NAIL	598519.4095	524580.3971	87.5989	-107.6474
209-NAIL2	598519.4097	524580.3976	87.5984	-107.6474
210-NAIL	598240.8384	524142.1722	91.1770	-107.6507
211-L.NAIL	602237.7636	525438.0504	74.8679	-107.7130
212-L.NAIL	602361.8989	525628.7996	74.9810	-107.7130
22-PK PARKLOT	610052.2862	575061.0109	77.2804	-107.2308
23-PK PARKLOT	610420.2982	575113.8198	72.0272	-107.2373
617-A-PK	586908.9544	521175.1495	123.5453	-107.4670
617-B-PK	587087.6981	521298.8149	124.3637	-107.4670
84-SPK	590990.4958	520602.5006	111.0426	-107.5523
85-SPK	590764.6656	520835.5569	114.1401	-107.5457
86-SPK	590424.8723	516874.8163	144.6056	-107.6081
87-SPK	590049.1424	516466.9167	143.0817	-107.6048
89-PK	580379.7835	514331.8482	147.3430	-107.4539
90-SPK-2	582095.6971	515753.8437	248.8354	-107.4604
91-SPK	583950.3685	515174.7146	130.3427	-107.5096
92-SPK	584795.0678	512447.7562	114.9258	-107.5752

93-DH	584944.2787	512415.7661	114.4968	-107.5785
94-PK	595730.8917	513955.3545	108.3388	-107.7721
95-H/T	595748.8382	514069.1718	106.7920	-107.7721
96-PK	593484.7510	509444.6895	97.6886	-107.8147
97-PK	593526.9501	509513.6234	97.4836	-107.8147
98-SPK	591991.9493	511160.4879	119.5711	-107.7458
99-SPK	591712.4324	511680.2178	119.8283	-107.7294
BGMW-01	605570.8070	526269.0512	96.3224	-107.7721
BGSW/SED 08 OFF	585925.8104	508257.2185	83.5765	-107.6770
BSW/SED 08 OFF	585925.8485	508257.2447	83.5842	-107.6770
C-28/28	586821.3982	522600.4470	103.1239	-107.4440
C-8-PK	587175.8734	522657.2576	101.7691	-107.4473
* NJGS 122286	586397.3592	521437.6506	113.8093	-107.4539
NJGS 13F1	611626.2872	577031.2537	26.4396	-107.2406
NJGS 13I1	603917.8432	547927.1063	53.8002	-107.4440
NJGS 13J1	590697.9210	551362.2266	108.9081	-107.1750
SD2-88/PK	580417.6467	514243.0830	143.1280	-107.4571
TBM-PAINT	605570.7447	526268.1951	94.2104	-107.7721
* THROCKMORTON 3	581526.1086	516535.1446	304.8414	-107.4374
W.TREAT-105/PIN	586881.3055	524090.4494	101.4255	-107.4210

Qxx-Matrices

Point Id	m0	q11	q12	q13	q22	q23	q3
1-SPK	0.0069	0.0231	-0.0001	0.0187	0.0139	0.0081	0.20
100-PK	0.0122	0.0315	0.0076	0.0123	0.0300	0.0554	0.25
101-PK	0.0127	0.0372	0.0136	0.0589	0.0269	0.0544	0.28
102-SPK	0.0067	0.0310	-0.0022	-0.0159	0.0124	-0.0040	0.07
103-SPK	0.0091	0.0371	0.0004	-0.0058	0.0144	-0.0083	0.08
104-TACK	0.0092	0.0081	-0.0022	0.0024	0.0032	-0.0017	0.01
136-SPK	0.0054	0.0373	-0.0062	-0.0104	0.0171	0.0004	0.08
137-SPK	0.0053	0.0442	-0.0070	-0.0282	0.0228	-0.0080	0.13
138-SPK	0.0048	0.0169	-0.0041	-0.0044	0.0157	0.0040	0.12
139-SPK	0.0176	0.0225	0.0039	-0.0015	0.0045	-0.0043	0.04
140 I PIN	0.0063	0.0500	0.0033	-0.0574	0.0171	0.0043	0.15
141-PIN	0.0095	0.0360	0.0016	-0.0390	0.0098	0.0018	0.08
149 DH	0.0073	0.0338	0.0093	0.0464	0.0194	0.0302	0.20
150 I PIN	0.0069	0.0329	0.0086	0.0354	0.0201	0.0284	0.18
151 SPK/PIPE	0.0098	0.0367	0.0097	0.0587	0.0198	0.0316	0.23
152 I PIN	0.0083	0.0215	0.0011	0.0214	0.0127	0.0051	0.10
153-DH	0.0061	0.0306	-0.0094	-0.0111	0.0226	-0.0029	0.12
155- NAIL	0.0083	0.0327	-0.0135	0.0094	0.0176	-0.0075	0.09
156-NAIL	0.0071	0.1286	-0.0647	-0.2240	0.0515	0.1370	0.52
157-L.NAIL	0.0114	0.0212	0.0007	0.0074	0.0142	0.0046	0.19
158-L.NAIL	0.0157	0.0375	0.0003	0.0469	0.0181	0.0047	0.26
164-PK	0.0073	0.0344	-0.0149	-0.0292	0.0194	0.0096	0.12
165-PK	0.0089	0.0294	-0.0126	-0.0263	0.0172	0.0091	0.12
166/SPK	0.0112	0.0306	0.0027	-0.0304	0.0080	-0.0008	0.06
167-PIN/CAP	0.0059	0.0490	0.0047	-0.0495	0.0177	-0.0096	0.1
169 PK	0.0056	0.0284	0.0060	0.0077	0.0262	0.0471	0.22
16F-104/TACK	0.0100	0.0489	0.0112	-0.0208	0.0086	-0.0027	0.07
170 PK	0.0065	0.0215	0.0026	-0.0085	0.0141	0.0187	0.11
19-SPK	0.0081	0.0182	-0.0041	0.0323	0.0059	-0.0104	0.10
193-PK/RAILROAD	0.0062	0.0903	0.0226	-0.0225	0.0196	-0.0222	0.18
194-PK RR X ROAD	0.0046	0.0962	0.0225	-0.0711	0.0192	-0.0123	0.18
2-SPK	0.0072	0.0207	-0.0009	0.0223	0.0104	0.0059	0.146

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        National Geodetic Survey,   Retrieval Date = OCTOBER 30, 1993
KV0728 ***********************************************************************
KV0728  DESIGNATION -  J 36
KV0728  PID         -  KV0728
KV0728  STATE/COUNTY-  NJ/MONMOUTH
KV0728  USGS QUAD   -  SANDY HOOK
KV0728
KV0728  HORZ DATUM  -  NAD 83
KV0728  VERT DATUM  -  NAVD 88
KV0728
KV0728  POSITION    -  40 25 01.     (N)    074 04 13.     (W)     SCALED
KV0728  83 minus 27 -       +00.                  -01.             NADCON
KV0728
KV0728  HEIGHT      -         8.593  (meters)      28.19   (feet)  ADJUST
KV0728  88 minus 29 -        -0.312                                 ADJUSTED
KV0728 ***********************************************************************
KV0728  GEOID HEIGHT-       -32.69                                  GEOID93
KV0728  MODELED GRAV-   980,212.9                                   NAVD88
KV0728
KV0728  VERT ORDER  -  FIRST     CLASS 2  .
KV0728
KV0728 The horizontal coordinates were scaled from a topographic map and have
KV0728 an estimated accuracy of +/- 6 seconds.
KV0728
KV0728 The orthometric height was determined by differential leveling
KV0728 and adjusted by the National Geodetic Survey in June 1991.
 V0728
.V0728 The geoid height was determined by GEOID93.
KV0728
KV0728 The modeled gravity was interpolated from observed gravity values.
KV0728
KV0728 STATION MARK IS A BENCH MARK DISK
KV0728 WITH SETTING: SET IN THE ABUTMENT OR PIER OF A LARGE BRIDGE
KV0728 THE MARK IS STAMPED: J 36 1952
KV0728 STABILITY: PROBABLY HOLD POSITION/ELEVATION WELL
KV0728 SATELLITE: THE SITE LOCATION WAS REPORTED AS UNSUITABLE FOR
KV0728 SATELLITE: SATELLITE OBSERVATIONS - December 12, 1988
KV0728
KV0728  HISTORY     - Year Condition            Recov. By
KV0728  HISTORY     - 1952 STATION MONUMENTED   COAST AND GEODETIC SURVEY
KV0728  HISTORY     - 1964 GOOD                 COAST AND GEODETIC SURVEY
KV0728  HISTORY     - 1979 GOOD                 NATIONAL GEODETIC SURVEY
KV0728  HISTORY     - 1988 GOOD                 NEW JERSEY GEODETIC SURVEY
KV0728
KV0728                          STATION DESCRIPTION
KV0728
KV0728 DESCRIBED BY COAST AND GEODETIC SURVEY 1964
KV0728 TEXT WAS SUPERSEDED BY LATER RECOVERY.
KV0728
KV0728                          STATION RECOVERY (1979)
KV0728
KV0728 RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1979
 V0728 TEXT WAS SUPERSEDED BY LATER RECOVERY.
 V0728
KV0728                          STATION RECOVERY (1988)
KV0728
KV0728 RECOVERY NOTE BY NEW JERSEY GEODETIC SURVEY 1988
KV0728 1.1 KM (1.77 MI) WEST ALONG  STATE HIGHWAY 36 FROM THE JCT OF STATE
KV0728 HIGHWAY 36 AND LEONARDO AVE, SET IN THE SOUTH FACE OF THE NORTH
KV0728 ABUTMENT OF RAILROAD BRIDGE OVER STATE HIGHWAY ROUTE 36, 60.67 M
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FND 8/95

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        National Geodetic Survey,   Retrieval Date = OCTOBER 30, 1993
KV6224 ***********************************************************************
KV6224  DESIGNATION -  13 F 1
KV6224  PID         -  KV6224
KV6224  STATE/COUNTY-  NJ/MONMOUTH
KV6224  USGS QUAD   -  SANDY HOOK
KV6224
KV6224  HORZ DATUM  -  NAD 83
KV6224  VERT DATUM  -  NGVD 29
KV6224
KV6224  POSITION    -  40 25 00.49102(N)    074 04 14.86210(W)     ADJUSTED
KV6224  83 minus 27 -       +00.39016             -01.49467        NADCON
KV6224
KV6224  HEIGHT      -         8.364  (meters)      27.44   (feet)  ADJUST
KV6224  88 minus 29 -        -0.31                                  VERTCON
KV6224 ***********************************************************************
KV6224  LAPLACE CORR-        -2.71                                  DEFLEC93
KV6224  GEOID HEIGHT-       -32.69                                  GEOID93
KV6224
KV6224  HORZ ORDER  -  SECOND
KV6224  VERT ORDER  -  SECOND    CLASS 1
KV6224
KV6224 The horizontal coordinates were established by GPS observations
KV6224 and adjusted by the National Geodetic Survey in March 1990.
KV6224
KV6224 The orthometric height was determined by differential leveling
KV6224 and adjusted by the National Geodetic Survey in January 1992.
KV6224
KV6224 The Laplace correction was computed from DEFLEC93 derived deflections.
KV6224
KV6224 The geoid height was determined by GEOID93.
KV6224
KV6224                      North         East       Scale          Converg.
KV6224 SPC NJ      -    175,879.478   186,424.065 0.99991633     +0 16 41.8  MT
KV6224 UTM  18     -  4,474,434.420   578,832.862 0.99967650     +0 36 08.9  MT
KV6224
KV6224 STATION MARK IS A SURVEY DISK
KV6224 WITH SETTING: SET IN TOP OF CONCRETE MONUMENT (ROUND)
KV6224 THE MARK IS STAMPED: 13 F 1 1988
KV6224 STABILITY: MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO SURFACE
KV6224 STABILITY: MOTION - E.G. FROST HEAVE, ETC
KV6224 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
KV6224 SATELLITE: SATELLITE OBSERVATIONS - December 12, 1988
KV6224
KV6224  HISTORY     - Year Condition            Recov. By
KV6224  HISTORY     - 1988 STATION MONUMENTED   NEW JERSEY GEODETIC SURVEY
KV6224
KV6224                          STATION DESCRIPTION
KV6224
KV6224 DESCRIBED 1988
KV6224 THE STATION IS LOCATED ABOUT 52 M (170.60 FT) WEST OF THE U.S. NAVAL
KV6224 WEAPONS RAILROAD BRIDGE OVER STATE HIGHWAY ROUTE 36 IN MIDDLETOWN
KV6224 TOWNSHIP, SET ON THE NORTH SIDE OF WEST BOUND LANES OF ROUTE 36, 2.75
KV6224 M (9.02 FT) NORTH OF THE NORTH CURBLINE OF WEST BOUND ROUTE 36, 15.25
KV6224 M (50.03 FT) NORTHWEST OF POLE BT6667 MDT, 32.35 M (106.13 FT)
KV6224 SOUTHWEST OF THE SOUTHWEST CORNER OF THE NORTH RAILROAD BRIDGE
KV6224 ABUTMENT WHICH ALSO CONTAINS BENCH MARK J 36 ON ITS SOUTH FACE, 42.4
KV6224 M (139.11 FT) NORTHWEST OF THE WESTERLY APEX OF THE CENTER PIER OF
KV6224 THE RAILROAD BRIDGE, 14.8 M (48.56 FT) SOUTH OF THE CHAIN LINK FENCE
KV6224 OF THE NAVAL COMPOUND, 20.05 M (65.78 FT) SOUTH SOUTHEAST OF THE BASE
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FND 8/95

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        National Geodetic Survey,   Retrieval Date = OCTOBER 30, 1993
KV6228 ***********************************************************************
KV6228  DESIGNATION -  13 I 1
KV6228  PID         -  KV6228
KV6228  STATE/COUNTY-  NJ/MONMOUTH
KV6228  USGS QUAD   -
KV6228
KV6228  HORZ DATUM  -  NAD 83
KV6228  VERT DATUM  -  NGVD 29
KV6228
KV6228  POSITION    -  40 20 13.22824(N)    074 05 56.23945(W)     ADJUSTED
KV6228  83 minus 27 -       +00.39597             -01.49307        NADCON
KV6228
KV6228  HEIGHT      -        16.9    (meters)      55.     (feet)  GPS OBS
KV6228  88 minus 29 -        -0.3                                  VERTCON
KV6228 ***********************************************************************
KV6228  LAPLACE CORR-        -3.59                                 DEFLEC93
KV6228  GEOID HEIGHT-       -32.75                                 GEOID93
KV6228
KV6228  HORZ ORDER  -  SECOND
KV6228
KV6228 The horizontal coordinates were established by GPS observations
KV6228 and adjusted by the National Geodetic Survey in March 1990.
KV6228
KV6228 The orthometric height was determined by GPS observations.
KV6228
KV6228 The Laplace correction was computed from DEFLEC93 derived deflections.
KV6228
KV6228 The geoid height was determined by GEOID93.
KV6228
KV6228                      North         East       Scale          Converg.
KV6228 SPC NJ       -    167,008.491   184,074.430 0.99991429     +0 15 34.5  MT
KV6228 UTM  18      -  4,465,552.433   576,533.972 0.99967210     +0 34 59.7  MT
KV6228
KV6228 STATION MARK IS A SURVEY DISK
KV6228 WITH SETTING: SET IN TOP OF CONCRETE MONUMENT (ROUND)
KV6228 THE MARK IS STAMPED: 13 I 1 1988
KV6228 STABILITY: MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO SURFACE
KV6228 STABILITY: MOTION - E.G. FROST HEAVE, ETC
KV6228 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
KV6228 SATELLITE: SATELLITE OBSERVATIONS - November 11, 1988
KV6228
KV6228  HISTORY      - Year Condition             Recov. By
KV6228  HISTORY      - 1988 STATION MONUMENTED    NEW JERSEY GEODETIC SURVEY
KV6228
KV6228                           STATION DESCRIPTION
KV6228
KV6228 DESCRIBED 1988
KV6228 THE STATION IS LOCATED AT THE NORTHEAST CORNER OF THE NORTH BOUND
KV6228 ENTRANCE RAMP TO THE GARDEN STATE PARKWAY, INTERCHANGE NO. 109, AND
KV6228 WEST BOUND NEWMAN SPRINGS ROAD, COUNTY ROUTE 520.  THE STATION IS
KV6228 LOCATED IN FRONT OF THE PARKWAY CORPORATE PARK, A 4 STORY OFFICE
KV6228 BUILDING. 4.4 M (14.44 FT) EAST OF THE EAST CURBLINE OF NORTH BOUND
KV6228 RAMP TO THE PARKWAY,11.5 M (1.64 FT) NORTHEAST OF THE SOUTH EASTERLY
KV6228 OF TWO BELL TELEPHONE MANHOLES AT THE NOSE OF THE RAMP ROAD DIVIDE,
KV6228 12.85 M (42.16 FT) EAST OF THE NOSE OF THE ROAD RAMP DIVIDE, 11.75 M
KV6228 (38.55 FT) SOUTH OF A LIGHTPOST, NO. L488D4, ON THE EAST SIDE OF THE
KV6228 NORTH BOUND RAMP, 4.3 M (14.11 FT) WEST OF THE CENTER OF A MANHOLE,
KV6228 38.5 M (126.31 FT) NORTHWEST OF POLE JC 383 IMDT MOV, 17.5 M
KV6228 (57.41 FT) SOUTH OF THE SOUTH CORNER OF AN INLET CURBPIECE ON THE
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FND 8/95

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        National Geodetic Survey,   Retrieval Date = OCTOBER 30, 1993
KV5087 ***********************************************************************
KV5087  DESIGNATION -  THROCKMORTON 3
KV5087  PID         -  KV5087
KV5087  STATE/COUNTY-  NJ/MONMOUTH
KV5087  USGS QUAD   -  MARLBORO
KV5087
KV5087  HORZ DATUM  -  NAD 83
KV5087  VERT DATUM  -  NGVD 29
KV5087
KV5087  POSITION    -  40 15 03.89478(N)    074 10 46.87753(W)     ADJUSTED
KV5087  83 minus 27 -       +00.40155             -01.48464        NADCON
KV5087
KV5087  HEIGHT      -        93.53   (meters)     306.9    (feet)  LEVELING
KV5087  88 minus 29 -        -0.37                                  VERTCON
KV5087 ***********************************************************************
KV5087  LAPLACE CORR-        -3.07                                  DEFLEC93
KV5087  GEOID HEIGHT-       -32.75                                  GEOID93
KV5087
KV5087  HORZ ORDER  -  FIRST
KV5087  VERT ORDER  -  THIRD ?
KV5087
KV5087 The horizontal position was established by classical geodetic methods
KV5087 and adjusted by the National Geodetic Survey in July 1986.
KV5087
KV5087 The orthometric height was determined by differential leveling.  The
KV5087 vertical network tie was performed by a horz. field party for horz.
KV5087 obs reductions. Reset procedures were used to establish the elevation.
KV5087
KV5087 The Laplace correction was computed from DEFLEC93 derived deflections.
KV5087
KV5087 The geoid height was determined by GEOID93.
KV5087
KV5087                      North         East       Scale          Converg.
KV5087 SPC NJ      -    157,440.227   177,249.512 0.99990914     +0 12 25.1  MT
KV5087 UTM  18     -  4,455,948.162   569,764.830 0.99965991     +0 31 48.2  MT
KV5087
KV5087                 Primary Azimuth Mark                      Grid Az
KV5087 SPC NJ      -   THROCKMORTON 3 AZ MK                     324 04 30.1
KV5087 UTM  18     -   THROCKMORTON 3 AZ MK                     323 45 07.0
KV5087
KV5087 ---------------------------------------------------------------------|
KV5087  Pid     Reference Object                    Distance      Geod. AZ  |
KV5087                                                            dddmmss.s |
KV5087         THROCKMORTON 3 RM 1 AZIMUTH                        0225525.0 |
KV5087         THROCKMORTON 3 RM 2                 45.543 METERS 06124     |
KV5087  KV5046 ASBURY PARK INCINERATOR STACK      APPROX. 6.3 KM 0892553.2 |
KV5087         THROCKMORTON 3 RM 3                 39.341 METERS 16832     |
KV5087  KV5088 US ARMY THEOD NR THROCKMORTON       11.475 METERS 21930     |
KV5087  KV5086 THROCKMORTON 2                       5.238 METERS 26138     |
KV5087         THROCKMORTON 3 AZ MK                              3241655.2 |
KV5087 ---------------------------------------------------------------------|
KV5087
KV5087 STATION MARK IS A HORIZONTAL CONTROL DISK
KV5087 WITH SETTING: SET IN TOP OF SQUARE CONCRETE MONUMENT
KV5087 THE MARK IS STAMPED: THROCKMORTON 3 1932
KV5087 STABILITY: MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO SURFACE
KV5087 STABILITY: MOTION - E.G. FROST HEAVE, ETC
KV5087 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
KV5087 SATELLITE: SATELLITE OBSERVATIONS - December 12, 1988
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FND 9/95

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         National Geodetic Survey,   Retrieval Date = OCTOBER 30, 1993
KV6229 ***********************************************************************
KV6229  DESIGNATION -  13 J 1
KV6229  PID         -  KV6229
KV6229  STATE/COUNTY-  NJ/MONMOUTH
KV6229  USGS QUAD   -  MARLBORO
KV6229
KV6229  HORZ DATUM  -  NAD 83
KV6229  VERT DATUM  -  NGVD 29
KV6229
KV6229  POSITION    -  40 20 47.73243(N)    074 08 46.78901(W)     ADJUSTED
KV6229  83 minus 27 -       +00.39455             -01.48791        NADCON
KV6229
KV6229  HEIGHT      -        33.8    (meters)     111.     (feet)  GPS OBS
KV6229  88 minus 29 -        -0.3                                  VERTCON
KV6229 ***********************************************************************
KV6229  LAPLACE CORR-        -2.47                                 DEFLEC93
KV6229  GEOID HEIGHT-       -32.67                                 GEOID93
KV6229
KV6229  HORZ ORDER  -  SECOND
KV6229
KV6229 The horizontal coordinates were established by GPS observations
KV6229 and adjusted by the National Geodetic Survey in March 1990.
KV6229
KV6229 The orthometric height was determined by GPS observations.
KV6229
KV6229 The Laplace correction was computed from DEFLEC93 derived deflections.
KV6229
KV6229 The geoid height was determined by GEOID93.
KV6229
KV6229                      North         East       Scale          Converg.
KV6229 SPC NJ      -    168,055.502   180,045.000 0.99991111     +0 13 44.3  MT
KV6229 UTM  18     -  4,466,576.412   572,499.678 0.99966470     +0 33 09.7  MT
KV6229
KV6229 STATION MARK IS A SURVEY DISK
KV6229 WITH SETTING: SET IN TOP OF CONCRETE MONUMENT (ROUND)
KV6229 THE MARK IS STAMPED: 13 J 1 1988
KV6229 STABILITY: MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO SURFACE
KV6229 STABILITY: MOTION - E.G. FROST HEAVE, ETC
KV6229 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
KV6229 SATELLITE: SATELLITE OBSERVATIONS - November 11, 1988
KV6229
KV6229  HISTORY     - Year Condition            Recov. By
KV6229  HISTORY     - 1988 STATION MONUMENTED   NEW JERSEY GEODETIC SURVEY
KV6229
KV6229                          STATION DESCRIPTION
KV6229
KV6229 DESCRIBED 1988
KV6229 TO REACH FROM THE LINCROFT POST OFFICE ON NEWMAN SPRINGS ROAD, COUNTY
KV6229 ROUTE 520, PROCEED 2.0 KM (3.22 MI) WESTERLY ON NEWMAN SPRINGS ROAD
KV6229 TO CRAWFORD CORNER,EVERETT ROAD, THEN TURN RIGHT, NORTH, FOR 0.8 KM
KV6229 (1.29 MI) TO THE INTERSECTION OF WEST FRONT STREET, THE STATION IS
KV6229 LOCATED ON THE NORTHEAST CORNER OF THE INTERSECTION WHERE THE
KV6229 LINCROFT PRESBYTERIAN CHURCH IS LOCATED. 1.0 M (3.28 FT) NORTH OF THE
KV6229 NORTH CURBLINE OF WEST FRONT STREET, 8.6 M (28.22 FT) SOUTHEAST OF
KV6229 POLE JC 259 MDT, 13.4 M (43.96 FT) SOUTHEAST OF A FIRE HYDRANT, 15.7
KV6229 M (51.51 FT) SOUTH SOUTHEAST OF POLE BT 8547 MDT, 19.9 M (65.29 FT)
KV6229 SOUTH SOUTHEAST OF THE SOUTHEAST INLET CURB PIECE ON CRAWFORG CORNER
KV6229 ROAD AND 33.9 M (111.22 FT) WEST OF A POLE WITHOUT A NUMBER.  THE
KV6229 MARK IS SET FLUSH WITH THE GROUND.
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FND 8/95

NAME OF STATIONS 1 + 2

RECORD OF CONTROL SURVEY STATIONS

HORIZONTAL CONTROL 2ND ORDER ACCURACY
HORIZONTAL CONTROL NAD 83 DATUM
VERTICAL CONTROL 3RD ORDER ACCURACY
VERTICAL CONTROL NAVD 88 DATUM

STATE NEW JERSEY
COUNTY MONMOUTH
TOWNSHIP EARLE NWS
SET BY JMS YEAR 95

NEW JERSEY STATE SYSTEM OF PLANE COORDINATES _____ ZONE _____

NAME OF STATION 1	NAME OF STATION 2
LAT. 40°25'07.048" LONG. 74°04'15.036"	LAT. 40°25'11.290" LONG. 74°04'15.039"
Y 577,694.78 X 611,609.63	Y 578,123.95 X 611,607.32
ELEVATION 17.65 FEET _____ METERS	ELEVATION 14.51 FEET _____ METERS
REFERENCES:	REFERENCES:
RM-1 = PK NAIL IN UP# W15A1	RM-1 = PK NAIL IN UP#
RM-2 = PK NAIL IN UP#	RM-2 = PK NAIL IN UP#
RM-3 = BUILDING CORNER	RM-3 = PK NAIL IN UP#

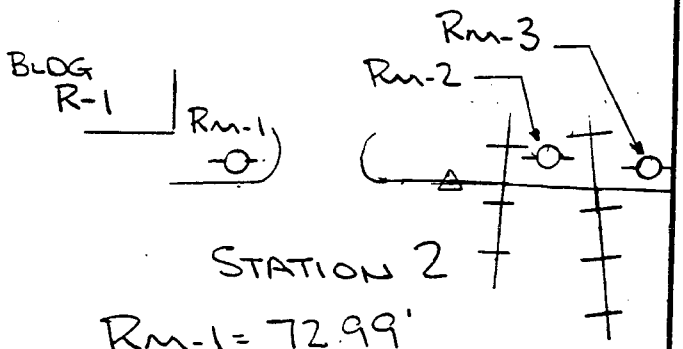
DESCRIPTION:

STATION 1 IS A RAILROAD SPIKE BETWEEN A CONCRETE WALK AND CURBLINE.

STATION 2 IS A RAILROAD SPIKE IN A CONCRETE CURBLINE.

SITES 6, 12, 15 AND 17

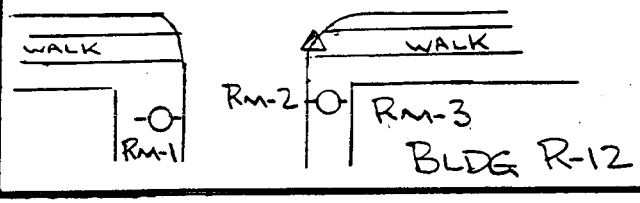
RM-1 = 45.22'
RM-2 = 20.56'
RM-3 = 30.80'



STATION 2

RM-1 = 72.99'
RM-2 = 25.53'
RM-3 = 71.78'

STATION 1



NAME OF STATIONS 33 + 34

RECORD OF CONTROL SURVEY STATIONS

HORIZONTAL CONTROL 2ND ORDER ACCURACY
HORIZONTAL CONTROL NAD 83 DATUM
VERTICAL CONTROL 3RD ORDER ACCURACY
VERTICAL CONTROL NAVD 88 DATUM

STATE NEW JERSEY
COUNTY MONMOUTH
TOWNSHIP EARLE NWS
SET BY JMS YEAR 95

NEW JERSEY STATE SYSTEM OF PLANE COORDINATES _____ ZONE _____

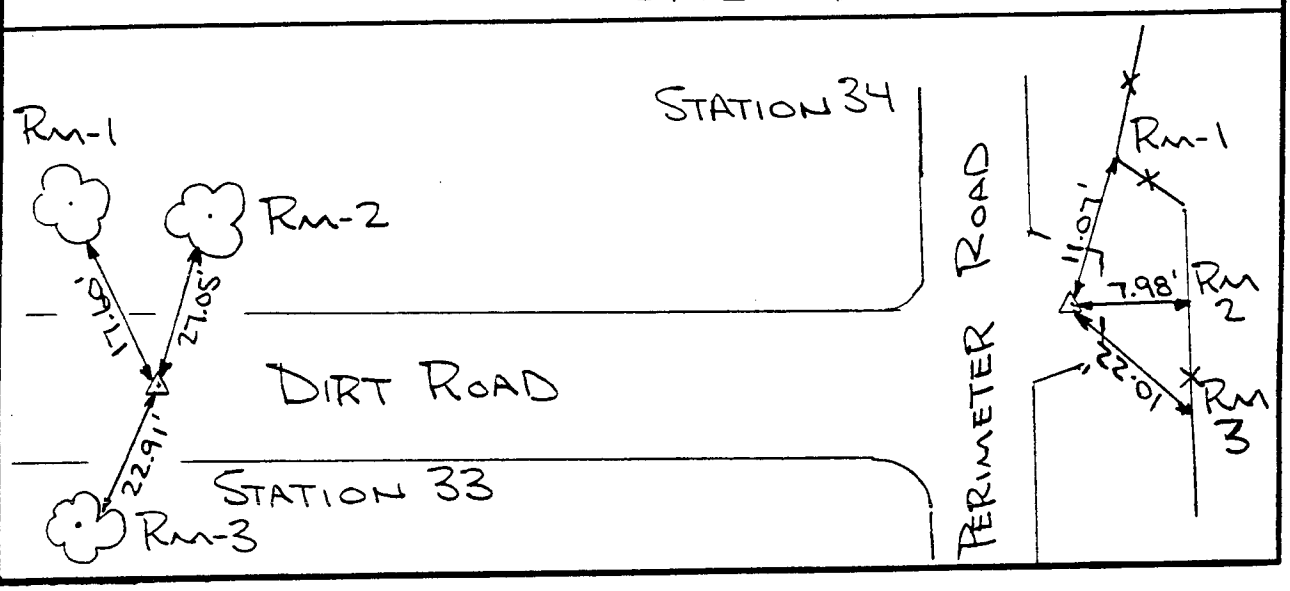
NAME OF STATION	NAME OF STATION
LAT. 40°24'06.404 LONG. 74°04'06.386	LAT. 40°24'08.622 LONG. 74°03'46.463
Y 571,561.44 X 612,308.55	Y 571,793.51 X 613,848.68
ELEVATION 120.89 FEET _____ METERS	ELEVATION 70.62 FEET _____ METERS
REFERENCES:	REFERENCES:
RM-1 = PK NAIL IN 12" TREE WITH BLAZE	RM-1 = X-CUT ON FENCE POST
RM-2 = PK NAIL IN 12" TREE WITH BLAZE	RM-2 = X-CUT ON FENCE POST
RM-3 = PK NAIL IN 12" TREE WITH BLAZE	RM-3 = X-CUT ON FENCE POST

DESCRIPTION:

STATION 33 IS A RAILROAD SPIKE LODGED IN A 2' IRON PIPE.

STATION 34 IS A RAILROAD SPIKE SET IN BITUMINOUS OVERPOUR.

SITE 7



NAME OF STATIONS 84 + 85

RECORD OF CONTROL SURVEY STATIONS

HORIZONTAL CONTROL 2ND ORDER ACCURACY
HORIZONTAL CONTROL NAD 83 DATUM
VERTICAL CONTROL 3RD ORDER ACCURACY
VERTICAL CONTROL NAVD 88 DATUM

STATE NEW JERSEY
COUNTY MONMOUTH
TOWNSHIP EARLE NWS
SET BY JMS YEAR 95

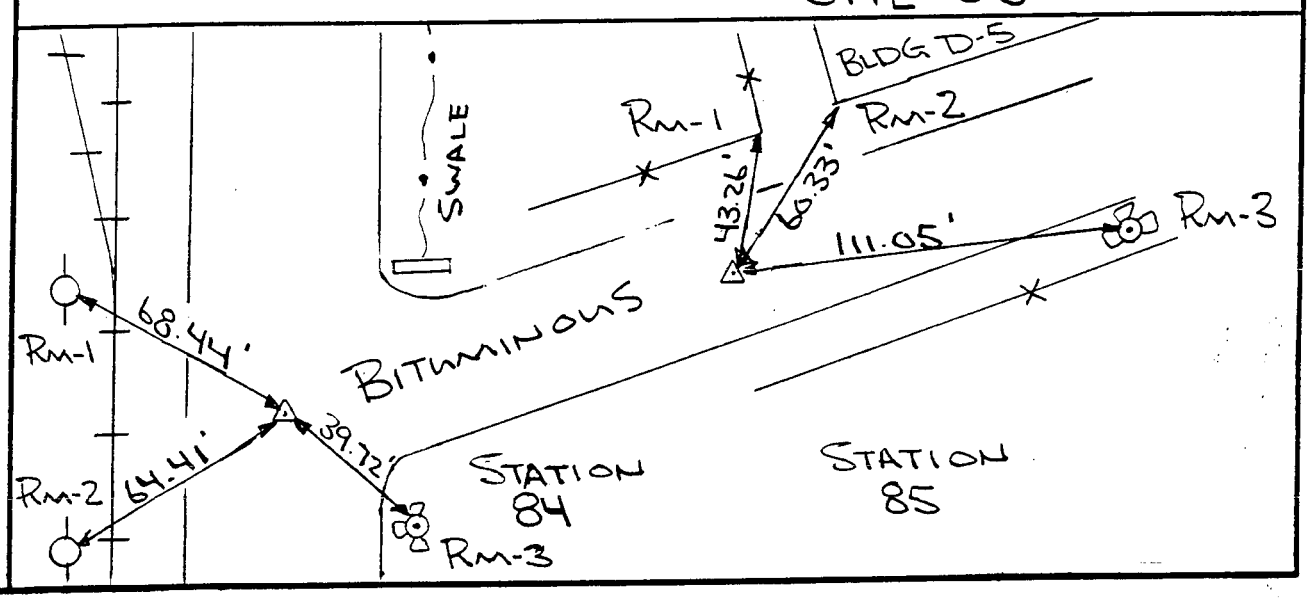
NEW JERSEY STATE SYSTEM OF PLANE COORDINATES _____ ZONE _____

NAME OF STATION 84	NAME OF STATION 85
LAT. 40°15'43.735 LONG. 74°08'44.595	LAT. 40°15'46.048 LONG. 74°08'47.497
Y 590,990.50 X 520,602.50	Y 590,764.67 X 520,835.56
ELEVATION 111.03 FEET _____ METERS	ELEVATION 114.14 FEET _____ METERS
REFERENCES:	REFERENCES:
Rm-1 = PK NAIL IN UP#	Rm-1 = X-CUT IN BASE OF FENCE POST.
Rm-2 = PK NAIL IN UP#	Rm-2 = BUILDING CORNER
Rm-3 = ON/OFF VALVE OF FIRE HYDRANT	Rm-3 = ON/OFF VALVE OF FIRE HYDRANT

DESCRIPTION:

STATIONS 85 + 86 ARE RAILROAD SPIKES SET IN A BITUMINOUS ROAD SURFACE.

SITE 23



NAME OF STATIONS 86 + 87

RECORD OF CONTROL SURVEY STATIONS

HORIZONTAL CONTROL 2ND ORDER ACCURACY
HORIZONTAL CONTROL NAD 83 DATUM
VERTICAL CONTROL 3RD ORDER ACCURACY
VERTICAL CONTROL NAVD 88 DATUM

STATE NEW JERSEY
COUNTY MONMOUTH
TOWNSHIP EARLE NWS
SET BY JMS YEAR 95

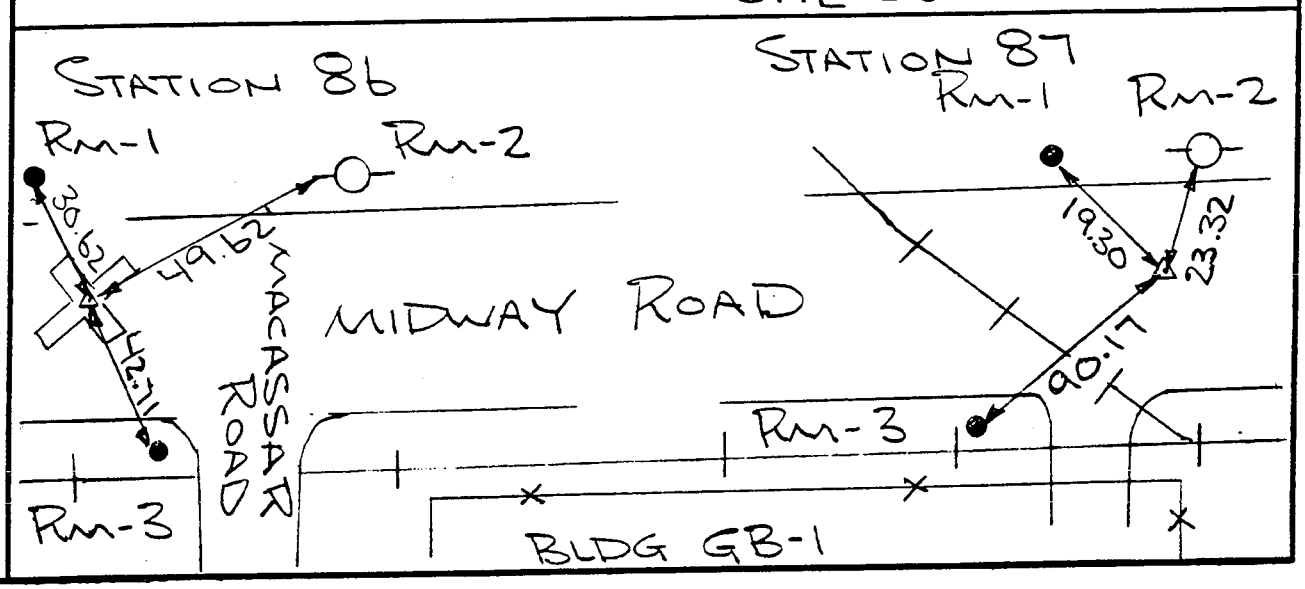
NEW JERSEY STATE SYSTEM OF PLANE COORDINATES _____ ZONE _____

NAME OF STATION 86	NAME OF STATION 87
LAT. 40°15'06.918" LONG. 74°08'52.083"	LAT. 40°15'02.902 LONG. 74°08'56.950"
Y 516,874.82 X 590,424.87	Y 516,466.92 X 590,049.14
ELEVATION 144.63 FEET _____ METERS	ELEVATION 143.06 FEET _____ METERS
REFERENCES:	REFERENCES:
RM-1 = X-CUT IN BASE OF RR X-ING SIGN	RM-1 = X-CUT IN BASE OF RR X-ING SIGN
RM-2 = PK NAIL IN UP# A419	RM-2 = PK NAIL IN UP# A448
RM-3 = X-CUT IN BASE OF STREET SIGN	RM-3 = X-CUT IN BASE OF RR X-ING SIGN

DESCRIPTION:

STATIONS 86 + 87 ARE RAILROAD SPIKES SET IN THE BITUMINOUS SURFACE OF MIDWAY ROAD. STATION 86 IS SET IN THE CENTER OF A PAINTED RAILROAD "X" ON MIDWAY ROAD.

SITE 26



NAME OF STATIONS 92 + 93

RECORD OF CONTROL SURVEY STATIONS

HORIZONTAL CONTROL 2ND ORDER ACCURACY
HORIZONTAL CONTROL NAD 83 DATUM
VERTICAL CONTROL 3RD ORDER ACCURACY
VERTICAL CONTROL NAVD 88 DATUM

STATE NEW JERSEY
COUNTY MONMOUTH
TOWNSHIP EARLE NWS
SET BY JMS YEAR 95

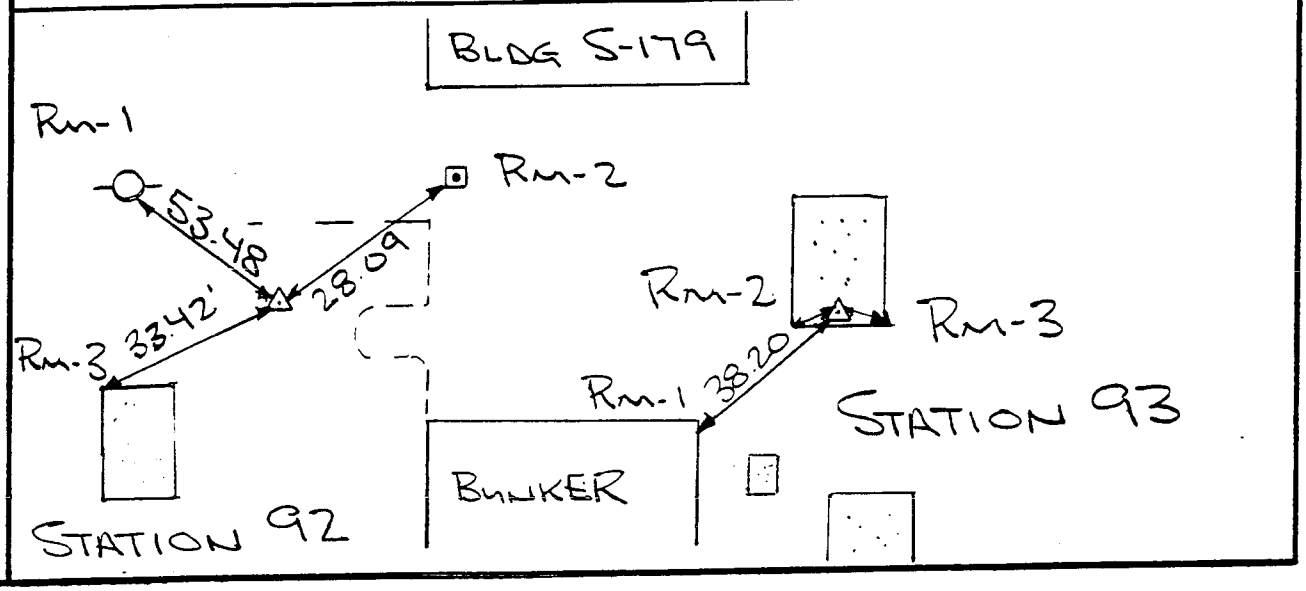
NEW JERSEY STATE SYSTEM OF PLANE COORDINATES _____ ZONE _____

NAME OF STATION 92	NAME OF STATION 93
LAT. 40°14'23.381" LONG. 74°10'04.512"	LAT. 40°14'23.060" LONG. 74°10'02.989"
Y 512,447.76 X 584,795.07	Y 512,415.77 X 584,944.28
ELEVATION 114.97 FEET _____ METERS	ELEVATION 114.45 FEET _____ METERS
REFERENCES: Rm-1 = PK NAIL IN UP# A519 Rm-2 = CORNER OF CONCRETE POLE STANDARD. Rm-3 = CORNER OF CONCRETE PAD.	REFERENCES: Rm-1 = CORNER OF BUNKER Rm-2 = CORNER OF PAD (3.05') Rm-3 = CORNER OF PAD (2.95')

DESCRIPTION:

STATION 92 IS A RAILROAD SPIKE SET IN A PARKING LOT.
STATION 93 IS A DRILLHOLE SET IN A FLUSH CONCRETE PAD.

SITE 19



NAME OF STATIONS 99+98

RECORD OF CONTROL SURVEY STATIONS

HORIZONTAL CONTROL 2ND ORDER ACCURACY
HORIZONTAL CONTROL NAD 83 DATUM
VERTICAL CONTROL 3RD ORDER ACCURACY
VERTICAL CONTROL NAVD 88 DATUM

STATE NEW JERSEY
COUNTY MONMOUTH
TOWNSHIP EARLE NWS
SET BY JMS YEAR 95

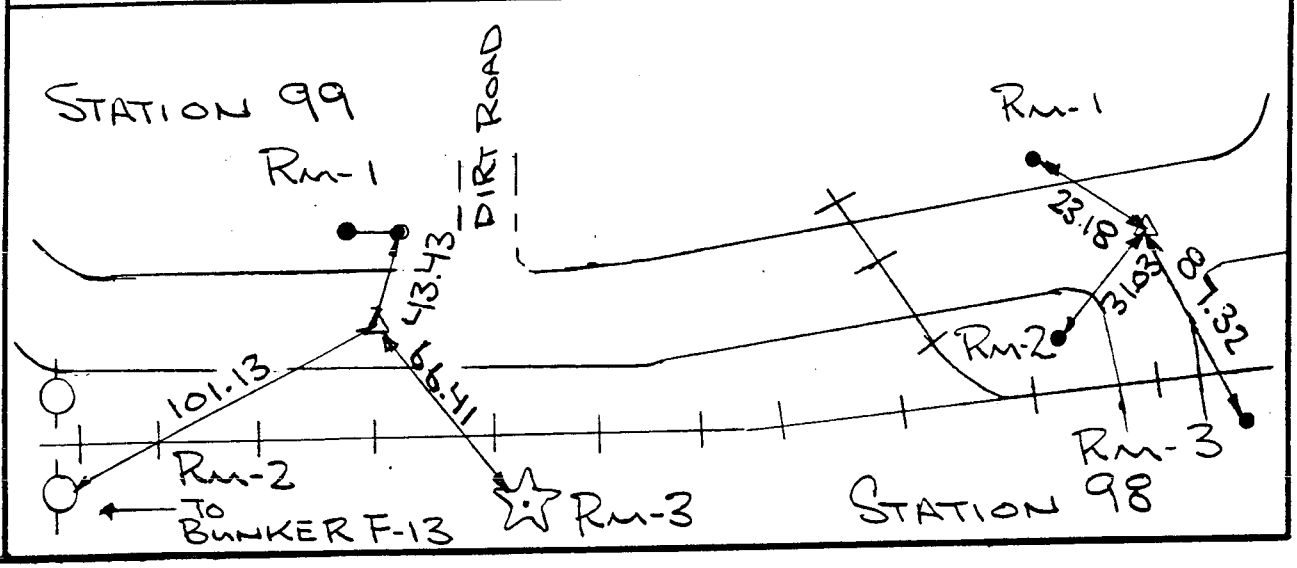
NEW JERSEY STATE SYSTEM OF PLANE COORDINATES _____ ZONE _____

NAME OF STATION 99	NAME OF STATION 98
LAT. 40°14'15.531 LONG. 74°08'35.745	LAT. 40°14'10.383 LONG. 74°08'32.168
Y 511,680.22 X 591,712.43	Y 511,160.49 X 591,991.95
ELEVATION 119.80 FEET ____ METERS	ELEVATION 119.62 FEET ____ METERS
REFERENCES:	REFERENCES:
RM-1 = X-CUT ON SIGN POST	RM-1 = X-CUT ON SIGN POST
RM-2 = PK NAIL IN UP#	RM-2 = X-CUT ON RR X-ING SIGN
RM-3 = PK NAIL IN 18" TREE WITH BLAZE	RM-3 = X-CUT ON RR X-ING SIGN

DESCRIPTION:

STATIONS 99 AND 98 ARE RAILROAD SPIKES SET IN THE BITUMINOUS SURFACE OF "F" GROUP ROAD.

SITE 3



NAME OF STATIONS 102 + 103

RECORD OF CONTROL SURVEY STATIONS

HORIZONTAL CONTROL 2ND ORDER ACCURACY
HORIZONTAL CONTROL NAD 83 DATUM
VERTICAL CONTROL 3RD ORDER ACCURACY
VERTICAL CONTROL NAVD 88 DATUM

STATE NEW JERSEY
COUNTY MONMOUTH
TOWNSHIP EARLE NWS
SET BY JMS YEAR 95

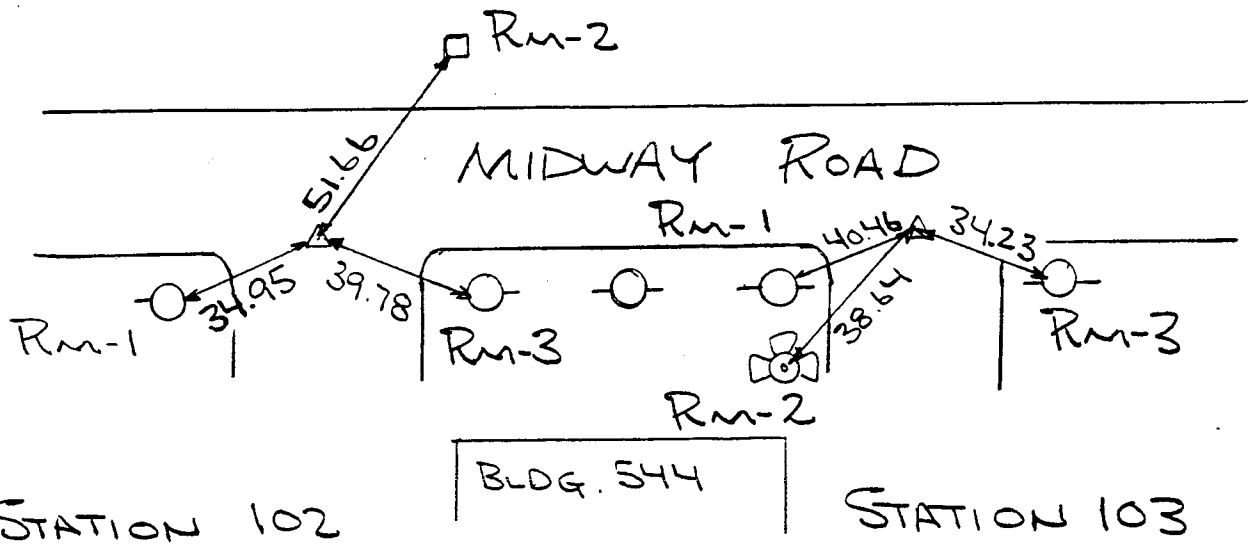
NEW JERSEY STATE SYSTEM OF PLANE COORDINATES _____ ZONE T.M.

NAME OF STATION 102	NAME OF STATION 103
LAT. 40°15'21.336" LONG. 74°08'35.347"	LAT. 40°15'22.362" LONG. 74°08'34.134"
Y 518,338.90 X 591,716.56	Y 518,443.05 X 591,810.13
ELEVATION 120.11 FEET _____ METERS	ELEVATION 118.63 FEET _____ METERS
REFERENCES: Rm-1 = PK NAIL IN UP#A407B Rm-2 = CORNER OF TELEPHONE BOX Rm-3 = PK NAIL IN UP#A407A	REFERENCES: Rm-1 = PK NAIL IN UP#A406B Rm-2 = ON/OFF VALVE OF FIRE HYDRANT Rm-3 = PK NAIL IN UP#A406A

DESCRIPTION:

STATIONS 102 + 103 ARE RAILROAD SPIKES IN THE BITUMINOUS SURFACE OF MIDWAY ROAD.

SITE 20



NAME OF STATIONS 136 + 137

RECORD OF CONTROL SURVEY STATIONS

HORIZONTAL CONTROL 2ND ORDER ACCURACY
HORIZONTAL CONTROL NAD 83 DATUM
VERTICAL CONTROL 3RD ORDER ACCURACY
VERTICAL CONTROL NAVD 88 DATUM

STATE NEW JERSEY
COUNTY MONMOUTH
TOWNSHIP EARLE NWS
SET BY JMS YEAR 95

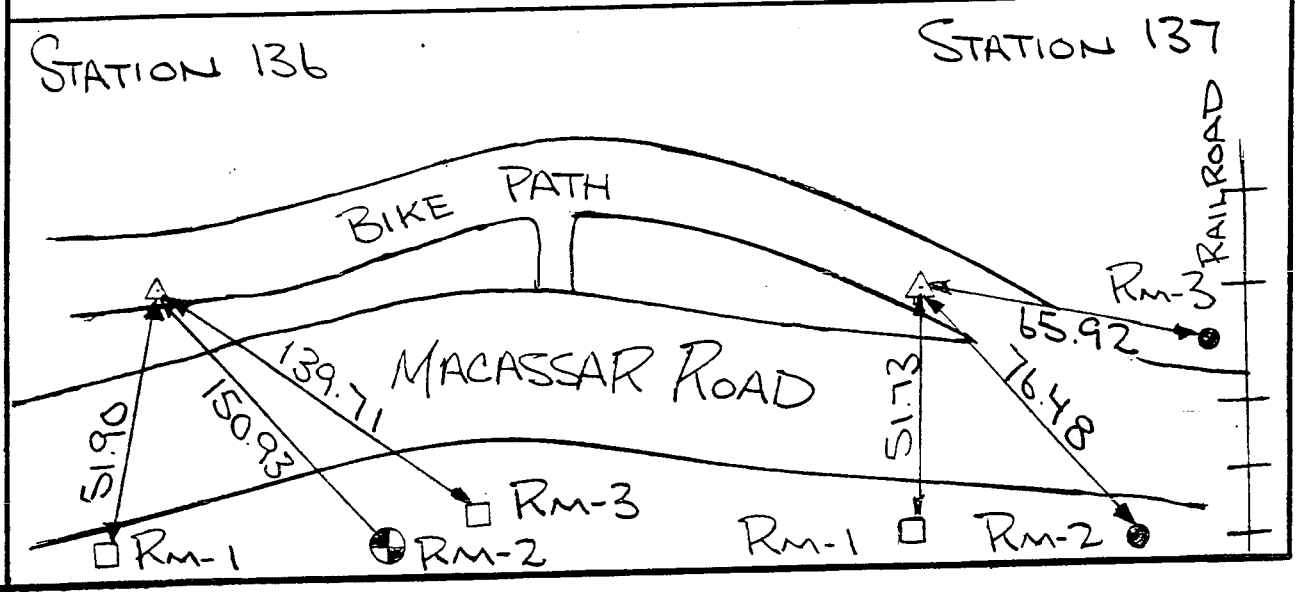
NEW JERSEY STATE SYSTEM OF PLANE COORDINATES _____ ZONE T.M.

NAME OF STATION 136	NAME OF STATION 137
LAT. 40°16'27.940" LONG. 74°09'10.051"	LAT. 40°16'31.531" LONG. 74°09'10.881"
Y 525,067.57 X 588,999.74	Y 525,430.63 X 588,933.97
ELEVATION 94.33 FEET _____ METERS	ELEVATION 91.53 FEET _____ METERS
REFERENCES:	REFERENCES:
RM-1 = X-CUT ON BOLT OF LIGHT POLE MR22	RM-1 = X-CUT ON PAD OF LIGHT POLE MR25
RM-2 = CENTER OF WELL 01-05	RM-2 = X-CUT IN BASE OF RR X-ING SIGN.
RM-3 = X-CUT ON PAD OF LIGHT POLE MR23	RM-3 = X-CUT IN BASE OF GATE POST

DESCRIPTION:

STATIONS 136 + 137 ARE RAILROAD SPIKES SET IN A BITUMINOUS BIKE PATH.

SITE 1



NAME OF STATIONS 139 + 138

RECORD OF CONTROL SURVEY STATIONS

HORIZONTAL CONTROL 2ND ORDER ACCURACY
HORIZONTAL CONTROL NAD 83 DATUM
VERTICAL CONTROL 3RD ORDER ACCURACY
VERTICAL CONTROL NAVD 88 DATUM

STATE NEW JERSEY
COUNTY MONMOUTH
TOWNSHIP EARLE NWS
SET BY JMS YEAR 95

NEW JERSEY STATE SYSTEM OF PLANE COORDINATES _____ ZONE _____

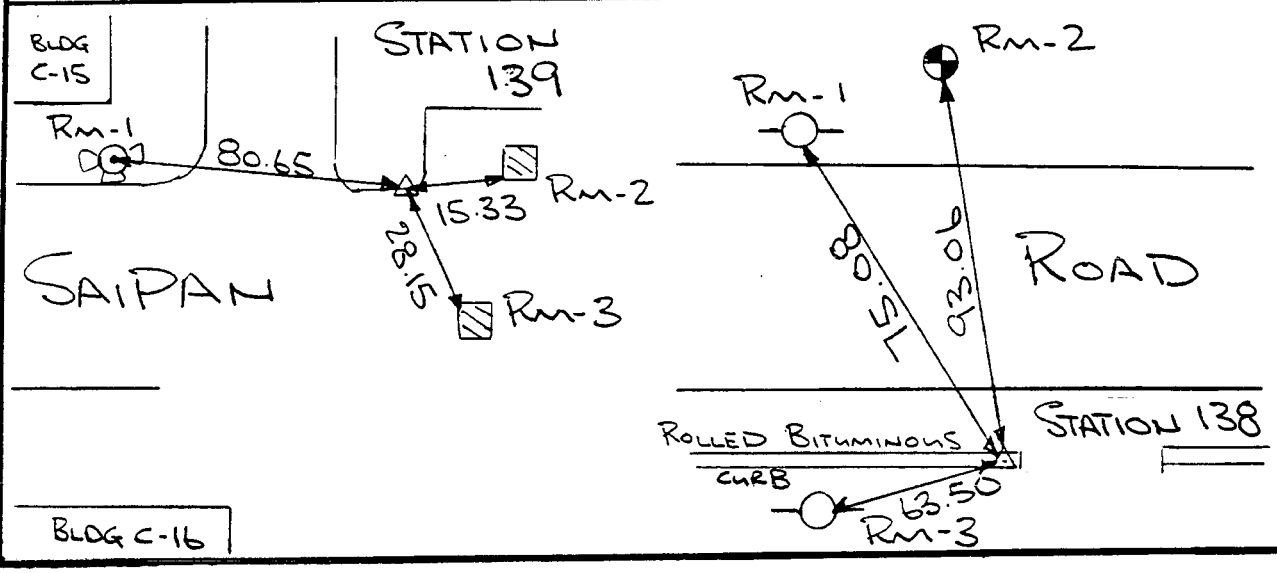
NAME OF STATION 139	NAME OF STATION 138
LAT. 40°16'13.285 LONG. 74°09'22.999	LAT. 40°16'18.762 LONG. 74°09'24.369
Y 523,580.74 X 588,002.00	Y 524,134.54 X 587,893.67
ELEVATION 101.64 FEET _____ METERS	ELEVATION 97.61 FEET _____ METERS
REFERENCES: Rm-1 = ON/OFF VALVE OF FIRE HYDRANT Rm-2 = CORNER OF CATCH BASIN Rm-3 = CORNER OF CATCH BASIN	REFERENCES: Rm-1 = PK NAIL IN UP# I48 Rm-2 = CENTER OF WELL 29-01 Rm-3 = PK NAIL IN UP#

DESCRIPTION:

STATION 139 IS A RAILROAD SPIKE IN A CONCRETE CURB.

STATION 138 IS A RAILROAD SPIKE IN A BITUMINOUS CURB.

SITES 16/F AND 29



NAME OF STATIONS 141 + 140

RECORD OF CONTROL SURVEY STATIONS

HORIZONTAL CONTROL 2ND ORDER ACCURACY
HORIZONTAL CONTROL NAD 83 DATUM
VERTICAL CONTROL 3RD ORDER ACCURACY
VERTICAL CONTROL NAVD 88 DATUM

STATE NEW JERSEY
COUNTY MONMOUTH
TOWNSHIP EARLE NWS
SET BY JMS YEAR 95

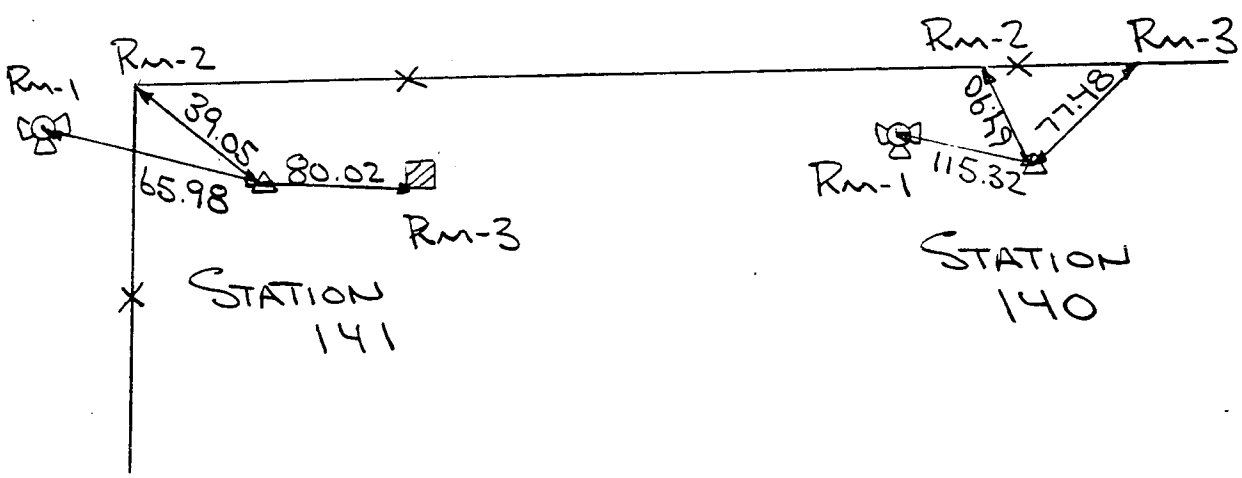
NEW JERSEY STATE SYSTEM OF PLANE COORDINATES _____ ZONE _____

NAME OF STATION 141	NAME OF STATION 140
LAT. 40°16'14.664 LONG. 74°08'26.620	LAT. 40°16'09.163 LONG. 74°08'26.884
Y 523,737.65 X 592,371.21	Y 523,180.95 X 592,353.03
ELEVATION 92.24 FEET _____ METERS	ELEVATION 94.10 FEET _____ METERS
REFERENCES:	REFERENCES:
Rm 1 = ON/OFF VALVE OF FIRE HYDRANT	Rm-1 = ON/OFF VALVE OF FIRE HYDRANT
Rm-2 = X-CUT ON FENCE POST	Rm-2 = X-CUT ON FENCE POST
Rm-3 = CORNER OF CATCH BASIN.	Rm-3 = X-CUT ON FENCE POST

DESCRIPTION:

STATIONS 141 AND 142 ARE IRON PINS. BOTH STATIONS ARE LOCATED IN A SALVAGE YARD.

SITE 13



NAME OF STATIONS 149+150

RECORD OF CONTROL SURVEY STATIONS

HORIZONTAL CONTROL 2ND ORDER ACCURACY
HORIZONTAL CONTROL NAD 83 DATUM
VERTICAL CONTROL 3RD ORDER ACCURACY
VERTICAL CONTROL NAVD 88 DATUM

STATE NEW JERSEY
COUNTY MONMOUTH
TOWNSHIP EARLE NWS
SET BY JMS YEAR 95

NEW JERSEY STATE SYSTEM OF PLANE COORDINATES _____ ZONE _____

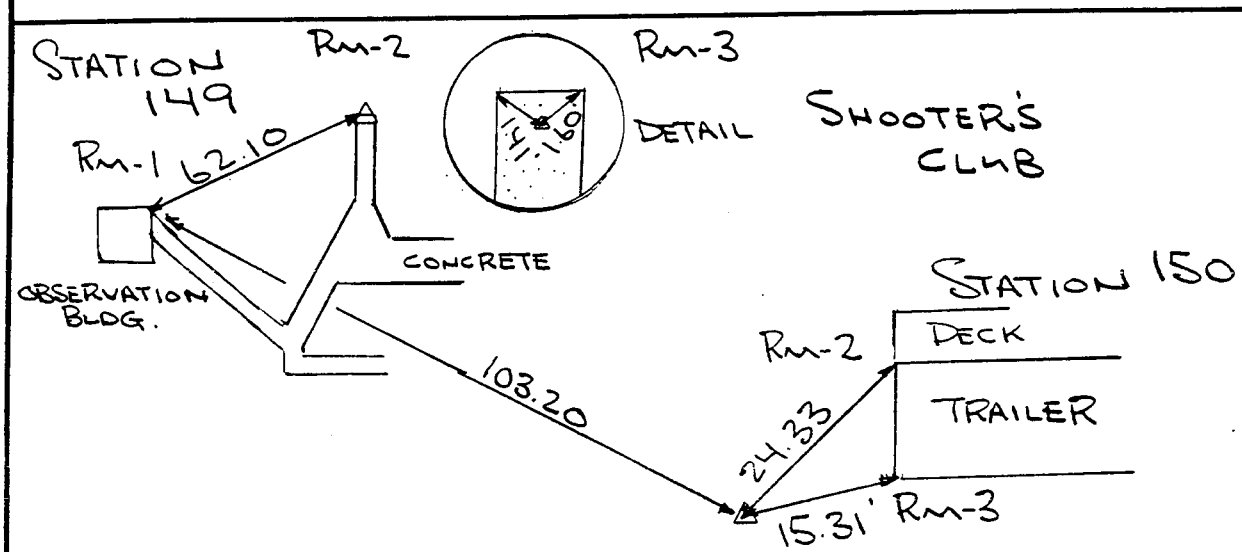
NAME OF STATION 149	NAME OF STATION 150
LAT. 40°15'40.645 LONG. 74°07'14.897	LAT. 40°15'41.324 LONG. 74°07'16.598
Y 520,318.57 X 597,948.88	Y 520,386.70 X 597,812.83
ELEVATION 112.92 FEET _____ METERS	ELEVATION 111.53 FEET _____ METERS
REFERENCES:	REFERENCES:
Rm-1 = BUILDING CORNER	Rm-1 = BUILDING CORNER
Rm-2 = CORNER OF WALK	Rm-2 = TRAILER CORNER
Rm-3 = CORNER OF WALK	Rm-3 = TRAILER CORNER

DESCRIPTION:

STATION 149 IS A DRILLHOLE IN A CONCRETE WALK.

STATION 150 IS AN IRON PIN.

SITE 5



NAME OF STATIONS 152+151

RECORD OF CONTROL SURVEY STATIONS

HORIZONTAL CONTROL 2ND ORDER ACCURACY
HORIZONTAL CONTROL NAD 83 DATUM
VERTICAL CONTROL 3RD ORDER ACCURACY
VERTICAL CONTROL NAVD 88 DATUM

STATE NEW JERSEY
COUNTY MONMOUTH
TOWNSHIP EARLE NWS
SET BY JMS YEAR 95

NEW JERSEY STATE SYSTEM OF PLANE COORDINATES _____ ZONE _____

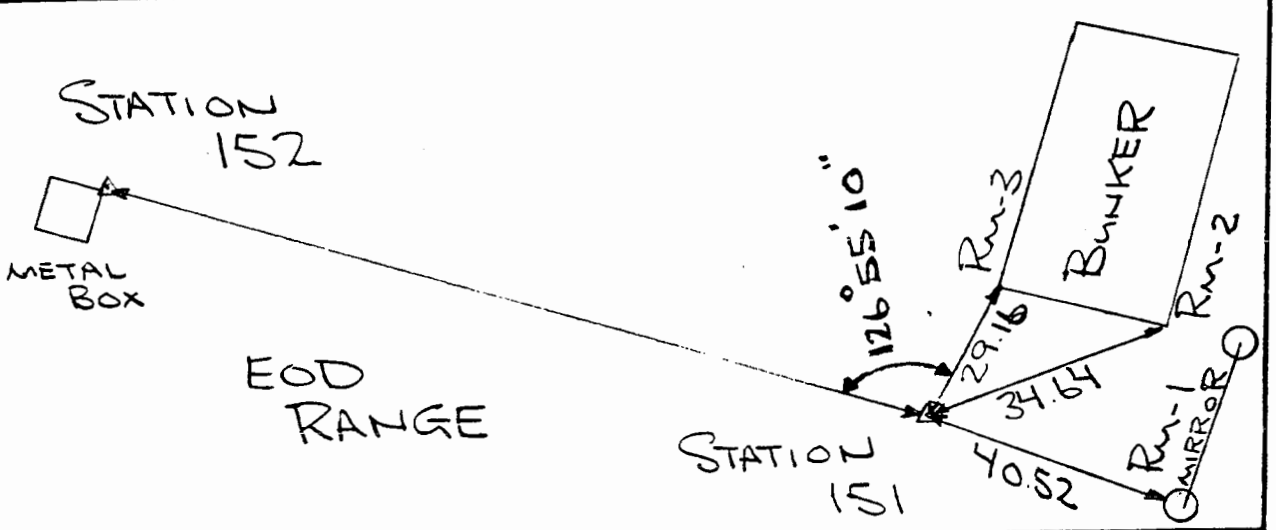
NAME OF STATION 152	NAME OF STATION 151
LAT. 40°15'56.65" LONG. 74°07'06.18"	LAT. 40°15'51.61" LONG. 74°07'09.692"
Y 521,940.97 X 598,572.04	Y 521,429.99 X 598,343.73
ELEVATION 95.58 FEET _____ METERS	ELEVATION 111.56 FEET _____ METERS
REFERENCES:	REFERENCES: RM-1 = PK NAIL IN WOODEN POLE. RM-2 = PK NAIL IN CORNER OF BUNKER RM-3 = PK NAIL IN CORNER OF BUNKER

DESCRIPTION:

STATION 152 IS AN IRON PIN LOCATED AT THE CORNER OF A METAL STORAGE BOX.

STATION 151 IS AN IRON PIPE WITH A RAILROAD SPIKE LODGED IN THE TOP.

SITE 2



NAME OF STATIONS 166+167

RECORD OF CONTROL SURVEY STATIONS

HORIZONTAL CONTROL 2ND ORDER ACCURACY
HORIZONTAL CONTROL NAD 83 DATUM
VERTICAL CONTROL 3RD ORDER ACCURACY
VERTICAL CONTROL NAVD 88 DATUM

STATE NEW JERSEY
COUNTY MONMOUTH
TOWNSHIP EARLE NWS
SET BY JMS YEAR 95

NEW JERSEY STATE SYSTEM OF PLANE COORDINATES _____ ZONE _____

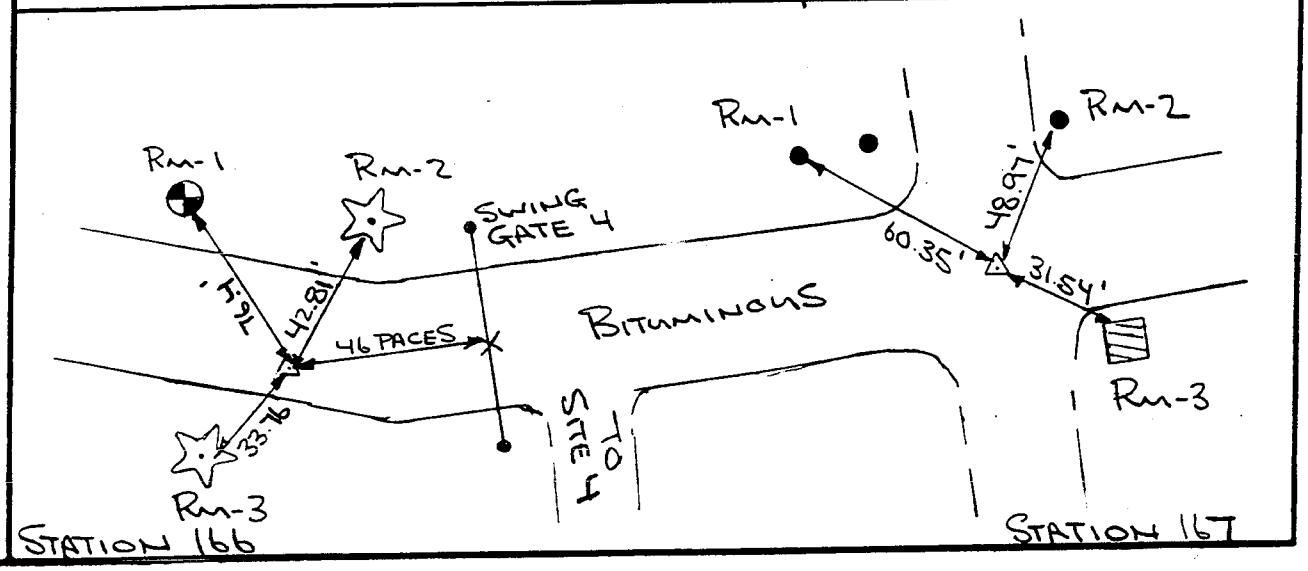
NAME OF STATION 166	NAME OF STATION 167
LAT. 40°15'36.235 LONG. 74°09'08.283	LAT. 40°15'39.836 LONG. 74°09'12.313
Y 519,836.31 X 589,157.30	Y 520,199.44 X 588,843.47
ELEVATION 178.60 FEET _____ METERS	ELEVATION 169.60 FEET _____ METERS
REFERENCES: Rm-1 = CENTER OF WELL # 04-04 Rm-2 = BLAZE AND PK IN PINE TREE Rm-3 = BLAZE AND PK IN PINE TREE	REFERENCES: Rm-1 = BASE OF DROP GATE POST Rm-2 = BASE OF DROP GATE POST Rm-3 = CORNER OF CATCH BASIN

DESCRIPTION:

STATION 166 IS A RAILROAD SPIKE IN A BITUMINOUS ROAD.

STATION 167 IS AN IRON PIN IN A BITUMINOUS / SAND ROAD.

SITES 4, 24 AND 25



INSERT TO APPENDIX F

Please add these pages behind the existing Appendix F in your Volume II Appendices.

APPENDIX F

SURVEY DATA RECONCILIATION

This appendix is included as a record of the survey reconciliation which was undertaken as a part of the 1995 Remedial Investigation (RI) and reporting (June 1996)for 27 (RI)sites and background or watershed locations at NWS Earle, Colts Neck, New Jersey. Data included pertains to survey work completed for the Navy in 1995/1996 by a Brown and Root Environmental subcontractor, James A. Stewart, using NAD 83 and NAVD 88, and previous survey data obtained by others using mostly NAD 27 and NGVD 29. There was some survey data, obtained using an undefined system, which was incorporated by direct plotting methods using the on-line best fit capability of the Intergraph Micro Station hardware and software in use for the project. This appendix presents the reconciled coordinates in Table 1. Back-up tables from various sources are included for future reference.

Latitudes, longitudes and heights are based on assumptions about the size and shape of the earth. These assumptions are expressed in the geodetic datum, or datum which is defined as "a set of constants specifying the coordinate system used for...calculating the coordinates of points on the Earth" (National Geologic Survey 1986). There are two kinds of datums: horizontal and vertical.

The horizontal datum used in the United States is being redefined. Until recently, most new survey work was done using the North American Datum of 1927 (NAD 27)in order to be compatible with most current maps. However the National Geodetic Survey (NAGS) recently changed the (horizontal) datum of the country. The new definition is called the North American Datum of 1983 (NAD 83). All survey work performed in 1995/1996 was based on NAD 83.

The vertical datum has also changed. The most commonly used vertical geodetic datum has been the National Geodetic Vertical Datum of 1929 (NGVD 29). The new vertical datum developed by the NAGS is the North American Vertical Datum of 1988 (NAVD 88). All survey work performed in 1995/1996 was based on NAVD 88.

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
01GW01	MW1-01	525315.66	588860.74	92.03	
01GW02	MW1-02	525170.66	588688.16		
01GW03	MW1-03	524983.37	588804.4		
01GW04	MW1-04	525390.62	588770.32	92.04	
01GW05	MW1-05	525214.2	589035.03	92.37	
01HP-01	01HP-01	525348.6912	588684.2184		
01HP-02	01HP-02	525350.6016	588788.0195		
01HP-03	01HP-03	525266.9806	588900.9287		
01HP-04	01HP-04	525067.1351	588903.5385		
01HP-05	01HP-05	524969.575	588844.8022		
01HP-06	01HP-06	525113.5901	588654.2305		
01HP-07	01HP-07	525244.1723	588603.5521		
01HP-08	01HP-08	525166.5363	588815.0274		
01SB01	01SB01	525373.92	588647.15	90.2	
01SB02	01SB02	525384.35	588712.71	90.7	
01SB03	01SB03	525395.13	588776.76	92.1	
01SB04	01SB04	525365.27	588850.59	91.8	
01SB05	01SB05	525307.67	588881.33	91.6	
01SB06	01SB06	525262.35	588600.6	90.6	
01SB07	01SB07	525273.75	588666.5	90.2	
01SB08	01SB08	525190	588672.43	90.4	
01SB09	01SB09	525152.73	588626.86	90.4	
02GW01	MW2-01	521249.42	598454.13		
02GW02	MW2-02	522000.55	597947.45		
02GW03	MW2-03	522431.97	598438.08		
02GW04	MW2-04	521808.92	598866.49		
02GW05	MW2-05	522189.01	598136.33		
02GW06	MW2-06	521928.64	598373.23	91.84	
02GW07	MW2-07	522138.83	598670.86		
02SS01	02SS01	521425	598131.09	96.3	
02SS02	02SS02	521516.21	598042.25	100.9	
02SS03	02SS03	521865.45	597978.51	95.5	
02SS04	02SS04	522253.45	598176.12	90.3	
02SS05	02SS05	522403.7	598503.09	88.1	
02SS06	02SS06	521973.73	598839.55	86.5	
02SS07	02SS07	521305.08	598473.89	99.7	
02SS08	02SS08	521311.46	598238.26	105.6	
03GW01	MW3-01	510625.76	591797.31		
03GW02	MW3-02	511016.08	591341.05		
03GW03	MW3-03	511025.84	591888.64		
03GW04	MW3-04	510703.97	591611.4		
03GW05	MW3-05	510791.75	591422.1		
03GW06	MW3-06	511276.62	591540.31		
03GW07	MW3-07	511018.49	591657.41		
03GW08	MW3-08	510626.47	591620.78		
03SDWET3A-1	03WET3A-1	510657.22	591755.59	111.8	
03TP01	TP03-01	510758.93	591559.47		
03TP02	TP03-02	510747.22	591567.23		
04GW01	MW4-01	520157.27	589442.22	170	
04GW02	MW4-02	519750.52	589909.61		

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
04GW03	MW4-03	519198.81	589486.8		
04GW04	MW4-04	519760.47	589175.81		
04GW05	MW4-05	520120.07	589869.69	164.26	
04GW06	MW4-06	519383.74	590010.53		
04GW07	MW4-07	520250.72	589789.94	162.52	
04HP-01	04HP-01	519767.84	589884.63		
04HP-02	04HP-02	519915.57	589912.67		
04HP-03	04HP-03	520018.13	589892.89		
04HP-04	04HP-04	520136.16	589638.29		
04HP-05	04HP-05	520249.58	589795.31		
04SD4B5	04SD4B5	519815.84	590050.07	137.7	
04SW01	04SW01	519364.04	589945.45	145.2	
04SW02	04SW02	519659.93	589977.41	140.2	
04SW03	04SW03	520362.49	589886.86	137.7	
04SW4B5	04SW4B5	519815.84	590050.07	137.7	
05GW01	MW5-01	519830.76	598198.76		
05GW02	MW5-02	519863.39	597947.57		
05GW03	MW5-03	520030.9	597590.02		
05GW04	MW5-04	520645.72	597617.04		
05GW05	MW5-05	520520.74	597845.94		
05GW06	MW5-06	520301.07	598162.48	114.86	
05GW07	MW5-07	520113.27	598177.39		
05GW08	MW5-08	519798.82	597633.77		
05HP-01	05HP-01	520363.08	598050.8		
05HP-02	05HP-02	520431.68	597927.08		
05HP-03	05HP-03	520556.52	597927.55		
05HP-04	05HP-04	520671.33	597991.37		
05HP-05	05HP-05	520814.32	598083.22		
05HP-06	05HP-06	520515.46	598158.91		
05HP-07	05HP-07	520174.07	598222.9		
06GW01	MW6-01	578271.96	611720.99	16.5	
06GW02	MW6-02	578367.31	611360.16		
06GW03	MW6-03	578523.53	611504.13	11.48	
06GW04	MW6-04	578562.77	611704.48		
06SD01	06SD01	578353.58	611359.02	3.1	
06SD02	06SD02	578386.07	611336.5	2.4	
06SD03	06SD03	578576.54	611625.7	5.8	
06SD04	06SD04	578626.21	611669.96	4.5	
06SW01	06SW01	578353.58	611359.02	3.1	
06SW02	06SW02	578386.07	611336.5	2.4	
07GW01	MW7-01	570953.84	611646.05		
07GW02	MW7-02	571200.48	611234	125.86	
07GW03	MW7-03	570595.54	611286.3		
07GW04	MW7-04	571292.64	611509.87		
07GW05	MW7-05	571092.46	611049.86		
07SDWET7-B2	07WET7-B2	571206.32	611228	125.3	
09TP01	TP9-01	572680.58	611955.74		
09TP02	TP9-02	573090.2	611996.01		
09TP03	TP9-03	572982.69	612059.59		
09TP04	TP9-04	573164.79	612186.77		
09TP05	TP9-05	573114.33	612265.71		

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
09TP06	TP9-06	573248.17	611993.81		
09TP07	TP9-07	573380.721	611977.3225	98.6	
09TP08	TP9-08	573342.51	612116.6		
09TP09	TP9-09	573346.4184	612040.8971	99.1	
10GW01	MW10-01	519227.66	592460.94		
10GW02	MW10-02	519082.42	592776.93		
10GW03	MW10-03	518644.55	592538.89		
10GW04	MW10-04	518942.38	592326.22		
10GW05	MW10-05	519436.45	592569.5		
10GW06	MW10-07	519261.61	592684.69		
10GW07	MW10-06	519223.57	592779.23		
11GW01	MW11-01	523927.95	590496.02		
11GW02	MW11-02	523690.59	590691.75		
11GW03	MW11-03	523440.82	590267.27		
11GW04	MW11-04	523670.37	590323.77		
11GW05	MW11-05	523851.14	590323.8		
12SD01	12SD01	578197.93	611431.27	11.4	
12SD02	12SD02	578218.64	611385.68	11.7	
12SS01	12SS01	578168.42	611315.46	13.4	
12SS02	12SS02	578165.38	611354.39	12.8	
12SS03	12SS03	578162.47	611389.49	13.2	
13GW01	MW13-01	523795.23	592065.02	84.19	
13GW02	MW13-02	523925.62	592201.9	83.04	
13GW03	MW13-03	524111.37	592288.33	81.28	
13GW04	MW13-04	523558.11	592380.46	92.18	
13GW05	MW13-05	523492.82	592101.12	93.67	
13SD01	13SD01	523347.54	592115.18	84.9	
13SD02	13SD02	523818.51	591954.09	77.1	
13SD03	13SD03	523872.18	592212.59	83.9	
13SW02	13SW02	523818.51	591954.09	77.1	
13TP01	TP13-01	523589.27	592303.36	91.6	
13TP02	TP13-02	523643.74	592303.36	91.7	
13TP03	TP13-03	523695.47	592319.3	91	
13TP04	TP13-04	523713.82	592221.23	91.6	
13TP05	TP13-05	523690.2	592223.17	90.8	
13TP06	TP13-06	523644.94	592230.07	90.9	
13TP07	TP13-07	523671.06	592222.25	90.9	
13TP08	TP13-08	523632.94	592145.99	91.7	
13TP09	TP13-09	523637.38	592118.08	91.5	
13TP10	TP13-10	523662.15	592070.45	91.9	
13TP11	TP13-11	523758.08	592309.48	90.5	
13TP12	TP13-12	523746.4	592253.28	90.3	
15SB01	15SB01	577263.8	611282.46	9.9	
15SB02	15SB02	577267.18	611356.98	9.7	
15SB03	15SB03	577171.45	611371.86	16.8	
15SB04	15SB04	577184.45	611433.57	13.8	
15SD01	15SD01	577322.83	611290.49	7.1	
15SD02	15SD02	577298.56	611418.01	8.7	
15SD03	15SD03	577179.08	611379.37	15.6	
15SS01	15SS01	577267.83	611325.96	9.6	
15SS02	15SS02	577172.95	611388.23	15.9	

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
15SW01	15SW01	577322.83	611290.49	7.1	
15SW02	15SW02	577298.56	611418.01	8.7	
16GW01	MW16-01	523117.9	588646.95	101.05	
16GW02	MW16-02	523531.58	588602.18	96.57	
16GW03	MW16-03	523453	588414.54	99.85	
16GW04	MW16-04	523281.89	588275.6	102.29	
16GW05	MW16-05	523240.23	588186.36	102.27	
16GW06	MW16-06	523755.06	588231.35	96.99	
16MW01	MW-1	523063.61	588308.71		
16SB01	16SB01	523117.9	588646.95	101.05	
16SB02	16SB02	523531.58	588602.18	96.57	
16SB03	16SB03	523453	588414.54	99.85	
16SB04	16SB04	523281.89	588275.6	102.29	
16SB05	16SB05	523240.23	588186.36	102.27	
16SB06	16SB06	523755.06	588231.35	96.99	
16SB07	16SB07	523350.49	588640.48	99.4	
16SB08	16SB08	523314.19	588614.65	101.8	
16SB09	16SB09	523526.78	588513.66	98.6	
16SB10	16SB10	523349.51	588551.24	100.5	
16SB11	16SB11	523268.36	588551.89	102.6	
16SB12	16SB12	523055.42	588586.86		
16SB13	16SB13	523084.63	588695.05		
16SB14	16SB14	523390.95	588469.7	100.4	
16SB15	16SB15	523299.83	588432.59	100.9	
16SB16	16SB16	523218.16	588475.25	102.3	
16SB17	16SB17	523317.84	588321.15	100.3	
16SB18	16SB18	523285.87	588363.15	102.3	
16SB19	16SB19	523170.47	588294.49	102.6	
16SB20	16SB20	523122.97	588341.68	100.5	
16SD01	16SD01	523800.66	588231.62	96.1	
16SD02	16SD02	523561.57	588590.16	95.3	
16SD03	16SD03	523405.26	588633.83	96.8	
16sg01	sg01	523442.71	588397.54		
16sg02	sg02	523406.88	588407.96		
16sg03	sg03	523365.11	588419.59		
16sg04	sg04	523323.49	588431.72		
16sg05	sg05	523288.07	588442.45		
16sg06	sg06	523448.73	588416.36		
16sg07	sg07	523412.21	588426.65		
16sg08	sg08	523370.43	588438.61		
16sg09	sg09	523328.32	588451.65		
16sg10	sg10	523292.73	588460.7		
16sg11	sg11	523454.77	588438.53		
16sg12	sg12	523418.9	588448.85		
16sg13	sg13	523376.33	588461.05		
16sg14	sg14	523334.76	588472.62		
16sg15	sg15	523305.48	588480.66		
16sg16	sg16	523823.53	588231.62		
16sg17	sg17	523779.59	588244.33		
16sg18	sg18	523735.14	588256.77		
16sg19	sg19	523831.76	588259		

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
16sg20	sg20	523786.51	588271.67		
16sg21	sg21	523742.58	588284.05		
16sg22	sg22	523839.89	588287.49		
16sg23	sg23	523794.58	588298.87		
16sg24	sg24	523749.9	588311.27		
16sg25	sg25	523848.22	588314.84		
16sg26	sg26	523802.33	588327.91		
16sg27	sg27	523758.47	588339.41		
16sg28	sg28	523856.12	588343.29		
16sg29	sg29	523810.36	588357.52		
16sg30	sg30	523766.82	588369.03		
16sg31	sg31	523341.52	588663.85		
16sg32	sg32	523322.18	588669.58		
16sg33	sg33	523284.52	588680.43		
16sg34	sg34	523253.88	588680.96		
16sg35	sg35	523338.96	588680.44		
16sg36	sg36	523280.51	588700.17		
16sg37	sg37	523352.55	588694.84		
16sg38	sg38	523328.03	588703.2		
16sg39	sg39	523299.51	588711.23		
16sg40	sg40	523274.03	588717.81		
16sg41	sg41	523897.8	588485.55		
16sg42	sg42	523805.67	588512.02		
16sg43	sg43	523713.17	588539.04		
16sg44	sg44	523623.18	588564.65		
16sg45	sg45	523532.8	588591.15		
16sg46	sg46	523443.87	588617.43		
16sg47	sg47	523353.96	588643.67		
16sg48	sg48	523272.36	588667.23		
16sg49	sg49	523871.26	588393.56		
16sg50	sg50	523779.02	588419.63		
16sg51	sg51	523686.52	588446.31		
16sg52	sg52	523595.88	588471.91		
16sg53	sg53	523504.91	588497.17		
16sg54	sg54	523415.95	588522.59		
16sg55	sg55	523373.38	588550.51		
16sg56	sg56	523246.06	588574.2		
16sg57	sg57	523660.07	588352.78		
16sg58	sg58	523568.7	588379.24		
16sg59	sg59	523477.63	588404.85		
16sg60	sg60	523217.75	588479.91		
16sg61	sg61	523817.33	588207.44		
16sg62	sg62	523725.71	588233.76		
16sg63	sg63	523633.3	588259.99		
16sg64	sg64	523541.55	588285.91		
16sg65	sg65	523451.83	588313.83		
16sg66	sg66	523362.2	588338.15		
16sg67	sg67	523271.06	588365.74		
16sg68	sg68	523191.11	588391.2		
16sg69	sg69	523791.78	588119.49		
16sg70	sg70	523699.94	588145.11		

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
16sg71	sg71	523608.12	588171.49		
16sg72	sg72	523515.95	588199.27		
16sg73	sg73	523424.18	588225.1		
16sg74	sg74	523336.19	588251.97		
16sg75	sg75	523244.68	588277.93		
16sg76	sg76	523165.42	588302.09		
16sg77	sg77	523176.9	588437.6		
16sg78	sg78	523116.6	588505.91		
16sg82	sg82	523827.76	588105.56		
16sg83	sg83	523762.52	588047.93		
16sg84	sg84	523256.88	588319.42		
16sg85	sg85	523213.11	588322.1		
16sg86	sg86	523157.74	588333.22		
16sg87	sg87	523299.37	588270.05		
16sg88	sg88	523225.63	588284.99		
16sg89	sg89	523200.42	588292.14		
16sg91	sg91	523143.52	588284.2		
16sg93	sg93	523098.89	588391.78		
16sg94	sg94	523111.83	588348.04		
16sg95	sg95	523230.28	588208.57		
16sg96	sg96	523531.2	588509.75		
16sg97	sg97	523491.12	588522.3		
16sg98	sg98	523519.47	588477.88		
16sg99	sg99	523482.56	588487.97		
16SS01	16SS01	523268.36	588433.81	101.3	
16SS02	16SS02	523262.53	588404.92	102.6	
16SS03	16SS03	523206.7	588349.48	100.8	
17GW01	MW17-01	577651.94	611152.23	16.88	
17GW02	MW17-02	577591.22	611016.55		
17GW03	MW17-03	577782.64	611051.33		
17GW04	MW17-04	577885.11	610929.59		
17GW05	MW17-05	577567.98	611012.36	15.24	
17SD01	17SD01	577633.18	610980.05	7.6	
17SD02	17SD02	577574.16	610927.52	4.4	
17SD03	17SD03	577415.09	611035.91	6.1	
17SD04	17SD04	577820.93	610921.3	3.7	
17SS01	17SS01	577788.92	610991.42	8.1	
17SW02	17SW02	577574.16	610927.52	4.4	
17SW03	17SW03	577415.09	611035.91	6.1	
17SW04	17SW04	577820.93	610921.3	3.7	
19GW01	MW19-01	512380.78	585023.31		
19GW02	MW19-02	512348.48	584665.39		
19GW03	MW19-03	512540.7	584781.59		
19GW04	MW19-04	512660.8	584962.39		
19GW05	MW19-05	512309.39	584833.45	112.59	
19GW06	MW19-06	512451.2	584666.49	107.46	
19GW07	MW19-07	512247.06	584826.73	111.68	
19SB01	19SB01	512336.03	584838.27	110.7	
19SB02	19SB02	512342.16	584871.8	109.3	
19SB03	19SB03	512311.66	584860.52	109.2	
19SB04	19SB04	512326.2	584852.62	109.3	

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
19SB05	19SB05*	512177.61	584626.57		
19SD01	19SD01	512139.09	584559.94	101.7	
19SD02	19SD02	512139.09	584559.94		
19SW01	19SW01	512139.09	584559.94	101.7	
20AQW-01	20AQW-01	518322.32	591907.59	116.1	
20SB01	20SB01	518220.31	591897.73	114.9	
20SB02	20SB02	518245.14	591927.24	114.8	
20SB03	20SB03	518272.14	591942.41	114.5	
20SD01	20SD01	518311.79	592012.56	111.9	
20SS01	20SS01	518238.74	591812.14	115.1	
20SS02	20SS02	518176.65	591870.85	114.6	
20SS03	20SS03	518170.13	591950.48	113.1	
20SS04	20SS04	518224.75	592001.23	111.6	
20SS05	20SS05	518105.32	591896.8	115.5	
22SB22-A	22-A	520507.4	590665.21		
22SB22-B	22-B	520466.91	590632.73		
22SB22-C	22-C	520444.24	590712.4		
22SB22-D	22-D	520281.71	590798.63		
22SD001	1	520494.88	590522		
22SD002	2	520502.14	590553.11		
22SD003	3	520509.08	590584.27		
22SD004	4	520463.51	590763.16		
22SD005	5	520469.02	590817.28		
22SD006	6	520493.8	590845.72		
22SS007	7	520439.03	590698.98		
22SS008	8	520501.27	590650.18		
22SS009	9	520478.61	590629.94		
23GW01	MW23-01	520889.58	590571.74	117.69	
23GW02	MW23-02	520787.82	590651.11	115.98	
23GW03	MW23-03	520970.56	590675.37	113.41	
23SB01	23SB01	520878.53	590537.37	117.69	
23SB02	23SB02	520787.82	590651.11	115.98	
23SB03	23SB03	520970.56	590675.37	113.41	
23SB04	23SB04	520837.43	590582.71	115.98	
23SD01	23SD01	521068.69	590477	127.6	
23SD02	23SD02	520890.86	590470.14	126.2	
23SD03	23SD03	520776.26	590657.53	114.5	
23SD04	23SD04	520615.35	590686.56	108.2	
23SD05	23SD05	520627.74	590889.73	105.2	
23SW03	23SW03	520776.26	590657.53	114.5	
23SW04	23SW04	520615.35	590686.56	108.2	
23SW05	23SW05	520627.74	590889.73	105.2	
24SB01	24SB01	521327.85	589274.59	190.1	
24SB02	24SB02	521329.52	589299.86	203.7	
25SB01	25SB01	520887.15	589179.01	187.3	
25SB02	25SB02	520877.36	589190.97	196.3	
26GW01	MW26-01	516795.26	590090.68		
26GW02	MW26-02	516979.36	590061.56		
26GW03	MW26-03	517044.01	590062.68		
26GW04	MW26-04	516893.31	590109.37	147.9	
26GW05	MW26-05	516710.98	589987.85	147.7	

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
26GW06	MW26-06	516663.4	590107.8	144.94	
26SB01	26SB01	516849.78	590110.01	146.5	
26SB01-95	26SB01-95	516830.0607	590100.825	146.8	
26SB02	26SB02	516837.83	590119.89	146.7	
26SB02-95	26SB02-95	516810.6147	590100.1729	146.4	
26SB03	26SB03	516939.94	590098.44	144.4	
26SB04	26SB04	516926.25	590093.37	144.2	
27SB01	26SB01	513724.9072	590435.3401	134.6	
27SB02	26SB02	513745.3528	590430.8439	134.3	
27SB03	26SB03	513726.7962	590452.8832	131.4	
29GW01	MW29-01,29SB01	524059.89	587837.64	97.36	
29GW02	MW29-02,29SB02	524076.78	588031.52	98.44	
29SB01	29SB01	524059.89	587837.64	97.36	
29SB02	29SB02	524076.78	588031.52	98.44	
86SB01	86SB01	522468.55	588782.93	115.6	
86SS01	86SS01	522362.37	588771.48	122.2	
BGGW01	BGGW01	526269.05	605570.8	94.16	
BGGW02	BGGW02	516601.2	580785.9	231.19	
BGGW03	BGGW03	570350.71	611729.55	201.75	
BGGW04	BGGW04	577080.38	611704.54	26.82	
BGSB01	BGSB01	526269.05	605570.8	94.16	
BGSB02	BGSB02	516601.2	580785.9	231.19	
BGSB03	BGSB03	570350.71	611729.55	201.75	
BGSB04	BGSB04	577080.38	611704.54	26.82	
BGSD01	BGSD01	525205.34	602103.36	66.2	
BGSD02	BGSD02	514322.72	580458.88	139.6	
BGSD04	BGSD04	514779.55	587174.87	115.9	
BGSW01	BGSW01	525205.34	602103.36	66.2	
BGSW02	BGSW02	514322.72	580458.88	139.6	
BGSW04	BGSW04	514779.55	587174.87	115.9	
LSS01	LSS01	520153.4538	594575.8901	104.1	
LSS02	LSS02	520387.168	594821.4164	102.6	
LSS03	LSS03	520305.2128	594825.718	103.7	
LSS04	LSS04	520319.8168	594977.6082	103.5	
LSS05	LSS05	520408.8522	594756.9543	102.2	
LSS06	LSS06	520362.4717	594704.0472	102.2	
LSS07	LSS07	520299.9227	594865.5632	103	
QHP-02	QHP-2	509386.6517	575888.2536	112	
QHP-03	QHP-03	509113.3228	575976.0997	103.6	
QHP-04	QHP-04	508978.9702	575909.1473	104	
QSB01	QSB02	509164.6136	575942.9789	105.2	
QSB03	QSB03	509083.5953	575986.0792	103.5	
QSD01	QSD01	508915.4527	575951.6656	99.86	
WET 9B-1	WET 9B-1	573213.06	612417		
WET 9B-2	WET 9B-2	572581.16	612362.19		
WET 9B-4	WET 9B-4	572679.92	612493.75		
WSSD05	WSSD05	513694.59	595754.44	95.1	
WSSD06	WSSD06	509315.61	593515.74	88.1	
WSSD07	WSSD07	509977.64	590385.38	94.4	
WSSD08	WSSD08	508267.61	585931.81	83.5	
WSSD09	WSSD09	511881.82	584429.56	99	

TABLE 1

NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
WSSD10	WSSD10	524056.76	599481.85	76.4	
WSSD11	WSSD11	525585.69	597194.63	68.8	
WSSD12	WSSD12	527692.25	592767.24	63.1	
WSSD13	WSSD13	527760.48	592757.15	61.8	
WSSD14	WSSD14	527824.15	592102.51	63.1	
WSSD15	WSSD15	509307.53	576398.5	100.6	
WSSD16	WSSD16	521040.71	577707.18	89.5	
WSSD17	WSSD17	572776.92	612844.68	69.7	
WSSD18	WSSD18	572133.48	612126.56	94.5	
WSSD19	WSSD19	573172.23	613698.87	39.6	
WSSD20	WSSD20	573985.07	613407.86	33.2	
WSSD21	WSSD21	575827.62	611413.46		
wssd21	WSSD21	575827.62	611413.46		
WSSD22	WSSD22	577305.61	611479.89	10.8	
WSSW05	WSSW05	513694.59	595754.44	95.1	
WSSW06	WSSW06	509315.61	593515.74	88.1	
WSSW07	WSSW07	509977.64	590385.38	94.4	
WSSW08	WSSW08	508267.61	585931.81	83.5	
WSSW09	WSSW09	511881.82	584429.56	99	
WSSW10	WSSW10	524056.76	599481.85	76.4	
WSSW11	WSSW11	525585.69	597194.63	68.8	
WSSW12	WSSW12	527692.25	592767.24	63.1	
WSSW13	WSSW13	527760.48	592757.15	61.8	
WSSW14	WSSW14	527824.15	592102.51	63.1	
WSSW15	WSSW15	509307.53	576398.5	100.6	
WSSW16	WSSW16	521040.71	577707.18	89.5	
WSSW17	WSSW17	572776.92	612844.68	69.7	
WSSW18	WSSW18	572133.48	612126.56	94.5	
WSSW19	WSSW19	573172.23	613698.87	39.6	
WSSW20	WSSW20	573985.07	613407.86	33.2	
WSSW21	WSSW21	575827.62	611413.46		
wssw21	WSSD21	575827.62	611413.46		
WSSW22	WSSW22	577305.61	611479.89	10.8	
WSSW30	WSSW30	571444.55	610803.39		

TABLE 2
PREVIOUS DATA SUMMARY
NWS EARLE, COLTS NECK, NEW JERSEY

Monitoring Well Number	CURRENT		PREVIOUS		Current Top of PVC Elevation	Previous Top of PVC Elevation
	Northing	Easting	Northing	Easting		
MW1-01	525315.66	588860.74	525529.82	2143136.38	93.66	94.76
MW1-02	525170.66	588688.16	525382.38	2142963.35	92.44	93.57
MW1-03	524983.37	588804.4	525194.31	2143081.89	93.65	94.78
MW1-04	525390.62	588770.32	-	-	93.93	-
MW1-05	521214.20	589035.03	-	-	94.20	-
MW2-01	521249.42	598454.13	521475.57	2152742.31	101.43	102.56
MW2-02	522000.55	597947.45	522229.54	2152226.07	94.85	95.98
MW2-03	522431.97	598438.08	522668.06	2152717.85	88.75	89.87
MW2-04	521808.92	598866.49	522042.71	2153154.26	88.93	90.06
MW2-05	522189.01	598136.33	522420.92	2152415.24	91.92	103.05
MW2-06	521928.64	598373.23	522160.00	2152655.97	93.92	95.07
MW2-07	522138.83	598670.86	522374.06	2152954.66	94.05	95.18
MW3-01	510625.76	591797.31	510873.73	2146110.42	115.92	117.05
MW3-02	511016.08	591341.05	511187.86	2145598.71	124.87	126.00
MW3-03	511025.84	591888.64	511283.17	2146138.03	124.40	125.53
MW3-04	510703.97	591611.4	510921.89	2145914.56	122.16	123.27
MW3-05	510791.75	591422.1	510978.98	2145713.86	124.90	126.03

TABLE 2
PREVIOUS DATA SUMMARY
NWS EARLE, COLTS NECK, NEW JERSEY

Monitoring Well Number	CURRENT		PREVIOUS		Current Top of PVC Elevation	Previous Top of PVC Elevation
	Northing	Easting	Northing	Easting		
MW3-06	511276.62	591540.31	511476.37	2145754.76	125.65	126.78
MW3-07	511018.49	591657.41	511239.71	2145910.80	124.50	125.63
MW3-08	510626.47	591620.78	-	-	118.22	-
MW4-01	520157.27	589442.22	520372.72	2143727.64	171.65	173.00
MW4-02	519750.52	589909.61	519966.04	2144194.49	151.23	152.36
MW4-03	519198.81	589486.8	519414.94	2143771.72	164.87	166.00
MW4-04	519760.40	589175.81	519976.34	2143461.23	180.15	181.28
MW4-05	520120.07	589869.69	520335.34	2144154.78	164.15	165.28
MW4-06	519383.74	590010.53	519595.61	2144197.10	148.62	149.75
MW4-07	520250.72	589789.94	-	-	164.50	-
MW5-01	519830.76	598198.76	520101.85	2152655.97	107.64	108.77
MW5-02	519863.39	597947.57	520075.26	2152954.66	112.83	113.96
MW5-03	520030.90	597590.02	520279.67	2146110.42	108.65	109.78
MW5-04	520645.72	597617.04	520926.28	2151901.90	104.82	105.65
MW5-05	520520.74	597845.94	520720.54	2152107.72	110.92	112.05
MW5-06	520301.07	598162.48	520532.33	2152448.17	116.15	117.30
MW5-07	520113.27	598177.39	520362.58	2152458.41	112.84	113.97

TABLE 2
PREVIOUS DATA SUMMARY
NWS EARLE, COLTS NECK, NEW JERSEY

Monitoring Well Number	CURRENT		PREVIOUS		Current Top of PVC Elevation	Previous Top of PVC Elevation
	Northing	Easting	Northing	Easting		
MW5-08	519798.82	597633.77	520009.12	2151921.68	109.17	110.30
MW6-01	578271.96	611720.99	176257.591	186452.903	17.75	18.99
MW6-02	578367.31	611360.16	176291.515	186350.031	12.68	13.87
MW6-03	578523.53	611504.13	176334.230	185386.816	13.64	14.82
MW6-04	578562.77	611704.48	176354.681	186448.124	14.58	14.64
MW7-01	570953.84	611646.05	571753.39	2165760.50	148.61	149.74
MW7-02	571200.48	611234.0	571999.24	2165343.22	126.94	128.15
MW7-03	570595.54	611286.3	571389.53	2165400.20	163.01	164.14
MW7-04	571292.64	611509.87	572094.11	2165420.79	132.77	133.90
MW7-05	571092.46	611049.86	571889.01	2165158.27	136.10	137.23
MW10-01	519227.66	592460.94	519453.48	2146774.29	112.86	113.99
MW10-02	519082.42	592776.93	519309.21	2147093.98	110.22	111.35
MW10-03	518644.55	592538.89	518865.96	2146856.99	109.77	110.90
MW10-04	518942.38	592326.22	519151.57	2146632.89	113.0	114.13
MW10-05	519436.45	592569.50	519664.80	2146882.31	111.31	112.44
MW10-06	519261.61	592684.69	519451.58	2147095.32	106.35	109.11
MW10-07	519223.57	592779.23	519489.28	2146999.71	107.97	107.44

TABLE 2
PREVIOUS DATA SUMMARY
NWS EARLE, COLTS NECK, NEW JERSEY

Monitoring Well Number	CURRENT		PREVIOUS		Current Top of PVC Elevation	Previous Top of PVC Elevation
	Northing	Easting	Northing	Easting		
MW11-01	523927.95	590496.02	524179.96	2144759.79	87.91	99.07
MW11-02	523690.59	590691.75	523941.95	2144958.84	89.66	100.97
MW11-03	523440.82	590267.27	523687.09	2144532.51	97.20	98.37
MW11-04	523670.37	590323.77	523918.98	2144587.88	91.00	92.23
MW11-05	523851.14	590323.80	524101.29	2144586.65	89.46	90.72
MW13-01	523795.23	592065.02	-	-	86.04	-
MW13-02	523925.62	592201.90	-	-	85.09	-
MW13-03	524111.37	592288.33	-	-	83.26	-
MW13-04	523558.11	592380.46	-	-	93.85	-
MW13-05	523492.82	592101.12	-	-	95.54	-
MW16-01	523117.9	588646.95	-	-	102.34	-
MW16-02	523531.58	588602.18	-	-	98.48	-
MW16-03	523453.0	588414.54	-	-	99.59	-
MW16-04	523281.89	588275.6	-	-	104.30	-
W16-05	523240.23	588186.36	-	-	104.14	-
MW16-06	523755.06	588231.35	-	-	98.73	-
MW-1	523063.61	588308.71	-	-	103.06	-

TABLE 2
PREVIOUS DATA SUMMARY
NWS EARLE, COLTS NECK, NEW JERSEY

Monitoring Well Number	CURRENT		PREVIOUS		Current Top of PVC Elevation	Previous Top of PVC Elevation
	Northing	Easting	Northing	Easting		
MW17-01	577651.94	611152.23	176068.642	186279.599	18.58	19.80
MW17-02	577591.22	611016.55	176049.993	186236.096	11.55	12.77
MW17-03	577782.64	611051.33	176098.779	185244.124	14.09	15.31
MW17-04	577885.11	610929.59	176136.602	186223.463	14.95	16.19
MW17-05	577567.98	611012.36	-	-	14.56	-
MW19-01	5152380.78	585023.31	512587.98	2139324.23	116.62	117.75
MW19-02	512348.48	584665.39	512587.70	2139324.75	109.38	110.51
MW19-03	512540.70	584781.59	512747.57	2139079.34	111.34	112.47
MW19-04	512660.80	584962.39	512869.96	2139260.84	113.44	114.57
MW19-05	512309.39	584833.45	512514.68	2139133.26	114.08	115.16
MW19-06	512451.20	584666.49	512656.03	2138966.10	109.32	110.26
MW19-07	512247.06	584826.73	-	-	113.78	-
MW23-01	520889.58	590571.74	-	-	119.62	-
MW23-02	520787.82	590651.11	-	-	118.22	-
MW23-03	520970.56	590675.37	-	-	113.19	-
MW26-01	516795.26	590090.68	517010.09	2144382.71	148.76	149.89
MW26-02	516979.36	590062.68	517195.55	2144352.05	148.51	149.64

TABLE 2
PREVIOUS DATA SUMMARY
NWS EARLE, COLTS NECK, NEW JERSEY

Monitoring Well Number	CURRENT		PREVIOUS		Current Top of PVC Elevation	Previous Top of PVC Elevation
	Northing	Easting	Northing	Easting		
MW26-03	517044.01	590062.68	517260.752	2144352.73	149.35	150.48
MW26-04	516893.31	590109.37	517109.10	2144400.87	149.96	151.09
MW26-05	516710.98	589987.85	-	-	148.68	-
MW26-06	516663.4	590107.8	-	-	146.82	-
MW29-01	524059.89	587837.64	-	-	99.42	-
MW29-02	524076.78	588031.52	-	-	101.10	-
BGMW-01	526269.05	605570.8	-	-	96.31	-
BGMW-02	516601.2	580785.9	-	-	233.70	-
BGMW-03	570350.71	611729.55	-	-	203.80	-
BGMW-04	577080.38	611704.54	-	-	28.96	-

INSERT TO APPENDIX F

Please add these pages behind the existing Appendix F in your Volume II Appendices.

APPENDIX F

SURVEY DATA RECONCILIATION

This appendix is included as a record of the survey reconciliation which was undertaken as a part of the 1995 Remedial Investigation (RI) and reporting (June 1996) for 27 (RI) sites and background or watershed locations at NWS Earle, Colts Neck, New Jersey. Data included pertains to survey work completed for the Navy in 1995/1996 by a Brown and Root Environmental subcontractor, James A. Stewart, using NAD 83 and NAVD 88, and previous survey data obtained by others using mostly NAD 27 and NGVD 29. There was some survey data, obtained using an undefined system, which was incorporated by direct plotting methods using the on-line best fit capability of the Intergraph Micro Station hardware and software in use for the project. This appendix presents the reconciled coordinates in Table 1. Back-up tables from various sources are included for future reference.

Latitudes, longitudes and heights are based on assumptions about the size and shape of the earth. These assumptions are expressed in the geodetic datum, or datum which is defined as "a set of constants specifying the coordinate system used for...calculating the coordinates of points on the Earth" (National Geologic Survey 1986). There are two kinds of datums: horizontal and vertical.

The horizontal datum used in the United States is being redefined. Until recently, most new survey work was done using the North American Datum of 1927 (NAD 27) in order to be compatible with most current maps. However the National Geodetic Survey (NAGS) recently changed the (horizontal) datum of the country. The new definition is called the North American Datum of 1983 (NAD 83). All survey work performed in 1995/1996 was based on NAD 83.

The vertical datum has also changed. The most commonly used vertical geodetic datum has been the National Geodetic Vertical Datum of 1929 (NGVD 29). The new vertical datum developed by the NAGS is the North American Vertical Datum of 1988 (NAVD 88). All survey work performed in 1995/1996 was based on NAVD 88.

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
01GW01	MW1-01	525315.66	588860.74	92.03	
01GW02	MW1-02	525170.66	588688.16		
01GW03	MW1-03	524983.37	588804.4		
01GW04	MW1-04	525390.62	588770.32	92.04	
01GW05	MW1-05	525214.2	589035.03	92.37	
01HP-01	01HP-01	525348.6912	588684.2184		
01HP-02	01HP-02	525350.6016	588788.0195		
01HP-03	01HP-03	525266.9806	588900.9287		
01HP-04	01HP-04	525067.1351	588903.5385		
01HP-05	01HP-05	524969.575	588844.8022		
01HP-06	01HP-06	525113.5901	588654.2305		
01HP-07	01HP-07	525244.1723	588603.5521		
01HP-08	01HP-08	525166.5363	588815.0274		
01SB01	01SB01	525373.92	588647.15	90.2	
01SB02	01SB02	525384.35	588712.71	90.7	
01SB03	01SB03	525395.13	588776.76	92.1	
01SB04	01SB04	525365.27	588850.59	91.8	
01SB05	01SB05	525307.67	588881.33	91.6	
01SB06	01SB06	525262.35	588600.6	90.6	
01SB07	01SB07	525273.75	588666.5	90.2	
01SB08	01SB08	525190	588672.43	90.4	
01SB09	01SB09	525152.73	588626.86	90.4	
02GW01	MW2-01	521249.42	598454.13		
02GW02	MW2-02	522000.55	597947.45		
02GW03	MW2-03	522431.97	598438.08		
02GW04	MW2-04	521808.92	598866.49		
02GW05	MW2-05	522189.01	598136.33		
02GW06	MW2-06	521928.64	598373.23	91.84	
02GW07	MW2-07	522138.83	598670.86		
02SS01	02SS01	521425	598131.09	96.3	
02SS02	02SS02	521516.21	598042.25	100.9	
02SS03	02SS03	521865.45	597978.51	95.5	
02SS04	02SS04	522253.45	598176.12	90.3	
02SS05	02SS05	522403.7	598503.09	88.1	
02SS06	02SS06	521973.73	598839.55	86.5	
02SS07	02SS07	521305.08	598473.89	99.7	
02SS08	02SS08	521311.46	598238.26	105.6	
03GW01	MW3-01	510625.76	591797.31		
03GW02	MW3-02	511016.08	591341.05		
03GW03	MW3-03	511025.84	591888.64		
03GW04	MW3-04	510703.97	591611.4		
03GW05	MW3-05	510791.75	591422.1		
03GW06	MW3-06	511276.62	591540.31		
03GW07	MW3-07	511018.49	591657.41		
03GW08	MW3-08	510626.47	591620.78		
03SDWET3A-1	03WET3A-1	510657.22	591755.59	111.8	
03TP01	TP03-01	510758.93	591559.47		
03TP02	TP03-02	510747.22	591567.23		
04GW01	MW4-01	520157.27	589442.22	170	
04GW02	MW4-02	519750.52	589909.61		

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
04GW03	MW4-03	519198.81	589486.8		
04GW04	MW4-04	519760.47	589175.81		
04GW05	MW4-05	520120.07	589869.69	164.26	
04GW06	MW4-06	519383.74	590010.53		
04GW07	MW4-07	520250.72	589789.94	162.52	
04HP-01	04HP-01	519767.84	589884.63		
04HP-02	04HP-02	519915.57	589912.67		
04HP-03	04HP-03	520018.13	589892.89		
04HP-04	04HP-04	520136.16	589638.29		
04HP-05	04HP-05	520249.58	589795.31		
04SD4B5	04SD4B5	519815.84	590050.07	137.7	
04SW01	04SW01	519364.04	589945.45	145.2	
04SW02	04SW02	519659.93	589977.41	140.2	
04SW03	04SW03	520362.49	589886.86	137.7	
04SW4B5	04SW4B5	519815.84	590050.07	137.7	
05GW01	MW5-01	519830.76	598198.76		
05GW02	MW5-02	519863.39	597947.57		
05GW03	MW5-03	520030.9	597590.02		
05GW04	MW5-04	520645.72	597617.04		
05GW05	MW5-05	520520.74	597845.94		
05GW06	MW5-06	520301.07	598162.48	114.86	
05GW07	MW5-07	520113.27	598177.39		
05GW08	MW5-08	519798.82	597633.77		
05HP-01	05HP-01	520363.08	598050.8		
05HP-02	05HP-02	520431.68	597927.08		
05HP-03	05HP-03	520556.52	597927.55		
05HP-04	05HP-04	520671.33	597991.37		
05HP-05	05HP-05	520814.32	598083.22		
05HP-06	05HP-06	520515.46	598158.91		
05HP-07	05HP-07	520174.07	598222.9		
06GW01	MW6-01	578271.96	611720.99	16.5	
06GW02	MW6-02	578367.31	611360.16		
06GW03	MW6-03	578523.53	611504.13	11.48	
06GW04	MW6-04	578562.77	611704.48		
06SD01	06SD01	578353.58	611359.02	3.1	
06SD02	06SD02	578386.07	611336.5	2.4	
06SD03	06SD03	578576.54	611625.7	5.8	
06SD04	06SD04	578626.21	611669.96	4.5	
06SW01	06SW01	578353.58	611359.02	3.1	
06SW02	06SW02	578386.07	611336.5	2.4	
07GW01	MW7-01	570953.84	611646.05		
07GW02	MW7-02	571200.48	611234	125.86	
07GW03	MW7-03	570595.54	611286.3		
07GW04	MW7-04	571292.64	611509.87		
07GW05	MW7-05	571092.46	611049.86		
07SDWET7-B2	07WET7-B2	571206.32	611228	125.3	
09TP01	TP9-01	572680.58	611955.74		
09TP02	TP9-02	573090.2	611996.01		
09TP03	TP9-03	572982.69	612059.59		
09TP04	TP9-04	573164.79	612186.77		
09TP05	TP9-05	573114.33	612265.71		

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
09TP06	TP9-06	573248.17	611993.81		
09TP07	TP9-07	573380.721	611977.3225	98.6	
09TP08	TP9-08	573342.51	612116.6		
09TP09	TP9-09	573346.4184	612040.8971	99.1	
10GW01	MW10-01	519227.66	592460.94		
10GW02	MW10-02	519082.42	592776.93		
10GW03	MW10-03	518644.55	592538.89		
10GW04	MW10-04	518942.38	592326.22		
10GW05	MW10-05	519436.45	592569.5		
10GW06	MW10-07	519261.61	592684.69		
10GW07	MW10-06	519223.57	592779.23		
11GW01	MW11-01	523927.95	590496.02		
11GW02	MW11-02	523690.59	590691.75		
11GW03	MW11-03	523440.82	590267.27		
11GW04	MW11-04	523670.37	590323.77		
11GW05	MW11-05	523851.14	590323.8		
12SD01	12SD01	578197.93	611431.27	11.4	
12SD02	12SD02	578218.64	611385.68	11.7	
12SS01	12SS01	578168.42	611315.46	13.4	
12SS02	12SS02	578165.38	611354.39	12.8	
12SS03	12SS03	578162.47	611389.49	13.2	
13GW01	MW13-01	523795.23	592065.02	84.19	
13GW02	MW13-02	523925.62	592201.9	83.04	
13GW03	MW13-03	524111.37	592288.33	81.28	
13GW04	MW13-04	523558.11	592380.46	92.18	
13GW05	MW13-05	523492.82	592101.12	93.67	
13SD01	13SD01	523347.54	592115.18	84.9	
13SD02	13SD02	523818.51	591954.09	77.1	
13SD03	13SD03	523872.18	592212.59	83.9	
13SW02	13SW02	523818.51	591954.09	77.1	
13TP01	TP13-01	523589.27	592303.36	91.6	
13TP02	TP13-02	523643.74	592303.36	91.7	
13TP03	TP13-03	523695.47	592319.3	91	
13TP04	TP13-04	523713.82	592221.23	91.6	
13TP05	TP13-05	523690.2	592223.17	90.8	
13TP06	TP13-06	523644.94	592230.07	90.9	
13TP07	TP13-07	523671.06	592222.25	90.9	
13TP08	TP13-08	523632.94	592145.99	91.7	
13TP09	TP13-09	523637.38	592118.08	91.5	
13TP10	TP13-10	523662.15	592070.45	91.9	
13TP11	TP13-11	523758.08	592309.48	90.5	
13TP12	TP13-12	523746.4	592253.28	90.3	
15SB01	15SB01	577263.8	611282.46	9.9	
15SB02	15SB02	577267.18	611356.98	9.7	
15SB03	15SB03	577171.45	611371.86	16.8	
15SB04	15SB04	577184.45	611433.57	13.8	
15SD01	15SD01	577322.83	611290.49	7.1	
15SD02	15SD02	577298.56	611418.01	8.7	
15SD03	15SD03	577179.08	611379.37	15.6	
15SS01	15SS01	577267.83	611325.96	9.6	
15SS02	15SS02	577172.95	611388.23	15.9	

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
15SW01	15SW01	577322.83	611290.49	7.1	
15SW02	15SW02	577298.56	611418.01	8.7	
16GW01	MW16-01	523117.9	588646.95	101.05	
16GW02	MW16-02	523531.58	588602.18	96.57	
16GW03	MW16-03	523453	588414.54	99.85	
16GW04	MW16-04	523281.89	588275.6	102.29	
16GW05	MW16-05	523240.23	588186.36	102.27	
16GW06	MW16-06	523755.06	588231.35	96.99	
16MW01	MW-1	523063.61	588308.71		
16SB01	16SB01	523117.9	588646.95	101.05	
16SB02	16SB02	523531.58	588602.18	96.57	
16SB03	16SB03	523453	588414.54	99.85	
16SB04	16SB04	523281.89	588275.6	102.29	
16SB05	16SB05	523240.23	588186.36	102.27	
16SB06	16SB06	523755.06	588231.35	96.99	
16SB07	16SB07	523350.49	588640.48	99.4	
16SB08	16SB08	523314.19	588614.65	101.8	
16SB09	16SB09	523526.78	588513.66	98.6	
16SB10	16SB10	523349.51	588551.24	100.5	
16SB11	16SB11	523268.36	588551.89	102.6	
16SB12	16SB12	523055.42	588586.86		
16SB13	16SB13	523084.63	588695.05		
16SB14	16SB14	523390.95	588469.7	100.4	
16SB15	16SB15	523299.83	588432.59	100.9	
16SB16	16SB16	523218.16	588475.25	102.3	
16SB17	16SB17	523317.84	588321.15	100.3	
16SB18	16SB18	523285.87	588363.15	102.3	
16SB19	16SB19	523170.47	588294.49	102.6	
16SB20	16SB20	523122.97	588341.68	100.5	
16SD01	16SD01	523800.66	588231.62	96.1	
16SD02	16SD02	523561.57	588590.16	95.3	
16SD03	16SD03	523405.26	588633.83	96.8	
16sg01	sg01	523442.71	588397.54		
16sg02	sg02	523406.88	588407.96		
16sg03	sg03	523365.11	588419.59		
16sg04	sg04	523323.49	588431.72		
16sg05	sg05	523288.07	588442.45		
16sg06	sg06	523448.73	588416.36		
16sg07	sg07	523412.21	588426.65		
16sg08	sg08	523370.43	588438.61		
16sg09	sg09	523328.32	588451.65		
16sg10	sg10	523292.73	588460.7		
16sg11	sg11	523454.77	588438.53		
16sg12	sg12	523418.9	588448.85		
16sg13	sg13	523376.33	588461.05		
16sg14	sg14	523334.76	588472.62		
16sg15	sg15	523305.48	588480.66		
16sg16	sg16	523823.53	588231.62		
16sg17	sg17	523779.59	588244.33		
16sg18	sg18	523735.14	588256.77		
16sg19	sg19	523831.76	588259		

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
16sg20	sg20	523786.51	588271.67		
16sg21	sg21	523742.58	588284.05		
16sg22	sg22	523839.89	588287.49		
16sg23	sg23	523794.58	588298.87		
16sg24	sg24	523749.9	588311.27		
16sg25	sg25	523848.22	588314.84		
16sg26	sg26	523802.33	588327.91		
16sg27	sg27	523758.47	588339.41		
16sg28	sg28	523856.12	588343.29		
16sg29	sg29	523810.36	588357.52		
16sg30	sg30	523766.82	588369.03		
16sg31	sg31	523341.52	588663.85		
16sg32	sg32	523322.18	588669.58		
16sg33	sg33	523284.52	588680.43		
16sg34	sg34	523253.88	588680.96		
16sg35	sg35	523338.96	588680.44		
16sg36	sg36	523280.51	588700.17		
16sg37	sg37	523352.55	588694.84		
16sg38	sg38	523328.03	588703.2		
16sg39	sg39	523299.51	588711.23		
16sg40	sg40	523274.03	588717.81		
16sg41	sg41	523897.8	588485.55		
16sg42	sg42	523805.67	588512.02		
16sg43	sg43	523713.17	588539.04		
16sg44	sg44	523623.18	588564.65		
16sg45	sg45	523532.8	588591.15		
16sg46	sg46	523443.87	588617.43		
16sg47	sg47	523353.96	588643.67		
16sg48	sg48	523272.36	588667.23		
16sg49	sg49	523871.26	588393.56		
16sg50	sg50	523779.02	588419.63		
16sg51	sg51	523686.52	588446.31		
16sg52	sg52	523595.88	588471.91		
16sg53	sg53	523504.91	588497.17		
16sg54	sg54	523415.95	588522.59		
16sg55	sg55	523373.38	588550.51		
16sg56	sg56	523246.06	588574.2		
16sg57	sg57	523660.07	588352.78		
16sg58	sg58	523568.7	588379.24		
16sg59	sg59	523477.63	588404.85		
16sg60	sg60	523217.75	588479.91		
16sg61	sg61	523817.33	588207.44		
16sg62	sg62	523725.71	588233.76		
16sg63	sg63	523633.3	588259.99		
16sg64	sg64	523541.55	588285.91		
16sg65	sg65	523451.83	588313.83		
16sg66	sg66	523362.2	588338.15		
16sg67	sg67	523271.06	588365.74		
16sg68	sg68	523191.11	588391.2		
16sg69	sg69	523791.78	588119.49		
16sg70	sg70	523699.94	588145.11		

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
16sg71	sg71	523608.12	588171.49		
16sg72	sg72	523515.95	588199.27		
16sg73	sg73	523424.18	588225.1		
16sg74	sg74	523336.19	588251.97		
16sg75	sg75	523244.68	588277.93		
16sg76	sg76	523165.42	588302.09		
16sg77	sg77	523176.9	588437.6		
16sg78	sg78	523116.6	588505.91		
16sg82	sg82	523827.76	588105.56		
16sg83	sg83	523762.52	588047.93		
16sg84	sg84	523256.88	588319.42		
16sg85	sg85	523213.11	588322.1		
16sg86	sg86	523157.74	588333.22		
16sg87	sg87	523299.37	588270.05		
16sg88	sg88	523225.63	588284.99		
16sg89	sg89	523200.42	588292.14		
16sg91	sg91	523143.52	588284.2		
16sg93	sg93	523098.89	588391.78		
16sg94	sg94	523111.83	588348.04		
16sg95	sg95	523230.28	588208.57		
16sg96	sg96	523531.2	588509.75		
16sg97	sg97	523491.12	588522.3		
16sg98	sg98	523519.47	588477.88		
16sg99	sg99	523482.56	588487.97		
16SS01	16SS01	523268.36	588433.81	101.3	
16SS02	16SS02	523262.53	588404.92	102.6	
16SS03	16SS03	523206.7	588349.48	100.8	
17GW01	MW17-01	577651.94	611152.23	16.88	
17GW02	MW17-02	577591.22	611016.55		
17GW03	MW17-03	577782.64	611051.33		
17GW04	MW17-04	577885.11	610929.59		
17GW05	MW17-05	577567.98	611012.36	15.24	
17SD01	17SD01	577633.18	610980.05	7.6	
17SD02	17SD02	577574.16	610927.52	4.4	
17SD03	17SD03	577415.09	611035.91	6.1	
17SD04	17SD04	577820.93	610921.3	3.7	
17SS01	17SS01	577788.92	610991.42	8.1	
17SW02	17SW02	577574.16	610927.52	4.4	
17SW03	17SW03	577415.09	611035.91	6.1	
17SW04	17SW04	577820.93	610921.3	3.7	
19GW01	MW19-01	512380.78	585023.31		
19GW02	MW19-02	512348.48	584665.39		
19GW03	MW19-03	512540.7	584781.59		
19GW04	MW19-04	512660.8	584962.39		
19GW05	MW19-05	512309.39	584833.45	112.59	
19GW06	MW19-06	512451.2	584666.49	107.46	
19GW07	MW19-07	512247.06	584826.73	111.68	
19SB01	19SB01	512336.03	584838.27	110.7	
19SB02	19SB02	512342.16	584871.8	109.3	
19SB03	19SB03	512311.66	584860.52	109.2	
19SB04	19SB04	512326.2	584852.62	109.3	

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
19SB05	19SB05*	512177.61	584626.57		
19SD01	19SD01	512139.09	584559.94	101.7	
19SD02	19SD02	512139.09	584559.94		
19SW01	19SW01	512139.09	584559.94	101.7	
20AQW-01	20AQW-01	518322.32	591907.59	116.1	
20SB01	20SB01	518220.31	591897.73	114.9	
20SB02	20SB02	518245.14	591927.24	114.8	
20SB03	20SB03	518272.14	591942.41	114.5	
20SD01	20SD01	518311.79	592012.56	111.9	
20SS01	20SS01	518238.74	591812.14	115.1	
20SS02	20SS02	518176.65	591870.85	114.6	
20SS03	20SS03	518170.13	591950.48	113.1	
20SS04	20SS04	518224.75	592001.23	111.6	
20SS05	20SS05	518105.32	591896.8	115.5	
22SB22-A	22-A	520507.4	590665.21		
22SB22-B	22-B	520466.91	590632.73		
22SB22-C	22-C	520444.24	590712.4		
22SB22-D	22-D	520281.71	590798.63		
22SD001	1	520494.88	590522		
22SD002	2	520502.14	590553.11		
22SD003	3	520509.08	590584.27		
22SD004	4	520463.51	590763.16		
22SD005	5	520469.02	590817.28		
22SD006	6	520493.8	590845.72		
22SS007	7	520439.03	590698.98		
22SS008	8	520501.27	590650.18		
22SS009	9	520478.61	590629.94		
23GW01	MW23-01	520889.58	590571.74	117.69	
23GW02	MW23-02	520787.82	590651.11	115.98	
23GW03	MW23-03	520970.56	590675.37	113.41	
23SB01	23SB01	520878.53	590537.37	117.69	
23SB02	23SB02	520787.82	590651.11	115.98	
23SB03	23SB03	520970.56	590675.37	113.41	
23SB04	23SB04	520837.43	590582.71	115.98	
23SD01	23SD01	521068.69	590477	127.6	
23SD02	23SD02	520890.86	590470.14	126.2	
23SD03	23SD03	520776.26	590657.53	114.5	
23SD04	23SD04	520615.35	590686.56	108.2	
23SD05	23SD05	520627.74	590889.73	105.2	
23SW03	23SW03	520776.26	590657.53	114.5	
23SW04	23SW04	520615.35	590686.56	108.2	
23SW05	23SW05	520627.74	590889.73	105.2	
24SB01	24SB01	521327.85	589274.59	190.1	
24SB02	24SB02	521329.52	589299.86	203.7	
25SB01	25SB01	520887.15	589179.01	187.3	
25SB02	25SB02	520877.36	589190.97	196.3	
26GW01	MW26-01	516795.26	590090.68		
26GW02	MW26-02	516979.36	590061.56		
26GW03	MW26-03	517044.01	590062.68		
26GW04	MW26-04	516893.31	590109.37	147.9	
26GW05	MW26-05	516710.98	589987.85	147.7	

TABLE 1
NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
26GW06	MW26-06	516663.4	590107.8	144.94	
26SB01	26SB01	516849.78	590110.01	146.5	
26SB01-95	26SB01-95	516830.0607	590100.825	146.8	
26SB02	26SB02	516837.83	590119.89	146.7	
26SB02-95	26SB02-95	516810.6147	590100.1729	146.4	
26SB03	26SB03	516939.94	590098.44	144.4	
26SB04	26SB04	516926.25	590093.37	144.2	
27SB01	26SB01	513724.9072	590435.3401	134.6	
27SB02	26SB02	513745.3528	590430.8439	134.3	
27SB03	26SB03	513726.7962	590452.8832	131.4	
29GW01	MW29-01,29SB01	524059.89	587837.64	97.36	
29GW02	MW29-02,29SB02	524076.78	588031.52	98.44	
29SB01	29SB01	524059.89	587837.64	97.36	
29SB02	29SB02	524076.78	588031.52	98.44	
86SB01	86SB01	522468.55	588782.93	115.6	
86SS01	86SS01	522362.37	588771.48	122.2	
BGGW01	BGGW01	526269.05	605570.8	94.16	
BGGW02	BGGW02	516601.2	580785.9	231.19	
BGGW03	BGGW03	570350.71	611729.55	201.75	
BGGW04	BGGW04	577080.38	611704.54	26.82	
BGSB01	BGSB01	526269.05	605570.8	94.16	
BGSB02	BGSB02	516601.2	580785.9	231.19	
BGSB03	BGSB03	570350.71	611729.55	201.75	
BGSB04	BGSB04	577080.38	611704.54	26.82	
BGSD01	BGSD01	525205.34	602103.36	66.2	
BGSD02	BGSD02	514322.72	580458.88	139.6	
BGSD04	BGSD04	514779.55	587174.87	115.9	
BGSW01	BGSW01	525205.34	602103.36	66.2	
BGSW02	BGSW02	514322.72	580458.88	139.6	
BGSW04	BGSW04	514779.55	587174.87	115.9	
LSS01	LSS01	520153.4538	594575.8901	104.1	
LSS02	LSS02	520387.168	594821.4164	102.6	
LSS03	LSS03	520305.2128	594825.718	103.7	
LSS04	LSS04	520319.8168	594977.6082	103.5	
LSS05	LSS05	520408.8522	594756.9543	102.2	
LSS06	LSS06	520362.4717	594704.0472	102.2	
LSS07	LSS07	520299.9227	594865.5632	103	
QHP-02	QHP-2	509386.6517	575888.2536	112	
QHP-03	QHP-03	509113.3228	575976.0997	103.6	
QHP-04	QHP-04	508978.9702	575909.1473	104	
QSB01	QSB02	509164.6136	575942.9789	105.2	
QSB03	QSB03	509083.5953	575986.0792	103.5	
QSD01	QSD01	508915.4527	575951.6656	99.86	
WET 9B-1	WET 9B-1	573213.06	612417		
WET 9B-2	WET 9B-2	572581.16	612362.19		
WET 9B-4	WET 9B-4	572679.92	612493.75		
WSSD05	WSSD05	513694.59	595754.44	95.1	
WSSD06	WSSD06	509315.61	593515.74	88.1	
WSSD07	WSSD07	509977.64	590385.38	94.4	
WSSD08	WSSD08	508267.61	585931.81	83.5	
WSSD09	WSSD09	511881.82	584429.56	99	

TABLE 1

NWS EARLE SURVEY DATA

location	well_id	northing	easting	ref_elevation	total_depth
WSSD10	WSSD10	524056.76	599481.85	76.4	
WSSD11	WSSD11	525585.69	597194.63	68.8	
WSSD12	WSSD12	527692.25	592767.24	63.1	
WSSD13	WSSD13	527760.48	592757.15	61.8	
WSSD14	WSSD14	527824.15	592102.51	63.1	
WSSD15	WSSD15	509307.53	576398.5	100.6	
WSSD16	WSSD16	521040.71	577707.18	89.5	
WSSD17	WSSD17	572776.92	612844.68	69.7	
WSSD18	WSSD18	572133.48	612126.56	94.5	
WSSD19	WSSD19	573172.23	613698.87	39.6	
WSSD20	WSSD20	573985.07	613407.86	33.2	
WSSD21	WSSD21	575827.62	611413.46		
wssd21	WSSD21	575827.62	611413.46		
WSSD22	WSSD22	577305.61	611479.89	10.8	
WSSW05	WSSW05	513694.59	595754.44	95.1	
WSSW06	WSSW06	509315.61	593515.74	88.1	
WSSW07	WSSW07	509977.64	590385.38	94.4	
WSSW08	WSSW08	508267.61	585931.81	83.5	
WSSW09	WSSW09	511881.82	584429.56	99	
WSSW10	WSSW10	524056.76	599481.85	76.4	
WSSW11	WSSW11	525585.69	597194.63	68.8	
WSSW12	WSSW12	527692.25	592767.24	63.1	
WSSW13	WSSW13	527760.48	592757.15	61.8	
WSSW14	WSSW14	527824.15	592102.51	63.1	
WSSW15	WSSW15	509307.53	576398.5	100.6	
WSSW16	WSSW16	521040.71	577707.18	89.5	
WSSW17	WSSW17	572776.92	612844.68	69.7	
WSSW18	WSSW18	572133.48	612126.56	94.5	
WSSW19	WSSW19	573172.23	613698.87	39.6	
WSSW20	WSSW20	573985.07	613407.86	33.2	
WSSW21	WSSW21	575827.62	611413.46		
wssw21	WSSD21	575827.62	611413.46		
WSSW22	WSSW22	577305.61	611479.89	10.8	
WSSW30	WSSW30	571444.55	610803.39		

TABLE 2
PREVIOUS DATA SUMMARY
NWS EARLE, COLTS NECK, NEW JERSEY

Monitoring Well Number	CURRENT		PREVIOUS		Current Top of PVC Elevation	Previous Top of PVC Elevation
	Northing	Easting	Northing	Easting		
MW1-01	525315.66	588860.74	525529.82	2143136.38	93.66	94.76
MW1-02	525170.66	588688.16	525382.38	2142963.35	92.44	93.57
MW1-03	524983.37	588804.4	525194.31	2143081.89	93.65	94.78
MW1-04	525390.62	588770.32	-	-	93.93	-
MW1-05	521214.20	589035.03	-	-	94.20	-
MW2-01	521249.42	598454.13	521475.57	2152742.31	101.43	102.56
MW2-02	522000.55	597947.45	522229.54	2152226.07	94.85	95.98
MW2-03	522431.97	598438.08	522668.06	2152717.85	88.75	89.87
MW2-04	521808.92	598866.49	522042.71	2153154.26	88.93	90.06
MW2-05	522189.01	598136.33	522420.92	2152415.24	91.92	103.05
MW2-06	521928.64	598373.23	522160.00	2152655.97	93.92	95.07
MW2-07	522138.83	598670.86	522374.06	2152954.66	94.05	95.18
MW3-01	510625.76	591797.31	510873.73	2146110.42	115.92	117.05
MW3-02	511016.08	591341.05	511187.86	2145598.71	124.87	126.00
MW3-03	511025.84	591888.64	511283.17	2146138.03	124.40	125.53
MW3-04	510703.97	591611.4	510921.89	2145914.56	122.16	123.27
MW3-05	510791.75	591422.1	510978.98	2145713.86	124.90	126.03

TABLE 2
PREVIOUS DATA SUMMARY
NWS EARLE, COLTS NECK, NEW JERSEY

Monitoring Well Number	CURRENT		PREVIOUS		Current Top of PVC Elevation	Previous Top of PVC Elevation
	Northing	Easting	Northing	Easting		
MW3-06	511276.62	591540.31	511476.37	2145754.76	125.65	126.78
MW3-07	511018.49	591657.41	511239.71	2145910.80	124.50	125.63
MW3-08	510626.47	591620.78	-	-	118.22	-
MW4-01	520157.27	589442.22	520372.72	2143727.64	171.65	173.00
MW4-02	519750.52	589909.61	519966.04	2144194.49	151.23	152.36
MW4-03	519198.81	589486.8	519414.94	2143771.72	164.87	166.00
MW4-04	519760.40	589175.81	519976.34	2143461.23	180.15	181.28
MW4-05	520120.07	589869.69	520335.34	2144154.78	164.15	165.28
MW4-06	519383.74	590010.53	519595.61	2144197.10	148.62	149.75
MW4-07	520250.72	589789.94	-	-	164.50	-
MW5-01	519830.76	598198.76	520101.85	2152655.97	107.64	108.77
MW5-02	519863.39	597947.57	520075.26	2152954.66	112.83	113.96
MW5-03	520030.90	597590.02	520279.67	2146110.42	108.65	109.78
MW5-04	520645.72	597617.04	520926.28	2151901.90	104.82	105.65
MW5-05	520520.74	597845.94	520720.54	2152107.72	110.92	112.05
MW5-06	520301.07	598162.48	520532.33	2152448.17	116.15	117.30
MW5-07	520113.27	598177.39	520362.58	2152458.41	112.84	113.97

TABLE 2
PREVIOUS DATA SUMMARY
NWS EARLE, COLTS NECK, NEW JERSEY

Monitoring Well Number	CURRENT		PREVIOUS		Current Top of PVC Elevation	Previous Top of PVC Elevation
	Northing	Easting	Northing	Easting		
MW5-08	519798.82	597633.77	520009.12	2151921.68	109.17	110.30
MW6-01	578271.96	611720.99	176257.591	186452.903	17.75	18.99
MW6-02	578367.31	611360.16	176291.515	186350.031	12.68	13.87
MW6-03	578523.53	611504.13	176334.230	185386.816	13.64	14.82
MW6-04	578562.77	611704.48	176354.681	186448.124	14.58	14.64
MW7-01	570953.84	611646.05	571753.39	2165760.50	148.61	149.74
MW7-02	571200.48	611234.0	571999.24	2165343.22	126.94	128.15
MW7-03	570595.54	611286.3	571389.53	2165400.20	163.01	164.14
MW7-04	571292.64	611509.87	572094.11	2165420.79	132.77	133.90
MW7-05	571092.46	611049.86	571889.01	2165158.27	136.10	137.23
MW10-01	519227.66	592460.94	519453.48	2146774.29	112.86	113.99
MW10-02	519082.42	592776.93	519309.21	2147093.98	110.22	111.35
MW10-03	518644.55	592538.89	518865.96	2146856.99	109.77	110.90
MW10-04	518942.38	592326.22	519151.57	2146632.89	113.0	114.13
MW10-05	519436.45	592569.50	519664.80	2146882.31	111.31	112.44
MW10-06	519261.61	592684.69	519451.58	2147095.32	106.35	109.11
MW10-07	519223.57	592779.23	519489.28	2146999.71	107.97	107.44

TABLE 2
PREVIOUS DATA SUMMARY
NWS EARLE, COLTS NECK, NEW JERSEY

Monitoring Well Number	CURRENT		PREVIOUS		Current Top of PVC Elevation	Previous Top of PVC Elevation
	Northing	Easting	Northing	Easting		
MW11-01	523927.95	590496.02	524179.96	2144759.79	87.91	99.07
MW11-02	523690.59	590691.75	523941.95	2144958.84	89.66	100.97
MW11-03	523440.82	590267.27	523687.09	2144532.51	97.20	98.37
MW11-04	523670.37	590323.77	523918.98	2144587.88	91.00	92.23
MW11-05	523851.14	590323.80	524101.29	2144586.65	89.46	90.72
MW13-01	523795.23	592065.02	-	-	86.04	-
MW13-02	523925.62	592201.90	-	-	85.09	-
MW13-03	524111.37	592288.33	-	-	83.26	-
MW13-04	523558.11	592380.46	-	-	93.85	-
MW13-05	523492.82	592101.12	-	-	95.54	-
MW16-01	523117.9	588646.95	-	-	102.34	-
MW16-02	523531.58	588602.18	-	-	98.48	-
MW16-03	523453.0	588414.54	-	-	99.59	-
MW16-04	523281.89	588275.6	-	-	104.30	-
W16-05	523240.23	588186.36	-	-	104.14	-
MW16-06	523755.06	588231.35	-	-	98.73	-
MW-1	523063.61	588308.71	-	-	103.06	-

TABLE 2
PREVIOUS DATA SUMMARY
NWS EARLE, COLTS NECK, NEW JERSEY

Monitoring Well Number	CURRENT		PREVIOUS		Current Top of PVC Elevation	Previous Top of PVC Elevation
	Northing	Easting	Northing	Easting		
MW17-01	577651.94	611152.23	176068.642	186279.599	18.58	19.80
MW17-02	577591.22	611016.55	176049.993	186236.096	11.55	12.77
MW17-03	577782.64	611051.33	176098.779	185244.124	14.09	15.31
MW17-04	577885.11	610929.59	176136.602	186223.463	14.95	16.19
MW17-05	577567.98	611012.36	-	-	14.56	-
MW19-01	5152380.78	585023.31	512587.98	2139324.23	116.62	117.75
MW19-02	512348.48	584665.39	512587.70	2139324.75	109.38	110.51
MW19-03	512540.70	584781.59	512747.57	2139079.34	111.34	112.47
MW19-04	512660.80	584962.39	512869.96	2139260.84	113.44	114.57
MW19-05	512309.39	584833.45	512514.68	2139133.26	114.08	115.16
MW19-06	512451.20	584666.49	512656.03	2138966.10	109.32	110.26
MW19-07	512247.06	584826.73	-	-	113.78	-
MW23-01	520889.58	590571.74	-	-	119.62	-
MW23-02	520787.82	590651.11	-	-	118.22	-
MW23-03	520970.56	590675.37	-	-	113.19	-
MW26-01	516795.26	590090.68	517010.09	2144382.71	148.76	149.89
MW26-02	516979.36	590062.68	517195.55	2144352.05	148.51	149.64

TABLE 2
PREVIOUS DATA SUMMARY
NWS EARLE, COLTS NECK, NEW JERSEY

Monitoring Well Number	CURRENT		PREVIOUS		Current Top of PVC Elevation	Previous Top of PVC Elevation
	Northing	Easting	Northing	Easting		
MW26-03	517044.01	590062.68	517260.752	2144352.73	149.35	150.48
MW26-04	516893.31	590109.37	517109.10	2144400.87	149.96	151.09
MW26-05	516710.98	589987.85	-	-	148.68	-
MW26-06	516663.4	590107.8	-	-	146.82	-
MW29-01	524059.89	587837.64	-	-	99.42	-
MW29-02	524076.78	588031.52	-	-	101.10	-
BGMW-01	526269.05	605570.8	-	-	96.31	-
BGMW-02	516601.2	580785.9	-	-	233.70	-
BGMW-03	570350.71	611729.55	-	-	203.80	-
BGMW-04	577080.38	611704.54	-	-	28.96	-

APPENDIX G

CHAIN-OF-CUSTODY FORMS

CHAIN OF CUSTODY RECORD SURFACE WATERS.

PROJECT NO.: 231 CTO ~~203~~ 213 JOB 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC's 4 VIAS HCL	TCL SVOC's L GLASS	TAL METALS L PE HNO3	NITRATE/NITRITE AMMONIA L PE	TOC COD PHOS. L PE	BOD L PE	TURB. CHLORIDE HARDNESS L PE	REMARKS
TRIP BLANK	5/18	0730		✓	TB-01-051895	2	2							
BACK-GROUND	↓	1120		✓	BG-SW06	8	2	2	1	1	1	1		
↓	↓	1210		✓	BG-SW05	8	2	2	1	1	1	1		
↓	↓	1255		✓	BG-SW07	8	2	2	1	1	1	1		
RINSATE BLANK	↓	1530		✓	RB-01-051895	8	2	2	1	1	1	1		TROWEL

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
	5.19.95 1700	FED EX			
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**	**RELINQUISHED BY (SIGNATURE):**	**DATE / TIME:**	**RECEIVED BY(SIGNATURE):**
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED FOR LABORATORY BY (SIGNATURE):**	**DATE / TIME:**	**REMARKS:** SHIPPED TO LANCASTER LABS FED EX A.B. 4990008343	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

SEDIMENTS

PROJECT NO.: CTO ~~203~~ 231 JOB 5803

SITE NAME: NWS EARIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOCS 4 oz GLASS	TCL SVOCS 16 oz GLASS	TAL METALS GLASS	LANDFILL PAR.* L GLASS	GRAIN SIZE L GLASS		REMARKS
BACK-GROUND	5/18	1125		✓	BG-SED06	5	1	1	1	1	1		
↓	↓	1215		✓	BG-SED05	5	1	1	1	1	1		
↓	↓	1400		✓	BG-SED07	5	1	1	1	1	1		
													*ADD CYANIDE.
													* LANDFILL PAR. =
													NITRATE/NITRITE, AMMONIA TOC, PHOS., CHLORIDE

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	5.18.95 1700	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LABS FED EX A.B.# 4990008343	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

WATER SAMPLE

PROJECT NO.: 231 5803

SITE NAME: NWS FARM

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	CYANIDE L Pt NaOH						REMARKS
BACK-GROUND	5/24			✓	BGSW05	1	1						
↓	↓			✓	BGSW06	1	1						
↓	↓			✓	BGSW07	1	1						
													CYANIDE WAS OMITTED
													FROM SAMPLES TAKEN
													5.18.95; PLEASE ADD

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	5.18.95 1730	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LABS FED EX A.B. # ~~49~~ 5461996201	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

WATER SAMPLES

PROJECT NO.: 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOCS 40 ml VIAL	TCL SVOCS L GLASS	TAL METALS L PE HNO3	NITRATE/NITRITE AMMONIA L PE H2SO4	TOC COD PHOS. L PE	BOD L PE	TRB CHLORIDE HARDNESS L PE	CYANIDE L PE NaOH	REMARKS	BOTTLE CHECK
TRIP BLANK	5/24	0715		✓	TB-02 - 052495	2	2									✓
RINSATE BLANK		0720		✓	RB-02 - 052495	9	2	2	1	1	1	1	1		STAINLESS STEEL SPOON	✓
BACKGROUND		1000		✓	BG-SW08	27	6	6	3	3	3	3	3		RUN ALSO MS/MSD	✓
↓		1125		✓	BG-SW09	9	2	2	1	1	1	1	1			✓
DUP		0000		✓	DUP-01	9	2	2	1	1	1	1	1			✓
BACKGROUND		1355		✓	BG-SW10	9	2	2	1	1	1	1	1			✓
↓		1430		✓	BG-SW11	9	2	2	1	1	1	1	1			✓
↓		1530		✓	BG-SW13	9	2	2	1	1	1	1	1			✓
↓	↓	1555		✓	BG-SW12	9	2	2	1	1	1	1	1			✓

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[illegible]	5-24-95 1730	FED EX			
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**	**RELINQUISHED BY (SIGNATURE):**	**DATE / TIME:**	**RECEIVED BY(SIGNATURE):**
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED FOR LABORATORY BY (SIGNATURE):**	**DATE / TIME:**	**REMARKS:** SHIPPED TO LANCASTER LAB FED EX A.B. # 5461996201	

Order No. 70440 (0693)

SEDIMENTS

CHAIN OF CUSTODY RECORD

PROJECT NO.: 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOCS 4 oz GLASS	TCL SVOCS 1 GLASS	TAL METALS + CYANIDE 16 oz GLASS	LANDFILL PAR. 1 GLASS	GRAIN SIZE 1 GLASS	*	REMARKS
BACKGROUND	5/24	1025		✓	BGSED08	15	3	3	3	3	3		RUN ALSO MS/MSD
↓	↓	1150		✓	BGSED09	5	1	1	1	1	1		
DUP		0000		✓	DUP-01	5	1	1	1	1	1		
BACKGROUND		1400		✓	BGSED 10	5	1	1	1	1	1		
↓		1435		✓	BGSED 11	5	1	1	1	1	1		
↓		1540		✓	BGSED 13	5	1	1	1	1	1		
↓	↓	1600		✓	BGSED 12	5	1	1	1	1	1		
													* LANDFILL PAR. = NITRATE/NITRITE, AMMONIA TOC, PHOS, CHLORIDE

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	5.24.95 1730	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX A.B. # 5461996201	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

WATER SAMPLES

PROJECT NO.: 231 5803

SITE NAME: NWS EARIE

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOCs 40ml VIALS	TCL SVOCs L GLASS	TAL METALS L PE HNO3	NITRATE/NITRITE, AMMONIA, TOC, COD, PHOS. - L GLASS H2SO4	BOD L PE	TURB. CHLORIDE HARDNESS - L PE	CYANIDE L PE NaOH	REMARKS
TRIP BLANK	5/26	0710		✓	TB-03-052695	2	2							
RINSATE BLANK	↓	0715		✓	RB-03-052695	9	2	2	1	1	1	1	1	STAINLESS STEEL SPOON
BACKGROUND	↓	0928		✓	BGSW14	9	2	2	1	1	1	1	1	
↓	↓	1110		✓	BGSW15	9	2	2	1	1	1	1	1	
↓	↓	1210		✓	BGSW16	9	2	2	1	1	1	1	1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[illegible]	5-26-95	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX A.B. # 546199621D	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

SW & SED

PROJECT NO.: 231 5803

SITE NAME: NWS CARIF

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	EXPLOSIVES L GLASS		EXPLOSIVES L w/o GLASS				REMARKS
BACKGROUND	5/26	0820		—	BG-SW 10	2	2						
"	"	0850		—	BG-SW 13	2	2						
"	5/26	0825		—	BG-SED 10	1			1				
"	5/26	0855		—	BG-SED 13	1			1				
													"RESAMPLE"
													ADD TO SAMPLES TAKEN
													5-24-95 AT THE ABOVE
													SAMPLE LOCATIONS

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
	5-26-95 1500	FED EX			
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**	**RELINQUISHED BY (SIGNATURE):**	**DATE / TIME:**	**RECEIVED BY(SIGNATURE):**
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED FOR LABORATORY BY (SIGNATURE):**	**DATE / TIME:**	**REMARKS:** SHIPPED TO LANCASTER LAB FED EX A.B. # 5461996212	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

SEDIMENT

PROJECT NO.: 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOCS 4oz GLASS	TCL SVOCS L GLASS	TAL METALS + CN 16 oz GLASS	LANDFILL PAR.* L GLASS	GRAIN SIZE L GLASS		REMARKS
BACK-GROUND	5/26	0938		✓	BG-SED 14	5	1	1	1	1	1		
↓	↓	1128		✓	BG-SED 15	5	1	1	1	1	1		
↓	↓	1220		✓	BG-SED 16	5	1	1	1	1	1		
													*LANDFILL PAR.= NITRATE/NITRITE, AMMONIA, TOC, PHOS, CHLORIDE

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	5.26.95	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX A.B.# 5461996212	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: 5333

SITE NAME: NWS Earle CT0231

SAMPLERS (SIGNATURE): [signature] / [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC's 40ml Vial	TCL SVOC's 1-L Amber	TAL metals 1-L PE HNO3	Cyanide NaOH 1-L PE	Ammonia Phos, COD 1-L Clear H2SO4	Nitrate Nitrite, Turb, BOD+chlor 1-L PE	Hardness 500ml HNO3	REMARKS
01	6/8/95	0145		X	BG-SW01	13	3	3	1	1	2	2	1	
02	6/8	1138		X	BG-SW02	13	3	3	1	1	2	2	1	
	6/8			X	~~BG-SW03~~	~~39~~	~~9~~	~~9~~	~~3~~	~~3~~	~~6~~	~~6~~	~~3~~	~~SMA 6/8/95~~
03	6/8	1357		X	BG-SW04	39	9	9	3	3	6	6	3	DO MS/MSD
04	6/8	1704		X	BG-SW17	13	3	3	1	1	2	2	1	
05	6/8	0000		X	DUP-02	13	3	3	1	1	2	2	1	
06	6/8	0835		X	TB-04-0608	2	2	—	—	—	—	—	—	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	6/8/95 1950	FED EX			
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIP LANCANSTER LAB AB# 5461996072	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: 5333

SITE NAME: NWS Earle CTO231

SAMPLERS (SIGNATURE): [illegible] / S. J. Corth

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC's 4 oz wm Jar	TCL SVOC Ammonium Chloride, Nitrate, Phos, TOC Chloride, Nitrate, Sulfate 4 oz wm Jar	TAL Metals Aluminum Jar Steel				REMARKS
01	6/8/15	1002		X	~~BG SW 01~~ 6/8/15 BGSE001	3	1	1	1				
02	6/8	1157		X	~~BG SW 02~~ 6/8/15 BGSE002	3	1	1	1				
03	6/8	1424		X	~~BG SW 03~~ 6/8/15 BGSE004	9	3	3	3				Do MS/MSD
04	6/8	1702		X	BG SE017	3	1	1	1				
05	6/8	0000		X	DUP-02	3	1	1	1				

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
[illegible]	~~0750~~ 1950	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIP TO LANCASTER LABS AB# 546199 6072	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: 5333

SITE NAME: NWS Earle CTO 231

SAMPLERS (SIGNATURE): [signature] / S. Conti

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	PCB/Pest 1-L Amber	TPH 1-L Amber	Explosives 1-L Amber	BOD/Pest/TPH/Explosives 500ml w/ice			REMARKS
	6/8/95	0945		X	BGSW01	7	2	2	2	1			
	6/8	1138		X	BGSW02	7	2	2	2	1			
	6/8			X	~~BGSW03~~	~~21~~	~~6~~	~~6~~	~~6~~	~~3~~			~~DO MS/MSD~~
	6/8	1357		X	BGSW04	21	6	6	6	3			DO MS MSD.

SEO

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
[signature]	6/9/95 1950	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SENT TO LANCASTER LABS AB# 546199607 2	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: 5333

SITE NAME: NWS Earle CT0231

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40ml Vial HCl	TCL SVOC 1-L Amber	TAL metals 1-L PE HNO3	Cyanide NaOH 1-L PE	Ammonia, Phos, COD 1-L Clear H2SO4	Nitrate Nitrite, Turb, BOD, Chlo 1-L PE	Hardness 500ml	PCB/Pest 1-L Amber	Explosives 1-L Amber	TPH 1-L Amber	REMARKS
RB-04	6/9/95	1950		X	RB-04-060995	18	3	3	1	1	2	2	—	2	2	2	
TB-05	6/9/95	0710		X	TB-05-060995	3	3										Trip Blank.
RB-05	6/9	0715		X	RB-05-060995		3	3	1	1	2	2					
18	6/9	1113		X	BG SW18	13	3	3	1	1	2	2	1				
19	6/9	0927		X	BG SW19	13	3	3	1	1	2	2	1				
20	6/9	1020		X	BG SW20	13	3	3	1	1	2	2	1				
21	6/9	1213		X	BG SW21	13	3	3	1	1	2	2	1				
~~—~~	~~6/9~~			~~X~~	~~BG SW22~~	~~13~~	~~3~~	~~3~~	~~1~~	~~1~~	~~2~~	~~2~~	~~1~~				~~[illegible]~~

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	6/9/95 1815				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Shipped to Lancaster Labs Fed Ex # 136 577 3614	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: 5333

SITE NAME: NWS Earle CT0231

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40z WM	TAL Metals 500ml WM	TCL SVOC, Ammonia, Cyanide, Nitrite, Nitrate, Chloride, Phos., Grain Siz. 1-L WM				REMARKS Time
18	5/9/05	1125		X	BG-SED18	3	1	1	1				1125
19	5/9	0939		X	BG SED19	3	1	1	1				0939
20	5/9	1032		X	BG SED 20	3	1	1	1				1032
21	5/9	1223		X	BG-SED 21	3	1	1	1				1223
	~~5/9~~			~~X~~	~~BG-SED 22~~	~~3~~	~~1~~	~~1~~	~~1~~				~~DELETED~~

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
[signature]	5/9/05 1815				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Shipped to Lancaster Labs Fed Ex # 136 577 3614	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

SED

PROJECT NO.: 610 231 S803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 4 oz GLASS	SVOC, PEST/PCB QT. w/m GLASS	TAL METALS 16 oz w/m GLASS	EXPL, TOC, GRAIN SIZE QT w/m GLASS			REMARKS
SITE 13	6/14	1030		✓	13SED02	4	1	1	1	1			
DUP 03	"	0000		✓	DUP 03	4	1	1	1	1			

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
KS	~~1740~~ 1740	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
	6.14.95				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX. AB # 5461995685	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

HYDROPUNCH GW SAMPLES

LANDFILL PARAMETERS

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): S. Conte

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOCs 40 ml VOA VIAL	TCL SVOCs 1-L Amber	TCL PESTICIDES 1-L Amber	EXPLOSIVES 1-L Amber	COD/TOC 1L-CLEAR GLASS	NITRATE/NITRITE 1L PE	TPH 1L CLEAR GLASS	BOD - 1L PE	Ammonia, Phosphate COD/TOC 1L CLEAR GLASS	NITRATE/NITRITE CHLORIDE - 1L PE TURB	REMARKS
TRIP BLANK	6/14/95	0730		✓	TB08 - 061495	2	2										
SITE 1 HP08	6/14/95	0900		✓	01HP08	14	3	3	2	2	1	1	1	1			HP08 - Hydropunch SITE 1
SITE 4 HP01	"	1130		✓	04HP01-0508	9	3	2	–	–	–	–	–	1	2	1	Hydropunch SITE 4 - HP01
~~SITE 5 HP06~~	~~–~~			~~✓~~	~~05HP06~~	~~3~~	~~3~~								←		SJC DID NOT TAKE THIS
KINSATE BLANK	6/14/95	1745		✓	RB09 - 061495	10	3	3	–	–	–	–	–	1	2	1	OVER BAILER SITE 04 (Analyze)

2 WEEK TURNAROUND FOR HYDROPUNCH SAMPLES

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
S. Conte	6/14/95 1830	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SENT TO LANCASTER LABS AB# 5461995685	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD SW, TB & RB + DUP

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ml VIAL HCL	TCL SVOC L GLASS	TAL METALS L PE HNO3	TCL PEST/PCB L GLASS	EXPLOSIVES L GLASS	BD 13 L PE	TPH L GLASS H2SO4	AMMONIA, PHOS, COD, TOC L GLASS H2SO4	NITRATE, NITRITE, TURB, CLORIDE L PE	REMARKS
TRIP BLANK	6/14	0900		✓	TB 09 061495											
DUP 03	↓	0000		✓	DUP 03	13	3	2	1	1	1	1	1	2	1	
RINSATE BLANK	↓	1130		✓	RB 08 061495	8	3	2	1	1	1					RB-08 ANALYSIS
SITE 13	↓	1030		✓	13SW02	13	3	2	1	1	1	1	1	2	1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	6.14.95 1740				
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**	**RELINQUISHED BY (SIGNATURE):**	**DATE / TIME:**	**RECEIVED BY(SIGNATURE):**
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED FOR LABORATORY BY (SIGNATURE):**	**DATE / TIME:**	**REMARKS:** SHIPPED TO LANCASTER LAB FED EX AB# 5461995685	

Order No. 70440 (0693)

SW + TB & RB

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOCS 40 ML VIAL HCL	TCL SVOC L GLASS	TAL METALS L PE HNO3	PCB'S L GLASS	BOD L PE	NITRATE/NITRITE TURB. CHLORIDE L PE	AMMONIA PHOS. T.C. COD L GLASS H2SO4	TCL PEST L GLASS	TOC L GLASS H2SO4	REMARKS
TRIP BLANK	6/13	0700		✓	TB-06 061395	2	2									
RINSATE BLANK	↓	0710		✓	RB-06 061395	9	2	3	1			1*	1	1	KS ~~1~~	TOWEL
SITE 4				✓	04-SW01	13	3	3	1	2	1	1	2			
↓		1125		✓	04SW4B5	13	3	3	1	2	1	1	2			
↓		1220		✓	04-SW03	13	3	3	1	2	1	1	2			
SITE 19	↓	1455		✓	~~195CD0~~ KS 195W01	9	3	3	1					2		

* NO TURB. ON RINSATE

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
[signature]	6-13-95 0900	~~FED EX~~ LANCASTER LAB KS			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE): 6.14.95	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LABS KS ~~FED EX A.B. #~~ (PICK UP BY LAB) AT 0900	

Order No. 70440 (0693)

SEDIMENTS

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC	TCL SVOC w/m 4oz	TAL METALS GT w/m	TCL PEST 16oz w/m	TAL METALS, CHLORIDE NITRATE NITRITE AMMO., PHOS., COD, TOC			REMARKS
SITE 4	6/13	1145		✓	04SED4B5	3	1	1		1				
SITE 19	6/13	1455		✓	~~19SW01~~ 19SED01	3	1	1	1					

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	6.14.9 0900	LANCASTER LAB			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: TO LANCASTER LAB PICK UP BY LAB	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

SED

PROJECT NO.: CTO 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC	4.62 SVOC, PEST GT GLASS	TAL METALS, TOC, G.S. 16oz GLASS				REMARKS
SITE 6	6/15	1205		✓	06SED02	3	1	1	1				
"		1235		✓	06 SED01	3	1	1	1				
"		1345		✓	06 SED 03	3	1	1	1				
"		1400		✓	06 SED04	3	1	1	1				
SITE 17		1435		✓	17 SED04	3	1	1	1				
"		1515		✓	17 SED02	3	1	1	1				
"		1545		✓	17 SED03	3	1	1	1				

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	6-15-95 1950				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX A.B.# 546199616 4	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

HYDROPUNCH SAMPLES (GROUNDWATER)

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE.

SAMPLERS (SIGNATURE): S. Conti

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOCs 40 ml VOA	TCL SVOCs 1-L Amber	TCL Pesticides 1-L Amber	TAL Metals * 1-L PE	EXPLOSIVES 1-L Amber	COD/TOC 1-L CLEAR GLASS	NITRATE/NITRITE 1-L PE	TPH 1-L CLEAR GLASS	BOD 1-L PE	REMARKS
TRIP BLANK	6/13/95	0800		✓	TB07. 061395	2	2									Trip Blank.
HP01	"	0820		✓	01HP01	13	2	3	2	X	2	1	1	1	1	HP01 - Hydropunch
HP02	"	1000		✓	01HP02	13	2	3	2	X	2	1	1	1	1	HP02 - "
HP03	"	1130		✓	01HP03	13	2	3	2	X	2	1	1	1	1	HP03 - "
HP04	"	1320		✓	01HP04	13	2	3	2	X	2	1	1	1	1	HP04 - "
HP05	"	1500		✓	01HP05	14	3△	3	2	X	2	1	1	1	1	HP05 - "
HP06	"	1545		✓	01HP06	14	3△	3	2	X	2	1	1	1	1	HP06 - "
HP07	"	1700		✓	01HP07	14	3△	3	2	X	2	1	1	1	1	HP07 - "
RINSATE BLANK	"	1900		✓	RB07 • 061395	14	3△	3	2	X	2	1	1	1	1	RB - OVER BAILER.

* PER NORTHDIV RPM - NO METALS FROM HYDROPUNCH SAMPLES.

△ Added 3rd VOA vial Here for Lab Requirement.

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
S. Conti	6/14/95 0900	~~FED EX~~ S. Conti			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
		LANCASTER LABS			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SENT TO LANCASTER LAB	
				~~NB~~ NA (PICK UP BY LAB)	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

GW
HYDROPUNCH SAMPLES

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): S. Conti

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml VOA Vial TCL VOCs	TCL SVOCs 1L Amber	Ammonia/Phosphate COD/TOC - 1L GLASS	NITRATE/NITRITE BOD TURB/CLORIDE	BOD - 1L PE	1L PE	REMARKS
TRIP BLANK	6/15/95	07		✓	TB11 - 061595	2	2						TRIP BLANK
SITE 5 HP06	"	07/15		✓	05 HP06	3	3						HYDROPUNCH HP06. SITE 5
SITE 5 HP07	"	0840		✓	05HP07	3	3						" HP07 "
SITE 5 HP01	"	1000		✓	05 HP01	3	3						" HP01 "
SITE 5 HP02	"	1100		✓	05 HP02	3	3						" HP02 "
SITE 5 HP03	"	1205		✓	05 HP03	3	3						" HP03 "
SITE 5 HP04	"	1310		✓	05HP04	3	3						" HP04 "
SITE 5 HP05	"	1415		✓	05 HP05	3	3						" HP05 "
SITE 4 HP03	"	1630		✓	04 HP03-1518	9	3	2	2	1	1		NOTE SITE 4 HP03-1518
													2 WEEK TURNAROUND ON HYDROPUNCH SAMPLES

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
S. Conti	6/15/95 1930	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB AB # 5461996164	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

SW, TB, RB

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARIE

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ml VIALS HCL	TCL SVOC L GLASS	TAL METALS L PE HNO3	AMMONIA, PHOS, COD, TOC L GLASS H2SO4	NITRATE/NITRITE, CHLOR L PE	BOD L PE	HARDNESS SOD NAOH PE	TOC L GLASS HNO3	PEST L GLASS H2SO4	REMARKS
TRIP BLANK	6/15	0710		✓	TB 10 061595	3	3	~~2~~ 15								
RINSATE BLANK		1715		✓	RB 10 061595 *	8	3	2	1					1	1	STAINLESS STEEL SPOON
SITE 6		1155		✓	6SW02	11	3	2	1	2	1	1	1			
11		1225		✓	6SW01	11	3	2	1	2	1	1	1			
SITE 17		1420		✓	17SW04	11	3	2	1	2	1	1	1			
↓		1500		✓	17SW02	11	3	2	1	2	1	1	1			
↓	↓	1535		✓	17SW03	11	3	2	1	2	1	1	1			
																*RB HOLD 10

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
	61595 1950	FED EX			
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**	**RELINQUISHED BY (SIGNATURE):**	**DATE / TIME:**	**RECEIVED BY(SIGNATURE):**
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED FOR LABORATORY BY (SIGNATURE):**	**DATE / TIME:**	**REMARKS:** SHIPPED TO LANCASTER LAB FED EX AB# 546199616 4	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

SED

PROJECT NO.: CTO 231 5803	SITE NAME: NWS EARLE
SAMPLERS (SIGNATURE): [signature]	

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 4oz GLASS	SVOC, PEST/PCB GT w/m GLASS	EXPLOSIVES GT w/m GLASS	TPH, CANDFIL PAR. CN TOC G.S.	TAL METALS GT w/m GLASS	TAL METALS, GT. w/m GLASS	REMARKS
SITE 15	6/16	0825		✓	15 SED 01	3	1	1			1		
↓	↓	0915		✓	15 SED 02	3	1	1			1		
↓	↓	0940		✓	15 SED 03	3	1	1			1		
BACK GROUND	↓	1010		✓	BG SED 22	4	1	1	1	1			
													LANDFILL PAR. = NITRATE/NITRITE, AMMONIA COD, TOC, CHLORIDE, PHOS.

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	6.16.95 1500	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX AB # 546199563	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

SW, TB, RB

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ml vials HCL	SVOC L glass	TAL METALS L PE HNO3 + HARDNESS	CYANIDE L PE NaOH	AMMONIA, PHOS. COD, TOC L glass H2SO4	NITRIDE/NITRATE, TURB, CHLORIDE BOD - L PE	EXPLOSIVES L glass	PEST/PCB'S L glass	TPH L glass	TAL METALS L PE HNO3	REMARKS
TRIP BLANK	6/16	0700		✓	TB12 061695	2	2										
RINSATE BLANK		1130		✓	RB 11 061695 *	16	2	3	1	1	2	1	2	2	2		STAINLESS SPOON ANALYZE RB 11
SITE 15		0815		✓	15SW01	11	3	3						2	2	1	
11		0905		✓	15SW02	11	3	3						2	2	1	
BACK-GROUND	✓	0950		✓	BG SW 22	17	3	3	1	1	2	1	2	2	2		

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
	6/16/95 1500				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX AB # 5461995663	

Order No. 70440 (0693)

* NO: TURB, BOD, HARDNESS ON RB

CHAIN OF CUSTODY RECORD

Hydropunch Samples

PROJECT NO.: CTO 231 - 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): S. Conti

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40ml VOA TCL VOCs	1-L Amber TCL SVOCs	1-L Amber Glass COD/TOC Ammonia/Phosphate	1-L Amber Turbidity/Chloride Nitrate/Nitrite	1-L Amber BOD		REMARKS
TRIP BLANK	6/19/95	0700		✓	TB14 - 061995	2	2						Trip Blank
SITE 4 HP02	"	0900		✓	04HP02-1013	9	3	2	2	1	1		Hydropunch 04HP02-10'-13'
SITE 4 HP02	"	1020		✓	04HP02-2528	9	3	2	2	1	1		" 04HP02-25'-28'
SITE 4 HP04	"	1350		✓	04HP04	9	3	2	2	1	1		" 04HP04
SITE 4 HP05	"	1610		✓	04HP05	9	3	2	2	1	1		" 04HP05
RB	"	1900		✓	RB13 - 061995	9	3	2	2	1	1		Rinsate Blank over Boiler

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
S. Conti	6/19/95 1935	FED EX			
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**	**RELINQUISHED BY (SIGNATURE):**	**DATE / TIME:**	**RECEIVED BY(SIGNATURE):**
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED FOR LABORATORY BY (SIGNATURE):**	**DATE / TIME:**	**REMARKS:** SHIP TO LANCASTER LABS AB# 546199467 2	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

HYDROPUNCH SAMPLES

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40ml Vial TCL VOCs	1L Amber TCL SVOCs	1L Glass (Clear) Ammonia, Phos, COD	1L Amber Nitrate/Nitrite, TURB	1L Amber BOD	1L PE Nitrate/Nitrite, TURB, TOC, Chloride	1L PE BOD	REMARKS
TRIP BLANK	6/16/95	0700		✓	TB13 061695	2	2							TRIP BLANK
SITE 4 HP03	"	0810		✓	04HP03-2730	9	3	2	2	1	1			2730 FEET HYDROPUNCH HP03
SITE 4 HP03	"	1045		✓	04HP03-3942	9	3	2	2			1	1	3942 FEET
RB	"	1300		✓	RB12-061695	9	3	2	2	1	1			
														2WEEK
														TURNAROUND ON
														HYDROPUNCH SAMPLES

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	6/16/95 1500	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SENT TO LANCASTER LAB AB# 5461995663	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ml VIAL HCL	TCL SVOC GT AMBER	TCL PEST/PCB GT AMBER	EXPLOSIVES GT AMBER	TPH GT AMBER	NITRATE/NITRITE CHLORIDE SULFATE L PE	TOC, COD, PHOS., AMMONIA GT GLASS H_2SO_4	TAL METALS + MERCURY L PE HNO_3	CYAN L PE NaOH	REMARKS
TRIP BLANK	6/20	0705		✓	TB 15 062095	2	2									
RINSATE BLANK	11	1100		✓	RB 14 062095	17	3	3	2	2	2	1	2	1	1	PROJECT
~~BACK-GROUND~~		~~1400~~		✓	~~BGSB02-00~~ KS											

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
[signature]	6.20.95 1700				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED FED EX TO LANCASTER LAB A.B. # 5461996094	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 4 oz GLASS	SVOC, PEST/PCB, EXPLOSIVES, TPH, METALS + MERCURY, CN, NH3, CHLORIDE, TOC, COD, PHOS, AMMONIA, G.S., SULFATE, QT.						REMARKS
BACK-GROUND	6/20	1400		✓	BG SB 02-00	3	1	1	1					SOIL SAMPLE 0-.5' AT BORING 02
DUP 04	"	0000		✓	DUP 04	3	1	1	1					

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	6.20.95 1700				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED FED EX TO LANCASTER LAB A.B.# 5461996094	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

FIELD BLANK

PROJECT NO.: CTO 231 5803	SITE NAME: NWS ERIE
SAMPLERS (SIGNATURE): [signature]	

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	EXPLOSIVES QT AMBER (WATER)	EXPLOSIVES 4 oz w/m 2WS (SOIL)					REMARKS
DI CUBE LOT # N299	6/21	1330		—	DI WATER	2	2						
HYD. WATER	↓	1410		—	POTABLE WATER	2	2						
	↓	1010		—	RB 15 062195	2	2						
BG 02	6/21	0845		—	BGSB02-05	1		1					FROM 5 TO 7' BACKGROUND WELL LOCATION BGD2.

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
[signature]	6.21.95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO GPES FED EX AB # 4990008192	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC ALKAL LAB HCL	TCL SVOC GT AMBER	TCL PEST/PCB GT AMBER	~~ETPHOS SHES GT AMBER~~	TPH GT AMBER	NITRATE/NITRITE/CHLORIDE GT AMBER	TOC, COD, PHOS. AMMONIA L PE	TAL METALS + MERCURY L PE HNO3	CYANIDE L PE	SULFATE, GT GLASS H2SO4	Na OH	REMARKS
TRIP BLANK	6/21	0700		✓	TB16 062195	2	2											
RINSATE BLANK	6/21	1010		✓	RB15 062195	~~17~~ 15	3	3	2	2	2	1	2	1	1			SPLIT SPOON

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
	6.21.95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX A.B.# 4990008332	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): S. Conti

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOCS	4 OZ GLASS	SVOC, PEST, PCB, HG	EXPLOSIVES	N/N - CHLORIDE, TPH, METALS	TOC, COD, PHOS, AMMONIA	CN 1QT	1QT SULF	GS	REMARKS
BG02	6/21/95	08:45		✓	BGSB02-05	3	1	1	1							BACKGROUND SB/MW From BG02 @ 5'-7'
																No EXPLOSIVES - PER CONVER-
																SATION W/ LAB ON 6/21/95

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
S. Conti	6/21/95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIP TO LANCASTER LABS AB # 4990008332	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

FIELD BLANK: DI & POTABLE WATER

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC AQ MALVIAL HCL	TCL SVOC QT AMBER	TCL PEST/PCB QT AMBER	~~EXPLOSIVES QT AMBER~~	TPH QT AMBER	NITRATE/NITRITE CHLORIDE L PE	TOC, COD, PHOS. AMMONIA	TAL METALS + MERCURY L PE HNO3	CYANIDE L PE NaOH	BOD L PE	CR+6, CR+3 HARDNESS L PE	REMARKS
DI CUBE LOT # N299	6/21	1330		✓	DI WATER	17 ~~19~~	3	3	2	2	2	1	2	1	1	1	1	
HYD. WATER	"	1410		✓	POTABLE WATER	17 ~~19~~	3	3	2	2	2	1	2	1	1	1	1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
[signature]	6-21-95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB. FED EX A.B. # 4-9900 08332	

HYD. BEHIND FIELD TRAILER

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CEO 231 58073

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): S. Conti

STATION NO.	DATE (1995)	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	4 OZ GLASS EXPLOSIVES	QT AMBER EXPLOSIVE					REMARKS
RINSATE BLANK	6/23	1730		✓	RB16-062395			2					RINSATE BLANK OVER TROWELL
BG01	6/22	1545		✓	BGSB01-00		1						BG01-0 TO 6"
BG01	6/22	1600		✓	BGSB01-05		1						BG01-5'-7'

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
S. Conti	6/23/95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO GPES AB # 4990008240	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 S803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): S. Curtis

Aqueous / Soil

STATION NO.	DATE 1995	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ml Vial	TCL SVOC QT Amber	TCL PEST/PCB QT Amber	TPH QT Amber	Nitrate/Nitrite Chloride, SO4	TOC, COD, PH25 Ammonia QT GLASS	TCL METALS + HG 1L PG	CN 1L PG		40 ml GLASS	1 QT GLASS	1 QT GLASS	REMARKS
TRIP BLANK	6/22	07/10		V	TB17-062295	2	2												
RINSATE BLANK	6/22	18/45		V	RB16-062295	15	3	3	2	2	1	2	1	1					S.S. TROWEL
BG01	6/22	15/45		V	BGSB01-00	3										1	1	1	BG01 0-6"
BG01	6/22	16/00		V	BGSB01-05	3										1	1	1	BG01 5'-7'

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
S. Curtis	6/23/95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIP TO LANCASTER LABS AB # 4990008225	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	SOIL: EXPLOSIVES 4 oz GLASS	AQUEOUS: EXPLOSIVES GT GLASS						REMARKS
RINSATE BLANK	6/25	1620		✓	RB17 062595	2		2						STAINLESS STEEL TROWEL
					~~01SB~~ SJC 6/25/95									
01 SB01	6/25	0935		✓	01SB01-00	1	1							
01 SB01	"	0940		✓	01SB01-02	1	1							
01 SB02	"	1000		✓	01SB02-00	1	1							
01 SB02	"	1005		✓	01SB02-02	1	1							
01 SB03		1025		✓	01SB03-00	1	1							
01 SB03		1030		✓	01SB03-02	1	1							
01 SB04		1045		✓	01SB04-00	1	1							
01 SB04		1050		✓	01SB04-02	1	1							
01 SB05		1110		✓	01SB05-00	1	1							
01 SB05		1115		✓	01SB05-02	1	1							
01 SB06		1305		✓	01SB06-00	1	1							
01 SB06		1310		✓	01SB06-02	1	1							

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[illegible]	6.26.95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**	**RELINQUISHED BY (SIGNATURE):**	**DATE / TIME:**	**RECEIVED BY(SIGNATURE):**
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED FOR LABORATORY BY (SIGNATURE):**	**DATE / TIME:**	**REMARKS:** SHIPPED TO GPES FED EX A.B. # 4990008321	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): S. Conti

STATION NO.	DATE 1995	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC's 4 OZ GLASS	METALS, TPH W/N QT GLASS					REMARKS
01 SB07	6/25	1325		✓	01SB07-00	2	1	1					
01 SB07	6/25	1330		✓	01SB07-02	2	1	1					
DUP	"	0900		✓	DUP-05	2	1	1					
01 SB08	"	1400		✓	01SB08-00	2	1	1					
01 SB08	"	1405		✓	01SB08-02	2	1	1					
01 SB09	"	1420		✓	01SB09-00	2	1	1					
01 SB09	"	1425		✓	01SB09-02	2	1	1					
01 SB10	"	1445		✓	01SB10-00	6	3	3					DO MS/MSD
01 SB10	"	1500		✓	01SB10-02	2	1	1					

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
S. Conti	6/26/95 1700	FED EX.			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: LANCASTER LAB AB# 4990008310	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): S. Conti

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	EXPLOSIVES 4 OZ GLASS						REMARKS
01 SB07	6/25	1325		✓	01SB07-00	1	1						
01 SB07	"	1330		✓	01SB07-02	1	1						
DUP	"	0000		✓	DUP-05	1	1						
01 SB08	"	1400		✓	01SB08-00	1	1						
01 SB08	"	1405		✓	01SB08-02	1	1						
01 SB09	"	1420		✓	01SB09-00	1	1						
01 SB09	"	1425		✓	01SB09-02	1	1						
01 SB10	"	1445		✓	01SB10-00	3	3						DO MS/MSD
01 SB10	"	1500		✓	01SB10-02	1	1						
BG 03	26	1000		✓	BGSB03-00	1	1						
BG 03	26	1030		✓	BGSB03-05	1	1						

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
S. Conti	6/26/95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: GP[redacted] NBH 4990008321	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS CARIE

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	AQUEOUS: TCL VOC'S 40 ML VIAL HCL	AQUEOUS: TAL METALS L PE HNO3	AQUEOUS: TPH QT GLASS	AQUEOUS: NITRATE/NITRITE L PE	SOILS: TCL VOC'S 4 OZ GLASS	SOILS: METALS, TPH, NITRATE/NITRITE QT	REMARKS
TRIP BLANK	6/25	0710		✓	TB18 062595	2	2						
RINSATE BLANK	"	1620		—	RB17 062595	6	2	1	2	1			STAINLESS STEEL TROWEL
01 SB01	6/25	0935		—	01SB01-00	2					1	1	
01 SB01	"	0940		—	01SB01-02	2					1	1	
01 SB02	"	1000		—	01SB02-00	2					1	1	
01 SB02	"	1005		—	01SB02-02	2					1	1	
01 SB03	"	1025		—	01SB03-00	2					1	1	
01 SB03	"	1030		—	01SB03-02	2					1	1	
01 SB04	"	1045		—	01SB04-00	2					1	1	
01 SB04	"	1050		—	01SB04-02	2					1	1	
01 SB05	"	1110		—	01SB05-00	2					1	1	
01 SB05	"	1115		—	01SB05-02	2					1	1	
01 SB06	"	1305		—	01SB06-00	2					1	1	
01 SB06	"	1310		—	01SB06-02	2					1	1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
S. Curtis	6-26-95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX A.B.# 4990008310	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO231 / 3803

SITE NAME: NWS- EARLE

SAMPLERS (SIGNATURE): Jerry Hawsey

STATION NO.	DATE 95	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL SVOC'S GT AMBER	TCL PESTICIDES GT AMBER	TPH GT AMBER	NITRATE/NITRITE CHLORIDE SO4 1L PE	TOC, COD, PHOS AMMONIA GT GLASS	CYANIDE 1 LITER PE	REMARKS
—	6/26	1700		X	RB-18-062695		3	2	2	1	2	1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
Jerry Hawsey	6/26/95 1900	Federal Express			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Airbill # 4990008310	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): S. Conte

STATION NO.	DATE 1995	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	4 oz GLASS EXPLOSIVES	1 qt Amber EXPLOSIVES					REMARKS
26 SB04	6/26	0930	1	✓	26SB04-02	1	1						
26 SB04	"	0945		✓	26SB04-06	1	1						
26 SB03	"	1015		✓	26SB03-04	1	1						
26 SB03	"	1020		✓	26SB03-06	1	1						
26 SB01	"	1315		✓	26SB01-02	1	1						
26 SB02	"	1445		✓	26SB02-04	1	1						
RINSATE BLANK		1700		✓	RB18 · 062695	2		2					OVER TROWEL.

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
S. Conte	6/26/95 1700	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: GPES LAB AB # 4990008321	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 C 803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	WATER: TCL VOC 40 ml VIAL HCL	WATER: TAL METALS L PE HNO3	WATER: CR +6 500 ml PE	SOIL: TCL VOC 4 OZ GLASS	SOIL: TAL METALS GT GLASS	SOIL: TAL METALS + CR+6 GT GLASS	REMARKS
TRIP BLANK	6/27	1100		✓	TB 21 062795	2	2						
RINSATE BLANK		1530		✓	RB 19 062795	4	2	1	1				STAINLESS BOWL
DUP		0000		✓	DUP 06	2				1		1	
SITE 19		1200		✓	195B03-00	2				1	~~1~~ KS	1	
		1210		✓	195B03-03	2				1	~~1~~	1	
		1230		✓	195B04-00	2				1	1		
		1245		✓	195B04-03	2				1	1		
		1255		✓	195B01-01	2				1	1		
		1305		✓	195B01-03	2				1	1		
		1335		✓	195B02-00	2				1	~~1~~ KS	1	
		1345		✓	195B02-03	2				1		1	
		1400		✓	195B05-02	1					1		

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	6-27-95 1800	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX A.B. 4990008306	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

COC

PROJECT NO.: CTO 231 / 5803

SITE NAME: NWS - EARLE

SAMPLERS (SIGNATURE): Jerry Dawson

STATION NO.	DATE 95	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOCs 40z glass	TCL SVOCs, Pest/PCBs, metals, cyanide, TPH	Nitrate, Nitrite, Ammonia, COD, TOC, Chloride, Phosphate, Sulfate	TCL VOCs 40 ml vial			REMARKS
BG	6/26	1000	✓	X	BG-SB03-00	3	1	1	1				
BG	6/26	1030		X	BG-SB03-05	3	1	1	1				
	6/26	0900		X	TB-20-062695	2				2			TRIP BLANK

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
Jerry Dawson	6/26/95 1900	Federal Express			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Airbill # 4990008310	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.:	SITE NAME:
CTO 231/5803	NIOS - EARLE

SAMPLERS (SIGNATURE): Jerry Acuoyi

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	Explosives 4.03 glass	Explosives GT Amber					REMARKS
—	6/28	1100		x	RB-20-06R895	2		2					Binscate Blank
BG	6/28	0800		x	BG ~~RB~~-SB08-00	1	1						
BG	6/28	0910		x	BG ~~RB~~-SB08-05	1	1						

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
Jerry Acuoyi	6/28/95	Federal Express			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: AIRBILL # 4990008262	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): Joshua R Holden

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ml Vial HCL water	TCL VOC 4oz Glass	TCL SVOC, TAL METALS 4oz Glass w/m Glass				REMARKS
trip blank	6/28	0730		✓	TB03 062895	2	2						
site 20	6/28	0910		✓	20SB02-03	2		1	1				
↓	↓	0930		✓	20SB03-03	6		3	3				MS/MSD
site 20	6/28	0950		✓	20SB01-03	2		1	1				

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
Joshua R Holden	6/29/95	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Shipped to Analytical Lab FEX EX AB# 4990008273	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

SOIL AQUEOUS

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): S. Conti

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40ml VIALS TCL VOCs	4 OZ JAR TCL VOCs	1 QT GLASS TAL METALS	1 L PE (HNO3) TAL METALS			REMARKS
TRIP BLANK	6/26/95	0715		✓	TB ~~18~~ 19 062695	2	2						
26 SB04	"	0930		✓	26SB04-02	2		1	1				2-4' From 26SB04
26 SB04	"	0945		✓	26SB04-06	2		1	1				6-8' " 26SB04
26 SB03	"	1015		✓	26SB03-04	2		1	1				4-6' " 26SB03
26 SB03	"	1020		✓	26SB03-06	2		1	1				6-8' " 26SB03
26 SB01	"	1315		✓	26SB01-02	2		1	1				2-4' " 26SB01
26 SB02		1445		✓	26SB02-04	2		1	1				4-6' " 26SB02
RINSATE BLANK		1700		✓	RB18 · 062695	4	3			1			OVER SS TROWEL

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
S. Conti	6/27/95 1100	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: LANCASTER NB # 4990008310	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 / 5803

SITE NAME: NWS - EARLE

SAMPLERS (SIGNATURE): Jerry Acuoyo

STATION NO.	DATE 95	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC's 40 ml Vial	TAL metals 1 L PE	TCL SVOC's GT Amber	TCL PESTICIDES GT Amber	TPH GT Amber	NITRATE/NITRITE CHLORIDE, SO4 1 L PE	TOC, COD, PHOS, AMMONIA CYANIDE GT GLASS	1 LITER PE	TCL VOC's 4 oz GLASS	TCL SVOC's, PESTICIDES GLASS metals, cyanide, TOH, AMMONIA, NITRATE, NITRITE, SULPHATE, COD, BOD, TOC, CHLORIDE, PHOSPHATE		REMARKS
—	6/28	0700		X	TB - 22 062895	2	2											
—	6/28	1100		X	RB - 20 - 062895	14	2	1	3	2	2	1	2	1				
BG	6/28	0800		X	BG - SB04 - 00	3									1	1	1	
BG	6/28	0910		X	BG - SB04 - 05	3									1	1	1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
Jerry Acuoyo	6/28/95	Federal Express			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: AIRBILL # 4990008273	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS CARIB

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC'S 40 ml VIAL	TAL METALS 1 pt	BOD, TURB. SULFATE CHLORIDE NO3/NO2 AMMONIA COD TOC PHOS	1 pt	1 pt	1 pt	REMARKS
TRIP BLANK	7.6.95	0720		✓	TB 24 070695	2	2						
DUP 07		0000		✓	DUP07	7	3	1	1	2			SAMPLES PRICED
SITE 10		0940		✓	10GW02	7	3	1	1	2			
		1100		✓	10GW07	7	3	1	1	2			
		1210		✓	10GW06	7	3	1	1	2			
		1447		✓	10GW03	7	3	1	1	2			
		1540		✓	10GW04	7	3	1	1	2			
		1655		✓	10GW01	7	3	1	1	2			
		1805		✓	10GW05	7	3	1	1	2			

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	7-6-95 1930	FED EX.			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SENT TO LANCASTER LAB AB # 5461992152	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOCS 40 ml VIAL HCL	TAL METALS L PE HNO3	BOD, TURB SULFATE CHLORIDE	N/N, AMMONIA COD, TOC, PHOS	L PE	H2SO4 QT. GLASS	REMARKS
TRIP BLANK	7/5	1300		✓	TB 23 070595	2	2						
SITE 5	11	1700		✓	05GW05	21	~~3~~ 9	3	3	6			RUN ALSO MS/MSD

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	7.5.95 1845	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LABS FED EX AB# 5461992373	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): S. Conti / Paul M. Dunn

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOCs 4 OZ GLASS	TCL SVOCs, PEST TAL METALS QT-GLASS	TCL PCBs/TPH QT GLASS	TCL VOCs 40ml VOA	TCL SVOCs 1L Amber	TAL METALS 1L PE (HNO3)	PEST/PCBs 1L PE	TPH 1L PE	REMARKS
MW23-2	7/7/95	0830		✓	23SB02-02	2	1	1							From MW23-2 2'-4'
"	"	0940		✓	23SB02-16	2	1	1							" " 16'-18'
MW23-3	"	0903		✓	23SB03-06	2	1	1							From MW23-3 6'-8'
"	"	0928		✓	23SB03-14	2	1	1							" " 14'-16'
MW23-1	"	1315		✓	23SB01-04	2	1	1							From MW23-1 4'-6'
"	"	1130		✓	23SB01-16	2	1	1							" " 16'-18'
MW29-1	"	1300		✓	29SB01-02	1			1						
RINSATE BLANK	"	1700		✓	RB21-070795	11				3	3	1	2	2	OVER SPLIT SPOON
TB		0735			TB26-070795	2				2					

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
S. Conti	7/7/95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB AB# 5461992351	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS FARLE

SAMPLERS (SIGNATURE): S. Conte

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	4 OZ GLASS	EXPLOSIVES	EXPLOSIVES LITER AMBER					REMARKS
MW23-2	7/7/95	0830		✓	23SB02-02	1	1							
"	"	0940		✓	23SB02-16	1	1							
MW23-3	"	0903		✓	23SB03-06	1	1							
"	"	0928		✓	23SB03-14	1	1							
MW23-1	"	1325		✓	23SB01-04	1	1							
"	"	1430		✓	23SB01-16	1	1							
								~~2~~						
RINSATE BLANK	"	1700		✓	RB21-070795	2		2						

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S. Conte	7-7-95 1900	FED EX			
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIP TO GPES AB # 546199 2362	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 S803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): SJ Conti / [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ml VIAL HCL	TCL VOC 4 oz GLASS	TCL SVOC, TAL METALS QT GLASS, TCL PCB, TPH				REMARKS
TRIP BLANK	7/8/95	0710		✓	TB 27 070895	2	2						
16 SB20	"	0955		✓	16SB20-02	2		1	1				FUEL ODOR (90 PPM HNu HeadSP)
"	"	1010		✓	16SB20-06	2		1	1				" " (50 " " ")
16 SB19	"	1112		✓	16SB19-06	2		1	1				FUEL ODOR (50 " " ")
"	"	1123		✓	16SB19-08	2		1	1				" " (80 " " ")
16 SB11	"	0955		✓	16SB11-09	2		1	1				
16 SB08	"	1040		✓	16SB08-06	2		1	1				
16 SB07	"	1115		✓	16SB07-04	2		1	1				
16 SB17	"	1300		✓	16SB17-04	2		1	1				
"	"	1315		✓	16SB17-06	2		1	1				
16 SB18	"	1350		✓	16SB18-02	2		1	1				
"	"	1405		✓	16SB18-06	2		1	1				
DUP	"	0900		✓	DUP-08	2		1	1				
DUP	"	0900		✓	DUP-09	2		1	1				

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
SJ Conti	7/8/95 1700	FED EX			
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: LANCASTER LABS AB# 546199 2340	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS CNRIF

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ML VIALS HCL	TAL METALS 1 PE HNO3	BOD TURB. SULFATE CHLORIDE	N/N AMMONIA COD TOC PHOS	1 PE HNO3	GT GLASS H2SO4		REMARKS
TRIP BLANK	7.7.95	0730		✓	TB25 070795	2	2							
SITE 5	11	1835		✓	05GW02	7	3	1	1	2				

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	7.7.95 1915	FED EX			
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Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): [signature] [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TB & RB: TCL VOC 40 ml VIAL HCL	TB & RB: TCL SVOC QT GLASS	TB & RB: TCL PCB'S QT GLASS	TB & RB: TPH QT GLASS	TB & RB: TAL METALS L PE HNO3		SOILS: TCL VOC'S 4 oz GLASS	SOILS: TCL SVOC TAL METALS PCB, TPH QT GLASS	REMARKS
TRIP BLANK	7/9/95	0730		✓	TB28-070995	2	2								
RINSATE BLANK	"	1615		✓	RB23-070995	11	3	3	2	2	1				
DUP 10	"			✓	~~DUP-10~~										CM 7/19/95
16SB 09	"	0900		✓	16SB09-00	2							1	1	
"	"	0920		✓	16SB09-06	2							1	1	
MW16-2	"	1030		✓	16SB02-04	2							1	1	
MW16-6	"	1255		✓	16SB06-02	2							1	1	
"	"	1305		✓	16SB06-06	2							1	1	
MW16-11	"	1526		✓	16SB04-08	2							1	1	
"	"	1540		✓	16SB04-10	2							1	1	
DUP	"	0000		✓	DUP10-07095	2							1	1	
MW16 01	"	0914		✓	16SB01-06	2							1	1	
16SB13	"	1031		✓	16SB13-02	2							1	1	
16SB13	"	1044		✓	16SB13-06	2							1	1	

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[signature]	7.9.95 1730	[signature]			
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: DELIVERED TO LANCASTER BY PAUL DAVIS HNYS	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

Rinsate Blank — Soil Samples

PROJECT NO.: 610 231 5803

SITE NAME: NWS CARIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ml VIAL HCL	TCL SVOC 8oz GLASS	TCL PESTS 8oz GLASS	TPH	TAL METALS 1 PE HNO3		TCL VOCS 4oz GLASS	TCL SVOC, TAL METALS, PCB, TPH (8oz GLASS)	REMARKS
RINSATE BLANK	7/8/95	1510		✓	RB22 · 070895	10	2	3	2	2	1				STAINLESS STEEL TROWELL.
16SB10	7/8/95	1245		✓	16SB10-00								1	1	
16SB10	7/8/95	1254		✓	16SB10-04								1	1	
16SB15	7/8/95	1345		✓	16SB15-06								1	1	
16SB16	7/8/95	1435		✓	16SB16-06								1	1	
16SB14	7/8/95	1505		✓	16SB14-04								3	3	DO MS MSD

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
[signature]	7.8.95 1700 ~~1645~~	FED EX			
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX AB # 5461992340	

Order No. 70440 (0693)

F CUSTODY RECORD

PROJECT NO.: GTO 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): [illegible] / [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ml VIAL HCL	TPH VIAL HCL	QT GLASS	PCB QT GLASS	TAL METALS QT PE	N/N AMMONIA HNO3	COD, TOC, PHOS BOD, TURB SULFATE CHLORIDE	TPH, PCB - QT GLASS	QT GLASS H2SO4	L PE	REMARKS
TRIP BLANK	7/10/95	0810		✓	TB29-071095	2	2	2									
RINSATE BLANK		1700		✓	RB24-071095 *	4	2	2	2								* FOR SOILS ONLY. STAINLESS STEEL TROWEL
SITE 10		1135		✓	10G4W02	7	3			1	2	1					
11	↓	1145		✓	10G4W05	7	3			1	2	1					
SITE 29	↓	1310		✓	29SB02-02	1							1				

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
[illegible]	7.10.95 1900	FED EX			
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Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 SB03

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [illegible] Paul M. Davis

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL Volatiles 40z Glass Jar	TCL SVOC, TAL Metals PCB's, TPH 8oz glass						REMARKS
16SB12	7/9/95	1114		✓	16SB12-02	2	1	1						
16SB12	7/9/95	1124		✓	16SB12-06	2	1	1						
MW1603	7/9/95	1250		✓	16SB03-02	2	1	1						
MW1603	7/9/95	1304		✓	16SB03-06	2	1	1						
MW1605	7/9/95	1453		✓	16SB05-06	2	1	1						
MW1605	7/9/95	1457		✓	16SB05-08	2	1	1						

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[illegible]	7-9-95 1730	Paul M. Davis			
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: DELIVERED TO LANCASTER BY PAUL DAVIS II NUS	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS ENRIC

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ml VIAL (WATER)	TCL SVOC/PCB/PEST QT GLASS (WATER)	TAL METALS L PE (WATER)	TPH HNO3 (WATER)	QT GLASS	TCL VOC 4 oz GLASS	TCL SVOC, TAL METALS, TCL PCB, TPH QT w/AL GLASS	GRAIN SIZE 16 oz	TCL SVOC, TAL METALS, TCL PCB, TPH QT w/AL GLASS	REMARKS
TRIP BLANK	7/11/95	0705		✓	TB30-071195	2	2									
RINSATE BLANK		1840		✓	RB25-071195	10	2	5	1	2						STAINLESS STEEL TRAY
DUP		0000		✓	DUP-11	2					1			1		
DUP		0000		✓	DUP-12	2					1	KS #	KS #	1		
SITE 16		1045		✓	16SD02	3					1	1	1			
		1110		✓	16SD03	3					1	1	1			
		1145		✓	16SD01	3					1	1	1			
		1345		✓	16SS01	2					1			1		
		1345		✓	16SS02	2					1			1		
		1410		✓	16SS03	2					1			1		

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[signature]	7.11.95 1945	FED EX			
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Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5903

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC	TCL SVOC, TAL METALS, PEST/PCB, TPH						REMARKS
							4 oz GLASS	GT GLASS						
DUP	7/11/95	0900		✓	DUP-13	2	1	1						
SITE 15	↓	1610		✓	15SB01-01	2	1	1						
↓	↓	1615		✓	15SS01	2	1	1						
↓	↓	1640		✓	15SB02-01	2	1	1						
↓	↓	1705		✓	15SB04-02	2	1	1						
↓	↓	1720		✓	15SS02	2	1	1						
↓	↓	1730		✓	15SB03-02	2	1	1						

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[signature]	7.11.95 1945	FED EX			
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX AB # 5461995652	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: C10 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ML VIAL HCL	TAL METALS 1 PE HNO3	N/N, AMMONIA, COD 1 GLASS H2SO4	TOC, PHOS, BOD, TSPB, CHLORIDE, SULFATE 1 PE			REMARKS
TRIP BLANK	7/13/95	0740			TB32-071395	2	2						
SITE 5	↓	1637			05GW06	7	3	1	2	1			
"	↓	1738			05GW07	7	3	1	2	1			

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[signature]	7.13.95 1915	FED EX			
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Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ML VIAL	TAL METALS 1 PE HNO3	NH3 NH4 CL TOC TOX 500 PLASTIC	SO4 CHLORIDE 1 PE			REMARKS
TRIP BLANK	7/12/95	0720		✓	TB31 - 071295	2	2						
SITE 10	↓	0945		✓	10GW01	7	3	1	2	1			
↓	↓	1105		✓	10GW04	7	3	1	2	1			
↓	↓	1330		✓	10GW03	7	3	1	2	1			
↓	↓	1513		✓	10GW07	7	3	1	2	1			
↓	↓	1650		✓	10GW06	7	3	1	2	1			
↓	↓	0000		✓	DUP-14	7	3	1	2	1			

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[signature]	7.12.95 1850	FED EX			
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Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CIO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 qt wide glass Pest/PCB's	1 liter amber Pest/PCB's	40 ml glass HCl TCL volatiles	1 liter amber TPH SVOC's	1 liter plastic HNO3 Total metals	REMARKS
BG SB	7/19/95	1559		✓	BG SB04-00	1	1					Resample Surface Soils For Pest/PCB's original date 8/28/95 original sample Pest/PCB's Lost
BG SW	7/19/95	1456		✓	BG SW05	2		2				
BG SD	7/19/95	1456		✓	BG SD05	1	1					SED
~~BG SW~~	~~7/19/95~~	~~1420~~		~~✓~~	~~BG SW06~~	~~2~~		~~2~~				~~LM 7/19/95~~
BG SD	7/19/95	1420		✓	BG SD06	1	1					SED
RINSATE BLANK	7/19/95	1730		✓	RB26-071995	~~8~~ 2		2	~~2~~	~~3~~	1	TROWEL

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	7/19/95 1530	Federal Express			
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Shipped via Federal Express Airbill No 5461994786	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	PEST/PCB GT w/M glass						REMARKS
BACK GROUND	7/14	0845		✓	BG-SB04-05	1	1						
													RESAMPLE OF BG-SB04-05
													ORIGINAL SAMPLE DATE 6.28.95
													PEST/PCB LOST

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[illegible]	7.14.95	FED EX			
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX AB# 5461995615	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: [illegible]

SITE NAME: [illegible] EAGLE

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml Glass TCL Volatiles	1 Liter Amber Poly Total Cyanide, Sulfate, Nitrate	1 Liter Glass 1 Liter Glass 1 Liter Amber Total COD, Phenols, Sulfide	1 Liter Poly Total Metals	1 Liter Glass TCL SVOC	1 Liter Glass Semi-Volatile Organic Cl 3	REMARKS
TRIP BLANK	[illegible]	[illegible]			TB35-[illegible]	2	2						
"	[illegible]	[illegible]			[illegible]	2	2						
05	7/31/95	1012		✓	05GW03	7	3	1	2	1			
05	7/31/95	1240		✓	05GW04	7	3	1	2	1			
05	[illegible]	1731		✓	05GW01	7	3	1	2	1			
02	7/31/95	1500		✓	02GW02	8	3			1	3	1	
02	7/31/95	1510		✓	02GW05	8	3			1	3	1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[illegible]	7-31-95 1145	FED EX			
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**	**RELINQUISHED BY (SIGNATURE):**	**DATE / TIME:**	**RECEIVED BY(SIGNATURE):**
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED FOR LABORATORY BY (SIGNATURE):**	**DATE / TIME:**	**REMARKS:** Shipped via Federal Express Airbill No. 5461994705	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS CARIB

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ml VIAL HCL	TAL METALS 1 PL HNO3	TCL SVOC 1 GLASS	TCL PEST 1 GLASS	CRYS, CL, TC 1 GLASS		REMARKS
FIELD BLANK		0745		✓	TB33 - 072095	2	2						
"		0750		✓	TB34 - 072095	2	2						
SITE 3		1127		✓	036W06	9	3	1	3	2			
"		1323		✓	036W05	9	3	1	3	2			
SITE 2		1810		✓	026W06	8	3	1	3		1		

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
[signature]	7.20.95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME: 7.20.95 1950	REMARKS: SHIPPED TO LANCASTER LAB FED EX AIR BILL # 5461994716	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NAWS EARLE

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	[illegible]	Water Filtered TAL Metals					REMARKS
[illegible]	[illegible]	0717		✓	TB37	2	2						
"	[illegible]	0720		✓	TB37-[illegible]	2	2						
[illegible]	[illegible]	1012		✓	26GW01	4	3	1					
[illegible]	[illegible]	1309		✓	26GW02	4	3	1					
[illegible]	[illegible]	1430		✓	26GW03	4	3	1					
[illegible]	[illegible]	1530		✓	11GW03	4	3	1					

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
	7/22/95 1630				

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Shipped via Federal Express Airbill No 3461772356
			[illegible] 1620	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: [illegible] 331 2303	SITE NAME: MOS EARLE
SAMPLERS (SIGNATURE): [illegible]	

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TPH Analysis Excluding 5						REMARKS
Site 02	7/22/95	1510		✓	026W06	2	2						
Site 02	7/22/95	1500		✓	026W02	2	2						
Site 02	7/22/95	1510		✓	026W05	2	2						
Site 26	7/22/95	1112		✓	26W01	2	2						
Site 26	7/22/95	1309		✓	26W02	2	2						
Site 26	7/22/95	1430		✓	26W03	2	2						

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[illegible]	7/22/95 1630	[illegible]			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME: 7/22/95 1630	REMARKS: Shipped via Federal Express Airbill No 5461992174	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5503

SITE NAME: NWS CNWK

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40ml VOA	TAL Metals L PE	N/P, BD, TMEB, Chloride L PE	SVOC, TOC, PHOS. GT GLASS	TCL PEST GT GLASS	TPH GT GLASS	N/P, BD L PE	COD, TOC GT GLASS	TCL SVOC GT GLASS	REMARKS
TRIP BLANK	7.23.95	1700		✓	TB39 - 072295	2	2									
TRIP BLANK	7.23.95	0710		✓	TB40 - 072395	2	2									
SITE 11	7.23.95	1900		✓	11GW04	4	3	1								
↓	7.23.95	0915		✓	11GW02	4	3	1								
↓	↓	1110		✓	11GW05	4	3	1								
↓	↓	1015		✓	11GW01	4	3	1								
SITE 26	↓	1005		✓	26GW04	4	3	1								
SITE 5	↓	1430		✓	05GW08	7	3	1	1	2						
SITE 1	↓	1155		✓	01GW03	42	3	3			6	6	3	6	9	RUN ALSO MS/MSD
↓	↓	1700		–	01GW02	14	3	1			2	2	1	2	3	
↓	↓	0000		–	DUP-15	14	3	1			2	2	1	2	3	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
	7.24.95 1900				
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**	**RELINQUISHED BY (SIGNATURE):**	**DATE / TIME:**	**RECEIVED BY(SIGNATURE):**
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED FOR LABORATORY BY (SIGNATURE):**	**DATE / TIME:**	**REMARKS:** SHIPPED TO LANCASTER LABS A.B. # 546199219 6	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	EXPLOSIVES QT GLASS						REMARKS
SITE 26	7-23-95	1005		✓	26GW04	2	2						
SITE 1	↓	1655		✓	01GW03	KS ~~2~~ 6	~~2~~ 6						RUN ALSO MS/MSD
SITE 1	↓	1700		✓	01GW02	2	2						
DUP	↓	2000		✓	DUP-15	2	2						
SITE 1	7/24	1020		✓	01GW01	2	2						

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[illegible]	7.24.95 1915	FED EX			
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**	**RELINQUISHED BY (SIGNATURE):**	**DATE / TIME:**	**RECEIVED BY(SIGNATURE):**
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED FOR LABORATORY BY (SIGNATURE):**	**DATE / TIME:**	**REMARKS:** SHIPPED TO GPES FED EX AB # 5461992185	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 SF03

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40ml glass HCL TCL Volatiles	TCL Pest GT glass	1 liter poly HNO3 TAL Metals	500ml poly NaOH Cyanide	TCL SVOC GT glass	N/A, BOD, Chlorides Sulfate	COD, TOC, PHOS, Ammonia L PE	GT glass H2SO4	REMARKS
TRIP BLANK	7/25/95	0715		✓	TB41-072595	2	2								
"	7/25/95	0720		✓	TB42-072595	2	2								
SITE 1	7/25	0845		✓	036W01	2		2							ADD TO SAMPLE TAKEN 7-24-95
Site 19	7/25/95	0943		✓	196W02	4	3	~~1~~ EH 7/27/95	1						
Site 19	7/25/95	1002		✓	196W05	4	3		1						
Site 19	7/25/95	1143		✓	196W06	5	3		1	1					
SITE 4	7/25	1255		✓	046W01	10	3		1		3	1	2		
↓	7/25	1715		✓	046W05	10	3		1		3	1	2		
	7/25	1905		✓	046W06	10	3		1		3	1	2		
↓	7/25	1820		✓	046W04	10	3		1		3	1	2		

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	7-25-95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX AB # 5461992233	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40ml Vial w/HCl	TCL SVOC GT GLASS	TAL METALS L PE HNO3	TCL PEST GT GLASS	TPH GT GLASS	N/N. BOD L PE	COD, TOC GT GLASS H2SO4	DISSOLVED TAL METALS FILTERED L PE HNO3	REMARKS
TRIP BLANK	7-24-95	0700		✓	TB41-072495	2	2								
TRIP BLANK	7-24-95	0800		✓	TB42-072495	2	2								
SITE 1	↓	1020		✓	01GW01	14	3	3	1	2	2	1	2		
SITE 19	↓	1525		✓	19GW03	4	3		1						
"	↓	1735		✓	19GW01	4	3		1						
SITE 3	↓	1320		✓	03GW03	9	3	2	1	2				1	LOW VOL
"	↓	1365		✓	03GW01	7	3	2	1					1	LOW VOL. WILL SEND 2 MORE PEST 7.25.95

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
[signature]	7.24.95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX AB# 546199196	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 S803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml VOA HCL	TCL VOC	TCL SVOC	GT 25 MET	TAL METALS	GT 26 HNO3	BOD, NIN TARB, SULFATE, CHLORIDE	AMMONIA COD, TOC, PHOS.	L GLASS H2SO4	L PE	CR+6, CR3	500 ml PE	REMARKS
TRIP BLANK	7/27	0720		✓	TB46-072795	2	2												
"	7/27	0725		✓	TB47-072795	2	2												
SITE 7	↓	0947		✓	07GW03	7	3			1		1		2					
"	↓	1206		✓	07GW05	7	3			1		1		2					
SITE 17	↓	1522		✓	17GW03	10	3	3		1		1		2					
"	↓	1807		✓	17GW04	10	3	3		1		1		2					
SITE 2	↓	1520		✓	02GW03	8	3	3		1						1			

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	7-27-95 1905	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX A.B.# 5461992266	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml Glass HCl TCL Volatiles	1 Liter Amber TCL SVOCs	1 Liter Poly HNO3 TAL Metals	1 Liter Glass H2SO4 TOC, COD, Phos, Amm	1 Liter Plastic NaOH CN, BOD, Chlor, Sulfate	1 Liter Plastic NaOH, BOD Turb, Chlor Sulfate	REMARKS
TRIP BLANK	7/26/95	0715		✓	TB43 072695	2	2						
TRIP BLANK	7/26/95	0720		✓	TB44 - 072695	2	2						
Site 04	7/26/95	1045		✓	04GW02	10	3	3	1	2	1		
Site 07	7/26/95	1030		✓	07GW02	7	3		1	2		1	
Site 07	7/26/95	1232		✓	07GW04	7	3		1	2		1	
Site 07	7/26/95	1517		✓	07GW01	7	3		1	2		1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[illegible]	7.26.95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**	**RELINQUISHED BY (SIGNATURE):**	**DATE / TIME:**	**RECEIVED BY(SIGNATURE):**
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED FOR LABORATORY BY (SIGNATURE):**	**DATE / TIME:**	**REMARKS:** SHIPPED TO LANCASTER LAB FED EX A.B # 5461992244	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 S803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40ml Glass HCl TCL Volatiles	1 Liter Poly BOD	1 Liter Amber TCL SVOC's	1 Liter Poly HNO3 TAL Metals	1 Liter Amber TCL Pest	1 Liter Glass H2SO4 TOC, COD, Phos, Amm	1 Liter Poly Turb, Color, Sulfate NO3, BOD	REMARKS
Trip Blank	7/28/95	0900		✓	TB49-072895	2	2							
Site 05	7/28/95	0907		✓	05GW08	1		1						Resample BOD from 7/28/95 Holding time missed
Site 06	7/28/95	0930		✓	06GW01	12	3		3	1	2	2	1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
	7-28-95 1330	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB AB # 5461992270	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS CARR

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	EXPLOSIVES QT GLASS						REMARKS
SITE 02	7/27	1520		✓	02GW03	2	2						
SITE 06	7/25/95	0930		✓	06GW01	2	2						

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[illegible]	7.28.95	Fed Express			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO GPES FED EX A.B # 5461992255	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 Liter Amber Explosives						REMARKS
Site 06	8/12/95	1712		✓	06GW02	2	2						
Site 06	8/13/95	1035		✓	06GW03	2	2						
Site 06	8/13/95	1400		✓	06GW04	2	2						

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[illegible]	8/13/95 1900				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Shipped Via Federal Express Airbill No 5461992303	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS Earle

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40ml Glass HCL TCL Volatiles	1 Liter Amber Glass TCL SVOCs	1 Liter Poly HNO3 TAL Metals	1 Liter Amber Glass TCL Pest	1 Liter Clear Glass H2SO4 TOC, COD, Phos, Ammonia	1 Liter Poly Sulfate Chlorides, Sulfate, NO3, COD	1 Liter Poly Turb, Chloride, Sulfate NO2, BOD	REMARKS
TRIP BLANK	8/2/95	0745		X	TB 50-080295	2	2							
Site 17	8/2/95	1320		V	17GW01	12	3	3	1	2	2	1		
Site 06	8/2/95	1712		V	06GW02	12	3	3	1	2	2		1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
Charles Myers	8/2/95 1930	Federal Express			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Shipped via Federal Express Airbill NO 5461992281	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	16 OZ WIDE MOUTH EXPLOSIVES	1 LITER AMBER GLASS EXPLOSIVES					REMARKS
SITE 02	8/14/95	1435		✓	025505	1	1						
SITE 02	8/14/95	1505		✓	025506	1	1						
SITE 02	8/14/95	1545		✓	025504	1	1						
02 SITE	8/14/95	1625		✓	025503	1	1						
SITE 02	8/14/95	1709		✓	025508	1	1						
SITE 02	8/14/95	1710		✓	025507	1	1						
SITE 02	8/14/95	1744		✓	025502	2	2						DO MS/MSD
SITE 02	8/14/95	1746		✓	025501	1	1						
SITE 02	8/14/95	1538		✓	026W01	2		2					

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	8/14/95 1220				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Shipped via Federal Express Airbill No 2505134785	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml Glass Vial TCL Volatiles	1 liter Amber Glass TCL SVOCs	1 liter Plastic HNO3 TAL Metals	1 liter Amber Glass TCL Pest	1 liter Clear Glass H2SO4 TOC, COD, Phos, Amm	1 liter Plastic Turb, Chlor, Sulfate NO3+NO2	REMARKS
Trip Blank	8/3/95	0730		✓	TB51-080395	2	2						
Site 06	8/3/95	1035		✓	06GW03	12	3	3	1	2	2	1	
Site 06	8/3/95	1400		✓	06GW04	12	3	3	1	2	2	1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	8/3/95 1900	Federal Express			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Shipped via Federal Express Airbill No 5461992292	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5808

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40ml CLP VOLATILES	1 liter poly HNO3 TAL METALS	1 liter amber SVOCs	TCL SVOCs	120ml CLP VOLATILES	1qt WIDEMOUTH GLASS TCL SVOCs TAL METALS + PEST	~~PEST~~	REMARKS
TRIP BLANK	08/05/95	0805		X	TB53-080595	2	2							
SITE 20	08/05	0915		X	AQW-01	7	3	1	3					
SITE 3	08/05	1113		X	WET3A-1 —	3				1	2			
SITE 12	08/05	1412		X	12SS01 —	3				1	2			
SITE 12	08/05	1435		X	12SS02 —	3				1	2			
SITE 12	08/05	1420		X	12SS03 —	3				1	2			
site 12	8/5/95	0000		✓	DUP-16 —	3				1	2			
Rinsate Blank	8/5/95	1610		✓	RB27-080595	7	3	1	3					

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[signature]	8/5/95 1700	Federal Express			
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Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml glass HCl TCL Volatiles	1000 ml wide mouth TCL Pest/PCB's	500 ml Poly Chromium +6	1 Liter Amber Glass TCL SVOCs	1 Liter Plastic HNO3 TAL Metals	1 qt wide mouth TCL SVOCs TAL Metals Hexavalent Cr	REMARKS
Trip Blank	8/9/95	0750		✓	TBS2-080495	2	2						
Site 16	8/11/95	0930		✓	16SB02-03			1					Resample from 7/9/95 for TCL Pest/PCB's
Site 19	8/11/95	1257		✓	19GW06				1				Resample from 7/26/95 for Chromium +6
Site 02	8/11/95	1538		✓	02GW01		3		1	3	1		
Site 02	8/11/95	1435		✓	025505							2	
Site 02	8/11/95	1505		✓	025506							2	
Site 02	8/11/95	1545		✓	025504							2	
Site 02	8/11/95	1625		✓	025503							2	
Site 02	8/11/95	1709		✓	025508							2	
Site 02	8/11/95	1710		✓	025507							2	
Site 02	8/11/95	1744		✓	025502							4	Do MS/MSD
Site 02	8/11/95	1746		✓	025501							2	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
[signature]	8/14/95 1930	Federal Express			
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Shipped via Federal Express Airbill No 2505134446	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: 470231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL Volatiles 40 ml Glass HCl	1 Liter Amber	TCL SVOCs 1 Liter Amber	TCL Pest 1 Liter Amber	TAL Metals 1 Liter Plastic HNO3	TOC, COD, Phos, Amm Chloride, Sulfate, NH3 1 Liter Plastic	REMARKS
Rinsate Blank	8/7/95	1630		V	RB 28-080795	12	3	3	2	1	2	1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	8/7/95 1700				
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Shipped via Federal Express Airbill No 4858538496	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 221 SBCB

SITE NAME: MOS LARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	4oz clear unpreserved	1qt white plastic Nitrate/Nitrite	1qt white plastic TAL metals	40ml glass HCl TCL volatiles	120ml CLP GC/MS TCL VOLATILES	1qt wide mouth TAL MET, LANDFILL	1qt wide mouth TCL PEST/SVOC, TAL MET	REMARKS
Site 25	8/16/95	0830		✓	25 SB01-04	2	1	1						
Site 25	8/16/95	0835		✓	25 SB01-05	2	1	1						
Site 25	8/16/95	0850		✓	25 SB02-03	2	1	1						
Site 25	8/16/95	0855		✓	25 SB02-06	2	1	1						
Site 24	8/16/95	0955		✓	24 SB01-05	2	1	1						
Site 24	8/16/95	1000		✓	24 SB01-08	2	1	1						
Site 24	8/16/95	1015		✓	24 SB02-03	2	1	1						
Site 24	8/16/95	1020		✓	24 SB02-06	2	1	1						
Dup 18	8/16/95	0000		✓	DUP 18 - 080695	2	1	1						
Trip Blank	8/7/95	0805		✓	TB54-080795	2			2					
Site 7	8/7/95	1005		✓	WET 7-B2	3				1	2			
Site 12	8/7/95	1110		✓	12 SED 01	3				1		2		
Site 12	8/7/95	1120		✓	12 SED 02	3				1		2		
Site 12	8/7/95	0000		✓	DUP. 19 080795	3				1		2		

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[signature]	8/17/95 1700	Federal Express			
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Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	HOML Glass HCl	TCL Volatiles 1 Liter Amber Glass	TCL SVOCs 1 Liter Amber Glass	Pest/PCBs 1 Liter Poly HNO3	TAL Metals 1 Liter Glass H2SO4	TOC, COD, PHOS, Amm 1 Liter Poly Chlor, Sulf, NH, BOD	TPH 1 Liter Amber	Cyanide 1 Liter Poly NaOH	REMARKS
Trip Blank	8/9/95	0715		✓	TB57-080995		2								
Back Broad	8/9/95	0950		✓	BG6W04		3	3	2	1	2	1	2	1	
Site 17	8/9/95	1715		✓	S7GW05		3	3		1	2	1			

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[signature]	8/9/95 1930	Federal Express			
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Shipped via Federal Express Airbill No 4855539044 Lancaster Laboratories	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: C10231 5203

SITE NAME: NUS EARLE

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40ml Glass HCl	1L Volatiles	1L Amber TCL SVOCs	1L Amber PES/PCBs	1L Poly TAL Metals	1L Poly Cyanide	1L Glass Pesticides TCL Herbicides	1L Amber Alkalinity Sulfate	1L Amber TPH	REMARKS
Trip Blank	8/5/95	0225		✓	T1355 - 080895	2	2									
Rock Ground	8/5/95	1345		✓	BGGW03	15	3	3	2	1	1	2	1	2		

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[illegible]	8/5/95 1820	Federal Express			
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Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARIE

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	EXPLOSIVES						REMARKS
BACKGROUND	[illegible]	[illegible]		✓	[illegible]	2	2						
11	[illegible]	[illegible]			[illegible]	2	2						
SITE 13	[illegible]	[illegible]			[illegible]	2	2						

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[illegible]	8/10 95 1900				
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Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: C10231 5803

SITE NAME: NWS CHARLE

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40ml VOC-HCL	1L VOA-HCL	1000ml Amber 1L SEMI-VOA	1000ml Amber PCBS	1000ml Poly TOTAL METALS			REMARKS
STIE 29	8/8/95	1800		✓	29GW01	9	3	3	2	1				
TRIP BLANK	8/8/95	0130		✓	TB56-080895	2	2	—	—	—				

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	8-9-95 0930	LANCASTER LAB			
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB ~~CED C4 AB #~~ VIA LAB COURIER	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS CARIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml VOAs	TCL VOCs	TCL SVOC GT GLASS	TCL PEST/PCBs GT GLASS	TAL METALS L PE	TAL DISSOLVED METALS L PE HNO3	NH3, BOD, CHLORIDE, SULFATE - L PE	AMMONIA, COD, TOC, PHCS - GT GLASS H2SO4	REMARKS
TRIP BLANK	8/10	1845		✓	TB59-081095	2	2								
"	8/11	0725		✓	TB60 081195	2	2								
SITE 13	8/11/95	1230		✓	13GW01	13	3	3	2	1	1	1	2		
"	8/11/95	1225		✓	13GW03	13	3	3	2	1	1	1	2		
SITE 14	8/11/95	1250		✓	14GW07	4	3			1					
SITE 13	8/~~10~~ 11/95	1900		✓	13GW05	12	3	3	2	1		1	2		

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Shipped Via Federal Express Airbill NO 2505134450 Lancaster Labs	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: 670231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40ml glass HCl TCL volatiles	SVOCs GT glass	TAL METALS L PE HNO3	AMMONIA, COD, TOC PHOS, H2SO4	NIN, BOD, TURB CHLORIDE, SULFATE L PE	TCL PEST, PCB GT glass	REMARKS
Trip blank	8/10/95	0230		✓	TBS8-08/10/95	2	2						
SITE 13	11	1455		✓	13GW04	13 ~~10~~	3	3	1	2	1	2	13 TOTAL BOTTLES

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[signature]	8.10.95 1900	FED EX			
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Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5203

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml Glass HCl	TCL Volatiles 1 liter amber	TCL SVOCs 1 liter poly HNO3	TAL Metals 1 liter amber	TCL Pest 1 liter amber	TCL PCBs	TAL Dissolved Metals LPC HNO3	REMARKS
Site 23	8/11/95	1840		✓	23GW01	9	3	3	1	2				
Trip Blank	8/11/95	1815		✓	TB61-081195	2	2							
Trip Blank	8/12/95	0715		✓	TB62-081295	2	2							
Site 29	8/12/95	1118		✓	29GW02	9	3	3	1		2			
SITE 23	8/12	1245		✓	23GW03	10	3	3	1	2		1		

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	8/12/95 1600	FED EX			
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX AB# 250513446	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS CARIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	CYANIDES QT 9/1/95						REMARKS
SITE 13	8/11	1230		✓	13GW01	2	2						
11	8/11/95	1225		✓	13GW03	2	2						
11	8/10/95	1900		✓	13GW05	2	2						
Site 23	8/11/95	1840		✓	23GW01	2	2						
Site 29					~~29GW02~~ CM 8/12/95								
SITE 23	8/12	1245		✓	23GW03	2	2						(23GW03) (SAMPLE DATE 8.12.95)

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[signature]	8.12.95 1600				
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RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO GPCS (CD) FX A.B. # 2505134472	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS CARIF

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	EXPLOSIVES QT GLASS (WATER)		EXPLOSIVES KS 1602 W/M GLASS (SOIL)				REMARKS
SITE 23	8/12	1905		✓	23GW02	2	2						✓
Site 01	8/13/95	1642		✓	01GW05	2	2						✓
SITE 2	8/14	1230		✓	02GW07	2	2						NOT CONTAINED IN THIS SHIPMENT -WILL ARRIVE FROM LANCASTER LABS
11	8/14	1615		✓	02GW~~07~~ KS 04	2	2						(02GW04) ✓
SITE 1	8/14	1835		✓	01GW04	2	2						✓
SITE 13	8/14	1350		✓	13GW02	2	2						✓
SITE 23	8/15	0955		✓	23SED01	1			1				
		1023		✓	23SED02	1			1				
		1120		✓	23SB02-02	1			1				
		1210		✓	23SED03	1			1				
		1355		✓	23SED04	1			1				
		1505		✓	23SED05	1			1				
		0000		✓	DUP-20	1			1				
RINSATE BLANK	8/15	1745		✓	RB29-081595	2	2						✓

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[signature]	KS 8/15/95 1840				
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SHIPPED 8.15.95 KES					
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Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	HOAL Glass HCl	TCL Volatiles 1 Liter Amber	TCL SVOCs 1 Liter Amber	TPH 1 Liter Poly HNO3	TAL Metals 1 Liter Poly HNO3 Dissolved TAL Metals	TCL PEST QT GLASS	1 Liter Glass H2SO4 COD, TOC	1 Liter Poly NH3, BOD	1 Liter Glass H2SO4 TOC, COD, phos, Amm	1 Liter Poly BOD, NH3, chloride, Sulfate	1 Liter Amber PESTPCB	CR+6	REMARKS
Trip Blank	8/12/95	1030		✓	TB63-081295	2	2												
Site 16	8/12/95	1118		✓	16GW02	10	3	3	2	1	1								
TRIP BLANK	8/12	1520		✓	TB64-081295	2	2												
SITE 23	8/12	1905		✓	23GW02	10	3	3		1	1	2							
SITE 16	8/12	1210		✓	16GW06	10	3	3	2	1	1								
11	8/12	1710		✓	16GW01	9	3	3	2	1									
Site 16	8/13/95	1225		✓	16GW03	9	3	3	2	1									
Site 01	8/13/95	1642		✓	01GW05	15	3	3	2	1	1	2	2	1					
Site 13	8/14/95	1350		✓	13GW02	14	3	3	2	1					2	1	2		
SITE 2	8/14	1230		✓	02GW07	9	3	3		1	1							1	
11	8/4	1615		✓	02GW04	8	3	3		1								1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
	8-A-95 1840	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX AB# 2505134483	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 230 5803

SITE NAME: NWS EARIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	EXPLOSIVES GT 9CLASS						REMARKS
SITE 26	8/14	1140		✓	26GW06	2	2						
		1620		✓	26GW05	2	2						(26GW05)
		1210		✓	23SW03	2	2						
		1355		✓	23SW04	2	2						
		1505		✓	23SW05	2	2						
					~~DUP-20~~ KS								
DUP	8/14	0000		✓	DUP-20	2	2						

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[signature]	8.15.95 1840	FED EX			
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Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ml VIAL HCL	TCL SVOCS QT GLASS	TPH QT GLASS	TAL METALS L PE HNO3	TCL PEST QT GLASS	COD, TOC L GLASS	NITRATE/NITRITE, BOD - L PE	REMARKS
TRIP BLANK	8/14	0930		—	TB65-081495	2	2							
SITE 1	8/14	1835		—	01GW04	14	3	3	2	1	2	2	1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	8.15.95 1950	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX AB# 2505134520	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 S803

SITE NAME: NWS EARIE

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ML VIALS HCL	TAL METALS 1 PE HNO3						REMARKS
TRIP BLANK	8/14	0935		—	TB66-081495	2	2							
SITE 26	8/15	1140		—	26GW06	4	3	1						
"	8/15	1620		—	26GW05	4	3	1						

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[illegible]	8.16.95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX AB# 5461989643	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS CARIE

SAMPLERS (SIGNATURE): [signature] C.M.

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 4 oz GLASS	TCL SVOC, TAL METALS, 4 oz GLASS	TCL PEST - GT	TCL volatiles 40 ml glass HCL	TCL SVOCs 1 Liter Amber glass	TCL PEST 1 Liter Amber glass	1 Liter poly nitric TAL metals	REMARKS
SITE 23	8/15	0955		✓	23SED01	2	1	1						
		1023		✓	23SED02	2	1	1						
		1120		✓	23SB02-02	2	1	1						
		1210		✓	23SED03	2	1	1						
		1355		✓	23SED04	2	1	1						
		1505		✓	23SED05	2	1	1						
		0100		✓	DUP-20-081595	2	1	1						
Site 23	8/15/95	1210		✓	23SW03				3	3	2	1		
Site 23	8/15/95	1355		✓	23SW04				3	3	2	1		
Site 23	8/15/95	1505		✓	23SW05				3	3	2	1		
Site 23	8/15/95	0100		✓	DUP 20-081595				3	3	2	1		
Site 23	8/15/95	1215		✓	RB29-081595				3	3	2	1		

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	8/16/95 1100	FED EX			
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**	**RELINQUISHED BY (SIGNATURE):**	**DATE / TIME:**	**RECEIVED BY(SIGNATURE):**
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED FOR LABORATORY BY (SIGNATURE):**	**DATE / TIME:**	**REMARKS:** SHIPPED TO LANCASTER LAB FED EX AB# 5761989643	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS CARLC

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml VOA - HCL	TCL VOLATILES	TCL SVOC GT GLASS	TAL METALS QT PE HNO3	TPH QT GLASS	N/N, BOD, QT PE CHLORIDE, SULFATE AMMONIA, COD, TOC, PHOS	QT GLASS H2SO4	REMARKS
TRIP BLANK	8/22/95	0705		X	TB68-082295	(MS) ~~3~~ 2	2							
SITE 16	↓	1034		X	MW-1	9	3	3	1	2				4" FLUSH MT. BEHIND BLD C-18
SITE 4	↓	1352		X	04GW07	10	3	3	1		1	2		

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	8.22.95 1830	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX AB# 5461988873	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC AQUEOUS HCL	TCL SVOC GT GLASS	TAL METALS LPE HNO3	MIN BOD CHLORIDE SULFATE - GT PE	COD, TOC, PHOS AMMONIA GT GLASS H2SO4	TCL PCB GT GLASS	REMARKS
TRIP BLANK	9/21	1130		✓	TB67-082195	2	2						
SITE 4	"	1225		✓	04SW02	12	3	3	1	1	2	2	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
	9-21-97 1800	FED EX			
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**	**RELINQUISHED BY (SIGNATURE):**	**DATE / TIME:**	**RECEIVED BY(SIGNATURE):**
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED FOR LABORATORY BY (SIGNATURE):**	**DATE / TIME:**	**REMARKS:** SHIPPED TO LANCASTER LAB FED EX AB# 5461988884	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

WATCHS

PROJECT NO.: CTO 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC ACID/NAL HCL	TCL SVOC GT GLASS	TCL PEST/PCB GT GLASS	TPH GT GLASS	TAL METALS L PE HNO3	N/N, ISO. L PE CHLORIDE, SULFATE	AMMONIA COD. TOC, PHOS. GT GLASS H2SO4	CYANIDE - L PE - NaOH	HARDNESS - SUMM PE	TOC GT GLASS H2SO4	REMARKS
TRIP BLANK	8/23	1530		✓	TB70-082395	2	2										
BACKGROUND	8/23	1910		✓	BGGW02	15	3	3	2	2	1	1	2	1			8.23.95
"	8/24	0835		✓	BGSW30	16	3	3	2	2	1	1	2	1	1		
RINSATE BLANK	8/24	1520		✓	RB30-082495	15 ~~10~~ 12	3	3	2	2	1					1	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	8.24.95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX AB # 2505134586	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml VIALS TCL VOC	TCL SVOC GT GLASS	TCL PEST/PCB GT GLASS	TPH GT GLASS	TAL METALS LPE HNO_3	NIN BOD GT PE CHLORIDE SULFATE	AMMONIA TOT. PHOS. GT GLASS H_2SO_4	CYANIDE LPE NaOH	REMARKS
TRIP BLANK	8/22	1620		✓	TBG9-082295	2	2								
BACKGROUND	8/22	1120		✓	~~BACKGROUND~~ BG-GW01	15	3	3	2	2	1	1	2	1	(8.23.95)
DUP	"	0000		✓	DUP21-082395	15	3	3	2	2	1	1	2	1	"

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[illegible]	8.23.95 1730	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO ~~FED~~ LANCASTER LAB FED EX AB# 5461989665	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	EXPLOSIVES QT GLASS	EXPLOSIVES QT GLASS						REMARKS
DUP	8/23	0000		✓	DUP 21 · 082395	2	2							
BACKGROUND	↓	1120		✓	BGGW01	2	2							WATER
↓	↓	1910		✓	BGGW02	2	2							
↓	8/24	0835		✓	BGSW30	2	2							
SITE 13	↓	1115		✓	RS ~~S1~~ 13SED01	1		1						SOIL
"	↓	1140		✓	13SED03	1		1						
FIELD BLANK	8/24	1520		✓	RB30-082495	2	2							(TROWEL) WATER

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[illegible]	8.24.95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO GPES FED EX AB # 2505134612	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

SOIL/SED

PROJECT NO.: CTO 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 4 oz w/m glass	TCL SVOC, TCL PEST QT glass TAL METALS, TOC	TAL METALS 16 oz glass	GRAIN SIZE 16 oz glass	TCL SVOC TCL PEST/PCB QT glass	TCL SVOC QT glass TAL METALS	TCL SVOC TOC QT glass TAL MET.	TAL METALS, TCL PEST/PCB TPH, TOC QT glass	REMARKS
SITE 17	8/24	0940		✓	17SED01	3	1	1		1					
"		1005		✓	17SS01	3	1		1		1				
SITE 20		1420		✓	20SS01	2	1					1			
		1430		✓	20SS02	2	1					1			
		1440		✓	20SS05	2	1					1			
		1445		✓	20SS03	3	1			1			1		
		1450		✓	20SS04	3	1			1			1		
↓		1500		✓	20SED01	3	1			1			1		
DUP	↓	0000		✓	DUP22-082495	2	1					1			
SITE 13	8/24	1115		✓	13SED01	4	1			1				2	
"	"	1140		✓	13SED03	4	1			1				2	

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	8 24 95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX AB# 2505134586	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS CARIE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL VOC 40 ML VIAL HCL	TCL SVOC GT GLASS	TAL METALS 1 PE HNO3	TPA GT GLASS	G.C. FINGER PRINT 40 ML VIAL	SPECIFIC GRAVITY GT GLASS	REMARKS
SITE 16	8/31	1505		-	16GW04	9	3	3	1	2			WATER
↓	↓	1150		-	16GW05	9	3	3	1	2			"
↓	↓	1545		-	16GW04-OIL	3					2	1	OIL LAYER
↓	↓	1220		-	16GW05-OIL	3					2	1	"

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	8.31.95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LAB FED EX A.B.# 5461988814-	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.:	SITE NAME:
CTO 231 5803	NWS CARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCL PEST/PCB QT w/m glass (WATER)	QT glass (WATER)	TCL PEST/PCB (DRUMS)	TCL PCB QT glass (DRUMS)	TCL PCB QT w/m glass (SOIL)			REMARKS
BLD S-86	8/30	1600		✓	BLD S-86 SS	1	1							→ SOILS
"	"	1630		✓	BLD S-86 SB01	1	1							
RINSATE BLANK	"	1640		✓	RB31-083195	2		2						
DRUM	8/31	1235	✓		16MW05-01 & 02	2			2					
		1425	✓		16MW04-03 & 04	2			2					
↓		1640	✓		C8/1-MW01-05 & 06	1				1				→ SOILS
↓		1700		✓	16MW05-07	1				1				

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	8.31.95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO LANCASTER LABS FED EX AB # 5461988814	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS EARLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml Glass HCL TCL Volatiles	1 Liter Glass TCL SVOCs	1 Liter Poly HNO3 TAL Metals	250 ml Poly Chromium +6 CR+3			REMARKS
Trip Blank	7/26/95	1800		✓	T13 45 - 072695	2	2						
Site 02	7/26/95	1815		✓	02GW07	8	3	3	1	1			

SAMPLES PITCHED PER JOHN M.

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	7/26/95 1930	Fed Express			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Shipped Via Federal Express Airbill No 5461992325	

Order No. 70440 (0693)

DRUM SAMPLING

CHAIN OF CUSTODY RECORD

PROJECT NO.: CTO 231 5803

SITE NAME: NWS ERIE

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	WATER	SOIL						REMARKS (ALL QT GLASS JARS) DRUM #
SITE 16	8/31	1230		✓	16MW05-01	1	1							WATER 01
↓	↓	1235		✓	16MW05-02	1	1							WATER 02
↓	↓	1420		✓	16MW04-03	1	1							WATER 03
↓	↓	1425		✓	16MW04-04	1	1							WATER 04
↓	↓	1700		✓	16MW05-07	1		1						SOIL 07
BLD C8	↓	1635		✓	~~C8~~ C8/1-MW01-05	1		1						SOIL 05
↓	↓	1640		✓	C8/1-MW01-06	1		1						SOIL 06

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
	8-31-95 1900	FED EX			
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: SHIPPED TO WAYNE OFFICE; HOLD AT 4°C FED EX A.B. # 5461988733	

Order No. 70440 (0693)

NOTE: The wrong date was inadvertantly placed on each sample. The lab was notified and the correct changes were made i.e. 12/3/95 into 12/4/95

CHAIN OF CUSTODY RECORD

PROJECT NO.: 5803

SITE NAME: NUS-EAGLE

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	16 ml vial TCL VOC	4oz Glass TCL VOC	16 oz Glass TCL SVOC	4oz Glass TPH	1L clear TPH	1L amber TCL SVOC	1L amber pesticides/PCBs	REMARKS	
GA	12-3-95	1030		✓	TB-120395	3	3	–	–	–	–	–	–	Trip Blank	238.70
Site Q	12-3-95	1120		✓	Q-SB02-02	4	–	2	2	–	–	–	–		250.25 508.20
Site Q	12-3-95	1130		✓	Q-SB02-04	4	–	2	2	–	–	–	–		250.25 508.20
Site Q	12-3-95	1340		✓	Q-SD-01	5	–	2	2	1	–	–	–		250.25 508.20 65.45
Site Q	12-3-95	1430		✓	Q-SB03-01	5	–	2	2	1	–	–	–		250.25 508.20 65.45
GA	12-3-95	1125		✓	FB-120395	6	3	–	–	–	1	1	1	Field Blank (DO Analysis)	238.70 5290 469.70 223.30
GA	12-3-95	1135		✓	RB-120395	6	3	–	–	–	1	1	1	Rinsate Blank (DO analysis)	238.70 53.90 469.70 223.30

5374.60

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
[signature]	12-3-95 1140				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: FedEx AB # 2505135485	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.:	SITE NAME:
SAMPLERS (SIGNATURE):	

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 liter amber Explosives						REMARKS
Site 2	7/26/95	1510		V	026W07	2	2S						

SAMPLES PICKED PER JOHN M.

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS:	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: 5803

SITE NAME: NWS Earle

SAMPLERS (SIGNATURE): Paul M. Dan

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml TCL VOC	1L TPH	1L amber TCL SVOC	1L amber pesticides/PCBs			REMARKS
QA	12/5/95	1600		✓	RB-120595	6	3	1	1	1			DO NOT analyze. Rinsate Blank

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
Paul M. Dan	12/5/95 1800				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Fed Ex # 2505133002	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: 5803

SITE NAME: NWS Earle

SAMPLERS (SIGNATURE): Paul M. Ross

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml vial TCL VOC	1L amber TCL SVOC	1L clear TPH	4 oz glass TCL VOC	4 oz glass TAL metals	16 oz glass TCL SVOC	16 oz glass TCL pest./PCBs	REMARKS	
QA	12-5-95	0730		✓	TB-120515	3	3	–	–	–	–	–	–	Trip Blank	238.7
Site Q	12-5-95	0830		✓	Q-HP-04	6	3	2	1	–	–	–	–		238.7 469.7 53.9
Site Q	12-5-95	0945		✓	Q-HP-03	6	3	2	1	–	–	–	–		238.7 469.7 53.9
Site Q	12-5-95	1010		✓	Q-HP-02	6	3	2	1	–	–	–	–		238.7 469.7 53.9
Site 27	12-5-95	1115		✓	27-SB02-01	6	–	–	–	2	2*	1	1*	250.25 +335.72 + 508.2 + 238.70 *(limited volume)	1332.87
Site 27	12-5-95	1120		✓	27-SB02-03	7	–	–	–	2	2	1	2	250.25 + 335.72 + 508.2 + 238.7	1332.87
Site 27	12-5-95	1140		✓	27-SB02-10	7	–	–	–	2	2	1	2	250.25 + 335.72 + 508.2 + 238.7	"
Site 27	12-5-95	1200		✓	27-SB01-01	7	–	–	–	2	2	1	2	250.25 + 335.72 + 508.2 + 238.7	"
Site 27	12-5-95	1206		✓	27-SB01-03	7	–	–	–	2	2	1	2	250.25 + 335.72 + 508.2 + 238.7	"
Site 27	12-5-95	1215		✓	27-SB01-10	7	–	–	–	2	2	1	2	250.25 + 335.72 + 508.2 + 238.7	"
Site 26	12-5-95	1320		✓	26-AQWCT	3	3	–	–	–	–	–	–	238.70	238.70
Site 26	12-5-95	1116		✓	26-SBDEC95-01	2	–	–	–	2	–	–	–	250.25	250.25
Site 26	12-5-95	1110		✓	26-SBDEC95-02	2	–	–	–	2	–	–	–	250.25	250.25
															11,262.0

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
Paul M. Ross	12/5/95 1800				
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**	**RELINQUISHED BY (SIGNATURE):**	**DATE / TIME:**	**RECEIVED BY (SIGNATURE):**
RELINQUISHED BY (SIGNATURE):	**DATE / TIME:**	**RECEIVED FOR LABORATORY BY (SIGNATURE):**	**DATE / TIME:**	**REMARKS:** Fed Ex # 2505133002	

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

PROJECT NO.: 5803

SITE NAME: NWIS Earle

SAMPLERS (SIGNATURE): [signature]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml vial TCL VOC	1 L amber TCL SVOC	1 L clear TCL pest/pcb	1 L clear TPH	500 ml poly TAL metals		REMARKS
QA	12-6-95	1700		✓	RB-120695	7	3	1	1	1	1		Rinsate Blank DO Analysis

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
[signature]	12/6/95 1830				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Fed Ex # 250 513 2991	

Order No. 70440 (0693)

1 of 2

CHAIN OF CUSTODY RECORD

PROJECT NO.: 5803

SITE NAME: NWS- Earle

SAMPLERS (SIGNATURE): Paul M. Dum

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml vial	4oz glass TCL VOC	16 oz glass TCL VOC	32 oz glass TCL SVOC	4 oz glass TCL pest./PCB's	4 oz glass TAL metals	4 oz glass TPH	16 oz glass TCL Pest./PCB's	4 oz glass Mercury	REMARKS	
QA	12/6/95	0745		✓	TB- 120695	3	3	–	–	–	–	–	–	–	–	Trip Blank.	238.70
Site L	12/6/95	0900		✓	L-SS-03	21	–	6	3	3	6	3	–	–	–	250.05 335.72 508.20 65.45 238.70 DO MS/MSD	13983
Site L	12/6/95	0915		✓	L-SS-08	7	–	2	1	1	2	1	–	–	–	"	1398.3
Site L	12/6/95	0950		✓	L-SS-01	7	–	2	1	1	2	1	–	–	–	"	1398.3
Site L	12/6/95	1015		✓	L-SS 06	7	–	2	1	1	2	1	–	–	–	"	1398.3
Site L	12/6/95	1035		✓	L-SS-05	7	–	2	1	1	2	1	–	–	–	"	1398.32
Site L	12/6/95	1050		✓	L-SS-02	8	–	2	1	–	2	1	2	–	–	"	1398.3
Site L	12/6/95	1110		✓	L-SS-04	8	–	2	1	–	2	1	2	–	–	"	1398.3
Site L	12/6/95	1130		✓	L-SS-07	8	–	2	1	–	2	1	2	–	–	"	1398.32
Site 13	12/6/95	1300		✓	13-GW-02	3	3	–	–	–	–	–	–	–	–		238.70
Site 14	12/6/95	1410	✓	~~✓~~	14 FS-01	1	–	–	–	–	–	–	–	1			55.4
Site 27	12/6/95	1435		✓	27 SB03-01	7	–	2	1	–	2	–	2	–	–	250.25 335.72 508.20 238.70	1332.3
Site 27	12/6/95	1455		✓	27 SB03-03	7	–	2	1	–	2	–	2	–	–	"	1332.3
27	12/6/95	1540		✓	27 SB03-06	7	–	2	1	–	2	–	2	–	–	"	1332.8

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
Paul M. Dum	12/6/95 1830				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY(SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS: Fed Ex # 2505132991	

Total 15718.0

Order No. 70440 (0693)

CHAIN OF CUSTODY RECORD

7558
2429129

PROJECT NO.: 5803

SITE NAME: NWS Earle

SAMPLERS (SIGNATURE): Donald Whalen

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	4 oz VOA						REMARKS
	12/22	1005		✓	L-SS-06-RPsample	1	1						

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
Donald Whalen	12/22/15 1630				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS:	
			12/23/15 1110	Fed Ex airbill no. 801135426 0	

Order No. 70440 (0693)

APPENDIX H

SLUG TEST RESULTS

CALCULATION WORKSHEET Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT	JOB NUMBER
US NAVY	CTO - 231
SUBJECT: Slug Volume Calculations	
BASED ON	DRAWING NUMBER

BY	CHECKED BY	APPROVED BY	DATE
Paul Davis			

The initial water level change of the slug test occurs when the volume of water displaced in the well equals the volume of the Test Slug, or:

$$\pi r^2 h = \pi R^2 H_0$$

where:

r = radius of test slug = 0.75 inches
h = length of test slug = 38.0 inches
R = radius of well = 1.0 inches
H_0 = Initial water level change resulting from removal (or addition) of test slug in inches.

Therefore:

$$H_0 = \frac{\pi r^2 h}{\pi R^2} = \left(\frac{r}{R}\right)^2 h$$

$$H_0 = \left(\frac{0.75}{1.0}\right)^2 (38.0) \text{ inches}$$

$$H_0 = 21.375 \text{ inches}$$
$$(\div 12 \text{ inches / foot})$$

$$H_0 = 1.78 \text{ ft.}$$

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET **NUS CORPORATION**

PROJECT NAME: NWS - Earle WELL/BORING NO.: MW1-4
PROJECT NO.: 5803 GEOLOGIST: S. Conti
WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' / 14' TEST NO.: 1
STATIC WATER LEVEL (Depth/Elevation): (6.05' bgs) 7.94' / TPVC DATE: 7-19-95
TEST TYPE (Rising/Falling/Constant Head): Rising Head CHECKED:
METHOD OF INDUCING WATER LEVEL CHANGE: Slug : 38" x 1.5" (H_o = 1.78') PAGE 1 OF

TIME	ELAPSED TIME (min or sec.)	MEASURED DEPTH TO WATER (ft.)	CORRECTION	DEPTH TO WATER (ft.)	DRAWDOWN OR HEAD (ft.)	h/H_o	REMARKS
	0.01				-1.76	-0.99	
	0.02				-1.69	-0.95	
	0.03				-1.62	-0.91	
	0.04				-1.55	-0.87	
	0.05				-1.50	-0.84	
	0.06				-1.42	-0.80	
	0.07				-1.37	-0.77	
	0.08				-1.31	-0.74	
	0.09				-1.26	-0.71	
	0.10				-1.20	-0.67	
	0.11				-1.14	-0.64	
	0.12				-1.09	-0.61	
	0.13				-1.05	-0.59	
	0.14				-1.00	-0.56	
	0.15				-0.97	-0.54	
	0.16				-0.93	-0.52	
	0.17				-0.90	-0.51	
	0.18				-0.86	-0.48	
	0.19				-0.83	-0.47	
	0.20				-0.80	-0.45	
	0.21				-0.77	-0.43	
	0.22				-0.75	-0.42	
	0.23				-0.73	-0.41	
	0.24				-0.71	-0.40	
	0.25				-0.69	-0.39	
	0.26				-0.67	-0.38	
	0.27				-0.66	-0.37	
	0.28				-0.65	-0.37	
	0.29				-0.64	-0.36	

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — NUS CORPORATION

PROJECT NAME: NWS - Earle WELL/BORING NO.: MW 1-4
PROJECT NO.: 5803 GEOLOGIST: S. Conti
WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' / 14' TEST NO.: 2
STATIC WATER LEVEL (Depth/Elevation): (6.05' bgs) 7.94' TPVC DATE: 7-19-95
TEST TYPE (Rising/Falling/Constant Head): Rising Head CHECKED:
METHOD OF INDUCING WATER LEVEL CHANGE: Slug: 38" x 1.5" (H_o = 1.78') PAGE 2 OF

TIME	ELAPSED TIME (min or sec.)	MEASURED DEPTH TO WATER (ft.)	CORRECTION	DEPTH TO WATER (ft.)	DRAWDOWN OR HEAD (ft.)	h/H_o	REMARKS
	0.30				-0.62	-0.35	
	0.31				-0.61	-0.34	
	0.32				-0.60	-0.34	
	0.33				-0.59	-0.33	
	0.35				-0.59	-0.33	
	0.40				-0.55	-0.31	
	0.45				-0.53	-0.30	
	0.50				-0.51	-0.29	
	0.55				-0.48	-0.27	
	0.60				-0.46	-0.26	
	0.65				-0.45	-0.25	
	0.70				-0.43	-0.24	
	0.75				-0.41	-0.23	
	0.80				-0.39	-0.22	
	0.85				-0.37	-0.21	
	0.90				-0.34	-0.19	
	0.95				-0.32	-0.18	
	1.00				-0.29	-0.16	

CALCULATION WORKSHEET Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT		JOB NUMBER	
US NAVY		CTO-231	
SUBJECT	Hydraulic Conductivity Calculations		
BASED ON		DRAWING NUMBER	
BY Paul Davis	CHECKED BY	APPROVED BY	DATE

MW 1-4

$$K = \frac{r^2 \ln(L/R)}{2 L T_0}$$

where:

$r = 1$ in. $= 0.0833$ ft.
$R = 4$ in. $= 0.333$ ft.
$L = 7.95$ ft (TD 14' bgs − WL 6.05' bgs)
$T_0 = 1.16$ min. (from plot)

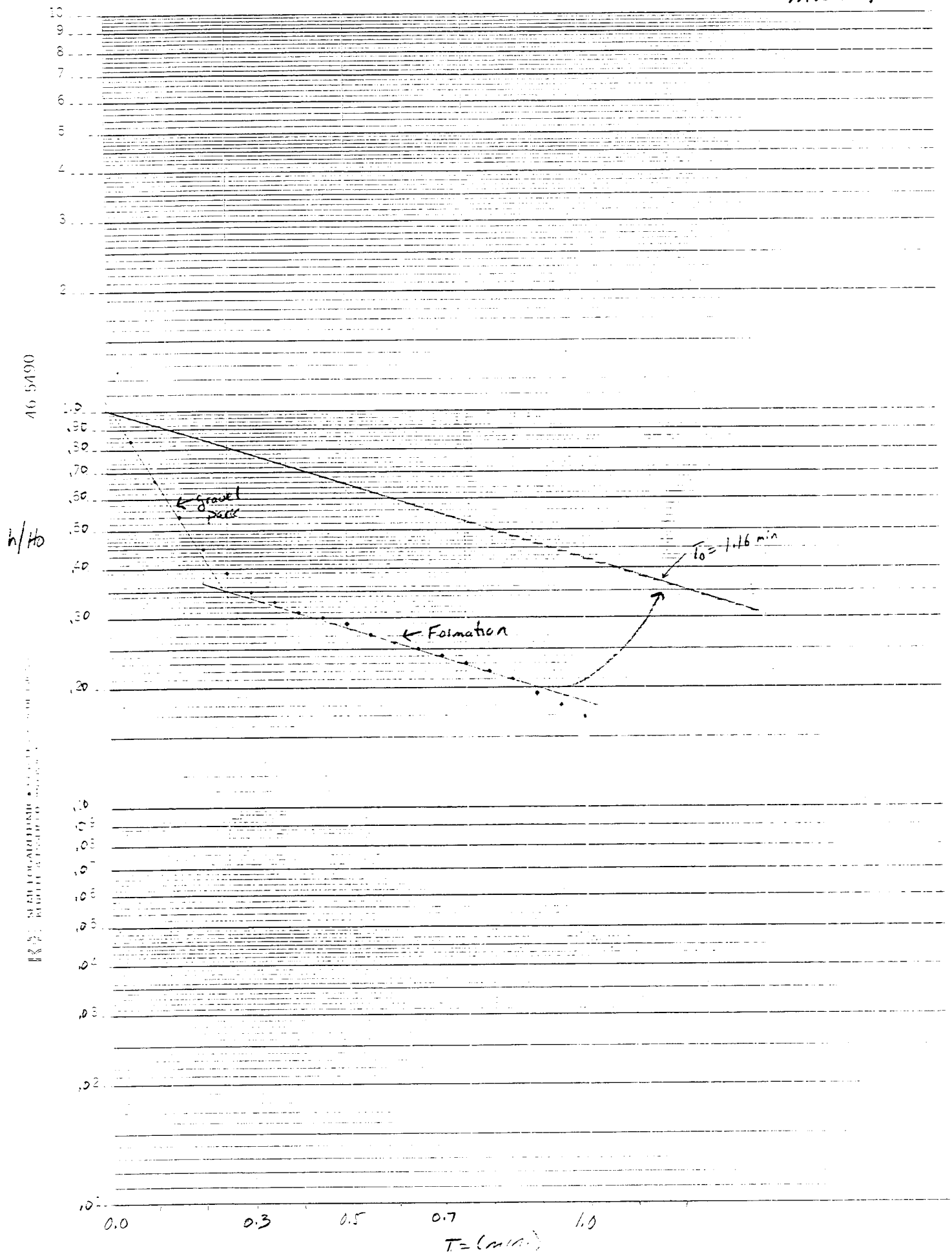
$$K = \frac{(0.0833')^2 \ln(7.95'/.333')}{2(7.95')(1.16 \text{ min})}$$

$$K = 1.19 \times 10^{-3} \text{ ft/min} \left(\times \frac{2.54 \text{ cm}}{\text{in.}} \times \frac{12 \text{ in}}{\text{ft}} \times \frac{1 \text{ min}}{60 \text{ sec}}\right)$$

$$K = 6.06 \times 10^{-4} \text{ cm/sec}$$

bgs = below ground surface.

MW 1-4



HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — HALLIBURTON NUS CORPORATION

PROJECT NAME: NWS EARLE WELL/BORING NO.: MW1-4

PROJECT NO.: 5803 GEOLOGIST: CONTI

WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' TEST NO.: 1

STATIC WATER LEVEL (Depth/Elevation): 7.94 TPVC (6.05' bgs) DATE: 7-19-95

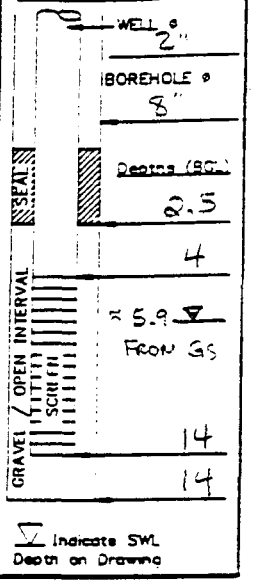
TEST TYPE (Rising/Falling/Constant Head): RISING HEAD CHECKED:

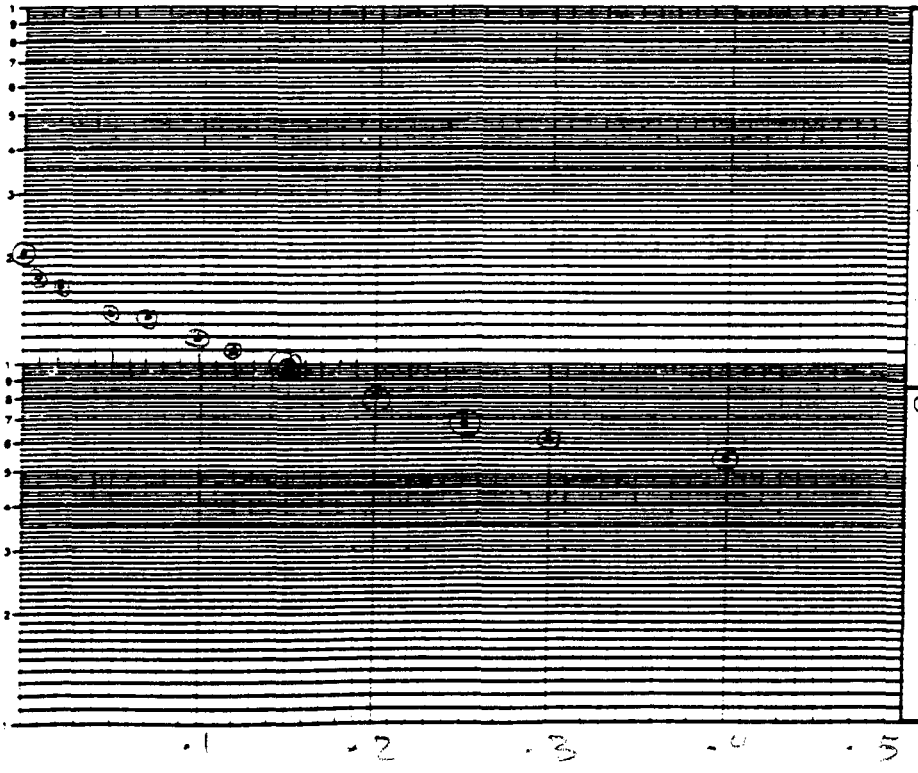
METHOD OF INDUCING WATER LEVEL CHANGE: 2" SLUG PAGE ___ OF ___

REFERENCE PT. FOR WL MEAS. (Top of Casing, Transducer, etc.): TPVC

ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)	ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)

WELL SCHEMATIC





REMARKS:

XD = 7.90 ± @ 1355

XD = 7.67 @ 1318

XD = 7.60 @ 1322

* XD = 7.61 @ 1325

TPVC IS 1.89' above ground surface

CALCS, SKETCH MAPS, ETC.:

SE1000C
Environmental Logger
07/19 13:48

Unit# 00000 Test 0

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	00007
Reference	0.000
Linearity	0.120
Scale factor	21.110
Offset	0.000
Delay mSEC	50.000

Step 0 07/19 13:52:00

Elapsed Time	INPUT 1
0.0000	-2.104
0.0133	-1.926
0.0266	-1.916
0.0199	-1.755
0.0133	-1.723
0.0166	-1.710
0.0200	-1.685
0.0233	-1.858
0.0266	-1.849
0.0300	-1.815
0.0333	-1.596
0.0366	-1.577
0.0400	-1.551
0.0433	-1.532
0.0466	-1.513
0.0500	-1.500
0.0533	-1.456
0.0566	-1.443
0.0600	-1.424
0.0633	-1.398
0.0666	-1.392
0.0700	-1.373
0.0733	-1.354
0.0766	-1.328
0.0800	-1.311
0.0833	-1.287
0.0866	-1.271
0.0900	-1.258
0.0933	-1.227
0.0966	-1.214
0.1000	-1.201
0.1033	-1.182
0.1066	-1.157
0.1100	-1.144

MW1-4
RISING HEAD

1-4

0.1133	-1.132
0.1166	-1.113
0.1200	-1.093
0.1233	-1.081
0.1266	-1.062
0.1300	-1.049
0.1333	-1.030
0.1366	-1.017
0.1400	-1.004
0.1433	-0.992
0.1466	-0.979
0.1500	-0.966
0.1533	-0.947
0.1566	-0.941
0.1600	-0.928
0.1633	-0.915
0.1666	-0.903
0.1700	-0.896
0.1733	-0.884
0.1766	-0.871
0.1800	-0.858
0.1833	-0.845
0.1866	-0.839
0.1900	-0.826
0.1933	-0.814
0.1966	-0.807
0.2000	-0.795
0.2033	-0.788
0.2066	-0.782
0.2100	-0.769
0.2133	-0.763
0.2166	-0.756
0.2200	-0.750
0.2233	-0.744
0.2266	-0.737
0.2300	-0.731
0.2333	-0.725
0.2366	-0.718
0.2400	-0.706
0.2433	-0.699
0.2466	-0.693
0.2500	-0.693
0.2533	-0.686
0.2566	-0.680
0.2600	-0.674
0.2633	-0.667
0.2666	-0.667
0.2700	-0.661
0.2733	-0.655
0.2766	-0.648
0.2800	-0.648
0.2833	-0.642
0.2866	-0.636
0.2900	-0.636
0.2933	-0.629
0.2966	-0.623
0.3000	-0.623
0.3033	-0.616
0.3066	-0.610
0.3100	-0.610
0.3133	-0.604
0.3166	-0.604
0.3200	-0.597
0.3233	-0.591
0.3266	-0.591
0.3300	-0.585

1-4

0.3333	-0.585
0.3500	-0.591
0.3667	-0.572
0.3833	-0.566
0.4000	-0.553
0.4167	-0.540
0.4333	-0.534
0.4500	-0.527
0.4667	-0.521
0.4833	-0.508
0.5000	-0.508
0.5167	-0.496
0.5333	-0.489
0.5500	-0.483
0.5667	-0.477
0.5833	-0.477
0.6000	-0.464
0.6167	-0.457
0.6333	-0.457
0.6500	-0.451
0.6667	-0.445
0.6833	-0.438
0.7000	-0.432
0.7167	-0.425
0.7333	-0.419
0.7500	-0.413
0.7667	-0.407
0.7833	-0.400
0.8000	-0.388
0.8167	-0.381
0.8333	-0.375
0.8500	-0.368
0.8667	-0.356
0.8833	-0.349
0.9000	-0.343
0.9167	-0.330
0.9333	-0.324
0.9500	-0.318
0.9667	-0.305
0.9833	-0.299
1.0000	-0.286
1.2000	-0.171
1.4000	-0.114
1.6000	-0.076
1.8000	-0.050
2.0000	-0.038
2.2000	-0.031
2.4000	-0.025
2.6000	-0.019
2.8000	-0.019
3.0000	-0.012
3.2000	-0.012
3.4000	-0.006
3.6000	-0.006
3.8000	0.006
4.0000	0.006
4.2000	0.000
4.4000	0.000
4.6000	0.006
4.8000	0.006
5.0000	0.012
5.2000	0.019
5.4000	0.012
5.6000	0.012
5.8000	0.019
6.0000	0.019

1-4

6.2000	0.019
6.4000	0.025
6.6000	0.025
6.8000	0.025
7.0000	0.025
7.2000	0.025
7.4000	0.019
7.6000	0.019
7.8000	0.019
8.0000	0.019
8.2000	0.019
8.4000	0.019
8.6000	0.019
8.8000	0.019
9.0000	0.019
9.2000	0.019
9.4000	0.019
9.6000	0.025
9.8000	0.025
10.0000	0.025
12.0000	0.025
14.0000	0.019
16.0000	0.031

END

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET **NUS CORPORATION**

PROJECT NAME: NWS- Earle WELL/BORING NO.: mw1-5
PROJECT NO.: CTO-231 GEOLOGIST: S. Conti / P. Davis
WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' / 15' TEST NO.: 1
STATIC WATER LEVEL (Depth/Elevation): 7.14' 695 DATE: 7-19-95
TEST TYPE (Rising/Falling/Constant Head): Rising Head CHECKED:
METHOD OF INDUCING WATER LEVEL CHANGE: Slug 38" x 1.5" (H_o = 1.78') PAGE ___ OF ___

TIME	ELAPSED TIME (min. or sec.)	MEASURED DEPTH TO WATER (ft.)	CORRECTION	DEPTH TO WATER (ft.)	DRAWDOWN OR HEAD (ft.)	h/H_o	REMARKS
	0.0				1.888	1.06	
	0.1				1.119	.629	
	0.2				.629	.353	
	0.3				.445	.250	
	0.4				.381	.214	
	0.5				.343	.193	
	0.6				.298	.167	
	0.7				.248	.139	
	0.8				.203	.114	
	0.9				.159	.0893	
	1.0				.133	.0747	
	1.1						
	1.2				.082	.0461	
	1.3						
	1.4				.063	.0354	
	1.5						
	1.6				.044	.0247	
	1.7						
	1.8				.031	.0174	
	1.9						
	2.0				.025	.0140	

CALCULATION WORKSHEET Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT		JOB NUMBER	
US NAVY		CTO-231	
SUBJECT	Hydraulic Conductivity Calculations		
BASED ON		DRAWING NUMBER	
BY Paul Davis	CHECKED BY	APPROVED BY	DATE

MW 1-5 Rising Head

$$K = \frac{r^2 \ln(L/R)}{2 L T_0}$$

where:

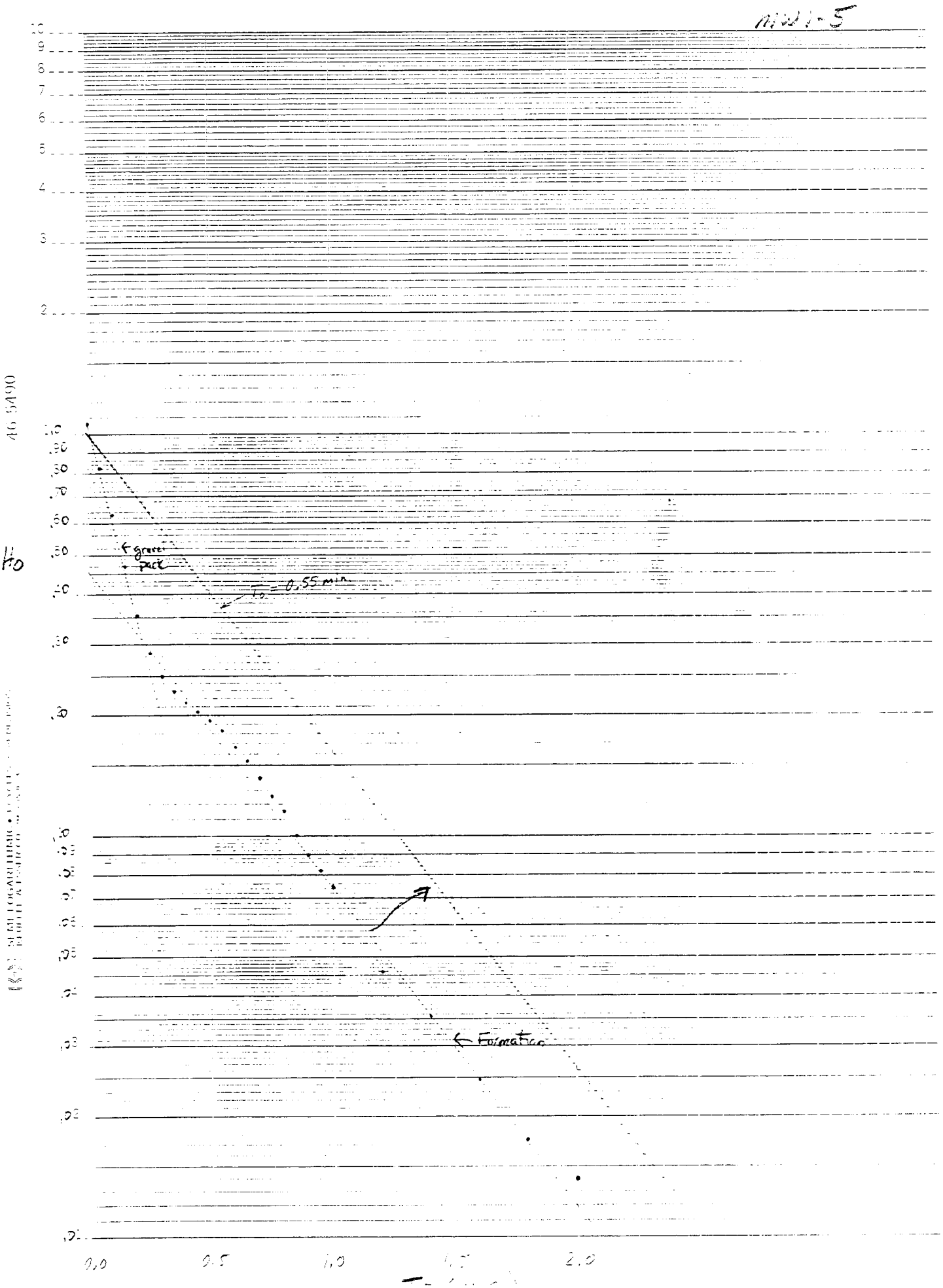
$r = 1$ in. $= 0.0833$ ft.
$R = 4$ in $= 0.333$ ft.
$L = 7.86$ ft. (TD 15' bgs − WL 7.14' bgs)
$T_0 = 0.55$ min (from plot)

$$K = \frac{(0.0833')^2 \ln(7.86'/0.333')}{2(7.86')(0.55 \text{ min})}$$

$K = 2.54 \times 10^{-3}$ ft/min. $\left(\times \frac{2.54 \text{ cm}}{\text{in}} \times \frac{12 \text{ in}}{\text{ft}} \times \frac{1 \text{ min}}{60 \text{ sec}}\right)$

$K = 1.29 \times 10^{-3}$ cm/sec.

[illegible]


n/Ho
← gravel pack
$T_0 = 0.55$ min
← Formation
0.0
0.5
1.0
2.0

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — HALLIBURTON NUS CORPORATION

PROJECT NAME: NWS EARLE WELL/BORING NO.: MW1-5

PROJECT NO.: 5303 GEOLOGIST: CONT.

WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' TEST NO.: 1

STATIC WATER LEVEL (Depth/Elevation): 8.97' TPVC (7.14' GPS) DATE:

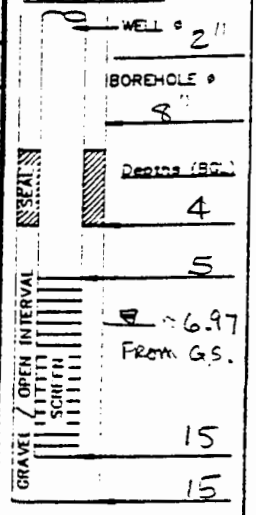
TEST TYPE (Rising/Falling/Constant Head): RISING CHECKED:

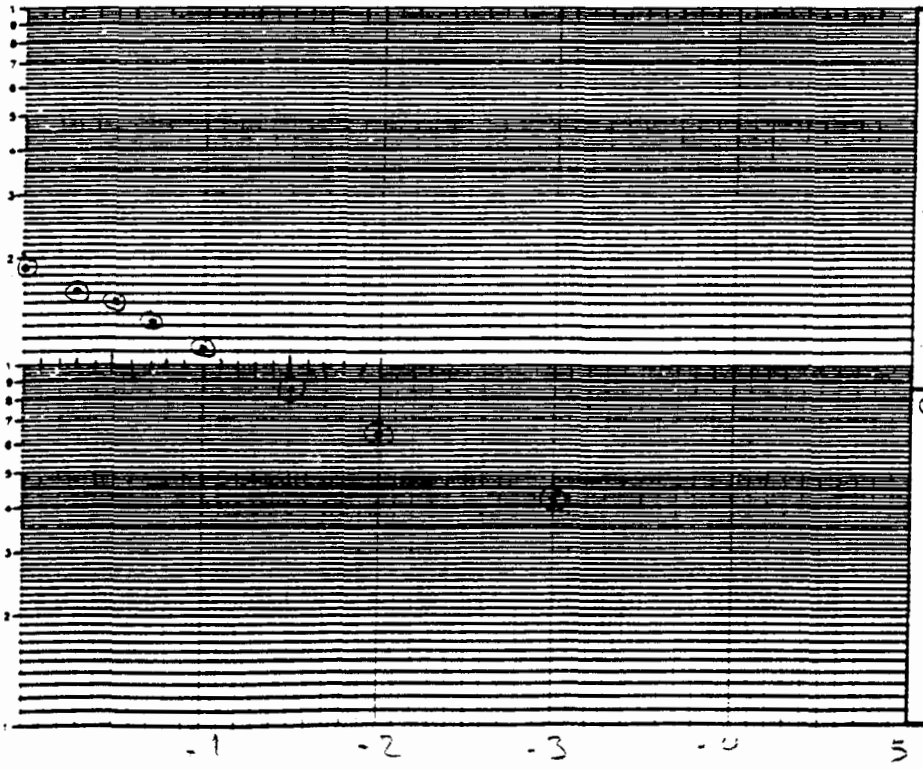
METHOD OF INDUCING WATER LEVEL CHANGE: 2IN. SLUG PAGE 1 OF

REFERENCE PT. FOR WL MEAS. (Top of Casing, Transducer, etc.): TPVC

ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)	ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)

WELL SCHEMATIC





REMARKS:

XD @ 7.80 @ 1405
7.72 @ 1410
7.72 @ 1412

TPVC is 1.83' above ground surface

CALCS, SKETCH MAPS, ETC.:

SE1000C
Environmental Logger
07/19 14:40

Unit# 00000 Test 0

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	00008
Reference	0.000
Linearity	0.120
Scale factor	20.110
Offset	0.000
Delay mSEI	50.000

Step 0 07/19 14:37:00

MW1-5
RISING HEAD

Elapsed Time	INPUT 1
0.0000	-1.858
0.0033	-1.844
0.0066	-1.812
0.0100	-1.787
0.0133	-1.755
0.0166	-1.728
0.0200	-1.699
0.0233	-1.672
0.0266	-1.647
0.0300	-1.615
0.0333	-1.593
0.0366	-1.564
0.0400	-1.538
0.0433	-1.509
0.0466	-1.4[illegible]
0.0500	-1.483
0.0533	-1.457
0.0566	-1.431
0.0600	-1.398
0.0633	-1.381
0.0666	-1.355
0.0700	-1.318
0.0733	-1.278
0.0766	-1.254
0.0800	-1.248
0.0833	-1.227
0.0866	-1.202
0.0900	-1.182
0.0933	-1.163
0.0966	-1.144
0.1000	-1.119
0.1033	-1.100
0.1066	-1.081
0.1100	-1.055

1-5

0.1133	-1.043
0.1166	-1.017
0.1200	-0.998
0.1233	-0.979
0.1266	-0.960
0.1300	-0.947
0.1333	-0.922
0.1366	-0.909
0.1400	-0.890
0.1433	-0.871
0.1466	-0.852
0.1500	-0.839
0.1533	-0.820
0.1566	-0.807
0.1600	-0.788
0.1633	-0.775
0.1666	-0.756
0.1700	-0.744
0.1733	-0.731
0.1766	-0.712
0.1800	-0.699
0.1833	-0.688
0.1866	-0.674
0.1900	-0.661
0.1933	-0.648
0.1966	-0.642
0.2000	-0.629
0.2033	-0.616
0.2066	-0.604
0.2100	-0.597
0.2133	-0.585
0.2166	-0.578
0.2200	-0.566
0.2233	-0.559
0.2266	-0.553
0.2300	-0.547
0.2333	-0.540
0.2366	-0.527
0.2400	-0.527
0.2433	-0.521
0.2466	-0.515
0.2500	-0.509
0.2533	-0.502
0.2566	-0.498
0.2600	-0.498
0.2633	-0.489
0.2666	-0.483
0.2700	-0.483
0.2733	-0.477
0.2766	-0.470
0.2800	-0.464
0.2833	-0.464
0.2866	-0.458
0.2900	-0.456
0.2933	-0.451
0.2966	-0.451
0.3000	-0.445
0.3033	-0.438
0.3066	-0.438
0.3100	-0.432
0.3133	-0.432
0.3166	-0.426
0.3200	-0.426
0.3233	-0.419
0.3266	-0.419
0.3300	-0.413

1-5

0.3333	-0.413
0.3500	-0.407
0.3666	-0.400
0.3833	-0.394
0.4000	-0.381
0.4166	-0.375
0.4333	-0.368
0.4500	-0.362
0.4666	-0.356
0.4833	-0.349
0.5000	-0.343
0.5166	-0.337
0.5333	-0.330
0.5500	-0.324
0.5666	-0.318
0.5833	-0.305
0.6000	-0.298
0.6166	-0.292
0.6333	-0.286
0.6500	-0.273
0.6666	-0.267
0.6833	-0.260
0.7000	-0.248
0.7166	-0.241
0.7333	-0.235
0.7500	-0.222
0.7666	-0.216
0.7833	-0.209
0.8000	-0.203
0.8166	-0.197
0.8333	-0.190
0.8500	-0.178
0.8666	-0.171
0.8833	-0.165
0.9000	-0.159
0.9166	-0.152
0.9333	-0.151
0.9500	-0.146
0.9666	-0.139
0.9833	-0.133
1.0000	-0.133
1.0166	-0.052
1.0333	-0.063
1.0500	-0.144
1.0666	-0.031
1.0833	-0.025

END

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — **NUS CORPORATION**

PROJECT NAME: NWS - Earle WELL/BORING NO.: MW13-4
PROJECT NO.: 5803 GEOLOGIST: S. Conti
WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' / 16' TEST NO.: 1
STATIC WATER LEVEL (Depth/Elevation): (9.79' 695) 11.46' / TPVC DATE: 7-19-95
TEST TYPE (Rising/Falling/Constant Head): Rising Head CHECKED:
METHOD OF INDUCING WATER LEVEL CHANGE: Slug : 38" x 1.5" (H_o = 1.78') PAGE 1 OF

TIME	ELAPSED TIME (min or sec.)	MEASURED DEPTH TO WATER (ft.)	CORRECTION	DEPTH TO WATER (ft.)	DRAWDOWN OR HEAD (ft.)	h/H_o	REMARKS
	0.00				-2.35	-1.32	
	0.01				-2.33	-1.31	
	0.02				-2.32	-1.30	
	0.03				-2.31	-1.30	
	0.04				-2.31	-1.30	
	0.05				-2.30	-1.29	
	0.06				-2.29	-1.29	
	0.07				-2.29	-1.29	
	0.08				-2.28	-1.28	
	0.09				-2.28	-1.28	
	0.10				-2.27	-1.28	
	0.11				-2.26	-1.27	
	0.12				-2.25	-1.26	
	0.13				-2.24	-1.26	
	0.14				-2.23	-1.25	
	0.15				-2.22	-1.25	
	0.16				-2.22	-1.25	
	0.17				-2.21	-1.24	
	0.18				-2.20	-1.24	
	0.19				-2.19	-1.23	
	0.20				-2.18	-1.22	
	0.21				-2.17	-1.22	
	0.22				-2.16	-1.21	
	0.23				-2.15	-1.21	
	0.24				-2.14	-1.20	
	0.25				-2.12	-1.19	
	0.26				-2.11	-1.19	
	0.27				-2.10	-1.18	
	0.28				-2.09	-1.17	

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET **NUS CORPORATION**

PROJECT NAME: NWS - Earle WELL/BORING NO.: MW 13-4
PROJECT NO.: 5803 GEOLOGIST: S. Conti
WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10'/16' TEST NO.: 1
STATIC WATER LEVEL (Depth/Elevation): (9.79' bgs) 11.46' TPVC DATE: 7-19-95
TEST TYPE (Rising/Falling/Constant Head): Rising Head CHECKED:
METHOD OF INDUCING WATER LEVEL CHANGE: Slug: 38" x 1.5" (H_o = 1.78') PAGE 2 OF ___

TIME	ELAPSED TIME (min or sec.)	MEASURED DEPTH TO WATER (ft.)	CORRECTION	DEPTH TO WATER (ft.)	DRAWDOWN OR HEAD (ft.)	h/H_o REMARKS
	0.29				-2.08	-1.17
	0.30				-2.07	-1.16
	0.35				-2.05	-1.15
	0.40				-2.03	-1.14
	0.45				-2.01	-1.13
	0.50				-1.99	-1.12
	0.55				-1.98	-1.11
	0.60				-1.96	-1.10
	0.80				-1.94	-1.09
	1.00				-1.93	-1.08
	2.00				-1.61	-0.90
	3.00				-1.36	-0.76
	4.00				-1.18	-0.66
	5.00				-1.02	-0.57
	6.00				-0.92	-0.52
	7.00				-0.83	-0.47
	8.00				-0.78	-0.44
	9.00				-0.73	-0.41
	10.00				-0.70	-0.39
	20.00				-0.51	-0.29
	30.00				-0.39	-0.22
	40.00				-0.29	-0.16
	50.00				-0.20	-0.11

CALCULATION WORKSHEET Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT US NAVY		JOB NUMBER	
SUBJECT Hydraulic Conductivity Calculations			
BASED ON		DRAWING NUMBER	
BY Paul Davis	CHECKED BY R.W.G. 12/28/95	APPROVED BY	DATE

MW13-4

$$K = \frac{r^2 \ln(L/R)}{2 L T_0}$$

where:

$r = 1 \text{ in.} = 0.0833 \text{ ft}$

$R = 4 \text{ in.} = 0.333 \text{ ft.}$

$L = 6.21 \text{ ft}$ (T.D 16' bgs − W.L. 9.79' bgs)

$T_0 = 31.5 \text{ min}$ (from plot)

$$K = \frac{(0.0833 \text{ ft})^2 \ln(6.21 \text{ ft.}/0.333 \text{ ft})}{2 (6.21 \text{ ft.})(31.5 \text{ min.})}$$

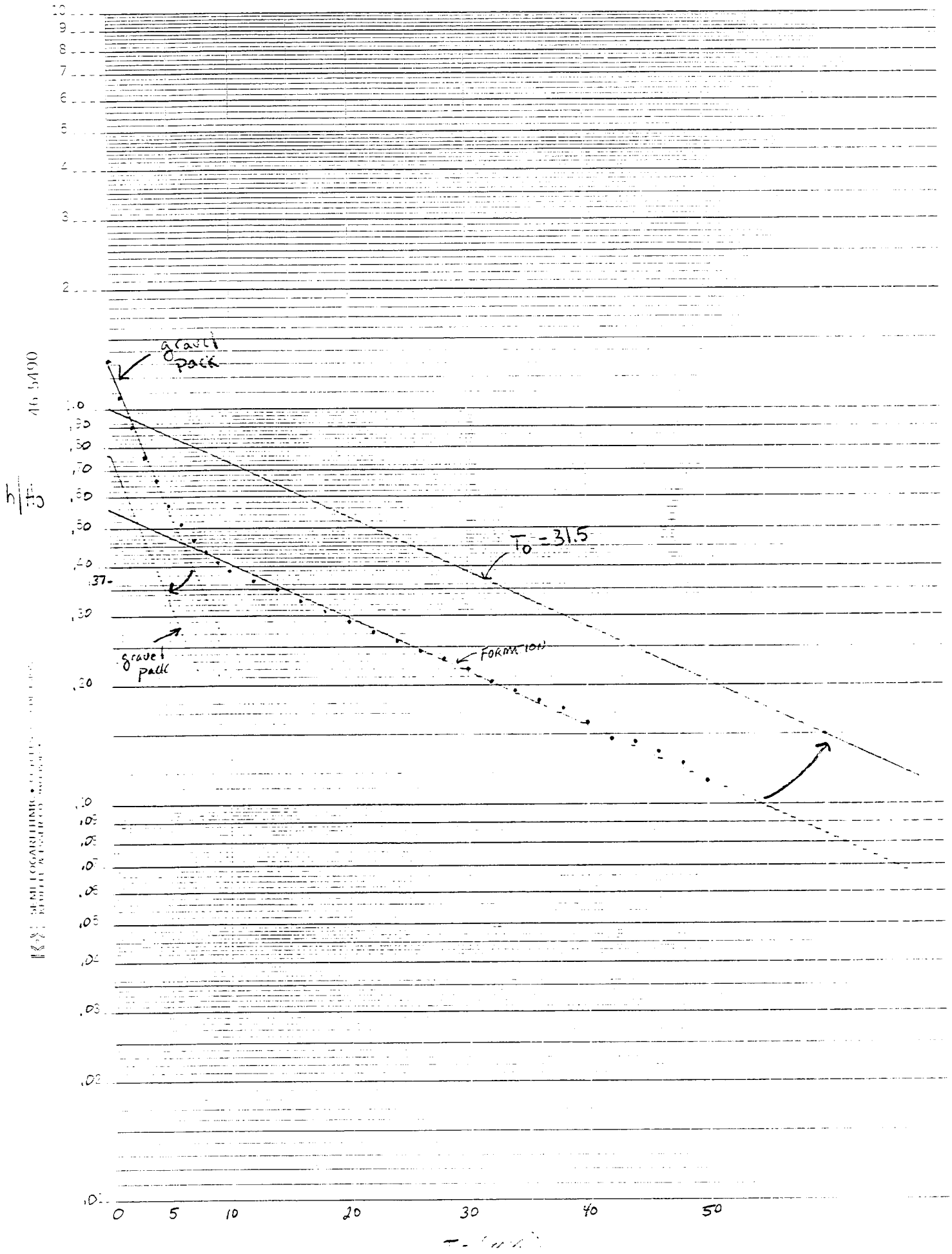
$K = 5.19 \times 10^{-5}$ ~~-5~~ ft./min. $\left(\times \frac{2.54 \text{ cm}}{\text{in}} \times \frac{12 \text{ in}}{\text{ft.}} \times \frac{1 \text{ min}}{60 \text{ sec.}}\right)$

$K = 2.64 \times 10^{-5}$ cm/sec

bgs = below ground surface

10^{-5} KS [illegible]

MW13-4


gravel pack
$T_o = 31.5$
Formation
gravel pack
h/ho
.37
0
5
10
20
30
40
50

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — HALLIBURTON NUS CORPORATION

PROJECT NAME: NWS EAGLE WELL/BORING NO.: MW13-4

PROJECT NO.: 5803 GEOLOGIST: SJ CONTI

WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' TEST NO.: 1

STATIC WATER LEVEL (Depth/Elevation): 11.46 TPVC (9.79' bgs) DATE: 7-18-93

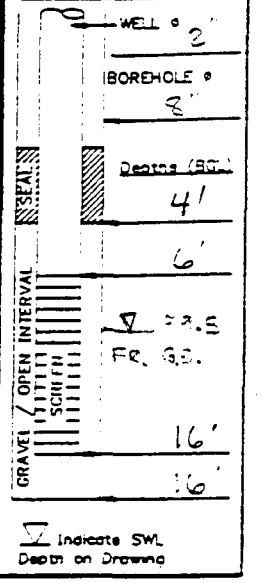
TEST TYPE (Rising/Falling/Constant Head): RISING CHECKED:

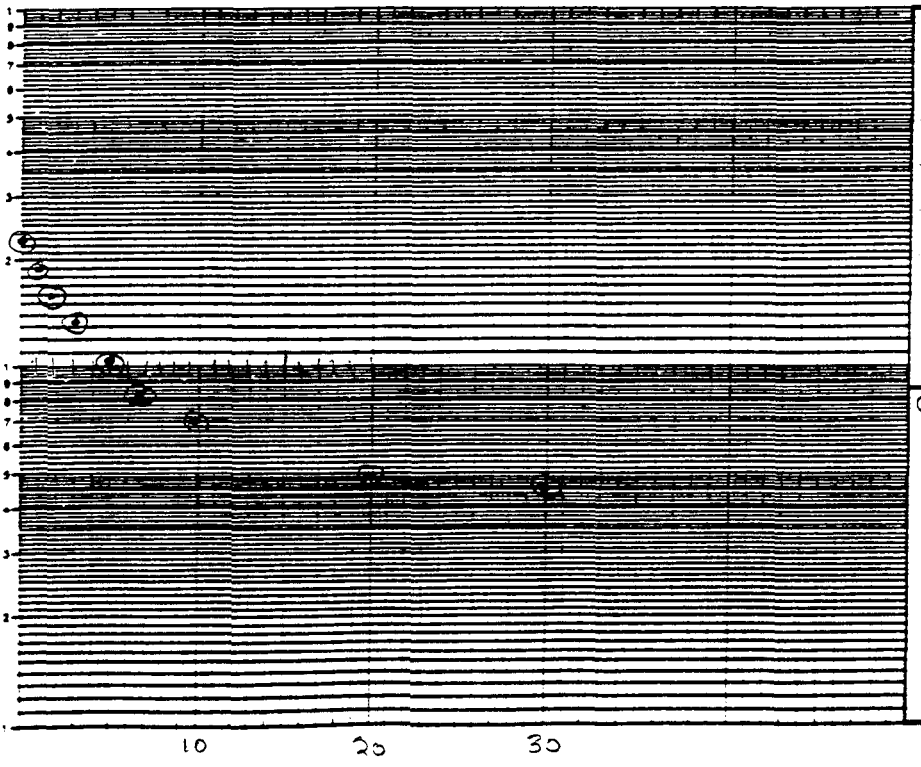
METHOD OF INDUCING WATER LEVEL CHANGE: 2" SLUG PAGE 1 OF

REFERENCE PT. FOR WL MEAS. (Top of Casing, Transducer, etc.): TPVC

ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)	ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)

WELL SCHEMATIC





REMARKS:

XD 5.02

XD 4.97

XD 5.01

XD 5.7% FOR 5 min after slug inserted.

TPVC IS 1.67' above ground surface

CALCS, SKETCH MAPS, ETC.:

SE10000
Environmental Logger
07/19 12:20

Unit# 00000 Test 0

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	00005
Reference	0.000
Linearity	0.120
Scale factor	20.110
Offset	0.000
Delay mSEC	50.000

Step 0 07/19 11:29:00

Elapsed Time	INPUT 1
0.0000	-2.345
0.0033	-2.332
0.0066	-2.332
0.0100	-2.332
0.0133	-2.328
0.0166	-2.328
0.0200	-2.319
0.0233	-2.313
0.0266	-2.313
0.0300	-2.313
0.0333	-2.313
0.0366	-2.313
0.0400	-2.317
0.0433	-2.317
0.0466	-2.317
0.0500	-2.311
0.0533	-2.311
0.0566	-2.311
0.0600	-2.294
0.0633	-2.294
0.0666	-2.294
0.0700	-2.288
0.0733	-2.288
0.0766	-2.281
0.0800	-2.281
0.0833	-2.275
0.0866	-2.275
0.0900	-2.275
0.0933	-2.269
0.0966	-2.269
0.1000	-2.269
0.1033	-2.262
0.1066	-2.262
[illegible]	[illegible]

MW13-4
RISING HEAD

13-4

0.1133	-2.256
0.1166	-2.256
0.1200	-2.250
0.1233	-2.250
0.1266	-2.243
0.1300	-2.243
0.1333	-2.237
0.1366	-2.237
0.1400	-2.230
0.1433	-2.230
0.1466	-2.230
0.1500	-2.224
0.1533	-2.224
0.1566	-2.218
0.1600	-2.218
0.1633	-2.218
0.1666	-2.211
0.1700	-2.211
0.1733	-2.205
0.1766	-2.205
0.1800	-2.199
0.1833	-2.199
0.1866	-2.192
0.1900	-2.192
0.1933	-2.186
0.1966	-2.186
0.2000	-2.180
0.2033	-2.180
0.2066	-2.173
0.2100	-2.173
0.2133	-2.167
0.2166	-2.167
0.2200	-2.161
0.2233	-2.154
0.2266	-2.154
0.2300	-2.148
0.2333	-2.148
0.2366	-2.141
0.2400	-2.141
0.2433	-2.135
0.2466	-2.122
0.2500	-2.122
0.2533	-2.116
0.2566	-2.116
0.2600	-2.110
0.2633	-2.103
0.2666	-2.103
0.2700	-2.097
0.2733	-2.097
0.2766	-2.091
0.2800	-2.091
0.2833	-2.084
0.2866	-2.084
0.2900	-2.078
0.2933	-2.078
0.2966	-2.072
0.3000	-2.072
0.3033	-2.065
0.3066	-2.065
0.3100	-2.059
0.3133	-2.053
0.3166	-2.053
0.3200	-2.046
0.3233	-2.046
0.3266	-2.040
0.3300	[illegible]

13-4

0.3333	-2.053
0.3500	-2.046
0.3666	-2.040
0.3833	-2.033
0.4000	-2.027
0.4166	-2.021
0.4333	-2.014
0.4500	-2.008
0.4666	-2.002
0.4833	-1.995
0.5000	-1.989
0.5166	-1.983
0.5333	-1.983
0.5500	-1.976
0.5666	-1.970
0.5833	-1.970
0.6000	-1.964
0.6166	-1.964
0.6333	-1.964
0.6500	-1.957
0.6666	-1.957
0.6833	-1.957
0.7000	-1.951
0.7166	-1.951
0.7333	-1.951
0.7500	-1.951
0.7666	-1.951
0.7833	-1.944
0.8000	-1.944
0.8166	-1.944
0.8333	-1.944
0.8500	-1.938
0.8666	-1.938
0.8833	-1.938
0.9000	-1.935
0.9166	-1.938
0.9333	-1.932
0.9500	-1.932
0.9666	-1.932
0.9833	-1.932
1.0000	-1.932
1.2000	-1.913
1.4000	-1.793
1.6000	-1.760
1.8000	-1.687
2.0000	-1.614
2.2000	-1.583
2.4000	-1.525
2.6000	-1.455
2.8000	-1.417
3.0000	-1.380
3.2000	-1.308
3.4000	-1.277
3.6000	-1.258
3.8000	-1.201
4.0000	-1.178
4.2000	-1.137
4.4000	-1.118
4.6000	-1.080
4.8000	-1.081
5.0000	-1.028
5.2000	-1.004
5.4000	-0.985
5.6000	-0.986
5.8000	-0.947
6.0000	[illegible]

13-4

6.2000	-0.902
6.4000	-0.877
6.6000	-0.877
6.8000	-0.858
7.0000	-0.832
7.2000	-0.832
7.4000	-0.813
7.6000	-0.807
7.8000	-0.781
8.0000	-0.775
8.2000	-0.756
8.4000	-0.756
8.6000	-0.750
8.8000	-0.750
9.0000	-0.731
9.2000	-0.724
9.4000	-0.718
9.6000	-0.712
9.8000	-0.705
10.0000	-0.699
12.0000	-0.654
14.0000	-0.623
16.0000	-0.584
18.0000	-0.548
20.0000	-0.514
22.0000	-0.483
24.0000	-0.457
26.0000	-0.432
28.0000	-0.413
30.0000	-0.394
32.0000	-0.382
34.0000	-0.343
36.0000	-0.324
38.0000	-0.311
40.0000	-0.288
42.0000	-0.280
44.0000	-0.254
46.0000	-0.241
48.0000	-0.228
50.0000	-0.203

END

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — **NUS CORPORATION**

PROJECT NAME: NWS - Earle WELL/BORING NO.: MW13-5
PROJECT NO.: 5803 GEOLOGIST: S. Conti
WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10'/17' TEST NO.: 1
STATIC WATER LEVEL (Depth/Elevation): (11.18' bgs) 13.05' / TPVC DATE: 7-19-95
TEST TYPE (Rising/Falling/Constant Head): Rising Head CHECKED:
METHOD OF INDUCING WATER LEVEL CHANGE: Slug: 38" x 1.5" (H_0 = 1.78') PAGE 1 OF

TIME	ELAPSED TIME (min. or sec.)	MEASURED DEPTH TO WATER (ft.)	CORRECTION	DEPTH TO WATER (ft.)	DRAWDOWN OR HEAD (ft.)	h/H_0	REMARKS
	0.00				-2.20	-1.24	
	0.01				-2.19	-1.23	
	0.02				-2.19	-1.23	
	0.03				-2.19	-1.23	
	0.04				-2.19	-1.23	
	0.05				-2.10	-1.18	
	0.06				-2.01	-1.13	
	0.07				-1.94	-1.09	
	0.08				-1.94	-1.09	
	0.09				-1.86	-1.04	
	0.10				-1.77	-0.99	
	0.11				-1.78	-1.00	
	0.12				-1.60	-0.90	
	0.13				-1.60	-0.90	
	0.14				-1.60	-0.90	
	0.15				-1.60	-0.90	
	0.16				-1.42	-0.80	
	0.17				-1.42	-0.80	
	0.18				-1.42	-0.80	
	0.19				-1.42	-0.80	
	0.20				-1.41	-0.79	
	0.21				-1.21	-0.68	
	0.22				-1.23	-0.69	
	0.23				-1.23	-0.69	
	0.24				-1.22	-0.69	
	0.25				-1.22	-0.69	
	0.26				-1.22	-0.69	
	0.27				-1.22	-0.69	
	0.28				-1.21	-0.68	

I think this is probably useless data... We can look at it closer & maybe make some crude estimates

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET **NUS CORPORATION**

PROJECT NAME: NWS-Earle WELL/BORING NO.: MW13-5
PROJECT NO.: 5803 GEOLOGIST: S. Conti
WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10'/17' TEST NO.: 1
STATIC WATER LEVEL (Depth/Elevation): (11.18'695) 13.05' / TPVC DATE: 7-19-95
TEST TYPE (Rising/Falling/Constant Head): Rising Head CHECKED:
METHOD OF INDUCING WATER LEVEL CHANGE: Slug: .38" x 1.5" (H_o = 1.78') PAGE 2 OF

TIME	ELAPSED TIME (min. or sec.)	MEASURED DEPTH TO WATER (ft.)	CORRECTION	DEPTH TO WATER (ft.)	DRAWDOWN OR HEAD (ft.)	h/H_o	REMARKS
	0.29				-1.21	-0.68	
	0.30				-1.21	-0.68	
	0.31				-1.02	-0.57	
	0.32				-1.02	-0.57	
	0.33				-1.02	-0.57	
	0.35				-1.03	-0.58	
	0.40				-1.03	-0.58	
	0.45				-1.03	-0.58	
	0.50				-1.03	-0.58	
	0.55				-1.02	-0.57	
	0.60				-0.94	-0.53	
	0.65				-0.94	-0.53	
	0.70				-0.94	-0.53	
	0.75				-0.94	-0.53	
	0.80				-0.94	-0.53	
	0.90				-0.839	-0.47	
	1.0				-0.832	-0.47	

CALCULATION WORKSHEET Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT U.S. NAVY		JOB NUMBER	
SUBJECT Hydraulic Conductivity Calculations			
BASED ON		DRAWING NUMBER	
BY Paul Davis	CHECKED BY	APPROVED BY	DATE

MW13-5

$$K = \frac{r^2 \ln(L/R)}{2 L T_0}$$

where:

$r = 1$ in. $= 0.0833$ ft.

$R = 4$ in. $= 0.333$ ft.

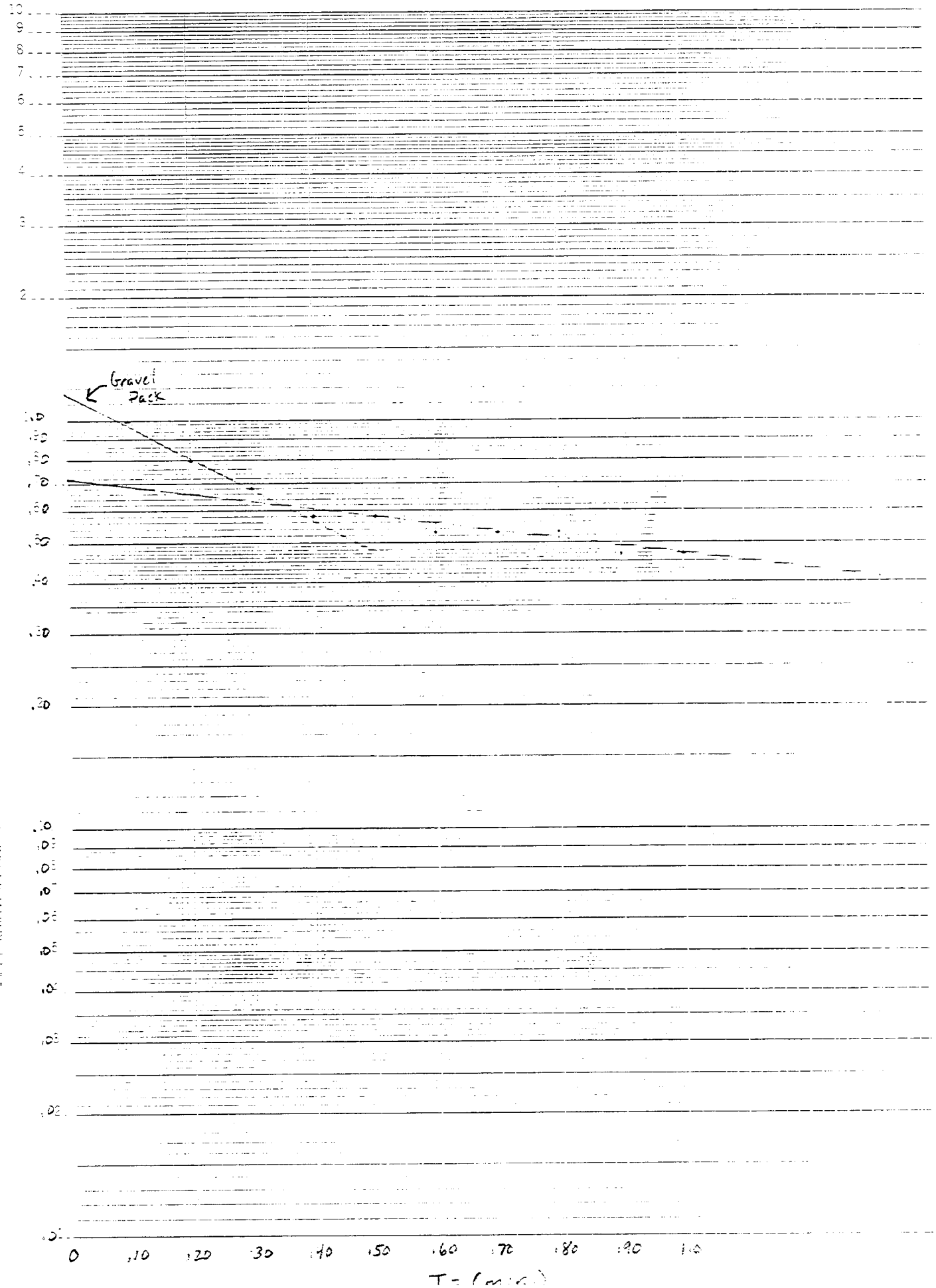
$L = 5.82$ ft. (T.D 17' bgs − 11.18' bgs)

$T_0 =$

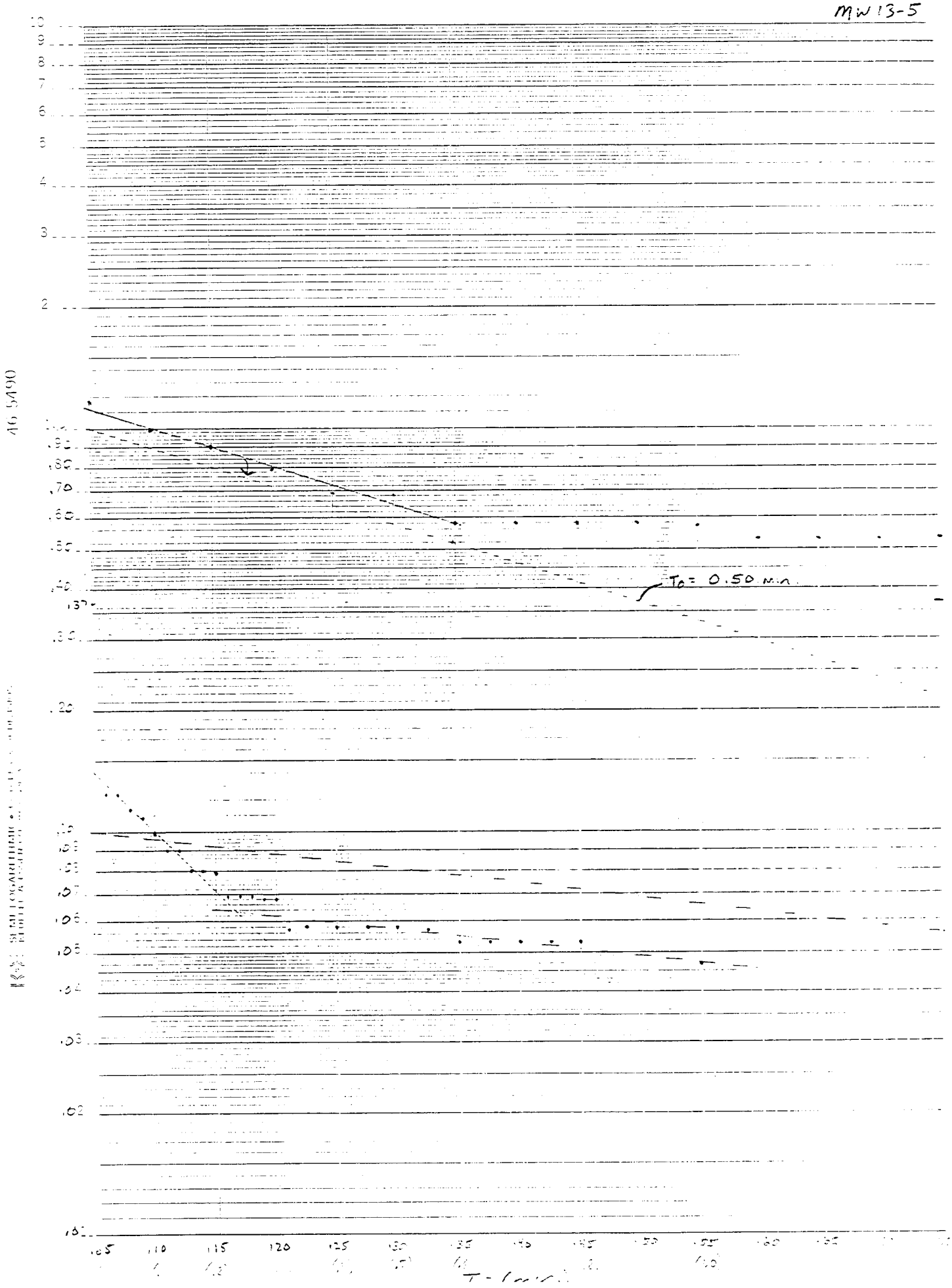
$$K = \frac{(0.0833 \text{ ft})^2 \ \ln(5.82 \text{ ft}/0.333 \text{ ft})}{2 (5.82 \text{ ft}) (\quad \text{min.})}$$

$K =$

MW13-5



MW 13-5


10
9
8
7
6
5
4
3
2
.90
.80
.70
.60
.50
.40
.30
.20
.10
.09
.08
.07
.06
.05
.04
.03
.02
.01
.105
.110
.115
.120
.125
.130
.135
.140
.145
.150
.155
.160
T_0 = 0.50 min
T - (min)

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — HALLIBURTON NUS CORPORATION

PROJECT NAME: NWS EAGLE WELL/BORING NO.: MW13-5

PROJECT NO.: 5803 GEOLOGIST: CONTI

WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' TEST NO.: 1

STATIC WATER LEVEL (Depth/Elevation): 13.05 TPVC (11.18' bgs) DATE: 7-19-95

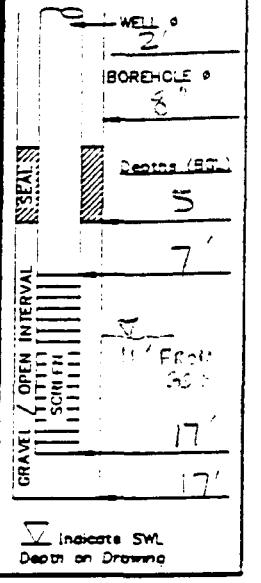
TEST TYPE (Rising/Falling/Constant Head): RISING HEAD CHECKED:

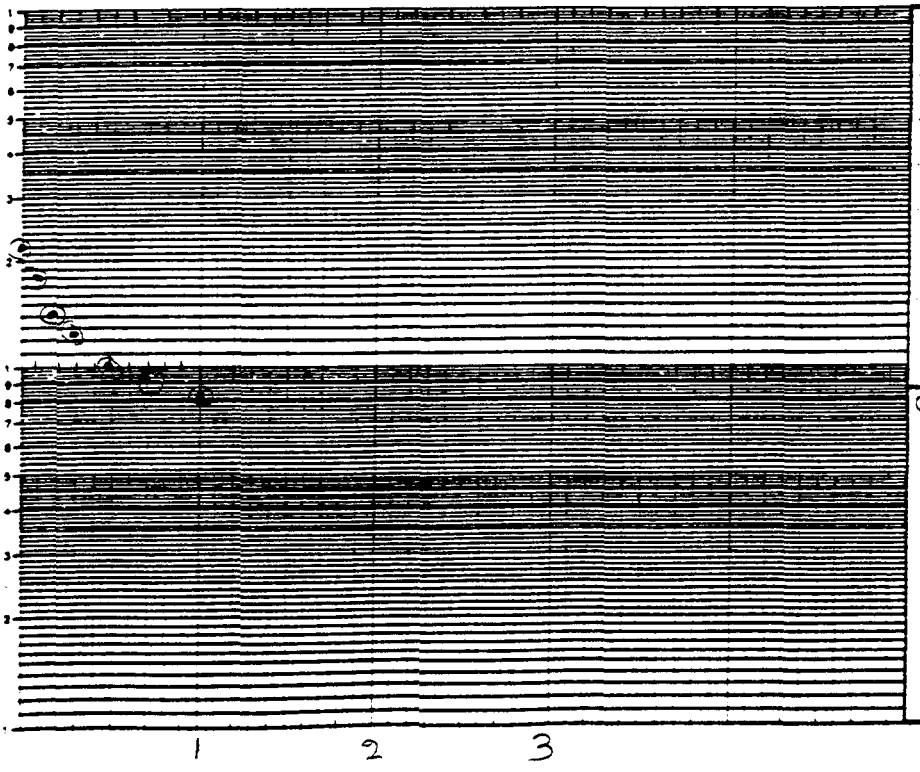
METHOD OF INDUCING WATER LEVEL CHANGE: 2" SLUG PAGE 1 OF

REFERENCE PT. FOR WL MEAS. (Top of Casing, Transducer, etc.): T. PVC

ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)	ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)

WELL SCHEMATIC





REMARKS:

XD - 5.51 ±

XD - 5.48 ±

TPVC IS 1.87' above ground surface

CALCS, SKETCH MAPS, ETC.:

SE1000C
Environmental Logger
07/19 12:56

Unit# 00000 Test 0

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	00006
Reference	0.000
Linearity	0.100
Scale factor	20.110
Offset	0.000
Delay mSEC	50.000

Step 0 07/19 12:45:00

Elapsed Time	INPUT 1
0.0000	-2.199
0.0033	-2.192
0.0066	-2.191
0.0100	-2.192
0.0133	-2.188
0.0166	-2.186
0.0200	-2.185
0.0233	-2.188
0.0266	-2.186
0.0300	-2.192
0.0333	-2.188
0.0366	-2.188
0.0400	-2.188
0.0433	-2.186
0.0466	-2.097
0.0500	-2.103
0.0533	-2.103
0.0566	-2.103
0.0600	-2.014
0.0633	-2.014
0.0666	-2.021
0.0700	-1.938
0.0733	-1.944
0.0766	-1.944
0.0800	-1.944
0.0833	-1.943
0.0866	-1.949
0.0900	-1.855
0.0933	-1.855
0.0966	-1.855
0.1000	-1.779
0.1033	-1.779
0.1066	-1.779
0.1100	-1.779

MW13-5
RISING HEAD

13-5

0.1133	-1.582
0.1166	-1.595
0.1200	-1.601
0.1233	-1.601
0.1266	-1.601
0.1300	-1.601
0.1333	-1.601
0.1366	-1.601
0.1400	-1.601
0.1433	-1.601
0.1466	-1.601
0.1500	-1.595
0.1533	-1.404
0.1566	-1.417
0.1600	-1.417
0.1633	-1.423
0.1666	-1.423
0.1700	-1.423
0.1733	-1.417
0.1766	-1.417
0.1800	-1.417
0.1833	-1.417
0.1866	-1.417
0.1900	-1.417
0.1933	-1.417
0.1966	-1.417
0.2000	-1.411
0.2033	-1.411
0.2066	-1.201
0.2100	-1.214
0.2133	-1.220
0.2166	-1.220
0.2200	-1.228
0.2233	-1.228
0.2266	-1.228
0.2300	-1.228
0.2333	-1.228
0.2366	-1.220
0.2400	-1.220
0.2433	-1.220
0.2466	-1.220
0.2500	-1.220
0.2533	-1.220
0.2566	-1.220
0.2600	-1.220
0.2633	-1.220
0.2666	-1.214
0.2700	-1.220
0.2733	-1.214
0.2766	-1.214
0.2800	-1.214
0.2833	-1.214
0.2866	-1.214
0.2900	-1.214
0.2933	-1.214
0.2966	-1.214
0.3000	-1.214
0.3033	-1.214
0.3066	-1.214
0.3100	-1.017
0.3133	-1.004
0.3166	-1.010
0.3200	-1.017
0.3233	-1.017
0.3266	-1.017
0.3300	-1.017

13-5

0.3333	-1.029
0.3500	-1.029
0.3666	-1.029
0.3833	-1.029
0.4000	-1.029
0.4166	-1.029
0.4333	-1.029
0.4500	-1.029
0.4666	-1.029
0.4833	-1.029
0.5000	-1.029
0.5166	-1.029
0.5333	-1.029
0.5500	-1.023
0.5666	-1.023
0.5833	-1.023
0.6000	-0.940
0.6166	-0.940
0.6333	-0.940
0.6500	-0.940
0.6666	-0.940
0.6833	-0.947
0.7000	-0.940
0.7166	-0.940
0.7333	-0.947
0.7500	-0.940
0.7666	-0.940
0.7833	-0.940
0.8000	-0.940
0.8166	-0.940
0.8333	-0.932
0.8500	-0.932
0.8666	-0.932
0.8833	-0.932
0.9000	-0.932
0.9166	-0.932
0.9333	-0.932
0.9500	-0.932
0.9666	-0.932
0.9833	-0.932
1.0000	-0.932
1.0166	-0.932
1.0333	-0.932
1.0500	-0.931
1.0666	-0.931
1.0833	0.[illegible]
1.1000	0.019
1.1166	0.025
1.1333	0.031
1.1500	0.031
1.1666	0.031
1.1833	0.031
1.2000	0.031
1.2166	0.031
1.2333	0.031
1.2500	0.031
1.2666	0.031
1.2833	0.038
1.3000	0.031
1.3166	0.031
1.3333	0.025
1.3500	0.025
1.3666	0.025
1.3833	0.031
1.4000	0.031
1.4166	0.031
1.4333	0.038
1.4500	0.031
1.4666	0.025

13 - 5

6.2000	0.025
6.4000	0.025
6.6000	0.025
6.8000	0.025
7.0000	0.025
7.2000	0.031
7.4000	0.031
7.6000	0.025
7.8000	0.025
8.0000	0.025
8.2000	0.031
8.4000	0.031
8.6000	0.031
8.8000	0.031
9.0000	0.031
9.2000	0.044
9.4000	0.038
9.6000	0.031
9.8000	0.031
10.0000	0.031

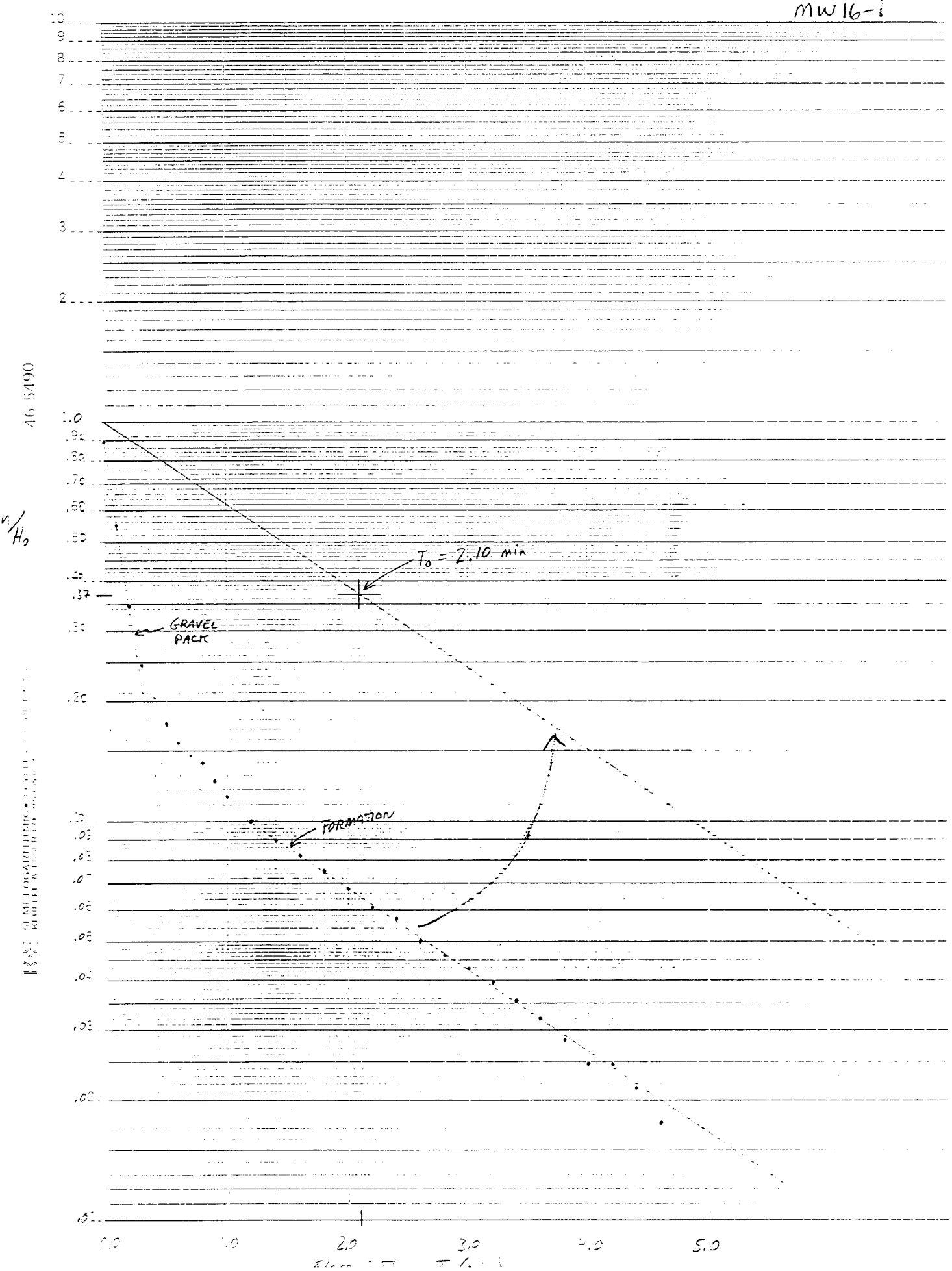
END

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — NUS CORPORATION

PROJECT NAME: NWS - EARLE
WELL/BORING NO.: MW16-1
PROJECT NO.: 5803
GEOLOGIST: S. Conti / P. Davis
WELL DIAMETER: 2"
SCREEN LENGTH/DEPTH: 10' / 16'
TEST NO.: 1
STATIC WATER LEVEL (Depth/Elevation): 8.47' bgs
DATE: 7-18-95
TEST TYPE (Rising/Falling/Constant Head): Rising Head
CHECKED:
METHOD OF INDUCING WATER LEVEL CHANGE: Slug: 38" x 1.5" (H_o = 1.78')
PAGE 1 OF

TIME	ELAPSED TIME (min or sec.)	MEASURED DEPTH TO WATER (ft.)	CORRECTION	DEPTH TO WATER (ft.)	DRAWDOWN OR HEAD (ft.)	h/H_o	REMARKS
	0.0				1.589	0.893	
	0.1				0.979	0.550	
	0.2				0.616	0.346	
	0.3				0.438	0.246	
	0.4				0.362	0.203	
	0.5				0.311	0.175	
	0.6				0.279	0.157	
	0.7				0.260	0.146	
	0.8				0.235	0.140	
	0.9				0.222	0.125	
	1.0				0.203	0.114	
	1.2				0.178	0.100	
	1.4				0.159	0.0893	
	1.6				0.146	0.0820	
	1.8				0.133	0.0747	
	2.0				0.120	0.0674	
	2.2				0.108	0.0607	
	2.4				0.101	0.0567	
	2.6				0.089	0.0500	
	2.8				0.082	0.0461	
	3.0				0.076	0.0427	
	3.2				0.070	0.0393	
	3.4				0.063	0.0354	
	3.6				0.057	0.0320	
	3.8				0.050	0.0281	
	4.0				0.044	0.0247	
	4.2				0.044	0.0247	
	4.4				0.038	0.0213	
	4.6				0.031	0.0174	

MW16-i


10
9
8
7
6
5
4
3
2
1.0
.90
.80
.70
.60
.50
.45
.37
.30
.20
.10
.09
.08
.07
.06
.05
.04
.03
.02
.01
h/H₀
T₀ = 2.10 min
GRAVEL PACK
FORMATION
0.0
1.0
2.0
3.0
4.0
5.0

CALCULATION WORKSHEET Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT US NAVY	JOB NUMBER CTO-231
SUBJECT Hydraulic Conductivity Calculations	
BASED ON	DRAWING NUMBER
BY Paul Davis / CHECKED BY	APPROVED BY / DATE

MW-16-1 (RISING HEAD)

$$K = \frac{r^2 \ln(L/R)}{2 L T_0}$$

where: $r = 1$ in $= 0.0833$ ft

$R = 4$ in $= 0.333$ ft

$L = 7.53$ ft (T.D 16' bgs − W.L. 8.47' bgs)

$T_0 = 2.10$ min

$$K = \frac{(0.0833 \text{ ft})^2 \ln(7.53 \text{ ft} / 0.333 \text{ ft})}{2(7.53 \text{ ft})(2.10 \text{ min})}$$

$K = 6.84 \times 10^{-4}$ ft/min $\left(\times \frac{2.54 \text{ cm}}{\text{in.}} \times \frac{12 \text{ in}}{\text{ft}} \times \frac{1 \text{ min}}{60 \text{ sec}}\right)$

$K = 3.48 \times 10^{-4}$ cm/sec.

bgs = below ground surface

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — HALLIBURTON NUS CORPORATION

PROJECT NAME: NWS EARLE WELL/BORING NO.: MW16-1

PROJECT NO.: 5803 GEOLOGIST: CONTI

WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' TEST NO.:

STATIC WATER LEVEL (Depth/Elevation): 9.76 TPVC (8.47' bgs) DATE: 7-18-95

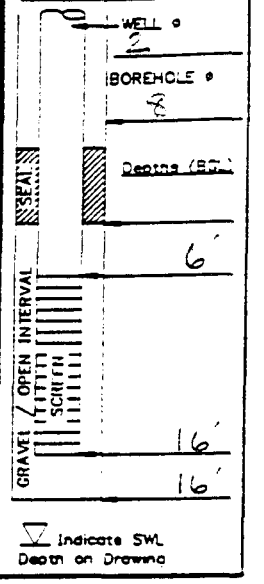
TEST TYPE (Rising/Falling/Constant Head): RISING CHECKED:

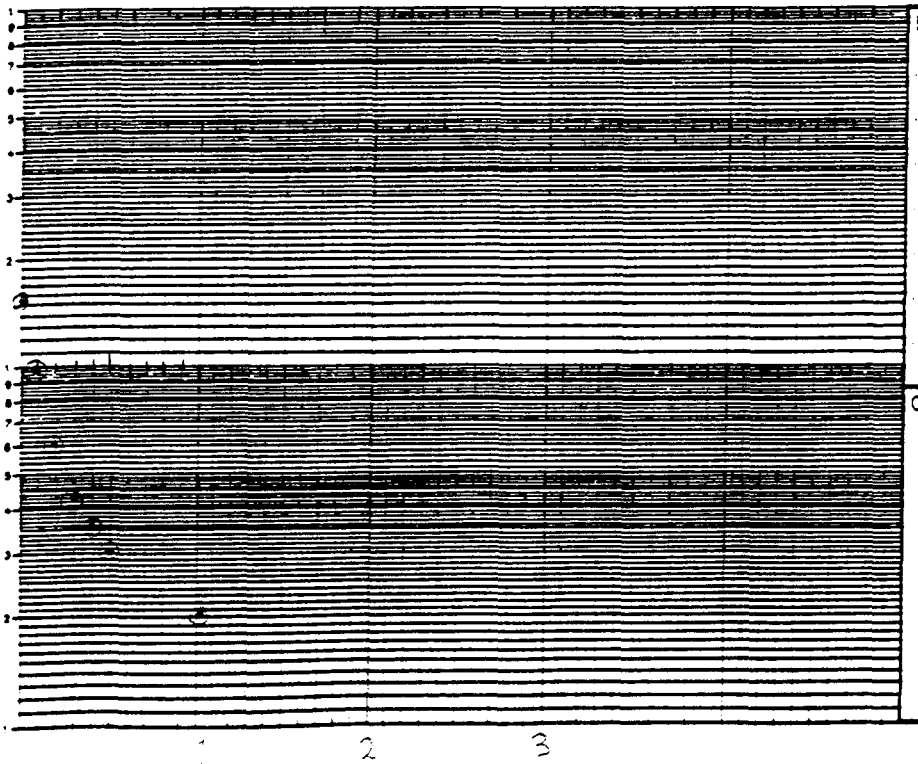
METHOD OF INDUCING WATER LEVEL CHANGE: 2" SLUG PAGE 1 OF

REFERENCE PT. FOR WL MEAS. (Top of Casing, Transducer, etc.): TPVC

ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)	ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)

WELL SCHEMATIC





REMARKS:

XD 7.60 ±

XD 07.74 - START

RH TEST.

TPVC IS 1.29' above ground surface

CALCS, SKETCH MAPS, ETC.:

0.1100

SE1000C
Environmental Logger
07/18 17:01

MW16-1
RISING HEAD TEST

Unit# 00000 Test 4

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	00004
Reference	0.000
Linearity	0.120
Scale factor	20.110
Offset	0.000
Delay mSEC	50.000

Step 0 07/18 16:39:48

Elapsed Time	INPUT 1
0.0000	-1.589
0.0033	-1.551
0.0066	-1.528
0.0100	-1.494
0.0133	-1.475
0.0166	-1.450
0.0200	-1.430
0.0233	-1.405
0.0266	-1.386
0.0300	-1.361
0.0333	-1.335
0.0366	-1.316
0.0400	-1.291
0.0433	-1.264
0.0466	-1.245
0.0500	-1.233
0.0533	-1.221
0.0566	-1.202
0.0600	-1.182
0.0633	-1.163
0.0666	-1.144
0.0700	-1.125
0.0733	-1.105
0.0766	-1.093
0.0800	-1.074
0.0833	-1.062
0.0866	-1.043
0.0900	-1.030
0.0933	-1.011
0.0966	-0.992
0.1000	-0.979
0.1033	-0.966
0.1066	-0.947
0.1100	-0.934
0.1133	-0.915
0.1166	-0.903
0.1200	-0.890

16-1 RH

0.1266	-0.858
0.1300	-0.845
0.1333	-0.839
0.1366	-0.820
0.1400	-0.807
0.1433	-0.795
0.1466	-0.782
0.1500	-0.776
0.1533	-0.758
0.1566	-0.744
0.1600	-0.737
0.1633	-0.725
0.1666	-0.712
0.1700	-0.699
0.1733	-0.693
0.1766	-0.686
0.1800	-0.674
0.1833	-0.661
0.1866	-0.655
0.1900	-0.642
0.1933	-0.636
0.1966	-0.629
0.2000	-0.616
0.2033	-0.610
0.2066	-0.597
0.2100	-0.591
0.2133	-0.585
0.2166	-0.578
0.2200	-0.566
0.2233	-0.559
0.2266	-0.553
0.2300	-0.547
0.2333	-0.540
0.2366	-0.534
0.2400	-0.527
0.2433	-0.521
0.2466	-0.515
0.2500	-0.508
0.2533	-0.502
0.2566	-0.496
0.2600	-0.489
0.2633	-0.489
0.2666	-0.483
0.2700	-0.477
0.2733	-0.470
0.2766	-0.470
0.2800	-0.464
0.2833	-0.458
0.2866	-0.451
0.2900	-0.451
0.2933	-0.445
0.2966	-0.445
0.3000	-0.438
0.3033	-0.432
0.3066	-0.432
0.3100	-0.426
0.3133	-0.419
0.3166	-0.419
0.3200	-0.413
0.3233	-0.413
0.3266	-0.407
0.3300	-0.407
0.3333	-0.400
0.3500	-0.400
0.3666	-0.381

16-1 R12

0.3833	-0.368
0.4000	-0.362
0.4166	-0.349
0.4333	-0.343
0.4500	-0.330
0.4666	-0.324
0.4833	-0.318
0.5000	-0.311
0.5166	-0.305
0.5333	-0.305
0.5500	-0.298
0.5666	-0.292
0.5833	-0.286
0.6000	-0.279
0.6166	-0.279
0.6333	-0.273
0.6500	-0.273
0.6666	-0.267
0.6833	-0.260
0.7000	-0.260
0.7166	-0.254
0.7333	-0.248
0.7500	-0.248
0.7666	-0.248
0.7833	-0.241
0.8000	-0.235
0.8166	-0.235
0.8333	-0.229
0.8500	-0.229
0.8666	-0.222
0.8833	-0.222
0.9000	-0.222
0.9166	-0.216
0.9333	-0.216
0.9500	-0.209
0.9666	-0.209
0.9833	-0.209
1.0000	-0.203
1.2000	-0.178
1.4000	-0.159
1.6000	-0.146
1.8000	-0.133
2.0000	-0.120
2.2000	-0.108
2.4000	-0.101
2.6000	-0.089
2.8000	-0.082
3.0000	-0.076
3.2000	-0.070
3.4000	-0.063
3.6000	-0.057
3.8000	-0.050
4.0000	-0.044
4.2000	-0.044
4.4000	-0.038
4.6000	-0.031
4.8000	-0.025
5.0000	-0.025
5.2000	-0.019
5.4000	-0.019
5.6000	-0.019
5.8000	-0.012
6.0000	-0.012
6.2000	-0.012
6.4000	-0.006
6.6000	-0.006

16-1 RL

6.8000	0.000
7.0000	-0.006
7.2000	-0.006
7.4000	0.000
7.6000	0.000
7.8000	0.000
8.0000	0.000
8.2000	0.006
8.4000	0.000
8.6000	0.006
8.8000	0.006
9.0000	0.006
9.2000	0.006
9.4000	0.006
9.6000	0.006
9.8000	0.006
10.0000	0.006

END

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — NUS CORPORATION

PROJECT NAME: NWS EARLE WELL/BORING NO.: MW16-6
PROJECT NO.: CTO-231 GEOLOGIST: S Conti / P Davis
WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' / 17' TEST NO.: 1
STATIC WATER LEVEL (Depth/Elevation): 6.44' 695 1 DATE: 7-18-95
TEST TYPE (Rising/Falling/Constant Head): Rising Head CHECKED:
METHOD OF INDUCING WATER LEVEL CHANGE: Slug = 36" x 1.5" (H_0 = 1.78') PAGE ___ OF ___

TIME	ELAPSED TIME (min or sec.)	MEASURED DEPTH TO WATER (ft.)	CORRECTION	DEPTH TO WATER (ft.)	DRAWDOWN OR HEAD (ft.) (-0.10)	h/H_0	REMARKS
	0.0				1.449	.814	
	0.1				.863	.485	
	0.2				.564	.317	
	0.3				.380	.213	
	0.4				.265	.149	
	0.5				.189	.106	
	0.6				.138	.0775	
	0.7				.106	.0596	
	0.8				.088	.0494	
	0.9				.069	.0388	
	1.0				.056	.0315	
	1.2				.043	.0242	
	1.4				.037	.0208	
	1.6				.030	.0169	
	NOTE:	0.1-foot static shift was			added	for ease in plotting	
		data.					

CALCULATION WORKSHEET Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT US NAVY		JOB NUMBER CTO-231	
SUBJECT Hydraulic Conductivity Calculations			
BASED ON		DRAWING NUMBER	
BY Paul Davis	CHECKED BY	APPROVED BY	DATE

MW16-6 Rising Head

$$K = \frac{r^2 \ln(L/R)}{2 L T_0}$$

where

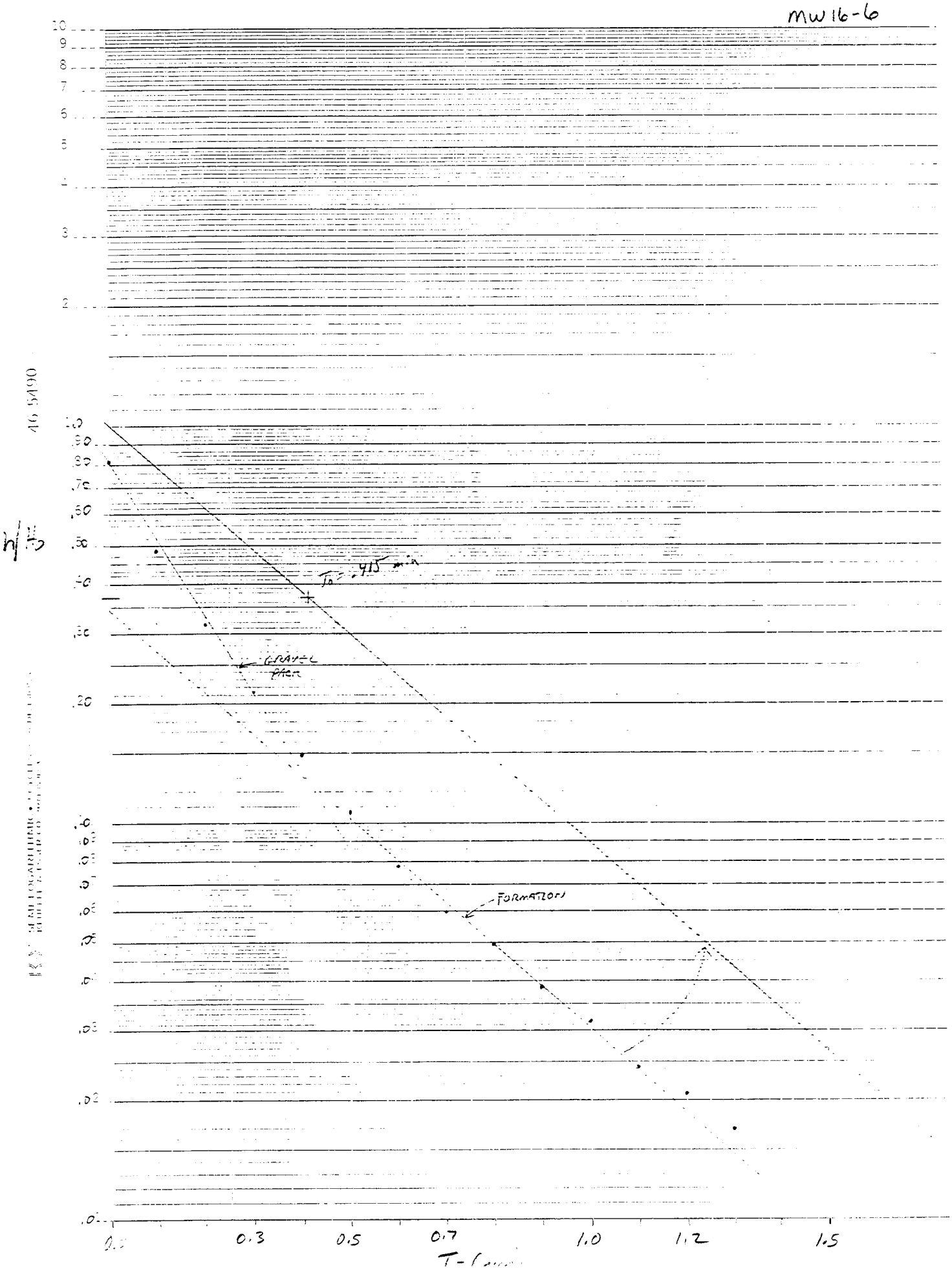
$r = 1$ in $= 0.0833$ ft.
$R = 4$ in $= 0.333$ ft.
$L = 10.56$ ft. (TD 17' bgs − WL 6.44' bgs)
$T_0 = 0.415$ min (from plot)

$$K = \frac{(0.0833')^2 \ln(10.56'/0.333')}{2(10.56')(0.415 \text{ min})}$$

$K = 2.74 \times 10^{-3}$ ft/min $\left(\times \frac{2.54 \text{ cm}}{\text{in}} \times \frac{12 \text{ in}}{\text{ft}} \times \frac{1 \text{ min}}{60 \text{ sec}}\right)$

$K = 1.39 \times 10^{-3}$ cm/sec

bgs: below ground surface.


MW 16-6
GRAVEL PACK
FORMATION
0.3
0.5
0.7
1.0
1.2
1.5

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — HALLIBURTON NUS CORPORATION

PROJECT NAME: NWS EARLE WELL/BORING NO.: MW16-6

PROJECT NO.: 5803 GEOLOGIST: CONTI

WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' TEST NO.: 1

STATIC WATER LEVEL (Depth/Elevation): 8.18 TPVC (6.44' 695) DATE: 7-18-95

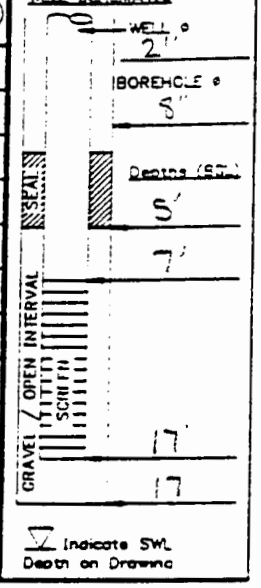
TEST TYPE (Rising/Falling/Constant Head): RISING HEAD CHECKED:

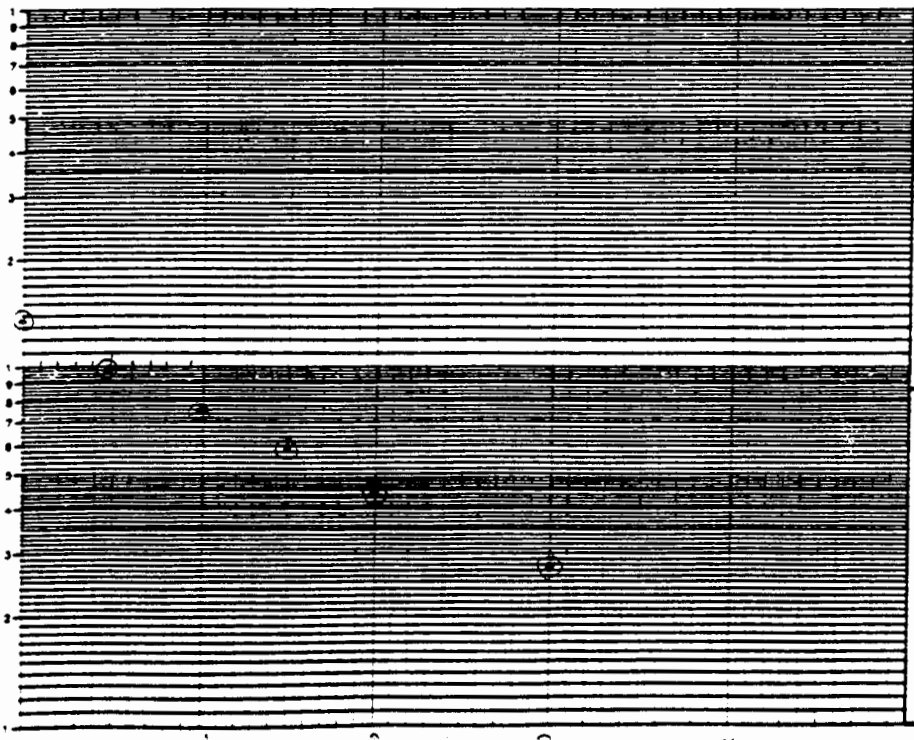
METHOD OF INDUCING WATER LEVEL CHANGE: 2" SLUG (SEE 2) PAGE 1 OF

REFERENCE PT. FOR WL MEAS. (Top of Casing, Transducer, etc.): TPVC

ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)	ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)

WELL SCHEMATIC





REMARKS:

10.70 XD ±

TPVC is 1.74' above ground surface

CALCS, SKETCH MAPS, ETC.:

SE1000C
Environmental Logger
07/19 07:35

Unit# 00000 Test 2

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	00003
Reference	0.000
Linearity	0.120
Scale factor	20.110
Offset	0.000
Delay mSEC	50.000

Step 0 07/18 15:26:57

Elapsed Time	INPUT 1
0.0000	-1.349
0.0033	-1.304
0.0066	-1.273
0.0100	-1.247
0.0133	-1.215
0.0166	-1.190
0.0200	-1.164
0.0233	-1.145
0.0266	-1.125
0.0300	-1.107
0.0333	-1.081
0.0366	-1.063
0.0400	-1.043
0.0433	-1.024
0.0466	-1.012
0.0500	-0.993
0.0533	-0.973
0.0566	-0.954
0.0600	-0.942
0.0633	-0.923
0.0666	-0.910
0.0700	-0.891
0.0733	-0.878
0.0766	-0.859
0.0800	-0.846
0.0833	-0.833
0.0866	-0.814
0.0900	-0.802
0.0933	-0.789
0.0966	-0.776
0.1000	-0.763
0.1033	-0.751
0.1066	-0.738
0.1100	-0.732
0.1133	-0.713
0.1166	-0.706
0.1200	-0.693

16-6 RH

0.1233	-0.681
0.1266	-0.674
0.1300	-0.662
0.1333	-0.649
0.1366	-0.636
0.1400	-0.630
0.1433	-0.617
0.1466	-0.604
0.1500	-0.598
0.1533	-0.585
0.1566	-0.579
0.1600	-0.572
0.1633	-0.560
0.1666	-0.547
0.1700	-0.541
0.1733	-0.534
0.1766	-0.522
0.1800	-0.515
0.1833	-0.509
0.1866	-0.496
0.1900	-0.490
0.1933	-0.483
0.1966	-0.471
0.2000	-0.464
0.2033	-0.458
0.2066	-0.452
0.2100	-0.445
0.2133	-0.439
0.2166	-0.426
0.2200	-0.420
0.2233	-0.413
0.2266	-0.407
0.2300	-0.401
0.2333	-0.394
0.2366	-0.388
0.2400	-0.382
0.2433	-0.375
0.2466	-0.369
0.2500	-0.362
0.2533	-0.356
0.2566	-0.350
0.2600	-0.343
0.2633	-0.337
0.2666	-0.331
0.2700	-0.324
0.2733	-0.318
0.2766	-0.311
0.2800	-0.305
0.2833	-0.299
0.2866	-0.299
0.2900	-0.292
0.2933	-0.286
0.2966	-0.280
0.3000	-0.280
0.3033	-0.273
0.3066	-0.267
0.3100	-0.261
0.3133	-0.261
0.3166	-0.254
0.3200	-0.248
0.3233	-0.248
0.3266	-0.241
0.3300	-0.235
0.3333	-0.229
0.3500	-0.222
0.3666	-0.203

16-6 RA

0.3833	0.184
0.4000	-0.165
0.4166	-0.152
0.4333	-0.133
0.4500	-0.121
0.4666	-0.108
0.4833	-0.101
0.5000	-0.089
0.5166	-0.082
0.5333	-0.070
0.5500	-0.057
0.5666	-0.050
0.5833	-0.044
0.6000	-0.038
0.6166	-0.031
0.6333	-0.031
0.6500	-0.025
0.6666	-0.019
0.6833	-0.012
0.7000	-0.006
0.7166	-0.006
0.7333	0.000
0.7500	0.006
0.7666	0.006
0.7833	0.012
0.8000	0.012
0.8166	0.019
0.8333	0.019
0.8500	0.025
0.8666	0.025
0.8833	0.031
0.9000	0.031
0.9166	0.031
0.9333	0.038
0.9500	0.038
0.9666	0.038
0.9833	0.044
1.0000	0.044
1.2000	0.057
1.4000	0.063
1.6000	0.070
1.8000	0.070
2.0000	0.070
2.2000	0.076
2.4000	0.070
2.6000	0.070
2.8000	0.070
3.0000	0.070
3.2000	0.070
3.4000	0.070
3.6000	0.070
3.8000	0.076
4.0000	0.076
4.2000	0.070
4.4000	0.076
4.6000	0.076
4.8000	0.076
5.0000	0.076
5.2000	0.076
5.4000	0.076
5.6000	0.076
5.8000	0.076
6.0000	0.076
6.2000	0.076
6.4000	0.076
6.6000	0.076

16-6 RH

6.8000	0.076
7.0000	0.076
7.2000	0.076
7.4000	0.082
7.6000	0.082
7.8000	0.082
8.0000	0.082
8.2000	0.082
8.4000	0.082
8.6000	0.082
8.8000	0.082
9.0000	0.082
9.2000	0.082
9.4000	0.082
9.6000	0.082
9.8000	0.082
10.0000	0.082
12.0000	0.082

END

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET **NUS CORPORATION**

PROJECT NAME: NWS - Earle WELL/BORING NO.: MW16-6
PROJECT NO.: CTO-231 GEOLOGIST: S. Conti / P. Davis
WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' / 17' TEST NO.: 1
STATIC WATER LEVEL (Depth/Elevation): 6.44' bgs / DATE: 7-18-95
TEST TYPE (Rising/Falling/Constant Head): Falling Head CHECKED:
METHOD OF INDUCING WATER LEVEL CHANGE: Slug 38" x 1.5" (Ho = 1.78') PAGE ___ OF ___

TIME	ELAPSED TIME (min. or sec.)	MEASURED DEPTH TO WATER (ft.)	CORRECTION	DEPTH TO WATER (ft.)	DRAWDOWN OR HEAD (ft.)	h/Ho	REMARKS
	.0033				1.133	.637	
	.1				.725	.407	
	.2				.522	.293	
	.3				.401	.225	
	.4				.311	.175	
	.5				.241	.135	
	.6				.197	.111	
	.7				.165	.0927	
	.8				.140	.0787	
	.9				.121	.0680	
	1.0				.108	.0607	
	1.2				.076	.0427	
	1.4				.063	.0354	
	1.6				.057	.0320	
	1.8				.044	.0247	
	2.0				.038	.0213	
	2.2				.038	.0213	
	2.4				.031	.0174	
	2.6				.031	.0174	
	2.8				.031	.0174	
	3.0				.025	.0140	
	3.2				.025	.0140	
	3.4				.025	.0140	

CALCULATION WORKSHEET Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT US NAVY		JOB NUMBER CTO-231	
SUBJECT Hydraulic Conductivity Calculations			
BASED ON		DRAWING NUMBER	
BY P. Davis	CHECKED BY	APPROVED BY	DATE

MW 16-6 (Falling Head)

$$K = \frac{r^2 \ln(L/R)}{2 L T_0}$$

where:

$r = 1$ in. $= 0.0833$ ft

$R = 4$ in. $= 0.333$ ft

$L = 10.56'$ (TD 17' bgs − WL 6.44' bgs)

T_0 0.85 min. (from plot)

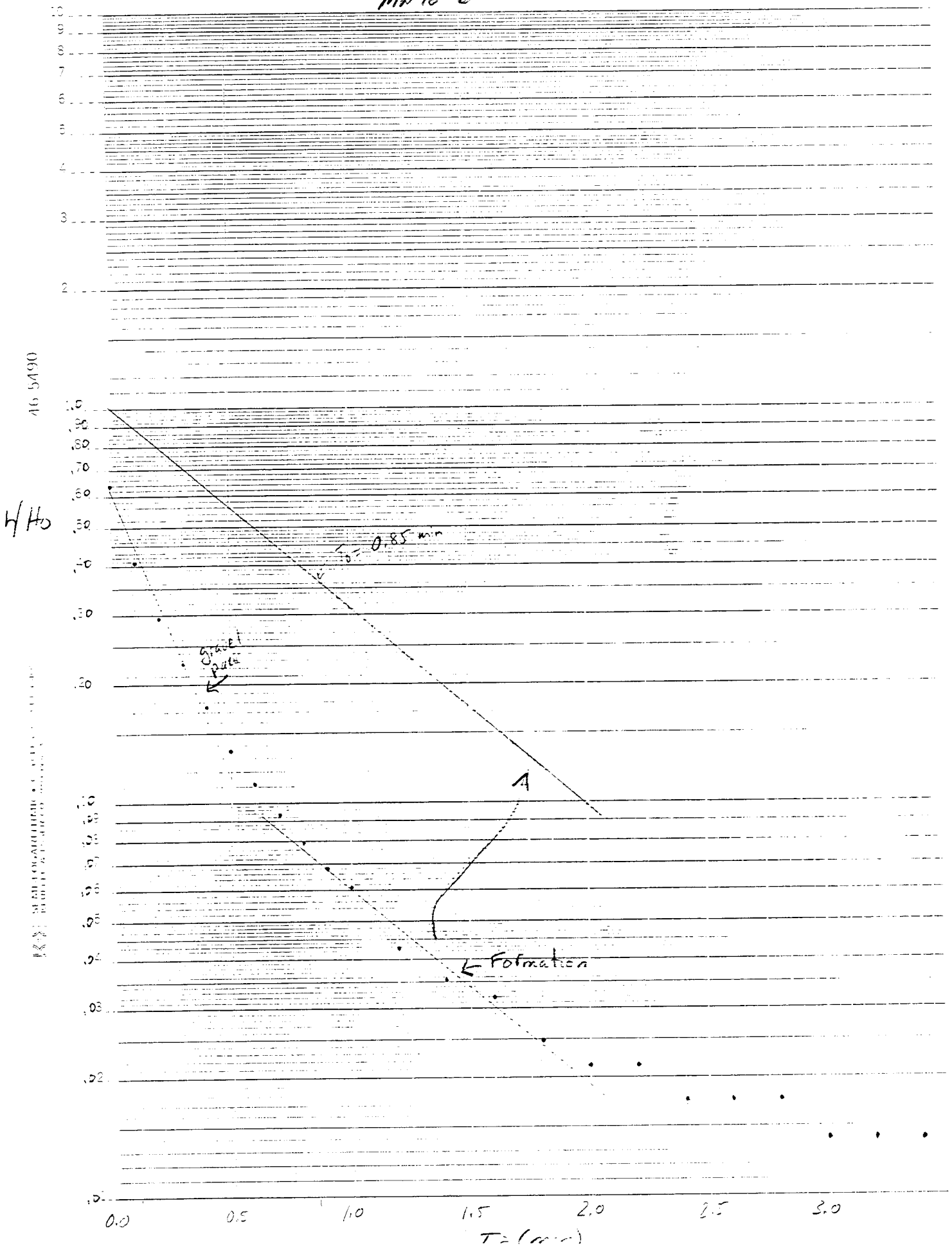
$$K = \frac{(0.0833')^2 \ln(10.56'/0.333')}{2(10.56')(0.85 \text{ min})}$$

$$K = 1.34 \times 10^{-3} \text{ ft/min.} \left(\times \frac{2.54 \text{ cm}}{\text{in}} \times \frac{12 \text{ in}}{\text{ft}} \times \frac{1 \text{ min}}{60 \text{ sec}}\right)$$

$$K = 6.79 \times 10^{-4} \text{ cm/sec.}$$

bgs = below ground surface

MW 16-6



HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — HALLIBURTON NUS CORPORATION

PROJECT NAME: NUS FARLE WELL/BORING NO.: MW16-6

PROJECT NO.: 5823 GEOLOGIST: CONT

WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' TEST NO.: 2

STATIC WATER LEVEL (Depth/Elevation): 8.18 TPVC (6.44' 695) DATE: 7-13-95

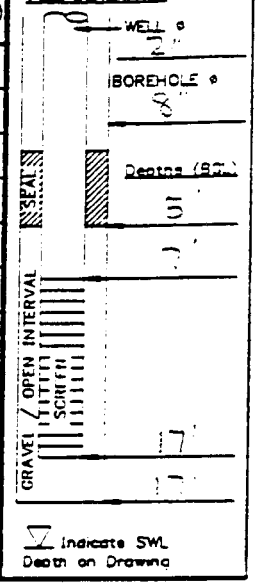
TEST TYPE (Rising/Falling/Constant Head): FALLING HEAD CHECKED:

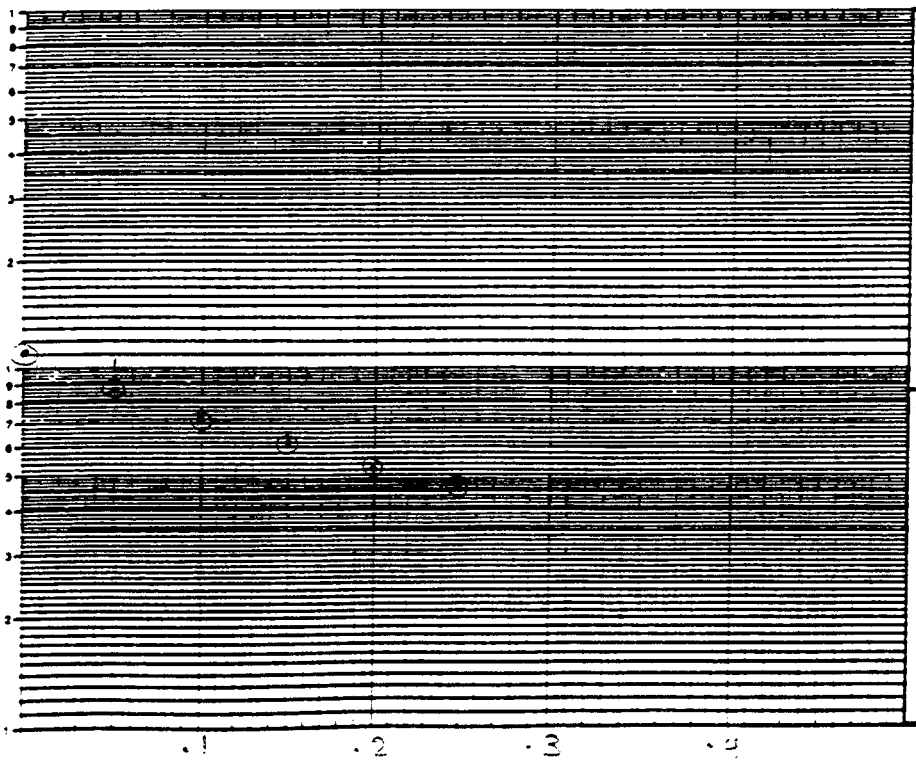
METHOD OF INDUCING WATER LEVEL CHANGE: 2" SLUG (SEL 3) PAGE 1 OF

REFERENCE PT. FOR WL MEAS. (Top of Casing, Transducer, etc.): TPVC

ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)	ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)

WELL SCHEMATIC





REMARKS:

TPVC IS 1.74' above ground surface

CALCS.SKETCH MAPS, ETC.:

SE1000C
Environmental Logger
07/19 07:32

Unit# 00000 Test 3

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	00003
Reference	0.000
Linearity	0.120
Scale factor	20.110
Offset	0.000
Delay mSEC	50.000

Step 0 07/18 15:41:54

Elapsed Time	INPUT 1
0.0000	1.018
0.0033	1.133
0.0066	1.120
0.0100	1.031
0.0133	0.980
0.0166	0.981
0.0200	0.974
0.0233	0.981
0.0266	0.948
0.0300	0.935
0.0333	0.923
0.0366	0.910
0.0400	0.904
0.0433	0.891
0.0466	0.878
0.0500	0.865
0.0533	0.853
0.0566	0.846
0.0600	0.834
0.0633	0.821
0.0666	0.808
0.0700	0.802
0.0733	0.795
0.0766	0.783
0.0800	0.776
0.0833	0.764
0.0866	0.757
0.0900	0.751
0.0933	0.738
0.0966	0.732
0.1000	0.725
0.1033	0.713
0.1066	0.706
0.1100	0.700
0.1133	0.694
0.1166	0.687
0.1200	0.674

16-6 FH

0.1233	0.669
0.1266	0.662
0.1300	0.655
0.1333	0.649
0.1366	0.643
0.1400	0.636
0.1433	0.630
0.1466	0.617
0.1500	0.617
0.1533	0.611
0.1566	0.604
0.1600	0.592
0.1633	0.592
0.1666	0.579
0.1700	0.579
0.1733	0.573
0.1766	0.560
0.1800	0.553
0.1833	0.547
0.1866	0.541
0.1900	0.541
0.1933	0.534
0.1966	0.528
0.2000	0.522
0.2033	0.515
0.2066	0.515
0.2100	0.509
0.2133	0.503
0.2166	0.496
0.2200	0.496
0.2233	0.490
0.2266	0.483
0.2300	0.483
0.2333	0.477
0.2366	0.471
0.2400	0.471
0.2433	0.464
0.2466	0.458
0.2500	0.458
0.2533	0.452
0.2566	0.452
0.2600	0.445
0.2633	0.445
0.2666	0.439
0.2700	0.439
0.2733	0.432
0.2766	0.432
0.2800	0.426
0.2833	0.420
0.2866	0.420
0.2900	0.413
0.2933	0.413
0.2966	0.407
0.3000	0.401
0.3033	0.401
0.3066	0.394
0.3100	0.394
0.3133	0.388
0.3166	0.388
0.3200	0.388
0.3233	0.382
0.3266	0.382
0.3300	0.375
0.3333	0.375
0.3500	0.350
0.3666	0.337

16-6 F1

0.3833	0.324
0.4000	0.311
0.4166	0.299
0.4333	0.286
0.4500	0.273
0.4666	0.267
0.4833	0.254
0.5000	0.241
0.5166	0.235
0.5333	0.229
0.5500	0.222
0.5666	0.210
0.5833	0.203
0.6000	0.197
0.6166	0.191
0.6333	0.191
0.6500	0.178
0.6666	0.178
0.6833	0.171
0.7000	0.165
0.7166	0.159
0.7333	0.159
0.7500	0.152
0.7666	0.146
0.7833	0.146
0.8000	0.140
0.8166	0.133
0.8333	0.133
0.8500	0.133
0.8666	0.127
0.8833	0.121
0.9000	0.121
0.9166	0.121
0.9333	0.114
0.9500	0.114
0.9666	0.114
0.9833	0.108
1.0000	0.108
1.2000	0.076
1.4000	0.063
1.6000	0.057
1.8000	0.044
2.0000	0.038
2.2000	0.035
2.4000	0.031
2.6000	0.031
2.8000	0.031
3.0000	0.025
3.2000	0.025
3.4000	0.025

END

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — NUS CORPORATION

PROJECT NAME: NWS - Earle WELL/BORING NO.: MW23-1
PROJECT NO.: CTO-231 GEOLOGIST: S. Conti / P. Davis
WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' / 27' TEST NO.: 1
STATIC WATER LEVEL (Depth/Elevation): 20.85' 693.1 DATE: 7-18-95
TEST TYPE (Rising/Falling/Constant Head): Rising Head CHECKED:
METHOD OF INDUCING WATER LEVEL CHANGE: Slug: 38" x 1.5" (H_o = 1.78') PAGE ___ OF ___

TIME	ELAPSED TIME (min or sec.)	MEASURED DEPTH TO WATER (ft.)	CORRECTION	DEPTH TO WATER (ft.)	DRAWDOWN OR HEAD (ft.)	h/H_o	REMARKS
	0.0				1.551	.871	
	0.1				.750	.421	
	0.2				.184	.103	
	0.3				.114	.064	
	0.4				.082	.0460	
	0.5				.057	.0320	
	0.6				.038	.0213	
	0.7				.031	.0174	
	0.8				.019	.0107	
	0.9				.012	.0[illegible]	
	1.0				.006	.0034	

CALCULATION WORKSHEET Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT US NAVY		JOB NUMBER CTO - 231	
SUBJECT Hydraulic Conductivity Calculations			
BASED ON		DRAWING NUMBER	
BY Paul Davis	CHECKED BY	APPROVED BY	DATE

MW 23-1

$$K = \frac{r^2 \ln(L/R)}{2 L T_0}$$

where

$r = 1$ in. $= 0.0833$ ft

$R = 4$ in $= 0.333$ ft.

$L = 6.15$ ft (TD 27' bgs - WL 20.85' bgs)

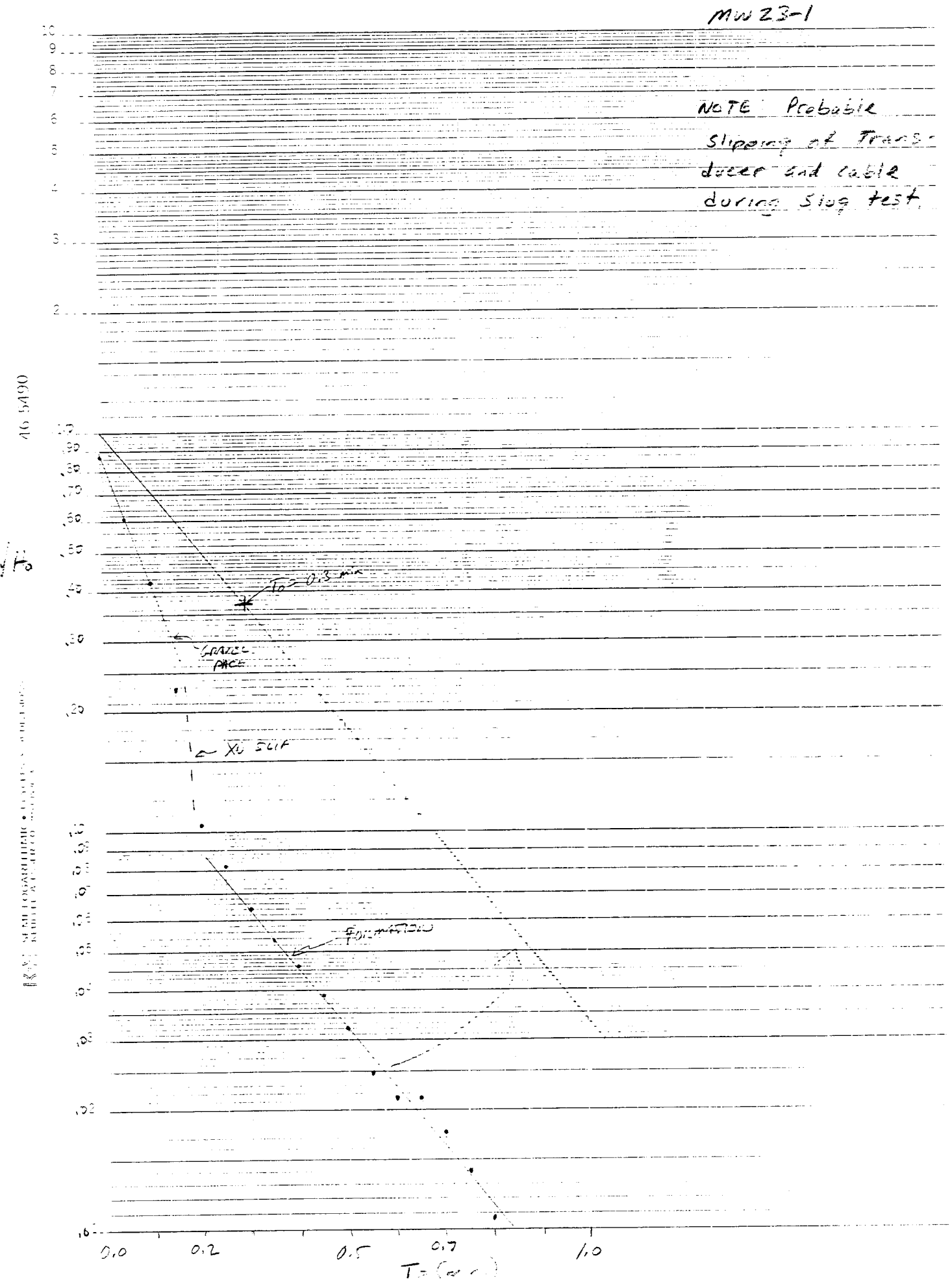
$T_0 = 0.30$ min (from plot)

$$K = \frac{(0.0833')^2 \ln(6.15'/0.333')}{2(6.5')(0.30 \text{ min})}$$

$$K = 5.48 \times 10^{-3} \text{ ft/min} \left(\times \frac{2.54 \text{ cm}}{\text{in.}} \times \frac{12 \text{ in}}{\text{ft}} \times \frac{1 \text{ min}}{60 \text{ sec}}\right)$$

$$K = 2.79 \times 10^{-3} \text{ cm/sec}$$

bgs = below ground surface


MW 23-1
NOTE Probable slipping of Transducer and cable during slug test.
GRAVEL PACK
FORMATION
0.0
0.2
0.5
0.7
1.0

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — HALLIBURTON NUS CORPORATION

PROJECT NAME: NWS EAGLE WELL/BORING NO.: MW23-1

PROJECT NO.: 5803 GEOLOGIST: CONTI

WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' TEST NO.: 1

STATIC WATER LEVEL (Depth/Elevation): 22.78' TPVC (20.85' bgs) DATE: 7-18-95

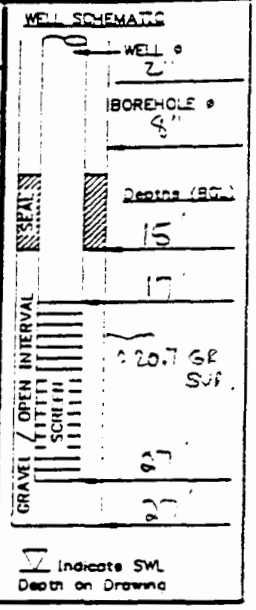
TEST TYPE (Rising/Falling/Constant Head): RISING HEAD (2") CHECKED:

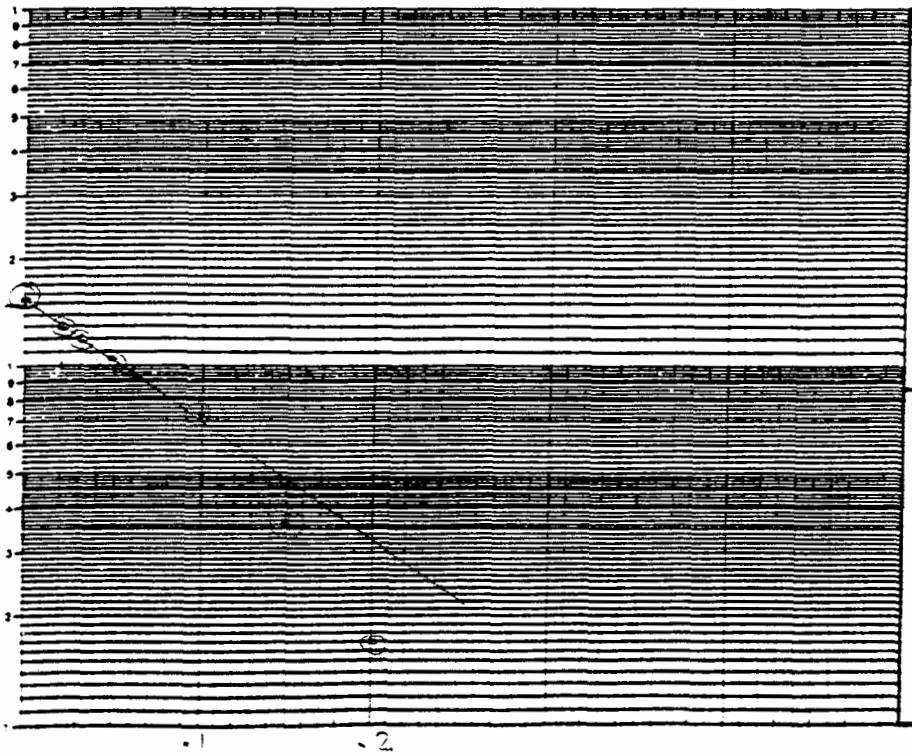
METHOD OF INDUCING WATER LEVEL CHANGE: 2" SLUG SEL 2 PAGE 1 OF

REFERENCE PT. FOR WL MEAS. (Top of Casing, Transducer, etc.): TPVC

ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)	ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)
0		-1.55			
.02		-1.35			
.03		-1.28			
.03		-1.21			
.05		-1.04			
.1		-.73			
.15		-.36			
.20		-.17			
.25		-.13			
.30		-.11			

WELL SCHEMATIC





REMARKS:

XDC 6.13 ±

2 SLUG

TPVC IS 1.93' above Ground Surface

CALCS.SKETCH MAPS, ETC.:

SE1000C
Environmental Logger
07/19 07:49

Unit# 00000 Test 0

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	00001
Reference	0.000
Linearity	0.120
Scale factor	20.110
Offset	0.000
Delay mSEC	50.000

Step 0 07/18 09:54:39

Elapsed Time	INPUT 1
0.0000	-1.551
0.0033	-1.519
0.0066	-1.487
0.0100	-1.455
0.0133	-1.424
0.0166	-1.392
0.0200	-1.354
0.0233	-1.316
0.0266	-1.284
0.0300	-1.246
0.0333	-1.214
0.0366	-1.188
0.0400	-1.157
0.0433	-1.131
0.0466	-1.106
0.0500	-1.080
0.0533	-1.049
0.0566	-1.023
0.0600	-0.998
0.0633	-0.972
0.0666	-0.953
0.0700	-0.928
0.0733	-0.909
0.0766	-0.883
0.0800	-0.864
0.0833	-0.845
0.0866	-0.826
0.0900	-0.807
0.0933	-0.788
0.0966	-0.769
0.1000	-0.750
0.1033	-0.731
0.1066	-0.705
0.1100	-0.686
0.1133	-0.667
0.1166	-0.648
0.1200	-0.629

23 - 1

0.1233	-0.604
0.1266	-0.584
0.1300	-0.572
0.1333	-0.553
0.1366	-0.527
0.1400	-0.502
0.1433	-0.476
0.1466	-0.438
0.1500	-0.406
0.1533	-0.362
0.1566	-0.292
0.1600	-0.247
0.1633	-0.235
0.1666	-0.228
0.1700	-0.222
0.1733	-0.216
0.1766	-0.216
0.1800	-0.209
0.1833	-0.203
0.1866	-0.197
0.1900	-0.197
0.1933	-0.190
0.1966	-0.190
0.2000	-0.184
0.2033	-0.178
0.2066	-0.178
0.2100	-0.171
0.2133	-0.171
0.2166	-0.165
0.2200	-0.165
0.2233	-0.165
0.2266	-0.159
0.2300	-0.159
0.2333	-0.152
0.2366	-0.152
0.2400	-0.146
0.2433	-0.146
0.2466	-0.146
0.2500	-0.146
0.2533	-0.139
0.2566	-0.139
0.2600	-0.133
0.2633	-0.133
0.2666	-0.133
0.2700	-0.127
0.2733	-0.127
0.2766	-0.127
0.2800	-0.127
0.2833	-0.120
0.2866	-0.120
0.2900	-0.120
0.2933	-0.120
0.2966	-0.114
0.3000	-0.114
0.3033	-0.114
0.3066	-0.114
0.3100	-0.108
0.3133	-0.108
0.3166	-0.108
0.3200	-0.105
0.3233	-0.101
0.3266	-0.101
0.3300	-0.101
0.3333	-0.101
0.3500	-0.095
0.3666	-0.089

23-1

0.3833	-0.082
0.4000	-0.082
0.4166	-0.076
0.4333	-0.069
0.4500	-0.069
0.4666	-0.063
0.4833	-0.057
0.5000	-0.057
0.5166	-0.050
0.5333	-0.050
0.5500	-0.044
0.5666	-0.044
0.5833	-0.044
0.6000	-0.038
0.6166	-0.038
0.6333	-0.038
0.6500	-0.038
0.6666	-0.031
0.6833	-0.031
0.7000	-0.031
0.7166	-0.025
0.7333	-0.025
0.7500	-0.025
0.7666	-0.025
0.7833	-0.025
0.8000	-0.019
0.8166	-0.019
0.8333	-0.019
0.8500	-0.019
0.8666	-0.019
0.8833	-0.012
0.9000	-0.012
0.9166	-0.012
0.9333	-0.012
0.9500	-0.012
0.9666	-0.012
0.9833	-0.006
1.0000	-0.006
1.2000	0.000
1.4000	0.000
1.6000	0.006
1.6000	0.006
2.0000	0.006
2.2000	0.006
2.4000	0.012
2.6000	0.006
2.8000	0.012
3.0000	0.012
3.2000	0.012
3.4000	0.012
3.6000	0.012
3.8000	0.012
4.0000	0.012
4.2000	0.012
4.4000	0.012
4.6000	0.012
4.8000	0.012
5.0000	0.012
5.2000	0.012
5.4000	0.012
5.6000	0.012
5.8000	0.012
6.0000	0.012
6.2000	0.012

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET **NUS CORPORATION**

PROJECT NAME: NWS - Earle WELL/BORING NO.: MW 23-2
PROJECT NO.: CTC-231 GEOLOGIST: S. Conti / P. Davis
WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' / 26' TEST NO.: 1
STATIC WATER LEVEL (Depth/Elevation): 18.98' 695.1 DATE: 7-18-95
TEST TYPE (Rising/Falling/Constant Head): Rising Head CHECKED:
METHOD OF INDUCING WATER LEVEL CHANGE: Slug: 38" x 1.5" (Ho = 1.78') PAGE ___ OF ___

TIME	ELAPSED TIME (min. or sec.)	MEASURED DEPTH TO WATER (ft.)	CORRECTION	DEPTH TO WATER (ft.)	DRAWDOWN OR HEAD (ft.)	h/Ho	REMARKS
	0.0				1.424	0.80	
	.05				1.163	.653	
	.1				.985	.553	
	.15				.839	.471	
	.2				.724	.407	
	.25				.623	.350	
	.3				.540	.303	
	.35				.476	.267	
	.4				.413	.232	
	.45				.356	.200	
	.5				.311	.175	
	.55				.273	.153	
	.6				.241	.135	
	.65				.216	.121	
	.7				.190	.107	
	.75				.171	.0961	
	.8				.152	.0854	
	.85				.139	.0781	
	.9				.108	.0607	
	.95				.089	.0500	
	1.0				.069	.0388	
	1.2				.031	.0174	
	1.4				.019	.0107	

CALCULATION WORKSHEET Order No. 19116 (01-91)

PAGE _____ OF _____

CLIENT US NAVY		JOB NUMBER CTO-231	
SUBJECT Hydraulic Conductivity Calculations			
BASED ON		DRAWING NUMBER	
BY Paul Davis	CHECKED BY	APPROVED BY	DATE

MW 23-2

$$K = \frac{r^2 \ln(L/R)}{2 L T_0}$$

where:

$r = 1$ in. $= 0.0833$ ft.
$R = 4$ in. $= 0.333$ ft.
$L = 7.02$ ft. (TD 26' bgs − WL 18.98' bgs)
$T_0 = 0.375$ min. (from plot)

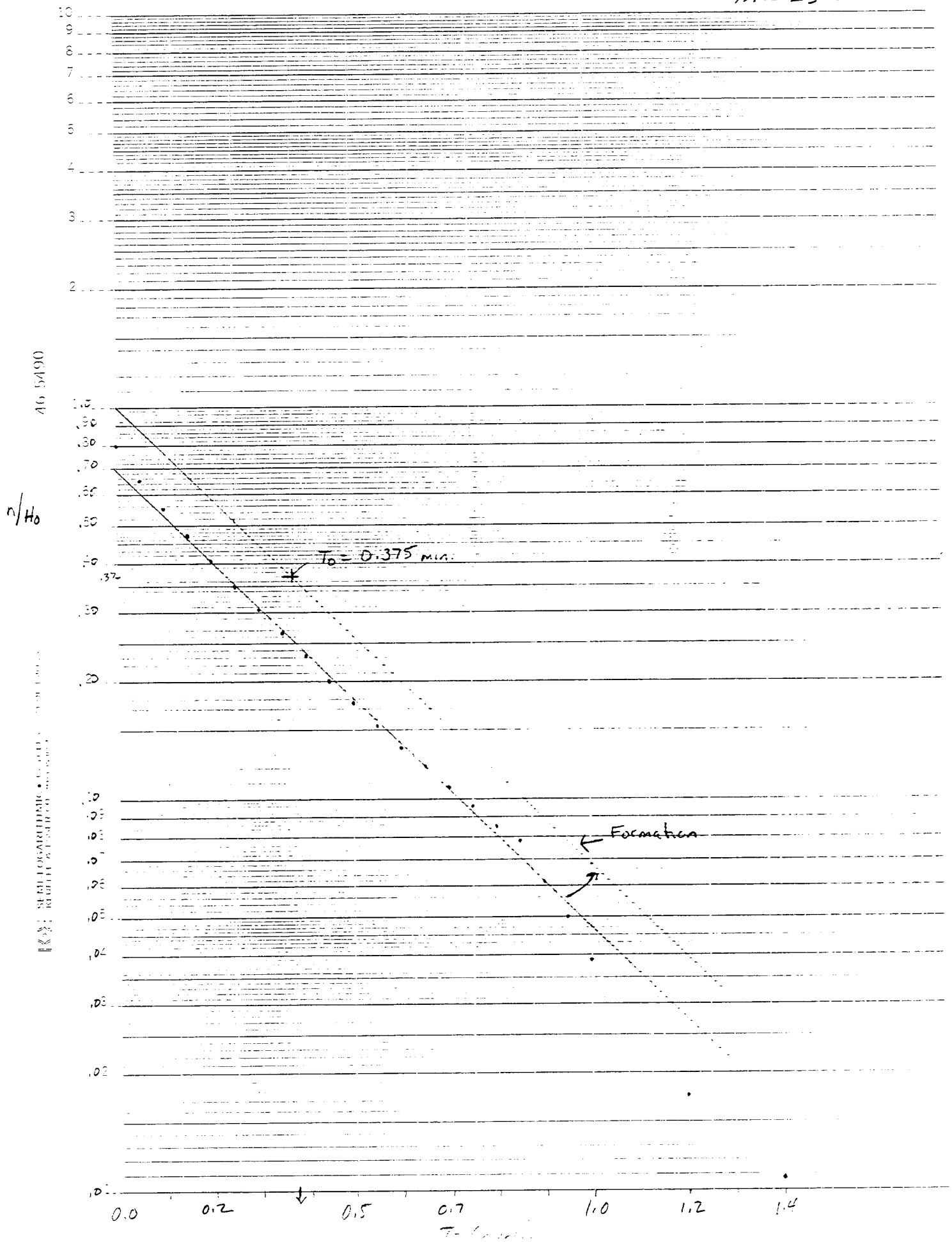
$$K = \frac{(0.0833 \text{ ft})^2 \ln(7.02'/0.333')}{2(7.02 \text{ ft})(0.375 \text{ min.})}$$

$$K = 4.02 \times 10^{-3} \text{ ft/min.} \left(\times \frac{2.54 \text{ cm}}{\text{in.}} \times \frac{12 \text{ in}}{\text{ft}} \times \frac{1 \text{ min}}{60 \text{ sec}}\right)$$

$$K = 2.04 \times 10^{-3} \text{ cm/sec.}$$

bgs = below ground surface

MW 23-2


10
9
8
7
6
5
4
3
2
1.0
.90
.80
.70
.60
.50
.40
.30
.20
.10
.09
.08
.07
.06
.05
.04
.03
.02
.01
h/H0
T0 = 0.375 min.
Formation
0.0
0.2
0.5
0.7
1.0
1.2
1.4

HYDRAULIC CONDUCTIVITY TESTING DATA SHEET — HALLIBURTON NUS CORPORATION

PROJECT NAME: NUS EARLE WELL/BORING NO.: MW 23-2

PROJECT NO.: 5803 GEOLOGIST: CONT.

WELL DIAMETER: 2" SCREEN LENGTH/DEPTH: 10' TEST NO.: 1

STATIC WATER LEVEL (Depth/Elevation): 21.22 TPVC (18.98' bgs) DATE: 7-18-95

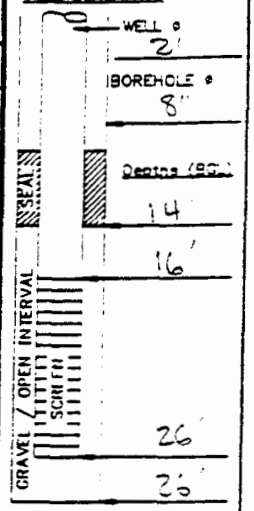
TEST TYPE (Rising/Falling/Constant Head): RISING SPL. CHECKED:

METHOD OF INDUCING WATER LEVEL CHANGE: 2" SLUG PAGE 1 OF

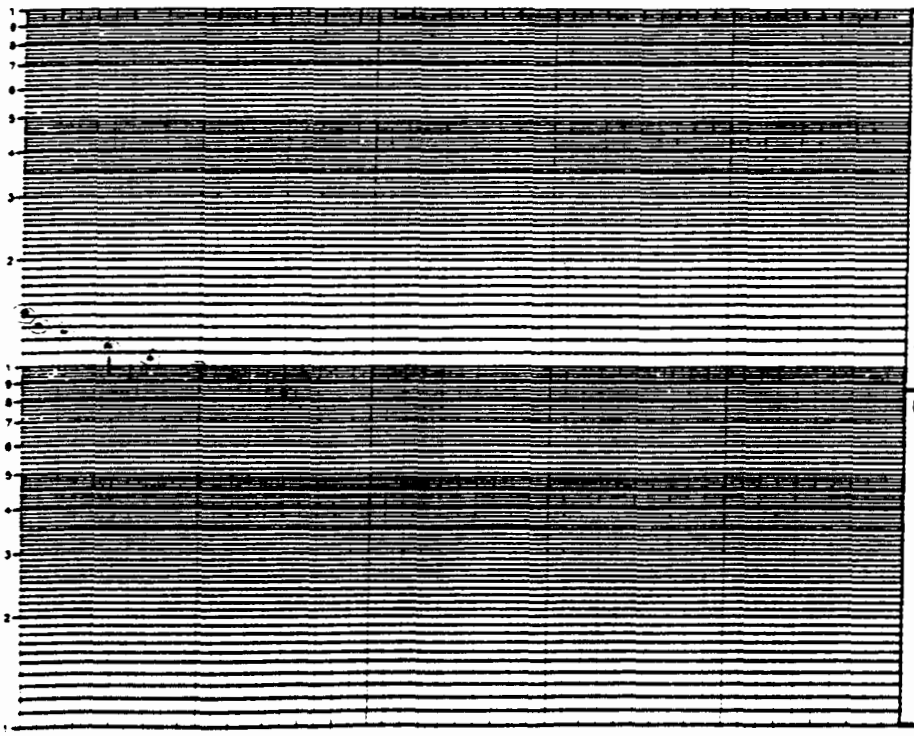
REFERENCE PT. FOR WL MEAS. (Top of Casing, Transducer, etc.): TOC

ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)	ELAPSED TIME (min. or sec.)	MEASURED WATER LEVEL (feet)	DRAWDOWN OR HEAD (ΔH) (feet)
0		-1.[illegible]			
.01		-1.33			
.02		-1.28			
.03		-1.23			
.05		-1.16			
.07		-1.07			
.10		-.98			
.12		-.91			
.15		-.83			
.20		-.71			
.25		-.6[illegible]			
.30		-.5[illegible]			

WELL SCHEMATIC



Indicate SWL Depth on Drawing



REMARKS:

XS = 7.0' ±

TPVC IS 2.24' above ground surface

CALCS, SKETCH MAPS, ETC.:

SE1000C
Environmental Logger
07/19 07:39

Unit# 00000 Test 1

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	00002
Reference	0.000
Linearity	0.120
Scale factor	20.110
Offset	0.000
Delay mSEC	50.000

Step 0 07/18 11:07:46

Elapsed Time	INPUT 1
0.0000	-1.424
0.0033	-1.405
0.0066	-1.379
0.0100	-1.360
0.0133	-1.335
0.0166	-1.318
0.0200	-1.303
0.0233	-1.284
0.0266	-1.271
0.0300	-1.259
0.0333	-1.239
0.0366	-1.227
0.0400	-1.208
0.0433	-1.195
0.0466	-1.182
0.0500	-1.163
0.0533	-1.150
0.0566	-1.135
0.0600	-1.125
0.0633	-1.112
0.0666	-1.100
0.0700	-1.087
0.0733	-1.074
0.0766	-1.061
0.0800	-1.049
0.0833	-1.042
0.0866	-1.030
0.0900	-1.017
0.0933	-1.004
0.0966	-0.998
0.1000	-0.985
0.1033	-0.972
0.1066	-0.960
0.1100	-0.953
0.1133	-0.941
0.1166	-0.934
0.1200	-0.922

MW23-2
RISING HEAD.

23-2

0.1233	-0.913
0.1266	-0.903
0.1300	-0.896
0.1333	-0.883
0.1366	-0.877
0.1400	-0.864
0.1433	-0.858
0.1466	-0.845
0.1500	-0.839
0.1533	-0.833
0.1566	-0.820
0.1600	-0.814
0.1633	-0.807
0.1666	-0.794
0.1700	-0.788
0.1733	-0.782
0.1766	-0.775
0.1800	-0.769
0.1833	-0.763
0.1866	-0.750
0.1900	-0.744
0.1933	-0.737
0.1966	-0.731
0.2000	-0.724
0.2033	-0.718
0.2066	-0.712
0.2100	-0.699
0.2133	-0.693
0.2166	-0.686
0.2200	-0.680
0.2233	-0.674
0.2266	-0.667
0.2300	-0.661
0.2333	-0.655
0.2366	-0.648
0.2400	-0.642
0.2433	-0.635
0.2466	-0.629
0.2500	-0.623
0.2533	-0.616
0.2566	-0.610
0.2600	-0.610
0.2633	-0.604
0.2666	-0.597
0.2700	-0.591
0.2733	-0.585
0.2766	-0.578
0.2800	-0.572
0.2833	-0.572
0.2866	-0.565
0.2900	-0.559
0.2933	-0.553
0.2966	-0.546
0.3000	-0.540
0.3033	-0.540
0.3066	-0.534
0.3100	-0.527
0.3133	-0.521
0.3166	-0.521
0.3200	-0.515
0.3233	-0.508
0.3266	-0.502
0.3300	-0.502
0.3333	-0.496
0.3500	-0.476
0.3666	-0.451

23-2

0.3833	-0.432
0.4000	-0.413
0.4166	-0.394
0.4333	-0.375
0.4500	-0.356
0.4666	-0.343
0.4833	-0.330
0.5000	-0.311
0.5166	-0.298
0.5333	-0.286
0.5500	-0.273
0.5666	-0.267
0.5833	-0.254
0.6000	-0.241
0.6166	-0.235
0.6333	-0.222
0.6500	-0.216
0.6666	-0.209
0.6833	-0.197
0.7000	-0.190
0.7166	-0.184
0.7333	-0.178
0.7500	-0.171
0.7666	-0.165
0.7833	-0.158
0.8000	-0.152
0.8166	-0.146
0.8333	-0.145
0.8500	-0.139
0.8666	-0.127
0.8833	-0.120
0.9000	-0.108
0.9166	-0.101
0.9333	-0.095
0.9500	-0.089
0.9666	-0.082
0.9833	-0.076
1.0000	-0.059
1.2000	-0.031
1.4000	-0.019
1.6000	-0.006
1.8000	-0.006
2.0000	0.000
2.2000	0.000
2.4000	0.000
2.6000	0.000
2.8000	0.000
3.0000	0.000
3.2000	0.000
3.4000	0.000
3.6000	0.000
3.8000	0.000
4.0000	0.006
4.2000	0.006
4.4000	0.000
4.6000	0.000
4.8000	0.000
5.0000	0.000
5.2000	0.000
5.4000	0.000
5.6000	0.000
5.8000	0.000
6.0000	0.000
6.2000	0.000
6.4000	0.000
6.6000	0.006

APPENDIX I

RISK ASSESSMENT DOCUMENTATION

APPENDIX I.a.1

EXAMPLE QUANTITATIVE RISK ASSESSMENT CALCULATIONS

SITE 16 - SURFACE SOIL INORGANIC RESULTS

SUBSTANCE	IO	BACKGROUND FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANG POSITIVE D	
4,4'-DDD	O	NOT DETECTED	2	1.783333	0.576362	0.013889	0.004183	0.144338	0.079213	2.026666	2.07E+00	2.919986	2.667894	2.		-
4,4'-DDE	O	2 / 4	3	87.350000	2.408234	19660.422500	4.670371	161.907062	2.495428	277.864421	4.07E+12	2.353380	16.320350	3.	16	-
4,4'-DDT	O	2 / 4	3	116.600000	2.715678	30968.135000	5.423703	203.201493	2.689164	355.705165	4.01E+14	2.353380	17.578930	3.	43	-
4-METHYLPHENOL	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
ACENAPHTHYLENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
ALPHA-BHC	O	NOT DETECTED	3	0.950000	-0.054772	0.006250	0.006973	0.091287	0.096426	1.057417	1.08E+00	2.353380	2.214600	3.		-
ALPHA-CHLORDANE	O	NOT DETECTED	3	0.950000	-0.054772	0.006250	0.006973	0.091287	0.096426	1.057417	1.08E+00	2.353380	2.214600	3.		-
ANTHRACENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
BENZO(A)ANTHRACENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
BENZO(A)PYRENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
BENZO(B)FLUORANTHENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
BENZO(G,H,I)PERYLENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
BENZO(K)FLUORANTHENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
BIS(2-ETHYLHEXYL)PHTHALATE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
BUTYLBENZYLPHTHALATE	O	1 / 4	3	190.000000	5.240885	450.000000	0.012179	24.494897	0.127430	218.822900	2.25E+02	2.353380	2.281471	3.		22
CARBAZOLE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
CHRYSENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
DI-N-BUTYLPHTHALATE	O	2 / 4	3	115.750000	4.527995	4909.187500	0.478630	80.904779	0.798858	210.949844	1.54E+03	2.353380	5.406918	3.	45	-
FLUORANTHENE	O	2 / 4	3	116.000000	4.597823	3158.000000	0.358226	64.889650	0.691111	192.355002	8.38E+02	2.353380	4.747233	3.	40	-
GAMMA-CHLORDANE	O	NOT DETECTED	3	0.950000	-0.054772	0.006250	0.006973	0.091287	0.096426	1.057417	1.08E+00	2.353380	2.214600	3.		-
HEPTACHLOR EPOXIDE	O	NOT DETECTED	3	0.950000	-0.054772	0.006250	0.006973	0.091287	0.096426	1.057417	1.08E+00	2.353380	2.214600	3.		-
INDENO(1,2,3-CD)PYRENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
N-NITROSODIPHENYLAMINE (1	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
PHENANTHRENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
PYRENE	O	1 / 4	3	146.500000	4.849639	3516.750000	0.351881	68.476273	0.684963	227.075346	1.04E+03	2.353380	4.710149	3.		4

OF TECTION	REPRESENTATIVE CONCENTRATION	REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES	FTESTCAL	FTESTTAB	ZTESTMES
	-	0.000000	0.000000	0.750000	0.750000	0.767000	LOGNORMAL OVER NORMAL							
330	277.86	277.864421	330.000000	0.660490	0.854370	0.748000	NORMAL							
420	355.71	355.705165	420.000000	0.699020	0.862880	0.748000	NORMAL							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.950610	0.950500	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.950610	0.950500	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	220	218.822900	220.000000	0.861500	0.857400	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
48	48	48.000000	48.000000	0.820610	0.799010	0.748000	NONPARAMETRIC DIST							
84	84	84.000000	84.000000	0.851760	0.863250	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.950610	0.950500	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.950610	0.950500	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	46	46.000000	46.000000	0.795480	0.724060	0.748000	LOGNORMAL							

Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO	SITECODE1	SITECODE2	PHASE	TYPE	SITEREF	SUBSTANCE	IO	SITE-RE FREQUE DETEC	
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	4,4'-DDD	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	4,4'-DDE	O	2	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	4,4'-DDT	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	4-METHYLPHENOL	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	ACENAPHTHYLENE	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	ALPHA-BHC	O	2	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	ALPHA-CHLORDANE	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	ANTHRACENE	O	2	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	BENZO(A)ANTHRACENE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	BENZO(A)PYRENE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	BENZO(B)FLUORANTHENE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	BENZO(G,H,I)PERYLENE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	BENZO(K)FLUORANTHENE	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	BIS(2-ETHYLHEXYL)PHTHALAT	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	BUTYLBENZYLPHTHALATE	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	CARBAZOLE	O	2	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	CHRYSENE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	DI-N-BUTYLPHTHALATE	O	2	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	FLUORANTHENE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	GAMMA-CHLORDANE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	HEPTACHLOR EPOXIDE	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	INDENO(1,2,3-CD)PYRENE	O	2	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	N-NITROSODIPHENYLAMINE (1	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	PHENANTHRENE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	PYRENE	O	3	/

TED Y OF ION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANGE OF POSITIVE DETECTION	REPRESENTATIVE CONCENTRATION
2	1	180.975000	3.276967	32049.950625	6.807598	253.179583	3.689877	1311.293199	1.00E+07	6.313745	10000000.000000	1.	360	360
2	1	67.500000	3.747771	2756.250000	1.081019	74.246212	1.470387	398.971612	1.00E+07	6.313745	10000000.000000	1.	15 - 120	120
3	2	103.666667	4.278955	7984.222222	0.674331	109.436435	1.005732	288.160596	1.35E+06	2.919986	13.125160	2.	38 - 230	230
3	2	163.333333	5.064843	1422.222222	0.066380	46.188022	0.315547	241.199627	4.31E+02	2.919986	4.265592	2.	110	110
3	2	160.000000	5.033073	1800.000000	0.091550	51.961524	0.370575	247.599580	5.89E+02	2.919986	4.870102	2.	100	100
3	2	0.492333	-1.611821	0.327311	1.928799	0.700690	1.700940	1.673595	3.46E+11	2.919986	22.228300	2.	0.047 - 0.13	0.13
3	2	12.483333	1.565992	211.550556	2.146871	17.813642	1.794521	42.514545	2.01E+14	2.919986	23.452260	2.	33	33
3	2	139.000000	4.808625	3428.666667	0.295113	71.714713	0.665334	259.900586	9.01E+03	2.919986	8.664971	2.	57 - 170	170
3	2	283.333333	5.555020	14955.555556	0.180984	149.777613	0.521034	535.836626	3.59E+03	2.919986	6.769100	2.	160 - 450	450
3	2	540.000000	5.908644	219466.666667	0.737178	573.759532	1.051555	1507.275205	1.73E+07	2.919986	13.726170	2.	160 - 1200	1200
3	2	683.333333	6.438923	70555.555556	0.189977	325.320355	0.533822	1231.776184	9.89E+03	2.919986	6.936401	2.	350 - 1000	1000
3	2	230.000000	5.379299	6466.666667	0.114884	98.488578	0.415122	396.037432	1.16E+03	2.919986	5.405408	2.	150 - 340	340
3	2	258.666667	5.305326	30923.555556	0.518119	215.372545	0.881578	621.753485	3.85E+05	2.919986	11.498670	2.	86	86
3	2	6933.333333	8.580623	17342222.222222	0.637120	5100.326787	0.977589	15531.743234	5.80E+07	2.919986	12.756380	2.	1800 - 12000	12000
3	2	283.333333	5.512269	23622.222222	0.251562	188.237439	0.614283	600.674305	9.64E+03	2.919986	7.994568	2.	160	160
3	2	198.666667	4.647087	45424.888889	1.239087	261.031288	1.363316	638.727492	7.58E+09	2.919986	17.812810	2.	42 - 54	54
3	2	473.333333	6.034866	58688.888889	0.241394	296.704117	0.601740	973.533364	1.40E+04	2.919986	7.829849	2.	250 - 810	810
3	2	214.666667	4.867989	41230.222222	1.019026	248.687220	1.236341	633.917186	3.79E+08	2.919986	16.150860	2.	44 - 100	100
3	2	443.333333	6.079047	5488.888889	0.031888	90.737717	0.218705	596.303940	7.60E+02	2.919986	3.425964	2.	340 - 510	510
3	2	14.566667	2.010629	213.442222	1.526916	17.893109	1.513398	44.731849	3.64E+10	2.919986	19.775250	2.	1.7 - 35	35
3	2	0.896667	-0.226415	0.143356	0.267224	0.463717	0.633116	1.678426	3.90E+01	2.919986	8.241899	2.	0.39	0.39
3	2	273.333333	5.433472	26755.555556	0.348577	200.333056	0.723094	611.065758	3.68E+04	2.919986	9.422688	2.	120 - 200	200
3	2	251.000000	5.201589	33688.666667	0.716199	224.795463	1.038484	629.972489	6.29E+06	2.919986	13.528470	2.	63	63
3	2	270.000000	5.566230	5066.666667	0.061679	87.177979	0.304168	416.969406	6.69E+02	2.919986	4.150297	2.	210 - 370	370
3	2	2056.666667	7.299901	2776422.222222	0.634428	2040.743329	0.975521	5497.063406	1.55E+07	2.919986	12.729280	2.	670 - 4400	4400

REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES	FTESTCAL	FTESTTAB
360.000000	360.000000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	1.397542	0.081125	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	411.901100	4.350000
120.000000	120.000000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	0.441367	0.329474	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.504000	4.260000
230.000000	230.000000	0.769520	0.801230	0.767000	NONPARAMETRIC DIST	0.540062	0.294577	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.665600	3.920000
110.000000	110.000000	0.750000	0.750000	0.767000	LOGNORMAL OVER NORMAL	-0.720082	0.235737	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	2.202000	3.920000
100.000000	100.000000	0.750000	0.750000	0.767000	LOGNORMAL OVER NORMAL	-0.720082	0.235737	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	2.680100	3.920000
0.130000	0.130000	0.799450	0.952420	0.767000	NONPARAMETRIC DIST	-0.707107	0.239750	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	7.026900	3.920000
33.000000	33.000000	0.809260	0.977150	0.767000	NONPARAMETRIC DIST	1.414213	0.078650	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	33.018200	3.920000
170.000000	170.000000	0.859860	0.818640	0.767000	NONPARAMETRIC DIST	-1.100700	0.135514	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	4.151300	3.920000
450.000000	450.000000	0.937220	0.984720	0.767000	NONPARAMETRIC DIST	0.713506	0.237766	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	8.190300	3.920000
1200.000000	1200.000000	0.821390	0.917880	0.767000	NONPARAMETRIC DIST	0.713506	0.237766	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	17.412100	3.920000
1000.000000	1000.000000	0.998030	0.966890	0.767000	NONPARAMETRIC DIST	2.140518	0.016156	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	13.230100	3.920000
340.000000	340.000000	0.930410	0.971460	0.767000	NONPARAMETRIC DIST	0.540062	0.294577	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	5.791200	3.920000
86.000000	86.000000	0.923760	0.996720	0.767000	NONPARAMETRIC DIST	0.000000	0.500000	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	10.455900	3.920000
12000.000000	12000.000000	0.999870	0.941490	0.767000	NONPARAMETRIC DIST	2.140518	0.016156	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	38.669000	3.920000
160.000000	160.000000	0.815620	0.860160	0.767000	NONPARAMETRIC DIST	0.000000	0.500000	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	7.033600	3.920000
54.000000	54.000000	0.769640	0.825230	0.767000	NONPARAMETRIC DIST	-0.713506	0.237766	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	11.722300	3.920000
810.000000	810.000000	0.890570	0.954160	0.767000	NONPARAMETRIC DIST	2.140518	0.016156	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	12.592000	3.920000
100.000000	100.000000	0.840550	0.966110	0.767000	NONPARAMETRIC DIST	0.000000	0.500000	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	2.454400	3.920000
510.000000	510.000000	0.877530	0.859270	0.767000	NONPARAMETRIC DIST	2.140518	0.016156	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.227500	3.920000
35.000000	35.000000	0.865880	0.998630	0.767000	NONPARAMETRIC DIST	2.121320	0.016947	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	33.066800	3.920000
0.390000	0.390000	0.962760	0.904080	0.767000	NONPARAMETRIC DIST	0.178377	0.429214	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	4.780600	3.920000
200.000000	200.000000	0.899500	0.973800	0.767000	NONPARAMETRIC DIST	0.540062	0.294577	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	9.991100	3.920000
63.000000	63.000000	0.944770	0.998560	0.767000	NONPARAMETRIC DIST	0.000000	0.500000	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	10.733900	3.920000
370.000000	370.000000	0.842110	0.866870	0.767000	NONPARAMETRIC DIST	2.140518	0.016156	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	5.140900	3.920000
4400.000000	4400.000000	0.835180	0.930560	0.767000	NONPARAMETRIC DIST	2.140518	0.016156	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	16.003200	3.920000

ZTESTMES	Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO
Z-TEST NOT POSSIBLE	1.369300	1.960000	1.3428894	2.3533800	T-TEST CANNOT BE USED	0.079213	3	1.783333	0.576362
Z-TEST NOT POSSIBLE	1.224700	1.960000	-0.1580236	2.1318470	T-TEST CANNOT BE USED	2.495428	4	87.350000	2.408234
Z-TEST NOT POSSIBLE	1.449100	1.960000	-0.0984834	2.0150480	T-TEST CANNOT BE USED	2.689164	4	116.600000	2.715678
Z-TEST NOT POSSIBLE	1.247200	1.960000	-0.8423522	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	1.247200	1.960000	-0.8853024	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	1.932200	1.960000	-1.3352911	2.0150480	T-TEST CANNOT BE USED	0.096426	4	0.950000	-0.054772
Z-TEST NOT POSSIBLE	1.247200	1.960000	1.3403097	2.0150480	T-TEST CANNOT BE USED	0.096426	4	0.950000	-0.054772
Z-TEST NOT POSSIBLE	1.932200	1.960000	-1.2460779	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	2.645800	1.960000	1.3647788	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	2.645800	1.960000	1.2846451	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	2.645800	1.960000	3.1733727	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	2.645800	1.960000	0.9534520	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	1.247200	1.960000	0.7171462	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	2.645800	1.960000	2.7396013	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	0.241500	1.960000	1.0136681	2.0150480	T-TEST CANNOT BE USED	0.127430	4	190.000000	5.240885
Z-TEST NOT POSSIBLE	1.932200	1.960000	0.1179694	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	2.645800	1.960000	2.0161161	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	0.441000	1.960000	0.7649472	2.0150480	T-TEST CANNOT BE USED	0.798858	4	115.750000	4.527995
Z-TEST NOT POSSIBLE	1.449100	1.960000	5.6179814	2.0150480	T-TEST CANNOT BE USED	0.691111	4	116.000000	4.597823
Z-TEST NOT POSSIBLE	2.645800	1.960000	1.5753902	2.0150480	T-TEST CANNOT BE USED	0.096426	4	0.950000	-0.054772
Z-TEST NOT POSSIBLE	1.247200	1.960000	-0.2314648	2.0150480	T-TEST CANNOT BE USED	0.096426	4	0.950000	-0.054772
Z-TEST NOT POSSIBLE	1.932200	1.960000	0.9213325	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	1.247200	1.960000	0.6169797	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	2.645800	1.960000	1.9982520	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	1.984300	1.960000	1.9361012	2.0150480	T-TEST CANNOT BE USED	0.684963	4	146.500000	4.849639

APPENDIX I.a.2

EXAMPLE QUANTITATIVE RISK ASSESSMENT CALCULATIONS

SITE 16 - SURFACE SOIL ORGANIC RESULTS

SUBSTANCE	IO	BACKGROUND FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANG POSITIVE	D
4,4'-DDD	O	NOT DETECTED	2	1.783333	0.576362	0.013889	0.004183	0.144338	0.079213	2.026666	2.07E+00	2.919986	2.667894	2.		-
4,4'-DDE	O	2 / 4	3	87.350000	2.408234	19660.422500	4.670371	161.907062	2.495428	277.864421	4.07E+12	2.353380	16.320350	3.	16	-
4,4'-DDT	O	2 / 4	3	116.600000	2.715678	30968.135000	5.423703	203.201493	2.689164	355.705165	4.01E+14	2.353380	17.578930	3.	43	-
4-METHYLPHENOL	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
ACENAPHTHYLENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
ALPHA-BHC	O	NOT DETECTED	3	0.950000	-0.054772	0.006250	0.006973	0.091287	0.096426	1.057417	1.08E+00	2.353380	2.214600	3.		-
ALPHA-CHLORDANE	O	NOT DETECTED	3	0.950000	-0.054772	0.006250	0.006973	0.091287	0.096426	1.057417	1.08E+00	2.353380	2.214600	3.		-
ANTHRACENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
BENZO(A)ANTHRACENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
BENZO(A)PYRENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
BENZO(B)FLUORANTHENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
BENZO(G,H,I)PERYLENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
BENZO(K)FLUORANTHENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
BIS(2-ETHYLHEXYL)PHTHALATE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
BUTYLBENZYLPHTHALATE	O	1 / 4	3	190.000000	5.240885	450.000000	0.012179	24.494897	0.127430	218.822900	2.25E+02	2.353380	2.281471	3.		22
CARBAZOLE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
CHRYSENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
DI-N-BUTYLPHTHALATE	O	2 / 4	3	115.750000	4.527995	4909.187500	0.478630	80.904779	0.798858	210.949844	1.54E+03	2.353380	5.406918	3.	45	-
FLUORANTHENE	O	2 / 4	3	116.000000	4.597823	3158.000000	0.358226	64.889650	0.691111	192.355002	8.38E+02	2.353380	4.747233	3.	40	-
GAMMA-CHLORDANE	O	NOT DETECTED	3	0.950000	-0.054772	0.006250	0.006973	0.091287	0.096426	1.057417	1.08E+00	2.353380	2.214600	3.		-
HEPTACHLOR EPOXIDE	O	NOT DETECTED	3	0.950000	-0.054772	0.006250	0.006973	0.091287	0.096426	1.057417	1.08E+00	2.353380	2.214600	3.		-
INDENO(1,2,3-CD)PYRENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
N-NITROSODIPHENYLAMINE (1	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
PHENANTHRENE	O	NOT DETECTED	3	183.750000	5.210728	192.187500	0.005695	16.007811	0.087137	202.586231	2.05E+02	2.353380	2.195732	3.		-
PYRENE	O	1 / 4	3	146.500000	4.849639	3516.750000	0.351881	68.476273	0.684963	227.075346	1.04E+03	2.353380	4.710149	3.		4

OF TECTION	REPRESENTATIVE CONCENTRATION	REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES	FTESTCAL	FTESTTAB	ZTESTMES
	-	0.000000	0.000000	0.750000	0.750000	0.767000	LOGNORMAL OVER NORMAL							
330	277.86	277.864421	330.000000	0.660490	0.854370	0.748000	NORMAL							
420	355.71	355.705165	420.000000	0.699020	0.862880	0.748000	NORMAL							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.950610	0.950500	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.950610	0.950500	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	220	218.822900	220.000000	0.861500	0.857400	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
48	48	48.000000	48.000000	0.820610	0.799010	0.748000	NONPARAMETRIC DIST							
84	84	84.000000	84.000000	0.851760	0.863250	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.950610	0.950500	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.950610	0.950500	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.800180	0.796030	0.748000	NONPARAMETRIC DIST							
	46	46.000000	46.000000	0.795480	0.724060	0.748000	LOGNORMAL							

Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO	SITECODE1	SITECODE2	PHASE	TYPE	SITEREF	SUBSTANCE	IO	SITE-RE FREQUE DETEC	
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	4,4'-DDD	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	4,4'-DDE	O	2	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	4,4'-DDT	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	4-METHYLPHENOL	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	ACENAPHTHYLENE	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	ALPHA-BHC	O	2	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	ALPHA-CHLORDANE	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	ANTHRACENE	O	2	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	BENZO(A)ANTHRACENE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	BENZO(A)PYRENE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	BENZO(B)FLUORANTHENE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	BENZO(G,H,I)PERYLENE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	BENZO(K)FLUORANTHENE	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	BIS(2-ETHYLHEXYL)PHTHALAT	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	BUTYLBENZYLPHTHALATE	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	CARBAZOLE	O	2	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	CHRYSENE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	DI-N-BUTYLPHTHALATE	O	2	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	FLUORANTHENE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	GAMMA-CHLORDANE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	HEPTACHLOR EPOXIDE	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	INDENO(1,2,3-CD)PYRENE	O	2	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	N-NITROSODIPHENYLAMINE (1	O	1	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	PHENANTHRENE	O	3	/
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SS	S	PYRENE	O	3	/

TED Y OF ION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANGE OF POSITIVE DETECTION	REPRESENTATIVE CONCENTRATION
2	1	180.975000	3.276967	32049.950625	6.807598	253.179583	3.689877	1311.293199	1.00E+07	6.313745	10000000.000000	1.	360	360
2	1	67.500000	3.747771	2756.250000	1.081019	74.246212	1.470387	398.971612	1.00E+07	6.313745	10000000.000000	1.	15 - 120	120
3	2	103.666667	4.278955	7984.222222	0.874331	109.436435	1.005732	288.160596	1.35E+06	2.919986	13.125160	2.	38 - 230	230
3	2	163.333333	5.064843	1422.222222	0.066380	46.188022	0.315547	241.199627	4.31E+02	2.919986	4.265592	2.	110	110
3	2	160.000000	5.033073	1800.000000	0.091550	51.961524	0.370575	247.599580	5.89E+02	2.919986	4.870102	2.	100	100
3	2	0.492333	-1.611821	0.327311	1.928799	0.700690	1.700940	1.673595	3.46E+11	2.919986	22.228300	2.	0.047 - 0.13	0.13
3	2	12.483333	1.565992	211.550556	2.146871	17.813642	1.794521	42.514545	2.01E+14	2.919986	23.452260	2.	33	33
3	2	139.000000	4.808625	3428.666667	0.295113	71.714713	0.665334	259.900586	9.01E+03	2.919986	8.664971	2.	57 - 170	170
3	2	283.333333	5.555020	14955.555556	0.180984	149.777613	0.521034	535.836626	3.59E+03	2.919986	6.769100	2.	160 - 450	450
3	2	540.000000	5.908644	219466.666667	0.737178	573.759532	1.051555	1507.275205	1.73E+07	2.919986	13.726170	2.	160 - 1200	1200
3	2	683.333333	6.438923	70555.555556	0.189977	325.320355	0.533822	1231.776184	9.89E+03	2.919986	6.936401	2.	350 - 1000	1000
3	2	230.000000	5.379299	6466.666667	0.114884	98.488578	0.415122	396.037432	1.16E+03	2.919986	5.405408	2.	150 - 340	340
3	2	258.666667	5.305326	30923.555556	0.518119	215.372545	0.881578	621.753485	3.85E+05	2.919986	11.498670	2.	86	86
3	2	6933.333333	8.580623	17342222.222222	0.637120	5100.326787	0.977589	15531.743234	5.80E+07	2.919986	12.756380	2.	1800 - 12000	12000
3	2	283.333333	5.512269	23622.222222	0.251562	188.237439	0.614283	600.674305	9.64E+03	2.919986	7.994568	2.	160	160
3	2	198.666667	4.647087	45424.888889	1.239087	261.031288	1.363316	638.727492	7.58E+09	2.919986	17.812810	2.	42 - 54	54
3	2	473.333333	6.034866	58688.888889	0.241394	296.704117	0.601740	973.533364	1.40E+04	2.919986	7.829849	2.	250 - 810	810
3	2	214.666667	4.867989	41230.222222	1.019026	248.687220	1.236341	633.917186	3.79E+08	2.919986	16.150860	2.	44 - 100	100
3	2	443.333333	6.079047	5488.888889	0.031888	90.737717	0.218705	596.303940	7.60E+02	2.919986	3.425964	2.	340 - 510	510
3	2	14.566667	2.010629	213.442222	1.526916	17.893109	1.513398	44.731849	3.64E+10	2.919986	19.775250	2.	1.7 - 35	35
3	2	0.896667	-0.226415	0.143356	0.267224	0.463717	0.633116	1.678426	3.90E+01	2.919986	8.241899	2.	0.39	0.39
3	2	273.333333	5.433472	26755.555556	0.348577	200.333056	0.723094	611.065758	3.68E+04	2.919986	9.422688	2.	120 - 200	200
3	2	251.000000	5.201589	33688.666667	0.716199	224.795463	1.036484	629.972489	6.29E+06	2.919986	13.528470	2.	63	63
3	2	270.000000	5.566230	5066.666667	0.061679	87.177979	0.304168	416.969406	6.69E+02	2.919986	4.150297	2.	210 - 370	370
3	2	2056.666667	7.299901	2776422.222222	0.634428	2040.743329	0.975521	5497.063406	1.55E+07	2.919986	12.729280	2.	670 - 4400	4400

REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES	FTESTCAL	FTESTTAB
360.000000	360.000000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	1.397542	0.081125	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	411.901100	4.350000
120.000000	120.000000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	0.441367	0.329474	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.504000	4.260000
230.000000	230.000000	0.769520	0.801230	0.767000	NONPARAMETRIC DIST	0.540062	0.294577	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.665600	3.920000
110.000000	110.000000	0.750000	0.750000	0.767000	LOGNORMAL OVER NORMAL	-0.720082	0.235737	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	2.202000	3.920000
100.000000	100.000000	0.750000	0.750000	0.767000	LOGNORMAL OVER NORMAL	-0.720082	0.235737	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	2.680100	3.920000
0.130000	0.130000	0.799450	0.952420	0.767000	NONPARAMETRIC DIST	-0.707107	0.239750	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	7.026900	3.920000
33.000000	33.000000	0.809260	0.977150	0.767000	NONPARAMETRIC DIST	1.414213	0.078650	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	33.018200	3.920000
170.000000	170.000000	0.859860	0.818640	0.767000	NONPARAMETRIC DIST	-1.100700	0.135514	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	4.151300	3.920000
450.000000	450.000000	0.937220	0.984720	0.767000	NONPARAMETRIC DIST	0.713506	0.237766	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	8.190300	3.920000
1200.000000	1200.000000	0.821390	0.917880	0.767000	NONPARAMETRIC DIST	0.713506	0.237766	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	17.412100	3.920000
1000.000000	1000.000000	0.998030	0.966890	0.767000	NONPARAMETRIC DIST	2.140518	0.016156	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	13.230100	3.920000
340.000000	340.000000	0.930410	0.971460	0.767000	NONPARAMETRIC DIST	0.540062	0.294577	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	5.791200	3.920000
86.000000	86.000000	0.923760	0.996720	0.767000	NONPARAMETRIC DIST	0.000000	0.500000	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	10.455900	3.920000
12000.000000	12000.000000	0.999870	0.941490	0.767000	NONPARAMETRIC DIST	2.140518	0.016156	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	38.669000	3.920000
160.000000	160.000000	0.815620	0.860160	0.767000	NONPARAMETRIC DIST	0.000000	0.500000	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	7.033600	3.920000
54.000000	54.000000	0.769640	0.825230	0.767000	NONPARAMETRIC DIST	-0.713506	0.237766	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	11.722300	3.920000
810.000000	810.000000	0.890570	0.954160	0.767000	NONPARAMETRIC DIST	2.140518	0.016156	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	12.592000	3.920000
100.000000	100.000000	0.840550	0.966110	0.767000	NONPARAMETRIC DIST	0.000000	0.500000	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	2.454400	3.920000
510.000000	510.000000	0.877530	0.859270	0.767000	NONPARAMETRIC DIST	2.140518	0.016156	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.227500	3.920000
35.000000	35.000000	0.865880	0.998630	0.767000	NONPARAMETRIC DIST	2.121320	0.016947	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	33.066800	3.920000
0.390000	0.390000	0.962760	0.904080	0.767000	NONPARAMETRIC DIST	0.178377	0.429214	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	4.780600	3.920000
200.000000	200.000000	0.899500	0.973800	0.767000	NONPARAMETRIC DIST	0.540062	0.294577	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	9.991100	3.920000
63.000000	63.000000	0.944770	0.998560	0.767000	NONPARAMETRIC DIST	0.000000	0.500000	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	10.733900	3.920000
370.000000	370.000000	0.842110	0.866870	0.767000	NONPARAMETRIC DIST	2.140518	0.016156	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	5.140900	3.920000
4400.000000	4400.000000	0.835180	0.930560	0.767000	NONPARAMETRIC DIST	2.140518	0.016156	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	16.003200	3.920000

ZTESTMES	Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO
Z-TEST NOT POSSIBLE	1.369300	1.960000	1.3428894	2.3533800	T-TEST CANNOT BE USED	0.079213	3	1.783333	0.576362
Z-TEST NOT POSSIBLE	1.224700	1.960000	-0.1580236	2.1318470	T-TEST CANNOT BE USED	2.495428	4	87.350000	2.408234
Z-TEST NOT POSSIBLE	1.449100	1.960000	-0.0984834	2.0150480	T-TEST CANNOT BE USED	2.689164	4	116.600000	2.715678
Z-TEST NOT POSSIBLE	1.247200	1.960000	-0.8423522	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	1.247200	1.960000	-0.8853024	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	1.932200	1.960000	-1.3352911	2.0150480	T-TEST CANNOT BE USED	0.096426	4	0.950000	-0.054772
Z-TEST NOT POSSIBLE	1.247200	1.960000	1.3403097	2.0150480	T-TEST CANNOT BE USED	0.096426	4	0.950000	-0.054772
Z-TEST NOT POSSIBLE	1.932200	1.960000	-1.2460779	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	2.645800	1.960000	1.3647788	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	2.645800	1.960000	1.2846451	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	2.645800	1.960000	3.1733727	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	2.645800	1.960000	0.9534520	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	1.247200	1.960000	0.7171462	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	2.645800	1.960000	2.7396013	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	0.241500	1.960000	1.0136681	2.0150480	T-TEST CANNOT BE USED	0.127430	4	190.000000	5.240885
Z-TEST NOT POSSIBLE	1.932200	1.960000	0.1179694	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	2.645800	1.960000	2.0161161	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	0.441000	1.960000	0.7649472	2.0150480	T-TEST CANNOT BE USED	0.798858	4	115.750000	4.527995
Z-TEST NOT POSSIBLE	1.449100	1.960000	5.6179814	2.0150480	T-TEST CANNOT BE USED	0.691111	4	116.000000	4.597823
Z-TEST NOT POSSIBLE	2.645800	1.960000	1.5753902	2.0150480	T-TEST CANNOT BE USED	0.096426	4	0.950000	-0.054772
Z-TEST NOT POSSIBLE	1.247200	1.960000	-0.2314648	2.0150480	T-TEST CANNOT BE USED	0.096426	4	0.950000	-0.054772
Z-TEST NOT POSSIBLE	1.932200	1.960000	0.9213325	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	1.247200	1.960000	0.6169797	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	2.645800	1.960000	1.9982520	2.0150480	T-TEST CANNOT BE USED	0.087137	4	183.750000	5.210728
Z-TEST NOT POSSIBLE	1.984300	1.960000	1.9361012	2.0150480	T-TEST CANNOT BE USED	0.684963	4	146.500000	4.849639

APPENDIX I.a.3

EXAMPLE QUANTITATIVE RISK ASSESSMENT CALCULATIONS

SITE 16 - SUBSURFACE SOIL INORGANIC RESULTS

SUBSTANCE	IO	BACKGROUND FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANGE OF POSITIVE DETECTION
ALUMINUM	I	8 / 8	7	2685.000000	7.724950	2194381.250000	0.377094	1583.623783	0.656479	3745.766366	5.41E+03	1.894579	2.645262	7.	675 - 5310
ARSENIC	I	8 / 8	7	6.643750	1.530439	23.750898	0.824556	5.209979	0.970747	10.133575	2.53E+01	1.894579	3.354234	7.	1.35 - 14.4
BARIUM	I	8 / 8	7	8.958750	1.558182	91.670661	1.403168	10.235549	1.266341	15.814877	7.58E+01	1.894579	4.111184	7.	0.92 - 31
BERYLLIUM	I	2 / 8	7	0.141125	-2.606090	0.015643	1.707840	0.133706	1.397074	0.230686	2.07E+00	1.894579	4.461003	7.	0.12 - 0.28
CADMIUM	I	1 / 8	7	0.288125	-1.292812	0.011600	0.080267	0.115138	0.302876	0.365248	3.64E-01	1.894579	2.061633	7.	0.57 - 0.57
CALCIUM	I	8 / 8	7	288.775000	5.042637	71768.651875	1.523896	286.393639	1.319695	480.611434	3.09E+03	1.894579	4.253059	7.	28.6 - 799
CHROMIUM	I	8 / 8	7	27.362500	2.942214	458.692344	0.803315	22.895847	0.958162	42.698936	1.00E+02	1.894579	3.323601	7.	4.7 - 59.5
COBALT	I	4 / 8	7	1.384375	-0.283929	2.423384	1.196263	1.664206	1.169255	2.499118	8.20E+00	1.894579	3.855940	7.	0.75 - 5
COPPER	I	8 / 8	7	4.327500	1.147104	10.239419	0.678968	3.420847	0.880888	6.618902	1.32E+01	1.894579	3.138734	7.	0.97 - 8.6
IRON	I	8 / 8	7	20435.625000	9.531050	330673583.984375	0.836969	19439.976014	0.978027	33457.198013	7.73E+04	1.894579	3.372020	7.	3745 - 62500
LEAD	I	8 / 8	7	12.162500	1.827653	161.674844	1.508267	13.593059	1.312910	21.267604	1.20E+02	1.894579	4.234945	7.	1.4 - 39.4
MAGNESIUM	I	8 / 8	7	252.025000	5.145914	31982.791875	1.079833	191.185151	1.110898	380.087473	1.51E+03	1.894579	3.705211	7.	18.5 - 619
MANGANESE	I	8 / 8	7	46.256250	2.817160	4427.067148	2.215535	71.130200	1.591238	93.901735	1.19E+03	1.894579	4.991413	7.	2.6 - 214
MERCURY	I	8 / 8	7	0.064813	-2.963339	0.002392	0.399002	0.052284	0.675280	0.099835	1.29E-01	1.894579	2.683630	7.	0.03 - 0.17
NICKEL	I	4 / 8	7	2.375000	0.428662	5.258750	0.835261	2.451530	0.977028	4.017120	8.59E+00	1.894579	3.369577	7.	1.8 - 7.2
POTASSIUM	I	7 / 8	7	396.675000	5.622057	52920.339375	1.152414	245.927607	1.147626	561.405877	2.78E+03	1.894579	3.799803	7.	95 - 792
SELENIUM	I	2 / 8	7	0.396875	-1.038309	0.049987	0.192219	0.239015	0.468700	0.556976	5.94E-01	1.894579	2.301928	7.	0.57 - 0.93
SILVER	I	2 / 8	7	0.255625	-1.516573	0.029046	0.249993	0.182198	0.534515	0.377668	4.12E-01	1.894579	2.413754	7.	0.37 - 0.67
SODIUM	I	8 / 8	7	39.675000	3.455257	881.479375	0.393289	31.739644	0.670428	60.935319	7.81E+01	1.894579	2.673669	7.	17.5 - 94.8
THALLIUM	I	4 / 8	7	0.687500	-0.568419	0.245125	0.341887	0.529285	0.625082	1.042034	1.27E+00	1.894579	2.582638	7.	0.7 - 1.9
VANADIUM	I	8 / 8	7	32.356250	3.320848	285.723398	0.338781	18.070446	0.622237	44.460464	6.16E+01	1.894579	2.577057	7.	11.05 - 64
ZINC	I	6 / 8	7	15.675000	1.971509	258.869375	2.041750	17.200311	1.527557	27.196367	3.72E+02	1.894579	4.816394	7.	1.1 - 50.7

REPRESENTATIVE CONCENTRATION	REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES
5310	3745.766366	5310.000000	0.910470	0.932190	0.818000	NONPARAMETRIC DIST				
14.4	10.133575	14.400000	0.855500	0.858820	0.818000	NONPARAMETRIC DIST				
15.81	15.814877	31.000000	0.797340	0.933580	0.818000	NORMAL				
0.28	0.230686	0.280000	0.887920	0.835410	0.818000	NONPARAMETRIC DIST				
0.37	0.365248	0.363878	0.547250	0.614290	0.818000	NORMAL OVER LOGNORMAL				
799	480.611434	799.000000	0.863130	0.890560	0.818000	NONPARAMETRIC DIST				
59.5	42.698936	59.500000	0.830940	0.922730	0.818000	NONPARAMETRIC DIST				
2.50	2.499118	5.000000	0.742060	0.823380	0.818000	NORMAL				
6.62	6.618902	8.600000	0.772810	0.866380	0.818000	NORMAL				
62500	33457.198013	62500.000000	0.824510	0.952460	0.818000	NONPARAMETRIC DIST				
39.4	21.267604	39.400000	0.827130	0.899030	0.818000	NONPARAMETRIC DIST				
619	380.087473	619.000000	0.945000	0.906200	0.818000	NONPARAMETRIC DIST				
93.90	93.901735	214.000000	0.666970	0.922570	0.818000	NORMAL				
0.10	0.099835	0.128685	0.733380	0.806710	0.818000	NORMAL OVER LOGNORMAL				
4.02	4.017120	7.200000	0.767540	0.836260	0.818000	NORMAL				
792	561.405877	792.000000	0.947470	0.789160	0.818000	LOGNORMAL				
0.56	0.556976	0.594118	0.657540	0.720620	0.818000	NORMAL OVER LOGNORMAL				
0.38	0.377668	0.412271	0.637520	0.711220	0.818000	NORMAL OVER LOGNORMAL				
60.94	60.935319	78.061434	0.687530	0.769950	0.818000	NORMAL OVER LOGNORMAL				
1.04	1.042034	1.267588	0.720370	0.855540	0.818000	NORMAL				
61.59	44.460464	61.591180	0.947390	0.944790	0.818000	NONPARAMETRIC DIST				
50.7	27.196367	50.700000	0.854270	0.904270	0.818000	NONPARAMETRIC DIST				

FTESTCAL	FTESTTAB	ZTESTMES	Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO	SITECODE1	SITECODE2	PHASE	TYPE
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB

SITEREF	SUBSTANCE	IO	SITE-RELATED FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RAN POSITIVE
S	ALUMINUM	I	32 / 32	31	2556.312500	7.740490	1009954.839844	0.263144	1021.045556	0.521184	2862.348693	3.16E+03	1.695519	1.940292	31.	378 -
S	ARSENIC	I	31 / 32	31	5.809844	1.447722	18.025895	0.750587	4.313627	0.880227	7.102760	8.99E+00	1.695519	2.280222	31.	1.2 -
S	BARIUM	I	32 / 32	31	3.720313	1.149958	5.777791	0.315219	2.442165	0.570427	4.452299	4.55E+00	1.695519	1.980028	31.	1.2 -
S	BERYLLIUM	I	31 / 32	31	0.249531	-1.670900	0.027516	0.719865	0.168534	0.862025	0.300045	3.87E-01	1.695519	2.260555	31.	0.039 -
S	CADMIUM	I	19 / 32	31	0.348609	-1.803453	0.152928	1.647448	0.397318	1.304067	0.467696	7.42E-01	1.695519	2.795462	31.	0.086 -
S	CALCIUM	I	32 / 32	31	299.600000	5.295166	110754.570000	0.735964	338.123200	0.871610	400.945074	4.16E+02	1.695519	2.270887	31.	34.5 -
S	CHROMIUM	I	32 / 32	31	71.076563	3.847807	2208.357029	1.244291	47.745098	1.133327	85.387117	1.51E+02	1.695519	2.574907	31.	4.1 -
S	COBALT	I	6 / 32	31	0.338438	-1.135718	0.009701	0.132090	0.100068	0.369257	0.368431	3.88E-01	1.695519	1.832517	31.	0.13 -
S	COPPER	I	32 / 32	31	3.257813	0.905688	20.795798	0.322490	4.633210	0.576969	4.646517	3.59E+00	1.695519	1.985486	31.	1.2 -
S	IRON	I	32 / 32	31	9410.468750	8.944786	25177400.561523	0.510485	5097.997134	0.725915	10938.482487	1.32E+04	1.695519	2.120926	31.	1160 -
S	LEAD	I	32 / 32	31	8.389063	1.598171	229.281521	0.601114	15.384333	0.787722	13.000182	9.18E+00	1.695519	2.182552	31.	2.15 -
S	MAGNESIUM	I	32 / 32	31	348.200000	5.552931	60028.873125	0.722198	248.928280	0.863420	422.810837	5.32E+02	1.695519	2.262055	31.	39.8 -
S	MANGANESE	I	25 / 32	31	4.243125	0.758024	34.248989	1.515204	5.945906	1.250633	6.025281	8.60E+00	1.695519	2.725440	31.	0.77 -
S	MERCURY	I	25 / 32	31	0.015892	-4.589552	0.000170	1.174260	0.013239	1.100972	0.019860	3.07E-02	1.695519	2.534705	31.	0.0051 -
S	NICKEL	I	21 / 32	31	1.126563	-0.048242	0.471865	0.325217	0.697916	0.579403	1.335748	1.39E+00	1.695519	1.987528	31.	0.56 -
S	POTASSIUM	I	32 / 32	31	899.521875	6.335733	526262.089834	1.179065	737.047004	1.103222	1120.435680	1.71E+03	1.695519	2.537480	31.	70.5 -
S	SELENIUM	I	1 / 32	31	0.516250	-0.671075	0.007983	0.016177	0.090776	0.129224	0.543458	5.36E-01	1.695519	1.710501	31.	1 -
S	SILVER	I	2 / 32	31	0.248594	-1.496994	0.026013	0.172695	0.163866	0.422215	0.297709	2.82E-01	1.695519	1.867682	31.	0.31 -
S	SODIUM	I	31 / 32	31	61.717188	3.615899	6157.261033	0.791906	79.723788	0.904130	85.612659	8.14E+01	1.695519	2.306310	31.	18.3 -
S	THALLIUM	I	9 / 32	31	0.643594	0.587608	0.157230	0.253843	0.402867	0.511891	0.764345	7.57E-01	1.695519	1.933061	31.	0.86 -
S	VANADIUM	I	32 / 32	31	40.857813	3.411615	575.184236	0.821059	24.366751	0.920622	48.161217	6.80E+01	1.695519	2.324412	31.	4.4 -
S	ZINC	I	32 / 32	31	6.489063	1.668772	26.274958	0.356065	5.207930	0.606259	8.050027	7.94E+00	1.695519	2.010459	31.	1.8 -

E OF ETECTION	REPRESENTATIVE CONCENTRATION	REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES
4180	3158.75	2862.348693	3158.751360	0.955660	0.872990	0.930000	LOGNORMAL	-0.152136	0.439540	MEANS NOT DIFFERENT BY NONPARA
20.3	7.10	7.102760	8.985480	0.890860	0.950510	0.930000	NORMAL	-0.371976	0.354955	MEANS NOT DIFFERENT BY NONPARA
13.8	4.45	4.452299	4.551736	0.796490	0.973580	0.930000	NORMAL	-0.625566	0.265800	MEANS NOT DIFFERENT BY NONPARA
0.61	0.30	0.300045	0.386986	0.909580	0.923630	0.930000	NORMAL OVER LOGNORMAL	1.589351	0.055991	MEANS NOT DIFFERENT BY NONPARA
1.3	0.47	0.467696	0.741996	0.768740	0.829600	0.930000	NORMAL OVER LOGNORMAL	-0.507430	0.305927	MEANS NOT DIFFERENT BY NONPARA
1570	400.95	400.945074	415.929497	0.674900	0.974620	0.930000	NORMAL	0.304258	0.380466	MEANS NOT DIFFERENT BY NONPARA
166	150.53	85.387117	150.527881	0.940400	0.835190	0.930000	LOGNORMAL	2.231018	0.012840	MEANS DIFFERENT BY NONPARA
0.75	0.39	0.368431	0.388288	0.634850	0.589220	0.930000	LOGNORMAL OVER NORMAL	-0.406728	0.342104	MEANS NOT DIFFERENT BY NONPARA
28	4.65	4.646517	3.589037	0.348730	0.782530	0.930000	NORMAL OVER LOGNORMAL	-0.507621	0.305860	MEANS NOT DIFFERENT BY NONPARA
18000	13157.99	10938.482487	13157.994128	0.937340	0.895930	0.930000	LOGNORMAL	-1.453470	0.073046	MEANS NOT DIFFERENT BY NONPARA
70.7	13.00	13.000182	9.181672	0.376840	0.741730	0.930000	NORMAL OVER LOGNORMAL	-0.101443	0.459599	MEANS NOT DIFFERENT BY NONPARA
1030	422.81	422.810837	531.905476	0.923330	0.949640	0.930000	NORMAL	1.014051	0.155279	MEANS NOT DIFFERENT BY NONPARA
31.8	6.03	6.025281	8.604236	0.619840	0.927250	0.930000	NORMAL OVER LOGNORMAL	-2.873950	0.002027	MEANS DIFFERENT BY NONPARA
0.048	0.02	0.019860	0.030738	0.889190	0.915900	0.930000	NORMAL OVER LOGNORMAL	-3.636070	0.000138	MEANS DIFFERENT BY NONPARA
3.3	1.34	1.335748	1.386027	0.845070	0.892460	0.930000	NORMAL OVER LOGNORMAL	-1.489230	0.068213	MEANS NOT DIFFERENT BY NONPARA
2530	1120.44	1120.435680	1714.831576	0.899000	0.920210	0.930000	NORMAL OVER LOGNORMAL	1.521077	0.064120	MEANS NOT DIFFERENT BY NONPARA
1	0.54	0.543458	0.536319	0.351880	0.425030	0.930000	NORMAL OVER LOGNORMAL	2.294497	0.010881	MEANS DIFFERENT BY NONPARA
1.1	0.30	0.297709	0.281892	0.411220	0.661750	0.930000	NORMAL OVER LOGNORMAL	1.221912	0.110870	MEANS NOT DIFFERENT BY NONPARA
292	85.61	85.612659	81.380707	0.586710	0.796630	0.930000	NORMAL OVER LOGNORMAL	0.929765	0.176246	MEANS NOT DIFFERENT BY NONPARA
1.6	0.76	0.764345	0.756639	0.643620	0.656950	0.930000	NORMAL OVER LOGNORMAL	0.914965	0.180105	MEANS NOT DIFFERENT BY NONPARA
79.6	68.01	48.161217	68.014824	0.917540	0.831980	0.930000	LOGNORMAL OVER NORMAL	0.777439	0.218450	MEANS NOT DIFFERENT BY NONPARA
29.6	8.05	8.050027	7.936406	0.697000	0.963360	0.930000	NORMAL	-0.710069	0.238831	MEANS NOT DIFFERENT BY NONPARA

FTESTMES	FTESTCAL	FTESTTAB	ZTESTMES	Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO
F-/T-TEST NA, DISTRIBS. DIFFERENT	2.485200	3.847900	Z-TEST NOT POSSIBLE	0.000000	1.960000	-0.2841730	1.6859540	T-TEST CANNOT BE USED	0.656479	8	2685.000000	7.724950
F-/T-TEST NA, DISTRIBS. DIFFERENT	0.418800	3.847900	Z-TEST NOT POSSIBLE	-0.506400	1.960000	-0.4696212	1.6859540	T-TEST CANNOT BE USED	0.970747	8	6.643750	1.530439
UNEQUAL VARIANCES, NORMAL	32.353200	3.847900	Z-TEST NOT POSSIBLE	0.000000	1.960000	-2.6958888	1.6859540	T-TEST CANNOT BE USED	1.266341	8	8.958750	1.558182
TOO MANY NDs FOR T-TEST	0.527600	3.847900	Z-TEST NOT POSSIBLE	4.785400	1.960000	1.6858168	1.6859540	T-TEST CANNOT BE USED	1.397074	8	0.141125	-2.606090
TOO MANY NDs FOR T-TEST	9.902500	3.847900	Z-TEST NOT POSSIBLE	2.371700	1.960000	0.4224002	1.6859540	T-TEST CANNOT BE USED	0.302876	8	0.288125	-1.292812
F-/T-TEST NA, DISTRIBS. DIFFERENT	0.279200	3.847900	Z-TEST NOT POSSIBLE	0.000000	1.960000	0.0831861	1.6859540	T-TEST CANNOT BE USED	1.319695	8	288.775000	5.042637
F-/T-TEST NA, DISTRIBS. DIFFERENT	4.276100	3.847900	Z-TEST NOT POSSIBLE	0.000000	1.960000	2.5003485	1.6859540	T-TEST CANNOT BE USED	0.958162	8	27.362500	2.942214
TOO MANY NDs FOR T-TEST	115.267100	3.847900	Z-TEST NOT POSSIBLE	-1.825700	1.960000	-3.6752072	1.6859540	T-TEST CANNOT BE USED	1.169255	8	1.384375	-0.283929
EQUAL VARIANCES, NORMAL	0.878100	3.847900	Z-TEST NOT POSSIBLE	0.000000	1.960000	-0.6101933	1.6859540	T-TEST CANNOT BE USED	0.880888	8	4.327500	1.147104
F-/T-TEST NA, DISTRIBS. DIFFERENT	28.054600	3.847900	Z-TEST NOT POSSIBLE	0.000000	1.960000	-2.9267791	1.6859540	T-TEST CANNOT BE USED	0.978027	8	20435.625000	9.531050
F-/T-TEST NA, DISTRIBS. DIFFERENT	0.158100	3.847900	Z-TEST NOT POSSIBLE	0.000000	1.960000	-0.6334367	1.6859540	T-TEST CANNOT BE USED	1.312910	8	12.162500	1.827653
F-/T-TEST NA, DISTRIBS. DIFFERENT	0.676100	3.847900	Z-TEST NOT POSSIBLE	0.000000	1.960000	1.0165672	1.6859540	T-TEST CANNOT BE USED	1.110898	8	252.025000	5.145914
TOO MANY NDs FOR T-TEST	92.981900	3.847900	Z-TEST NOT POSSIBLE	-1.456400	1.960000	-3.4288300	1.6859540	T-TEST CANNOT BE USED	1.591238	8	46.256250	2.817160
TOO MANY NDs FOR T-TEST	29.618100	3.847900	Z-TEST NOT POSSIBLE	-1.456400	1.960000	-4.8672744	1.6859540	T-TEST CANNOT BE USED	0.675280	8	0.064813	-2.963339
TOO MANY NDs FOR T-TEST	24.537600	3.847900	Z-TEST NOT POSSIBLE	0.816500	1.960000	-2.5749305	1.6859540	T-TEST CANNOT BE USED	0.977028	8	2.375000	0.428662
EQUAL VARIANCES, LOGNORMAL	0.017200	3.847900	Z-TEST NOT POSSIBLE	2.025500	1.960000	-28.8753750	1.6859540	T-TEST CANNOT BE USED	1.147626	8	5.622057	5.622057
TOO MANY NDs FOR T-TEST	13.973100	3.847900	Z-TEST NOT POSSIBLE	-2.101100	1.960000	2.2996400	1.6859540	T-TEST CANNOT BE USED	0.468700	8	0.396875	-1.038309
TOO MANY NDs FOR T-TEST	0.127800	3.847900	Z-TEST NOT POSSIBLE	-1.581100	1.960000	-0.1062594	1.6859540	T-TEST CANNOT BE USED	0.534515	8	0.255625	-1.516573
EQUAL VARIANCES, LOGNORMAL	0.854900	3.847900	Z-TEST NOT POSSIBLE	-0.506400	1.960000	-30.3781260	1.6859540	T-TEST CANNOT BE USED	0.670428	8	3.455257	3.455257
TOO MANY NDs FOR T-TEST	0.904400	3.847900	Z-TEST NOT POSSIBLE	-1.181500	1.960000	-0.2589369	1.6859540	T-TEST CANNOT BE USED	0.625082	8	0.687500	-0.568419
F-/T-TEST NA, DISTRIBS. DIFFERENT	0.854300	3.847900	Z-TEST NOT POSSIBLE	0.000000	1.960000	0.9216853	1.6859540	T-TEST CANNOT BE USED	0.622237	8	32.356250	3.320848
F-/T-TEST NA, DISTRIBS. DIFFERENT	22.039500	3.847900	Z-TEST NOT POSSIBLE	2.901900	1.960000	-2.6547764	1.6859540	T-TEST CANNOT BE USED	1.527557	8	15.675000	1.971509

APPENDIX I.a.4

EXAMPLE QUANTITATIVE RISK ASSESSMENT CALCULATIONS

SITE 16 - SUBSURFACE SOIL ORGANIC RESULTS

SUBSTANCE	IO	BACKGROUND FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANG POSITIVE D
1,2-DICHLOROETHENE (TOTAL)	O	NOT DETECTED	7	5.500000	1.701636	0.187500	0.006236	0.462910	0.084420	5.810073	5.83E+00	1.894579	1.836181	7.	-
2-BUTANONE	O	NOT DETECTED	7	5.500000	1.701636	0.187500	0.006236	0.462910	0.084420	5.810073	5.83E+00	1.894579	1.836181	7.	-
BENZENE	O	NOT DETECTED	7	5.500000	1.701636	0.187500	0.006236	0.462910	0.084420	5.810073	5.83E+00	1.894579	1.836181	7.	-
CARBON DISULFIDE	O	NOT DETECTED	7	5.500000	1.701636	0.187500	0.006236	0.462910	0.084420	5.810073	5.83E+00	1.894579	1.836181	7.	-
ETHYLBENZENE	O	NOT DETECTED	7	5.500000	1.701636	0.187500	0.006236	0.462910	0.084420	5.810073	5.83E+00	1.894579	1.836181	7.	-
METHYLENE CHLORIDE	O	NOT DETECTED	7	5.500000	1.701636	0.187500	0.006236	0.462910	0.084420	5.810073	5.83E+00	1.894579	1.836181	7.	-
TETRACHLOROETHENE	O	NOT DETECTED	7	5.500000	1.701636	0.187500	0.006236	0.462910	0.084420	5.810073	5.83E+00	1.894579	1.836181	7.	-
TOLUENE	O	NOT DETECTED	7	5.500000	1.701636	0.187500	0.006236	0.462910	0.084420	5.810073	5.83E+00	1.894579	1.836181	7.	-
TRICHLOROETHENE	O	NOT DETECTED	7	5.500000	1.701636	0.187500	0.006236	0.462910	0.084420	5.810073	5.83E+00	1.894579	1.836181	7.	-
XYLENE (TOTAL)	O	NOT DETECTED	7	5.500000	1.701636	0.187500	0.006236	0.462910	0.084420	5.810073	5.83E+00	1.894579	1.836181	7.	-
2-METHYLNAPHTHALENE	O	NOT DETECTED	7	183.125000	5.207433	187.109375	0.005417	14.623245	0.078685	192.920159	1.93E+02	1.894579	1.831584	7.	-
ACENAPHTHENE	O	NOT DETECTED	7	183.125000	5.207433	187.109375	0.005417	14.623245	0.078685	192.920159	1.93E+02	1.894579	1.831584	7.	-
ANTHRACENE	O	NOT DETECTED	7	183.125000	5.207433	187.109375	0.005417	14.623245	0.078685	192.920159	1.93E+02	1.894579	1.831584	7.	-
BENZO(A)ANTHRACENE	O	NOT DETECTED	7	183.125000	5.207433	187.109375	0.005417	14.623245	0.078685	192.920159	1.93E+02	1.894579	1.831584	7.	-
BENZO(A)PYRENE	O	NOT DETECTED	7	183.125000	5.207433	187.109375	0.005417	14.623245	0.078685	192.920159	1.93E+02	1.894579	1.831584	7.	-
BENZO(K)FLUORANTHENE	O	NOT DETECTED	7	183.125000	5.207433	187.109375	0.005417	14.623245	0.078685	192.920159	1.93E+02	1.894579	1.831584	7.	-
BIS(2-ETHYLHEXYL)PHTHALATE	O	NOT DETECTED	7	183.125000	5.207433	187.109375	0.005417	14.623245	0.078685	192.920159	1.93E+02	1.894579	1.831584	7.	-
CHRYSENE	O	NOT DETECTED	7	183.125000	5.207433	187.109375	0.005417	14.623245	0.078685	192.920159	1.93E+02	1.894579	1.831584	7.	-
DIBENZOFURAN	O	NOT DETECTED	7	183.125000	5.207433	187.109375	0.005417	14.623245	0.078685	192.920159	1.93E+02	1.894579	1.831584	7.	-
DIETHYLPHTHALATE	O	NOT DETECTED	7	183.125000	5.207433	187.109375	0.005417	14.623245	0.078685	192.920159	1.93E+02	1.894579	1.831584	7.	-
FLUORANTHENE	O	2/8	7	149.250000	4.900981	2775.187500	0.273577	56.317341	0.559159	186.973316	2.64E+02	1.894579	2.457949	7.	40 -
FLUORENE	O	NOT DETECTED	7	183.125000	5.207433	187.109375	0.005417	14.623245	0.078685	192.920159	1.93E+02	1.894579	1.831584	7.	-
NAPHTHALENE	O	NOT DETECTED	7	183.125000	5.207433	187.109375	0.005417	14.623245	0.078685	192.920159	1.93E+02	1.894579	1.831584	7.	-
PHENANTHRENE	O	NOT DETECTED	7	183.125000	5.207433	187.109375	0.005417	14.623245	0.078685	192.920159	1.93E+02	1.894579	1.831584	7.	-
PYRENE	O	1/8	7	164.500000	5.026888	2173.000000	0.209917	49.834010	0.489801	197.880556	2.65E+02	1.894579	2.336805	7.	4
4,4'-DDD	O	NOT DETECTED	6	1.807143	0.589279	0.016735	0.004843	0.139728	0.075166	1.909767	1.91E+00	1.943180	1.864210	6.	-
4,4'-DDE	O	2/8	7	44.587500	1.503601	11658.851719	3.156106	115.431373	1.899205	121.907454	1.82E+03	1.894579	5.850345	7.	16 -
4,4'-DDT	O	2/8	7	59.212500	1.657323	18777.401719	3.834526	146.491937	2.093398	157.337902	7.42E+03	1.894579	6.399817	7.	43 -
ALPHA-CHLORDANE	O	NOT DETECTED	7	0.950000	-0.054039	0.005000	0.005468	0.075593	0.079052	1.000635	1.00E+00	1.894579	1.831876	7.	-
AROCLOR-1254	O	NOT DETECTED	7	18.312500	2.904848	1.871094	0.005417	1.462324	0.078685	19.292016	1.93E+01	1.894579	1.831584	7.	-
ENDOSULFAN I	O	NOT DETECTED	7	0.950000	-0.054039	0.005000	0.005468	0.075593	0.079052	1.000635	1.00E+00	1.894579	1.831876	7.	-
ENDOSULFAN II	O	NOT DETECTED	7	1.831250	0.602263	0.018711	0.005417	0.146232	0.078685	1.929201	1.93E+00	1.894579	1.831584	7.	-
GAMMA-CHLORDANE	O	NOT DETECTED	7	0.950000	-0.054039	0.005000	0.005468	0.075593	0.079052	1.000635	1.00E+00	1.894579	1.831876	7.	-
HEPTACHLOR	O	NOT DETECTED	7	0.950000	-0.054039	0.005000	0.005468	0.075593	0.079052	1.000635	1.00E+00	1.894579	1.831876	7.	-
HEPTACHLOR EPOXIDE	O	NOT DETECTED	7	0.950000	-0.054039	0.005000	0.005468	0.075593	0.079052	1.000635	1.00E+00	1.894579	1.831876	7.	-

OF TECTION	REPRESENTATIVE CONCENTRATION	REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES	FTESTCAL	FTESTTAB	ZTESTMES
	-	0.000000	0.000000	0.803700	0.803280	0.818000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.803700	0.803280	0.818000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.803700	0.803280	0.818000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.803700	0.803280	0.818000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.803700	0.803280	0.818000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.803700	0.803280	0.818000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.803700	0.803280	0.818000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.803700	0.803280	0.818000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.803700	0.803280	0.818000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.803700	0.803280	0.818000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
84	84	84.000000	84.000000	0.773430	0.696010	0.818000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
	46	46.000000	46.000000	0.666060	0.555510	0.818000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.807370	0.813300	0.803000	NONPARAMETRIC DIST							
330	121.91	121.907454	330.000000	0.441300	0.611360	0.818000	NORMAL OVER LOGNORMAL							
420	157.34	157.337902	420.000000	0.470360	0.627870	0.818000	NORMAL OVER LOGNORMAL							
	-	0.000000	0.000000	0.892190	0.898330	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.892190	0.898330	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.835330	0.837230	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.892190	0.898330	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.892190	0.898330	0.818000	NONPARAMETRIC DIST							
	-	0.000000	0.000000	0.892190	0.898330	0.818000	NONPARAMETRIC DIST							

Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO	SITECODE1	SITECODE2	PHASE	TYPE	SITEREF	SUBSTANCE	IO	SITE-RELATED FREQUENCY OF DETECTION
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	1,2-DICHLOROETHENE (TOTAL	O	2 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	2-BUTANONE	O	2 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	BENZENE	O	3 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	CARBON DISULFIDE	O	1 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	ETHYLBENZENE	O	13 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	METHYLENE CHLORIDE	O	17 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	TETRACHLOROETHENE	O	6 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	TOLUENE	O	4 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	TRICHLOROETHENE	O	1 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	XYLENE (TOTAL)	O	14 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	2-METHYLNAPHTHALENE	O	15 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	ACENAPHTHENE	O	12 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	ANTHRACENE	O	8 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	BENZO(A)ANTHRACENE	O	2 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	BENZO(A)PYRENE	O	2 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	BENZO(K)FLUORANTHENE	O	2 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	BIS(2-ETHYLHEXYL)PHTHALAT	O	4 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	CHRYSENE	O	3 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	DIBENZOFURAN	O	8 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	DIETHYLPHTHALATE	O	3 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	FLUORANTHENE	O	5 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	FLUORENE	O	13 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	NAPHTHALENE	O	13 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	PHENANTHRENE	O	18 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	PYRENE	O	8 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	4,4'-DDD	O	2 / 9
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	4,4'-DDE	O	4 / 8
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	4,4'-DDT	O	7 / 9
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	ALPHA-CHLORDANE	O	1 / 9
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	AROCLOR-1254	O	1 / 32
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	ENDOSULFAN I	O	1 / 8
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	ENDOSULFAN II	O	1 / 9
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	GAMMA-CHLORDANE	O	4 / 7
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	HEPTACHLOR	O	1 / 9
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SB	S	HEPTACHLOR EPOXIDE	O	2 / 8

DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANGE OF POSITIVE DETECTION	REPRESENTATIVE CONCENTRATION	REPCONNOR
31	124.765625	2.813569	68206.515381	3.126572	265.342657	1.796505	204.296314	2.58E+02	1.695519	3.486603	31.	17 - 96	96	96.000000
31	122.375000	2.749628	68528.421875	3.059996	265.968074	1.777275	202.093144	2.29E+02	1.695519	3.458351	31.	5 - 8	8	8.000000
31	134.843750	2.805445	89165.928711	3.296230	303.384655	1.844603	225.776700	2.95E+02	1.695519	3.557626	31.	300 - 1300	225.78	225.776700
31	122.203125	2.709284	68568.747803	3.169984	266.046317	1.808934	201.944721	2.41E+02	1.695519	3.504908	31.	2	2	2.000000
31	1443.234375	3.589997	12593198.249756	7.176666	3605.472292	2.721796	2523.896260	1.62E+04	1.695519	4.909703	31.	13 - 16000	2523.90	2523.896260
31	102.703125	2.591585	56046.904053	2.968623	240.530390	1.750538	174.796877	1.81E+02	1.695519	3.419210	31.	2 - 150	150	150.000000
31	122.046875	2.721455	68612.802490	3.059677	266.131769	1.777182	201.814083	2.22E+02	1.695519	3.458215	31.	6 - 45	45	45.000000
31	110.156250	2.763562	54654.991211	3.013176	237.524852	1.763625	181.349157	2.23E+02	1.695519	3.438348	31.	190 - 770	181.35	181.349157
31	122.234375	2.721955	68561.265381	3.123869	266.031801	1.795728	201.971620	2.35E+02	1.695519	3.485460	31.	3	3	3.000000
31	6301.828125	3.881973	358351877.368896	9.841816	19233.086475	3.187365	12066.527392	1.99E+05	1.695519	5.654478	31.	8 - 92000	12066.53	12066.527392
31	28888.281250	7.638122	2981081357.202150	6.902523	55472.923773	2.669304	45515.083373	7.40E+05	1.695519	4.826560	31.	2200 - 220000	45515.08	45515.083373
31	1904.843750	6.378855	8148782.006836	2.302236	2900.283769	1.541591	2774.140716	4.59E+03	1.695519	3.119578	31.	160 - 11000	2774.14	2774.140716
31	1416.343750	6.219523	3874587.850586	1.991551	1999.893636	1.433804	2015.768361	3.02E+03	1.695519	2.970057	31.	78 - 3900	2015.77	2015.768361
31	2234.500000	6.425274	7089949.750000	3.076435	2705.301796	1.782042	3045.355361	9.16E+03	1.695519	3.465347	31.	41 - 43	43	43.000000
31	2234.500000	6.425274	7089949.750000	3.076435	2705.301796	1.782042	3045.355361	9.16E+03	1.695519	3.465347	31.	41 - 43	43	43.000000
31	2234.531250	6.425819	7089813.436523	3.073902	2705.275789	1.781309	3045.378816	9.14E+03	1.695519	3.464271	31.	39 - 46	46	46.000000
31	2106.781250	6.399975	6760548.983398	2.841428	2641.709902	1.712626	2898.576324	7.34E+03	1.695519	3.363985	31.	67 - 1400	1400	1400.000000
31	2231.031250	6.404273	7104435.030273	3.122954	2708.063949	1.795465	3042.714506	9.32E+03	1.695519	3.485073	31.	55 - 57	57	57.000000
31	1794.687500	6.385786	5544968.652344	2.283911	2392.454516	1.535443	2511.773695	4.55E+03	1.695519	3.110950	31.	1300 - 7800	4548.25	2511.773695
31	2230.781250	6.398389	7105506.858398	3.155783	2708.268221	1.804877	3042.525733	9.52E+03	1.695519	3.498930	31.	38 - 73	73	73.000000
31	2063.156250	6.300520	6880180.819336	2.959431	2664.980701	1.747826	2861.926240	7.33E+03	1.695519	3.415249	31.	49 - 140	140	140.000000
31	2779.218750	6.538336	20577804.858398	2.754112	4608.861575	1.686106	4160.624744	7.84E+03	1.695519	3.325566	31.	320 - 18000	4160.62	4160.624744
31	7586.093750	6.958472	209386741.772461	4.219621	14701.739788	2.087041	11992.620424	4.04E+04	1.695519	3.921942	31.	290 - 60000	11992.62	11992.620424
31	4730.187500	6.703720	66220498.589844	4.006665	8267.807672	2.033694	7208.282989	2.62E+04	1.695519	3.841091	31.	46 - 31000	7208.28	7208.282989
31	1705.281250	6.235339	5431338.514648	2.443405	2367.813967	1.588151	2414.981976	4.47E+03	1.695519	3.185290	31.	86 - 2800	2414.98	2414.981976
8	4.555556	0.919325	57.493580	0.686578	8.042405	0.878863	9.540635	9.30E+00	1.859548	2.976100	8.	2.1 - 26	9.54	9.540635
7	4.218750	1.157402	11.191211	0.521062	3.576305	0.771686	6.614284	9.95E+00	1.894579	2.888993	7.	1.8 - 11	6.61	6.614284
8	8.627778	1.900790	32.130617	0.587842	6.012233	0.813217	12.354457	2.11E+01	1.859548	2.839811	8.	6 - 20	20	12.354457
8	1.255556	0.099160	0.748025	0.183996	0.917348	0.454968	1.824174	1.75E+00	1.859548	2.210193	8.	3.7	1.82	1.824174
31	18.500000	2.912269	2.703125	0.013054	1.670426	0.116081	19.000674	1.92E+01	1.695519	1.705512	31.	10	10	10.000000
7	2.062500	0.234233	8.776719	0.606920	3.167102	0.832840	4.183935	4.64E+00	1.894579	3.026779	7.	9.9	4.18	4.183935
8	6.188889	0.952639	151.482099	0.954399	13.054400	1.036195	14.280650	1.50E+01	1.859548	3.320206	8.	41	14.28	14.280650
6	1.255714	0.048621	0.747053	0.331280	0.933575	0.621686	1.941381	2.54E+00	1.943180	2.721245	6.	0.39 - 3.3	1.94	1.941381
8	0.874444	-0.191692	0.046780	0.157374	0.229407	0.420768	1.016642	1.24E+00	1.859548	2.162086	8.	0.27	0.27	0.270000
7	1.748750	0.128433	5.255011	0.577974	2.450658	0.812737	3.390286	3.95E+00	1.894579	2.980821	7.	0.49 - 7.8	3.39	3.390286

REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES	FTESTCAL	FTESTTAB	ZTESTMES
96.000000	0.473540	0.642370	0.930000	NORMAL OVER LOGNORMAL	2.149596	0.015794	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	82.517200	3.847900	Z-TEST NOT POSSIBLE
8.000000	0.460600	0.619440	0.930000	NORMAL OVER LOGNORMAL	2.053893	0.019993	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	82.552900	3.847900	Z-TEST NOT POSSIBLE
294.526302	0.503030	0.637340	0.930000	NORMAL OVER LOGNORMAL	2.020037	0.021690	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	84.555900	3.847900	Z-TEST NOT POSSIBLE
2.000000	0.461360	0.655210	0.930000	NORMAL OVER LOGNORMAL	1.869974	0.030744	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	82.557400	3.847900	Z-TEST NOT POSSIBLE
16000.000000	0.477870	0.712950	0.930000	NORMAL OVER LOGNORMAL	2.453525	0.007073	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	123.404600	3.847900	Z-TEST NOT POSSIBLE
150.000000	0.442670	0.758480	0.930000	NORMAL OVER LOGNORMAL	1.395984	0.081360	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	81.027200	3.847900	Z-TEST NOT POSSIBLE
45.000000	0.459820	0.602080	0.930000	NORMAL OVER LOGNORMAL	2.279036	0.011332	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	82.562300	3.847900	Z-TEST NOT POSSIBLE
223.155158	0.492010	0.636430	0.930000	NORMAL OVER LOGNORMAL	2.019935	0.021695	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	80.836700	3.847900	Z-TEST NOT POSSIBLE
3.000000	0.461020	0.637480	0.930000	NORMAL OVER LOGNORMAL	1.869974	0.030744	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	82.556600	3.847900	Z-TEST NOT POSSIBLE
92000.000000	0.386630	0.716720	0.930000	NORMAL OVER LOGNORMAL	2.453525	0.007073	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	151.020300	3.847900	Z-TEST NOT POSSIBLE
220000.000000	0.596270	0.793660	0.930000	NORMAL OVER LOGNORMAL	2.761059	0.002881	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	111.877100	3.847900	Z-TEST NOT POSSIBLE
4586.390750	0.669550	0.727480	0.930000	NORMAL OVER LOGNORMAL	2.305987	0.010556	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	66.589900	3.847900	Z-TEST NOT POSSIBLE
3017.745991	0.643530	0.738380	0.930000	NORMAL OVER LOGNORMAL	2.207378	0.013644	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	61.103400	3.847900	Z-TEST NOT POSSIBLE
43.000000	0.639210	0.719450	0.930000	NORMAL OVER LOGNORMAL	2.095471	0.018065	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	65.559100	3.847900	Z-TEST NOT POSSIBLE
43.000000	0.639210	0.719450	0.930000	NORMAL OVER LOGNORMAL	2.095471	0.018065	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	65.559100	3.847900	Z-TEST NOT POSSIBLE
46.000000	0.639220	0.720280	0.930000	NORMAL OVER LOGNORMAL	2.095471	0.018065	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	65.559000	3.847900	Z-TEST NOT POSSIBLE
1400.000000	0.643200	0.733140	0.930000	NORMAL OVER LOGNORMAL	1.835212	0.033237	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	65.207200	3.847900	Z-TEST NOT POSSIBLE
57.000000	0.640260	0.724250	0.930000	NORMAL OVER LOGNORMAL	1.906710	0.028279	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	65.574200	3.847900	Z-TEST NOT POSSIBLE
4548.245380	0.689400	0.686930	0.930000	LOGNORMAL OVER NORMAL	2.377064	0.008726	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	63.742900	3.847900	Z-TEST NOT POSSIBLE
73.000000	0.640730	0.735950	0.930000	NORMAL OVER LOGNORMAL	1.872839	0.030545	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	65.575300	3.847900	Z-TEST NOT POSSIBLE
140.000000	0.625790	0.716810	0.930000	NORMAL OVER LOGNORMAL	2.649983	0.004025	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	45.696100	3.847900	Z-TEST NOT POSSIBLE
7839.307420	0.643310	0.748600	0.930000	NORMAL OVER LOGNORMAL	2.577279	0.004979	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	73.492700	3.847900	Z-TEST NOT POSSIBLE
40394.828181	0.582220	0.779840	0.930000	NORMAL OVER LOGNORMAL	2.761449	0.002877	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	91.110100	3.847900	Z-TEST NOT POSSIBLE
26230.577471	0.630690	0.866310	0.930000	NORMAL OVER LOGNORMAL	2.183693	0.014492	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	82.308600	3.847900	Z-TEST NOT POSSIBLE
2800.000000	0.635610	0.730440	0.930000	NORMAL OVER LOGNORMAL	2.272826	0.011518	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	45.754500	3.847900	Z-TEST NOT POSSIBLE
9.302412	0.397110	0.441360	0.829000	NORMAL OVER LOGNORMAL	1.758969	0.039291	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	40.730300	3.857200	Z-TEST NOT POSSIBLE
9.952103	0.746090	0.749600	0.818000	NORMAL OVER LOGNORMAL	1.006621	0.157059	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	38.689000	3.856300	Z-TEST NOT POSSIBLE
20.000000	0.905750	0.916220	0.829000	NONPARAMETRIC DIST	1.539810	0.061803	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	39.335400	3.854400	Z-TEST NOT POSSIBLE
1.747488	0.420220	0.459650	0.829000	NORMAL OVER LOGNORMAL	0.592510	0.276755	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	24.858100	3.854400	Z-TEST NOT POSSIBLE
10.000000	0.511190	0.426670	0.930000	LOGNORMAL OVER NORMAL	0.966830	0.166815	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.181900	3.847900	Z-TEST NOT POSSIBLE
4.635878	0.428450	0.463540	0.818000	NORMAL OVER LOGNORMAL	0.379480	0.352166	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	42.573500	3.856300	Z-TEST NOT POSSIBLE
14.966994	0.390860	0.421890	0.829000	NORMAL OVER LOGNORMAL	0.919918	0.178808	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	54.088400	3.854400	Z-TEST NOT POSSIBLE
2.540919	0.680710	0.845880	0.803000	NORMAL	1.227252	0.109864	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	24.532600	3.859200	Z-TEST NOT POSSIBLE
0.270000	0.525110	0.465420	0.829000	LOGNORMAL OVER NORMAL	-0.197503	0.421717	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	7.069500	3.854400	Z-TEST NOT POSSIBLE
3.952583	0.474040	0.642370	0.818000	NORMAL OVER LOGNORMAL	0.107170	0.457327	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	38.754200	3.856300	Z-TEST NOT POSSIBLE

Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO
0.725500	1.960000	1.2589515	1.6859540	T-TEST CANNOT BE USED	0.084420	8	5.500000	1.701636
0.725500	1.960000	1.2308154	1.6859540	T-TEST CANNOT BE USED	0.084420	8	5.500000	1.701636
0.900500	1.960000	1.1941329	1.6859540	T-TEST CANNOT BE USED	0.084420	8	5.500000	1.701636
0.506400	1.960000	1.2286439	1.6859540	T-TEST CANNOT BE USED	0.084420	8	5.500000	1.701636
2.194300	1.960000	1.1169081	1.6859540	T-TEST CANNOT BE USED	0.084420	8	5.500000	1.701636
2.718700	1.960000	1.1319077	1.6859540	T-TEST CANNOT BE USED	0.084420	8	5.500000	1.701636
1.328400	1.960000	1.2266049	1.6859540	T-TEST CANNOT BE USED	0.084420	8	5.500000	1.701636
1.054100	1.960000	1.2341185	1.6859540	T-TEST CANNOT BE USED	0.084420	8	5.500000	1.701636
0.506400	1.960000	1.2290399	1.6859540	T-TEST CANNOT BE USED	0.084420	8	5.500000	1.701636
2.320500	1.960000	0.9169366	1.6859540	T-TEST CANNOT BE USED	0.084420	8	5.500000	1.701636
2.449500	1.960000	1.4493718	1.6859540	T-TEST CANNOT BE USED	0.078685	8	183.125000	5.207433
2.070200	1.960000	1.6627288	1.6859540	T-TEST CANNOT BE USED	0.078685	8	183.125000	5.207433
1.581100	1.960000	1.7271559	1.6859540	T-TEST CANNOT BE USED	0.078685	8	183.125000	5.207433
0.725500	1.960000	2.1238745	1.6859540	T-TEST CANNOT BE USED	0.078685	8	183.125000	5.207433
0.725500	1.960000	2.1238745	1.6859540	T-TEST CANNOT BE USED	0.078685	8	183.125000	5.207433
0.725500	1.960000	2.1239272	1.6859540	T-TEST CANNOT BE USED	0.078685	8	183.125000	5.207433
1.054100	1.960000	2.0395849	1.6859540	T-TEST CANNOT BE USED	0.078685	8	183.125000	5.207433
0.900500	1.960000	2.1181205	1.6859540	T-TEST CANNOT BE USED	0.078685	8	183.125000	5.207433
1.581100	1.960000	1.8866988	1.6859540	T-TEST CANNOT BE USED	0.078685	8	183.125000	5.207433
0.900500	1.960000	2.1177022	1.6859540	T-TEST CANNOT BE USED	0.078685	8	183.125000	5.207433
-0.624200	1.960000	2.0114333	1.6859540	T-TEST CANNOT BE USED	0.559159	8	149.250000	4.900981
2.194300	1.960000	1.5777099	1.6859540	T-TEST CANNOT BE USED	0.078685	8	183.125000	5.207433
2.194300	1.960000	1.4103863	1.6859540	T-TEST CANNOT BE USED	0.078685	8	183.125000	5.207433
2.860400	1.960000	1.5404278	1.6859540	T-TEST CANNOT BE USED	0.078685	8	183.125000	5.207433
0.757300	1.960000	1.8225214	1.6859540	T-TEST CANNOT BE USED	0.489801	8	164.500000	5.026888
1.333300	1.960000	0.8969665	1.7613100	T-TEST CANNOT BE USED	0.075166	7	1.807143	0.589279
1.032800	1.960000	0.9886853	1.7613100	T-TEST CANNOT BE USED	1.899205	8	44.587500	1.503601
2.176100	1.960000	-1.0392653	1.7530500	T-TEST CANNOT BE USED	2.093398	8	59.212500	1.657323
0.971800	1.960000	0.9358640	1.7530500	T-TEST CANNOT BE USED	0.079052	8	0.950000	-0.054039
0.506400	1.960000	0.2902799	1.6859540	T-TEST CANNOT BE USED	0.078685	8	18.312500	2.904848
1.032800	1.960000	0.9932516	1.7613100	T-TEST CANNOT BE USED	0.079052	8	0.950000	-0.054039
0.971800	1.960000	0.9406172	1.7530500	T-TEST CANNOT BE USED	0.078685	8	1.831250	0.602263
2.496800	1.960000	0.9278032	1.7709330	T-TEST CANNOT BE USED	0.079052	8	0.950000	-0.054039
0.971800	1.960000	-0.8869439	1.7530500	T-TEST CANNOT BE USED	0.079052	8	0.950000	-0.054039
1.511900	1.960000	0.9214391	1.7613100	T-TEST CANNOT BE USED	0.079052	8	0.950000	-0.054039

APPENDIX I.a.5

EXAMPLE QUANTITATIVE RISK ASSESSMENT CALCULATIONS

SITE 16 - SEDIMENT INORGANIC RESULTS

SUBSTANCE	ID	BACKGROUND FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANGE OF POSITIVE DETECTION
ALUMINUM	I	3 / 3	2	2746.333333	7.720057	1857360.222222	0.490733	1669.143593	0.857962	5560.266909	2.89E+06	2.919986	11.189300	2.	839 - 3940
ANTIMONY	I	NOT DETECTED	2	5.233333	1.457152	11.843889	0.366053	4.214954	0.740999	12.339133	8.90E+02	2.919986	9.657278	2.	-
ARSENIC	I	2 / 3	2	2.975000	0.525363	5.917917	1.510209	2.979408	1.505096	7.997849	6.46E+09	2.919986	19.666650	2.	2.4 - 6.2
BARIUM	I	3 / 3	2	7.033333	1.869633	7.575556	0.166778	3.370954	0.500167	12.716272	7.32E+01	2.919986	6.497170	2.	3.9 - 10.6
BERYLLIUM	I	1 / 3	2	0.333333	-1.349625	0.038422	0.604516	0.240069	0.952247	0.738054	1.75E+03	2.919986	12.424390	2.	0.57 - 0.57
CADMIUM	I	NOT DETECTED	2	5.233333	1.457152	11.843889	0.366053	4.214954	0.740999	12.339133	8.90E+02	2.919986	9.657278	2.	-
CALCIUM	I	3 / 3	2	342.666667	5.746493	19221.555556	0.189730	169.800864	0.533474	628.926252	4.93E+03	2.919986	6.931843	2.	179 - 518
CHROMIUM	I	3 / 3	2	21.566667	2.321857	592.828889	1.451035	29.820183	1.475314	71.839163	1.64E+10	2.919986	19.277270	2.	4.3 - 56
COBALT	I	1 / 3	2	1.650000	0.347347	0.555000	0.369024	0.912414	0.744000	3.188197	3.07E+02	2.919986	9.696593	2.	2.1 - 2.1
COPPER	I	3 / 3	2	6.233333	1.468500	24.108889	0.777787	6.013596	1.080130	16.371382	3.70E+05	2.919986	14.101090	2.	1.5 - 13
IRON	I	3 / 3	2	3289.333333	7.322565	10025147.555556	2.094350	3877.850092	1.772435	9826.825149	2.95E+16	2.919986	23.163410	2.	228 - 7650
LEAD	I	3 / 3	2	15.300000	2.335704	181.460000	0.748709	16.498182	1.059747	43.113538	5.76E+05	2.919986	13.833650	2.	4.6 - 34.3
MAGNESIUM	I	3 / 3	2	153.233333	4.871322	6409.375556	0.349420	98.051330	0.723969	318.533629	2.12E+04	2.919986	9.434155	2.	60.7 - 256
MANGANESE	I	3 / 3	2	6.900000	1.892260	3.526667	0.080846	2.300000	0.348237	10.777466	2.20E+01	2.919986	4.616039	2.	4.6 - 9.2
MERCURY	I	1 / 3	2	0.025533	-4.529023	0.000902	1.694588	0.036777	1.594328	0.087534	6.10E+08	2.919986	20.833810	2.	0.068 - 0.068
NICKEL	I	2 / 3	2	3.966667	1.289566	2.548889	0.184720	1.955335	0.526384	7.263078	5.32E+01	2.919986	6.839038	2.	2.1 - 6
POTASSIUM	I	2 / 3	2	294.700000	5.247082	74772.980000	0.830375	334.902180	1.116048	859.296415	3.50E+07	2.919986	14.572430	2.	86.1 - 681
SILVER	I	NOT DETECTED	2	5.233333	1.457152	11.843889	0.366053	4.214954	0.740999	12.339133	8.90E+02	2.919986	9.657278	2.	-
SODIUM	I	3 / 3	2	57.633333	3.815216	1705.615556	0.443100	50.580859	0.815260	142.905312	2.90E+04	2.919986	10.629910	2.	26.6 - 116
THALLIUM	I	NOT DETECTED	2	5.233333	1.457152	11.843889	0.366053	4.214954	0.740999	12.339133	8.90E+02	2.919986	9.657278	2.	-
VANADIUM	I	3 / 3	2	18.466667	2.482025	293.762222	0.812573	20.991506	1.104020	53.855296	1.70E+06	2.919986	14.414580	2.	5.9 - 42.7
ZINC	I	3 / 3	2	18.666667	2.882243	33.975556	0.084388	7.138861	0.355784	30.701749	6.21E+01	2.919986	4.700649	2.	14.2 - 26.9

REPRESENTATIVE CONCENTRATION	REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES
3940	3940.000000	3940.000000	0.862890	0.812510	0.767000	NONPARAMETRIC DIST				
-	0.000000	0.000000	0.760200	0.770580	0.767000	NORMAL				
6.2	6.200000	6.200000	0.972070	0.959420	0.767000	NONPARAMETRIC DIST				
10.6	10.600000	10.600000	0.987610	0.999090	0.767000	NONPARAMETRIC DIST				
0.57	0.570000	0.570000	0.999420	0.939340	0.767000	NONPARAMETRIC DIST				
-	0.000000	0.000000	0.762850	0.775870	0.767000	NORMAL				
518	518.000000	518.000000	0.996460	0.991850	0.767000	NONPARAMETRIC DIST				
56	56.000000	56.000000	0.751450	0.756720	0.767000	NORMAL OVER LOGNORMAL				
2.1	2.100000	2.100000	0.817570	0.789040	0.767000	NONPARAMETRIC DIST				
13	13.000000	13.000000	0.914250	0.999280	0.767000	NONPARAMETRIC DIST				
7650	7650.000000	7650.000000	0.915800	0.982160	0.767000	NONPARAMETRIC DIST				
34.3	34.300000	34.300000	0.810180	0.898530	0.767000	NONPARAMETRIC DIST				
256	256.000000	256.000000	0.991830	0.988010	0.767000	NONPARAMETRIC DIST				
9.2	9.200000	9.200000	1.000000	0.990470	0.767000	NONPARAMETRIC DIST				
0.068	0.068000	0.068000	0.752350	0.762530	0.767000	NORMAL OVER LOGNORMAL				
6	6.000000	6.000000	0.994550	0.994410	0.767000	NONPARAMETRIC DIST				
681	681.000000	681.000000	0.788850	0.858420	0.767000	NONPARAMETRIC DIST				
-	0.000000	0.000000	0.750000	0.750000	0.767000	LOGNORMAL OVER NORMAL				
116	116.000000	116.000000	0.780980	0.815760	0.767000	NONPARAMETRIC DIST				
-	0.000000	0.000000	0.760610	0.771540	0.767000	NORMAL				
42.7	42.700000	42.700000	0.768330	0.803500	0.767000	NONPARAMETRIC DIST				
26.9	26.900000	26.900000	0.791210	0.806140	0.767000	NONPARAMETRIC DIST				

FTESTCAL	FTESTTAB	ZTESTMES	Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO	SITECODE1	SITECODE2	PHASE	TYPE
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD
					0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD

SITEREF	SUBSTANCE	IO	SITE-RELATED FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANG POSITIVE D
S	ALUMINUM	I	3 / 3	2	2838.333333	7.851309	1397005.555556	0.213774	1447.587073	0.566269	5278.754808	5.75E+04	2.919986	7.362544	2.	1400 -
S	ANTIMONY	I	1 / 3	2	0.756667	-0.502087	0.276539	0.413628	0.644056	0.787681	1.842452	2.52E+02	2.919986	10.268680	2.	1.5 -
S	ARSENIC	I	3 / 3	2	5.216667	1.554990	4.200556	0.215917	2.510146	0.569100	9.448408	1.09E+02	2.919986	7.399808	2.	2.5 -
S	BARIUM	I	3 / 3	2	19.866667	2.980911	6.093889	0.016682	3.023381	0.158185	24.963648	2.80E+01	2.919986	3.035995	2.	16.5 -
S	BERYLLIUM	I	3 / 3	2	0.238333	-1.523590	0.009239	0.187940	0.117721	0.530952	0.436794	3.34E+00	2.919986	6.898815	2.	0.125 -
S	CADMIUM	I	3 / 3	2	2.166667	0.768593	0.042222	0.009293	0.251661	0.118067	2.590931	2.75E+00	2.919986	2.829812	2.	1.9 -
S	CALCIUM	I	3 / 3	2	1153.500000	6.896491	326454.500000	0.345315	699.772642	0.719703	2333.215000	1.51E+05	2.919986	9.378253	2.	450.5 -
S	CHROMIUM	I	3 / 3	2	44.483333	3.672733	339.827222	0.287321	22.577441	0.656492	82.545618	2.58E+03	2.919986	8.548873	2.	18.45 -
S	COBALT	I	3 / 3	2	1.636667	0.415965	0.335356	0.168923	0.709248	0.503373	2.832356	1.76E+01	2.919986	6.538854	2.	0.86 -
S	COPPER	I	3 / 3	2	23.916667	3.165034	10.177222	0.019736	3.907152	0.172060	30.503558	3.51E+01	2.919986	3.116849	2.	19.45 -
S	IRON	I	3 / 3	2	12016.666667	9.388163	1777222.222222	0.011504	1632.737987	0.131361	14769.225681	1.58E+04	2.919986	2.893659	2.	11000 -
S	LEAD	I	3 / 3	2	51.650000	3.939093	28.291667	0.010889	6.514407	0.127804	62.632344	6.72E+01	2.919986	2.876146	2.	44.9 -
S	MAGNESIUM	I	3 / 3	2	947.166667	6.520626	322522.722222	0.887271	695.545889	1.153649	2119.755975	2.87E+08	2.919986	15.065890	2.	181.5 -
S	MANGANESE	I	3 / 3	2	63.050000	4.079674	508.281667	0.128714	27.611999	0.439399	109.599818	3.84E+02	2.919986	5.709804	2.	38.7 -
S	MERCURY	I	3 / 3	2	0.047167	-3.160723	0.000343	0.247047	0.022695	0.608745	0.085427	1.54E+00	2.919986	7.921839	2.	0.021 -
S	NICKEL	I	3 / 3	2	4.550000	1.499251	0.635000	0.032304	0.975961	0.220128	6.195328	7.83E+00	2.919986	3.436318	2.	3.55 -
S	POTASSIUM	I	3 / 3	2	529.833333	5.985279	110355.722222	0.696939	406.858186	1.022452	1215.737119	1.04E+07	2.919986	13.344420	2.	128.5 -
S	SILVER	I	3 / 3	2	0.495000	-0.726631	0.011317	0.047214	0.130288	0.266121	0.714647	1.02E+00	2.919986	3.801359	2.	0.37 -
S	SODIUM	I	3 / 3	2	95.116667	4.431525	1635.577222	0.285803	49.531463	0.654755	178.619517	5.40E+03	2.919986	8.526065	2.	39.85 -
S	THALLIUM	I	2 / 3	2	1.128333	0.002921	0.221939	0.271106	0.576982	0.637699	2.101041	5.19E+01	2.919986	8.302086	2.	1.3 -
S	VANADIUM	I	3 / 3	2	28.933333	3.168061	203.770556	0.489104	17.483016	0.856537	58.407158	2.97E+04	2.919986	11.170630	2.	8.85 -
S	ZINC	I	3 / 3	2	122.350000	4.802448	126.861667	0.009076	13.794655	0.116680	145.605784	1.55E+02	2.919986	2.823403	2.	106.55 -

OF TECTION	REPRESENTATIVE CONCENTRATION	REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES
4295	4295	4295.000000	4295.000000	0.999880	0.979690	0.767000	NONPARAMETRIC DIST	0.434372	0.332009	MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT
1.5	1.5	1.500000	1.500000	0.776400	0.804860	0.767000	NONPARAMETRIC DIST	-1.737490	0.041150	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST
7.45	7.45	7.450000	7.450000	0.972190	0.920340	0.767000	NONPARAMETRIC DIST	1.303117	0.096267	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST
22.35	22.35	22.350000	22.350000	0.935980	0.920090	0.767000	NONPARAMETRIC DIST	2.171861	0.014933	MEANS DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT
0.36	0.36	0.360000	0.360000	0.996240	0.992270	0.767000	NONPARAMETRIC DIST	0.000000	0.500000	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST
2.4	2.4	2.400000	2.400000	0.986840	0.978770	0.767000	NONPARAMETRIC DIST	2.171861	0.014933	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST
1850	1850	1850.000000	1850.000000	0.999940	0.963080	0.767000	NONPARAMETRIC DIST	1.737489	0.041150	MEANS DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT
58.7	58.7	58.700000	58.700000	0.794550	0.777020	0.767000	NONPARAMETRIC DIST	1.737489	0.041150	MEANS DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT
2.25	2.25	2.250000	2.250000	0.960220	0.912610	0.767000	NONPARAMETRIC DIST	0.220326	0.412809	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST
26.7	26.7	26.700000	26.700000	0.860790	0.847610	0.767000	NONPARAMETRIC DIST	2.171861	0.014933	MEANS DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT
13900	13900	13900.000000	13900.000000	0.788680	0.793260	0.767000	NONPARAMETRIC DIST	2.171861	0.014933	MEANS DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT
57.9	57.9	57.900000	57.900000	0.995580	0.989630	0.767000	NONPARAMETRIC DIST	2.171861	0.014933	MEANS DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT
1540	1540	1540.000000	1540.000000	0.953690	0.858860	0.767000	NONPARAMETRIC DIST	1.737489	0.041150	MEANS DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT
93.05	93.05	93.050000	93.050000	0.968600	0.996590	0.767000	NONPARAMETRIC DIST	2.171861	0.014933	MEANS DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT
0.0615	0.0615	0.061500	0.061500	0.796110	0.778920	0.767000	NONPARAMETRIC DIST	0.868744	0.192493	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST
5.5	5.5	5.500000	5.500000	0.998030	0.988880	0.767000	NONPARAMETRIC DIST	0.434372	0.332009	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST
942	942	942.000000	942.000000	0.999470	0.949000	0.767000	NONPARAMETRIC DIST	1.303117	0.096267	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST
0.63	0.63	0.630000	0.630000	0.995580	0.999900	0.767000	NONPARAMETRIC DIST	-0.881305	0.189076	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST
135.5	135.5	135.500000	135.500000	0.932280	0.873450	0.767000	NONPARAMETRIC DIST	1.303117	0.096267	MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT
1.6	1.6	1.600000	1.600000	0.933610	0.875860	0.767000	NONPARAMETRIC DIST	1.303117	0.096267	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST
40.75	40.75	40.750000	40.750000	0.832320	0.794600	0.767000	NONPARAMETRIC DIST	0.868744	0.192493	MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT
132	132	132.000000	132.000000	0.850930	0.842440	0.767000	NONPARAMETRIC DIST	2.171861	0.014933	MEANS DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT

FTESTCAL	FTESTTAB	ZTESTMES	Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO
0.032000	4.000000	Z-TEST NOT POSSIBLE	0.000000	1.960000	0.0721223	2.1318470	T-TEST CANNOT BE USED	0.857962	3	2746.333333	7.720057
4.158600	4.000000	Z-TEST NOT POSSIBLE	1.095400	1.960000	-1.8184890	2.1318470	T-TEST CANNOT BE USED	0.740999	3	5.233333	1.457152
0.046300	4.000000	Z-TEST NOT POSSIBLE	1.095400	1.960000	0.9966179	2.1318470	T-TEST CANNOT BE USED	1.505096	3	2.975000	0.525363
0.018700	4.000000	Z-TEST NOT POSSIBLE	0.000000	1.960000	4.9088425	2.1318470	T-TEST CANNOT BE USED	0.500167	3	7.033333	1.869633
0.755700	4.000000	Z-TEST NOT POSSIBLE	1.732100	1.960000	-0.6154000	2.1318470	T-TEST CANNOT BE USED	0.952247	3	0.333333	-1.349625
0.707800	4.000000	Z-TEST NOT POSSIBLE	2.449500	1.960000	4.7737200	2.1318470	T-TEST CANNOT BE USED	0.741483	3	0.621667	-0.673473
2.604700	4.000000	Z-TEST NOT POSSIBLE	0.000000	1.960000	1.9503473	2.1318470	T-TEST CANNOT BE USED	0.533474	3	342.666667	5.746493
0.121300	4.000000	Z-TEST NOT POSSIBLE	0.000000	1.960000	1.0612206	2.1318470	T-TEST CANNOT BE USED	1.475314	3	21.566667	2.321857
0.099600	4.000000	Z-TEST NOT POSSIBLE	1.732100	1.960000	-0.0199830	2.1318470	T-TEST CANNOT BE USED	0.744000	3	1.650000	0.347347
0.287400	4.000000	Z-TEST NOT POSSIBLE	0.000000	1.960000	4.2709059	2.1318470	T-TEST CANNOT BE USED	1.080130	3	6.233333	1.468500
1.085100	4.000000	Z-TEST NOT POSSIBLE	0.000000	1.960000	3.5926255	2.1318470	T-TEST CANNOT BE USED	1.772435	3	3289.333333	7.322565
1.237500	4.000000	Z-TEST NOT POSSIBLE	0.000000	1.960000	3.5494961	2.1318470	T-TEST CANNOT BE USED	1.059747	3	15.300000	2.335704
4.448900	4.000000	Z-TEST NOT POSSIBLE	0.000000	1.960000	1.9576989	2.1318470	T-TEST CANNOT BE USED	0.723969	3	153.233333	4.871322
6.464500	4.000000	Z-TEST NOT POSSIBLE	0.000000	1.960000	3.5100321	2.1318470	T-TEST CANNOT BE USED	0.348237	3	6.900000	1.892260
0.358100	4.000000	Z-TEST NOT POSSIBLE	1.732100	1.960000	0.8670702	2.1318470	T-TEST CANNOT BE USED	1.594328	3	0.025533	-4.529023
0.720600	4.000000	Z-TEST NOT POSSIBLE	1.095400	1.960000	0.4623305	2.1318470	T-TEST CANNOT BE USED	0.526384	3	3.966667	1.289566
0.059700	4.000000	Z-TEST NOT POSSIBLE	1.095400	1.960000	0.7728449	2.1318470	T-TEST CANNOT BE USED	1.116048	3	294.700000	5.247082
3.969100	4.000000	Z-TEST NOT POSSIBLE	2.449500	1.960000	-1.1036132	2.1318470	T-TEST CANNOT BE USED	0.730733	3	1.016667	-0.175948
0.000700	4.000000	Z-TEST NOT POSSIBLE	0.000000	1.960000	0.9170699	2.1318470	T-TEST CANNOT BE USED	0.815260	3	57.633333	3.815216
0.004300	4.000000	Z-TEST NOT POSSIBLE	1.732100	1.960000	0.7854325	2.1318470	T-TEST CANNOT BE USED	0.747504	3	0.748333	-0.491304
0.052700	4.000000	Z-TEST NOT POSSIBLE	0.000000	1.960000	0.6636094	2.1318470	T-TEST CANNOT BE USED	1.104020	3	18.466667	2.482025
0.651200	4.000000	Z-TEST NOT POSSIBLE	0.000000	1.960000	11.5619385	2.1318470	T-TEST CANNOT BE USED	0.355784	3	18.666667	2.882243

APPENDIX I.a.6

EXAMPLE QUANTITATIVE RISK ASSESSMENT CALCULATIONS

SITE 16 - SEDIMENT ORGANIC RESULTS

SUBSTANCE	IO	BACKGROUND FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANG POSITIVE D
2-METHYLNAPHTHALENE	O	NOT DETECTED	2	413.333333	5.823783	74772.222222	0.370857	334.900483	0.745846	977.926887	7.53E+04	2.919986	9.720774	2.	-
4,4'-DDD	O	2 / 3	2	9.366667	1.807405	68.882222	0.872104	10.164809	1.143746	26.503058	2.07E+06	2.919986	14.935930	2.	4.9 -
4,4'-DDE	O	1 / 3	2	3.966667	1.132842	8.175556	0.459104	3.501904	0.829853	9.870368	2.51E+03	2.919986	10.821070	2.	1.
4,4'-DDT	O	1 / 3	2	7.783333	1.499455	62.907222	1.044078	9.713950	1.251446	24.159641	1.88E+07	2.919986	16.348930	2.	1
ACENAPHTHENE	O	NOT DETECTED	2	413.333333	5.823783	74772.222222	0.370857	334.900483	0.745846	977.926887	7.53E+04	2.919986	9.720774	2.	-
ALPHA-BHC	O	NOT DETECTED	2	413.333333	5.823783	74772.222222	0.370857	334.900483	0.745846	977.926887	7.53E+04	2.919986	9.720774	2.	-
ANTHRACENE	O	NOT DETECTED	2	413.333333	5.823783	74772.222222	0.370857	334.900483	0.745846	977.926887	7.53E+04	2.919986	9.720774	2.	-
BENZO(A)ANTHRACENE	O	2 / 3	2	308.333333	5.561893	32872.222222	0.330930	222.054798	0.704553	682.685459	3.23E+04	2.919986	9.179687	2.	140 -
BENZO(A)PYRENE	O	2 / 3	2	325.000000	5.623799	35816.666667	0.305385	231.786540	0.676814	715.758429	2.37E+04	2.919986	8.815689	2.	160 -
BENZO(B)FLUORANTHENE	O	2 / 3	2	288.333333	5.540380	21272.222222	0.241275	178.629038	0.601591	589.475937	8.53E+03	2.919986	7.827892	2.	150 -
BENZO(G,H,I)PERYLENE	O	2 / 3	2	245.000000	5.407935	10616.666667	0.191792	126.194295	0.536365	457.745246	3.62E+03	2.919986	6.969721	2.	130 -
BENZO(K)FLUORANTHENE	O	2 / 3	2	281.666667	5.526489	18672.222222	0.223491	167.356904	0.578996	563.806091	6.48E+03	2.919986	7.530140	2.	150 -
BIS(2-ETHYLHEXYL)PHTHALAT	O	NOT DETECTED	2	413.333333	5.823783	74772.222222	0.370857	334.900483	0.745846	977.926887	7.53E+04	2.919986	9.720774	2.	-
BUTYLBENZYLPHTHALATE	O	NOT DETECTED	2	413.333333	5.823783	74772.222222	0.370857	334.900483	0.745846	977.926887	7.53E+04	2.919986	9.720774	2.	-
CARBAZOLE	O	NOT DETECTED	2	413.333333	5.823783	74772.222222	0.370857	334.900483	0.745846	977.926887	7.53E+04	2.919986	9.720774	2.	-
CHRYSENE	O	2 / 3	2	471.666667	5.927814	109772.222222	0.423273	405.781140	0.796812	1155.754710	1.80E+05	2.919986	10.388250	2.	250 -
DIBENZ(A,H)ANTHRACENE	O	NOT DETECTED	2	413.333333	5.823783	74772.222222	0.370857	334.900483	0.745846	977.926887	7.53E+04	2.919986	9.720774	2.	-
DIBENZOFURAN	O	NOT DETECTED	2	413.333333	5.823783	74772.222222	0.370857	334.900483	0.745846	977.926887	7.53E+04	2.919986	9.720774	2.	-
FLUORANTHENE	O	2 / 3	2	775.000000	6.205142	526250.000000	0.846360	888.467782	1.126739	2272.827589	1.15E+08	2.919986	14.712730	2.	300 -
FLUORENE	O	1 / 3	2	210.000000	5.344588	216.666667	0.005104	18.027756	0.087497	240.392177	2.48E+02	2.919986	2.699383	2.	19
GAMMA-CHLORDANE	O	1 / 3	2	1.765000	-0.271800	2.796117	2.431687	2.047969	1.909851	5.217578	2.06E+15	2.919986	24.960690	2.	0.0
INDENO(1,2,3-CD)PYRENE	O	2 / 3	2	215.000000	5.284384	6716.666667	0.187589	100.374299	0.530456	384.216484	3.01E+03	2.919986	6.892323	2.	110 -
METHOXYCHLOR	O	NOT DETECTED	2	413.333333	5.823783	74772.222222	0.370857	334.900483	0.745846	977.926887	7.53E+04	2.919986	9.720774	2.	-
NAPHTHALENE	O	NOT DETECTED	2	413.333333	5.823783	74772.222222	0.370857	334.900483	0.745846	977.926887	7.53E+04	2.919986	9.720774	2.	-
PHENANTHRENE	O	2 / 3	2	775.000000	6.088009	632916.666667	1.070450	974.358763	1.267152	2417.627303	2.72E+09	2.919986	16.554550	2.	200 -
PYRENE	O	2 / 3	2	825.000000	6.274548	580416.666667	0.845427	933.072880	1.126117	2398.025303	1.22E+08	2.919986	14.704570	2.	350 -

OF TECTION	REPRESENTATIVE CONCENTRATION	REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES	FTESTCAL	FTESTTAB
	-	0.000000	0.000000	0.762820	0.775920	0.767000	NORMAL						
21	21	21.000000	21.000000	0.855180	0.972710	0.767000	NONPARAMETRIC DIST						
	1.7	1.700000	1.700000	0.809120	0.870830	0.767000	NONPARAMETRIC DIST						
	19	19.000000	19.000000	0.752230	0.757910	0.767000	NORMAL OVER LOGNORMAL						
	-	0.000000	0.000000	0.762820	0.775920	0.767000	NORMAL						
	-	0.000000	0.000000	0.762710	0.775550	0.767000	NORMAL						
	-	0.000000	0.000000	0.762820	0.775920	0.767000	NORMAL						
560	560	560.000000	560.000000	0.894370	0.967890	0.767000	NONPARAMETRIC DIST						
590	590	590.000000	590.000000	0.860400	0.929370	0.767000	NONPARAMETRIC DIST						
490	490	490.000000	490.000000	0.905720	0.967990	0.767000	NONPARAMETRIC DIST						
380	380	380.000000	380.000000	0.981160	0.999830	0.767000	NONPARAMETRIC DIST						
470	470	470.000000	470.000000	0.914010	0.972740	0.767000	NONPARAMETRIC DIST						
	-	0.000000	0.000000	0.762820	0.775920	0.767000	NORMAL						
	-	0.000000	0.000000	0.762820	0.775920	0.767000	NORMAL						
	-	0.000000	0.000000	0.762820	0.775920	0.767000	NORMAL						
940	940	940.000000	940.000000	0.776190	0.804950	0.767000	NONPARAMETRIC DIST						
	-	0.000000	0.000000	0.762820	0.775920	0.767000	NORMAL						
	-	0.000000	0.000000	0.762820	0.775920	0.767000	NORMAL						
1800	1800	1800.000000	1800.000000	0.785630	0.851500	0.767000	NONPARAMETRIC DIST						
	190	190.000000	190.000000	0.942310	0.933520	0.767000	NONPARAMETRIC DIST						
5	0.095	0.095000	0.095000	0.932370	0.965170	0.767000	NONPARAMETRIC DIST						
310	310	310.000000	310.000000	0.992560	0.953760	0.767000	NONPARAMETRIC DIST						
	-	0.000000	0.000000	0.762710	0.775550	0.767000	NORMAL						
	-	0.000000	0.000000	0.762820	0.775920	0.767000	NORMAL						
1900	1900	1900.000000	1900.000000	0.761030	0.789130	0.767000	NORMAL						
1900	1900	1900.000000	1900.000000	0.805640	0.897350	0.767000	NONPARAMETRIC DIST						

ZTESTMES	Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO	SITECODE1	SITECODE2	PHASE	TYPE	SITEREF	SUBSTANCE	IO
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	2-METHYLNAPHTHALENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	4,4'-DDD	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	4,4'-DDE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	4,4'-DDT	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	ACENAPHTHENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	ALPHA-BHC	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	ANTHRACENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	BENZO(A)ANTHRACENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	BENZO(A)PYRENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	BENZO(B)FLUORANTHENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	BENZO(G,H,I)PERYLENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	BENZO(K)FLUORANTHENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	BIS(2-ETHYLHEXYL)PHTHALAT	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	BUTYLBENZYLPHTHALATE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	CARBAZOLE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	CHRYSENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	DIBENZ(A,H)ANTHRACENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	DIBENZOFURAN	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	FLUORANTHENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	FLUORENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	GAMMA-CHLORDANE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	INDENO(1,2,3-CD)PYRENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	METHOXYCHLOR	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	NAPHTHALENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	PHENANTHRENE	O
			0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			SD	S	PYRENE	O

SITE-RELATED FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANGE OF POSITIVE DETECTION	REPRESENTATIVE CONCENTRATION
1 / 3	2	194.833333	5.226067	2941.722222	0.099945	66.427279	0.387192	306.820074	8.03E+02	2.919986	5.065753	2.	119.5	119.5
1 / 3	2	24.300000	2.143747	891.021667	2.170799	36.558617	1.804494	85.932516	5.09E+14	2.919986	23.582700	2.	66.5	66.5
3 / 3	2	8.816667	2.003995	29.520556	0.319644	6.654385	0.692435	20.034993	7.81E+02	2.919986	9.020726	2.	4.9 - 16.5	16.5
3 / 3	2	22.866667	2.925284	186.068889	0.439341	16.706386	0.811795	51.031206	1.13E+04	2.919986	10.584510	2.	8.1 - 41	41
1 / 3	2	203.333333	5.290540	1805.555556	0.051168	52.041650	0.277041	291.067993	4.42E+02	2.919986	3.896862	2.	145	145
1 / 3	2	0.781667	-0.940523	0.271339	2.334031	0.637972	1.871108	1.857195	2.53E+14	2.919986	24.453940	2.	0.045	0.045
1 / 3	2	226.666667	5.421841	172.222222	0.003242	16.072751	0.069731	253.762990	2.58E+02	2.919986	2.633832	2.	215	215
3 / 3	2	281.166667	5.142341	72308.388889	0.981208	329.336581	1.213183	836.380291	2.86E+08	2.919986	15.847080	2.	63 - 660	660
3 / 3	2	258.666667	5.135714	55106.888889	0.799893	287.507101	1.095372	743.361865	2.00E+07	2.919986	14.301100	2.	75 - 590	590
3 / 3	2	383.333333	5.717390	68888.888889	0.450909	321.455025	0.822413	925.259799	2.18E+05	2.919986	10.723610	2.	150 - 750	750
3 / 3	2	173.500000	4.906924	15711.500000	0.471192	153.516286	0.840706	432.306153	1.30E+05	2.919986	10.963250	2.	71 - 350	350
2 / 3	2	188.666667	5.159812	4443.555556	0.180012	81.641493	0.519633	326.302362	2.38E+03	2.919986	6.750798	2.	96 - 250	250
3 / 3	2	346.666667	5.811452	8438.888889	0.075699	112.509259	0.336969	536.340930	1.03E+03	2.919986	4.492197	2.	235 - 460	460
1 / 3	2	168.333333	4.987214	5338.888889	0.330344	89.489292	0.703929	319.199277	1.80E+04	2.919986	9.171506	2.	65	65
1 / 3	2	210.000000	5.333610	1116.666667	0.027846	40.926764	0.204376	278.996578	3.42E+02	2.919986	3.324789	2.	165	165
3 / 3	2	335.000000	5.532394	63950.000000	0.543593	309.717613	0.902989	857.138895	7.02E+05	2.919986	11.779150	2.	120 - 690	690
1 / 3	2	185.000000	5.131565	4616.666667	0.201488	83.216585	0.549757	325.291071	3.17E+03	2.919986	7.145433	2.	90	90
1 / 3	2	181.500000	5.090214	5306.166667	0.257155	89.214629	0.621074	331.902902	6.86E+03	2.919986	8.083754	2.	79.5	79.5
3 / 3	2	545.000000	5.816050	253050.000000	1.004345	616.096583	1.227403	1583.649322	7.88E+08	2.919986	16.033620	2.	110 - 1250	1250
1 / 3	2	198.333333	5.254140	2438.888889	0.076663	60.484158	0.339108	300.300835	5.98E+02	2.919986	4.515470	2.	130	130
3 / 3	2	2.983333	1.092444	0.010556	0.001197	0.125831	0.042380	3.195466	3.22E+00	2.919986	2.547206	2.	2.85 - 3.1	3.1
3 / 3	2	152.166667	4.830562	9599.055556	0.366875	119.994097	0.741830	354.459280	2.63E+04	2.919986	9.668165	2.	71 - 290	290
1 / 3	2	11.200000	2.409946	1.446667	0.012138	1.473092	0.134933	13.683419	1.48E+01	2.919986	2.911564	2.	9.6	9.6
1 / 3	2	179.166667	5.059491	5793.055556	0.302944	93.217935	0.674104	336.318561	1.30E+04	2.919986	8.780112	2.	72.5	72.5
3 / 3	2	369.833333	5.132727	177228.722222	1.535695	515.599732	1.517743	1239.059566	9.39E+11	2.919986	19.832080	2.	59 - 965	965
3 / 3	2	788.333333	6.244238	514338.888889	0.816618	878.355471	1.106764	2269.113035	7.75E+07	2.919986	14.450590	2.	220 - 1800	1800

REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES	FTESTCAL	FTESTTAB
119.500000	119.500000	0.892350	0.859540	0.767000	NONPARAMETRIC DIST	-0.434372	0.332009	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	3.257000	4.000000
66.500000	66.500000	0.772160	0.880390	0.767000	NONPARAMETRIC DIST	0.434372	0.332009	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	2.189700	4.000000
16.500000	16.500000	0.759700	0.768610	0.767000	NORMAL	1.303117	0.096267	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.620000	4.000000
41.000000	41.000000	0.969540	0.997680	0.767000	NONPARAMETRIC DIST	1.737489	0.041150	MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.448500	4.000000
145.000000	145.000000	0.923080	0.896150	0.767000	NONPARAMETRIC DIST	-0.434372	0.332009	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	4.098700	4.000000
0.045000	0.045000	0.750000	0.750000	0.767000	LOGNORMAL OVER NORMAL	-0.461266	0.322304	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	1.347100	4.000000
215.000000	215.000000	0.870970	0.877220	0.767000	NONPARAMETRIC DIST	-0.220326	0.412809	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	8.788700	4.000000
660.000000	660.000000	0.821500	0.937330	0.767000	NONPARAMETRIC DIST	-0.434372	0.332009	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.241100	4.000000
590.000000	590.000000	0.802150	0.886460	0.767000	NONPARAMETRIC DIST	-0.660979	0.254313	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.073000	4.000000
750.000000	750.000000	0.870970	0.957430	0.767000	NONPARAMETRIC DIST	0.660979	0.254313	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.523400	4.000000
350.000000	350.000000	0.825730	0.900140	0.767000	NONPARAMETRIC DIST	-0.868744	0.192493	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.060500	4.000000
250.000000	250.000000	0.889530	0.848150	0.767000	NONPARAMETRIC DIST	0.434372	0.332009	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.766100	4.000000
460.000000	460.000000	0.999840	0.993200	0.767000	NONPARAMETRIC DIST	0.868744	0.192493	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	1.652900	4.000000
65.000000	65.000000	0.750000	0.750000	0.767000	LOGNORMAL OVER NORMAL	-0.881305	0.189076	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	2.308500	4.000000
165.000000	165.000000	0.955220	0.935320	0.767000	NONPARAMETRIC DIST	-0.434372	0.332009	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	4.975800	4.000000
690.000000	690.000000	0.846760	0.938110	0.767000	NONPARAMETRIC DIST	-0.868744	0.192493	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.114400	4.000000
90.000000	90.000000	0.867330	0.829580	0.767000	NONPARAMETRIC DIST	-0.434372	0.332009	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	2.530700	4.000000
79.500000	79.500000	0.860330	0.821000	0.767000	NONPARAMETRIC DIST	-0.434372	0.332009	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	2.317700	4.000000
1250.000000	1250.000000	0.855960	0.980230	0.767000	NONPARAMETRIC DIST	-0.434372	0.332009	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.208500	4.000000
130.000000	130.000000	0.903760	0.873100	0.767000	NONPARAMETRIC DIST	0.434372	0.332009	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	1.986700	4.000000
3.100000	3.100000	0.986840	0.984110	0.767000	NONPARAMETRIC DIST	0.868744	0.192493	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	7.720700	4.000000
290.000000	290.000000	0.832740	0.899590	0.767000	NONPARAMETRIC DIST	-0.868744	0.192493	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.050300	4.000000
9.600000	9.600000	0.968890	0.956750	0.767000	NONPARAMETRIC DIST	-0.220326	0.412809	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	6.280200	4.000000
72.500000	72.500000	0.856090	0.815730	0.767000	NONPARAMETRIC DIST	-0.434372	0.332009	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	2.186400	4.000000
965.000000	965.000000	0.771920	0.847580	0.767000	NONPARAMETRIC DIST	-0.868744	0.192493	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.609900	4.000000
1800.000000	1800.000000	0.808930	0.901690	0.767000	NONPARAMETRIC DIST	-0.434372	0.332009	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.005800	4.000000

ZTESTMES	Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO
Z-TEST NOT POSSIBLE	1.095400	1.960000	-1.1084522	2.1318470	T-TEST CANNOT BE USED	0.745846	3	413.333333	5.823783
Z-TEST NOT POSSIBLE	0.816500	1.960000	0.6816444	2.1318470	T-TEST CANNOT BE USED	1.143746	3	9.366667	1.807405
Z-TEST NOT POSSIBLE	1.732100	1.960000	1.1171422	2.1318470	T-TEST CANNOT BE USED	0.829853	3	3.966667	1.132842
Z-TEST NOT POSSIBLE	1.732100	1.960000	1.3518656	2.1318470	T-TEST CANNOT BE USED	1.251446	3	7.783333	1.499455
Z-TEST NOT POSSIBLE	1.095400	1.960000	-1.0732056	2.1318470	T-TEST CANNOT BE USED	0.745846	3	413.333333	5.823783
Z-TEST NOT POSSIBLE	1.095400	1.960000	-1.2647643	2.1318470	T-TEST CANNOT BE USED	0.740024	3	2.100000	0.544596
Z-TEST NOT POSSIBLE	1.095400	1.960000	-0.9642997	2.1318470	T-TEST CANNOT BE USED	0.745846	3	413.333333	5.823783
Z-TEST NOT POSSIBLE	1.095400	1.960000	-0.1184632	2.1318470	T-TEST CANNOT BE USED	0.704553	3	308.333333	5.561893
Z-TEST NOT POSSIBLE	1.095400	1.960000	-0.3111062	2.1318470	T-TEST CANNOT BE USED	0.676814	3	325.000000	5.623799
Z-TEST NOT POSSIBLE	1.095400	1.960000	0.4474340	2.1318470	T-TEST CANNOT BE USED	0.601591	3	288.333333	5.540380
Z-TEST NOT POSSIBLE	1.095400	1.960000	-0.6231760	2.1318470	T-TEST CANNOT BE USED	0.536365	3	245.000000	5.407935
Z-TEST NOT POSSIBLE	0.000000	1.960000	-0.8650549	2.1318470	T-TEST CANNOT BE USED	0.578996	3	281.666667	5.526489
Z-TEST NOT POSSIBLE	2.449500	1.960000	-0.3268384	2.1318470	T-TEST CANNOT BE USED	0.745846	3	413.333333	5.823783
Z-TEST NOT POSSIBLE	1.095400	1.960000	-1.2241502	2.1318470	T-TEST CANNOT BE USED	0.745846	3	413.333333	5.823783
Z-TEST NOT POSSIBLE	1.095400	1.960000	-1.0438413	2.1318470	T-TEST CANNOT BE USED	0.745846	3	413.333333	5.823783
Z-TEST NOT POSSIBLE	1.095400	1.960000	-0.4637137	2.1318470	T-TEST CANNOT BE USED	0.796812	3	471.666667	5.927814
Z-TEST NOT POSSIBLE	1.095400	1.960000	-1.1460523	2.1318470	T-TEST CANNOT BE USED	0.745846	3	413.333333	5.823783
Z-TEST NOT POSSIBLE	1.095400	1.960000	-1.1585992	2.1318470	T-TEST CANNOT BE USED	0.745846	3	413.333333	5.823783
Z-TEST NOT POSSIBLE	1.095400	1.960000	-0.3684601	2.1318470	T-TEST CANNOT BE USED	1.126739	3	775.000000	6.205142
Z-TEST NOT POSSIBLE	0.000000	1.960000	-0.3201726	2.1318470	T-TEST CANNOT BE USED	0.087497	3	210.000000	5.344588
Z-TEST NOT POSSIBLE	1.732100	1.960000	1.0284544	2.1318470	T-TEST CANNOT BE USED	1.909851	3	1.765000	-0.271800
Z-TEST NOT POSSIBLE	1.095400	1.960000	-0.6956679	2.1318470	T-TEST CANNOT BE USED	0.530456	3	215.000000	5.284384
Z-TEST NOT POSSIBLE	1.095400	1.960000	-1.0012170	2.1318470	T-TEST CANNOT BE USED	0.740024	3	21.000000	2.847181
Z-TEST NOT POSSIBLE	1.095400	1.960000	-1.1667186	2.1318470	T-TEST CANNOT BE USED	0.745846	3	413.333333	5.823783
Z-TEST NOT POSSIBLE	1.095400	1.960000	-0.6366009	2.1318470	T-TEST CANNOT BE USED	1.267152	3	775.000000	6.088009
Z-TEST NOT POSSIBLE	1.095400	1.960000	-0.0495596	2.1318470	T-TEST CANNOT BE USED	1.126117	3	825.000000	6.274548

APPENDIX I.a.7

EXAMPLE QUANTITATIVE RISK ASSESSMENT CALCULATIONS

SITE 16 - GROUNDWATER INORGANIC RESULTS

SUBSTANCE	IO	BACKGROUND FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RAN POSITIVE
ALUMINUM	I	4 / 4	3	1057.250000	6.546197	644905.687500	0.953159	927.294047	1.127332	2148.387632	1.71E+05	2.353380	7.479221	3.	242 -
ARSENIC	I	NOT DETECTED	3	1.650000	0.500775	0.000000	0.000000	0.000000	0.000000	1.650000	1.00E+07	2.353380	10000000.000000	3.	-
BARIUM	I	4 / 4	3	54.325000	3.836683	594.276875	0.396875	28.149053	0.727438	87.447709	4.87E+02	2.353380	4.967527	3.	16.2 -
BERYLLIUM	I	1 / 4	3	0.098750	-2.542736	0.005742	0.383819	0.087500	0.715373	0.201710	7.67E-01	2.353380	4.894121	3.	0.23 -
CADMIUM	I	1 / 4	3	0.270000	-1.413885	0.019200	0.182800	0.160000	0.493693	0.458270	7.72E-01	2.353380	3.625350	3.	0.51 -
CALCIUM	I	4 / 4	3	8310.000000	8.359801	86256850.000000	1.362839	10724.231130	1.348005	20929.095528	1.08E+07	2.353380	8.894544	3.	1070 -
CHROMIUM	I	2 / 4	3	14.667500	1.251572	299.844556	4.042905	19.994818	2.321754	38.195202	3.63E+10	2.353380	15.194440	3.	14.8 -
COBALT	I	3 / 4	3	3.600000	0.750925	8.825000	1.478969	3.430258	1.404264	7.636350	1.03E+04	2.353380	9.256690	3.	2.5 -
COPPER	I	1 / 4	3	0.613750	-0.650293	0.156980	0.277648	0.457500	0.608438	1.152086	2.80E+00	2.353380	4.257648	3.	1.3 -
IRON	I	4 / 4	3	2483.500000	7.516555	2843502.750000	0.664960	1947.135588	0.941601	4774.674975	8.80E+04	2.353380	6.299758	3.	706 -
LEAD	I	1 / 4	3	1.137500	-0.007534	0.450469	0.235448	0.775000	0.560296	2.049435	4.21E+00	2.353380	3.983818	3.	2.3 -
MAGNESIUM	I	4 / 4	3	4180.000000	8.010331	9169650.000000	0.726355	3496.598347	0.984111	8294.412309	2.04E+05	2.353380	6.568349	3.	1000 -
MANGANESE	I	4 / 4	3	240.850000	4.524369	81205.967500	2.282320	329.051095	1.744446	628.041133	4.32E+07	2.353380	11.454040	3.	14 -
MERCURY	I	4 / 4	3	0.059750	-2.847550	0.000209	0.060433	0.016681	0.283863	0.079378	9.43E-02	2.353380	2.720934	3.	0.044 -
NICKEL	I	4 / 4	3	7.375000	1.863742	12.846875	0.280790	4.138740	0.611872	12.245014	3.52E+01	2.353380	4.277528	3.	3.7 -
POTASSIUM	I	4 / 4	3	2386.000000	7.593480	1305240.500000	0.466999	1319.212139	0.789091	3938.303732	3.10E+04	2.353380	5.346414	3.	639 -
SELENIUM	I	1 / 4	3	2.975000	1.008270	1.801875	0.144952	1.550000	0.439625	4.798870	7.08E+00	2.353380	3.357168	3.	5.3 -
SODIUM	I	4 / 4	3	28472.500000	9.336404	1378344368.750000	1.898941	42869.482055	1.591201	78916.590839	6.01E+08	2.353380	10.462870	3.	1980 -
THALLIUM	I	NOT DETECTED	3	1.650000	0.500775	0.000000	0.000000	0.000000	0.000000	1.650000	1.00E+07	2.353380	10000000.000000	3.	-
VANADIUM	I	3 / 4	3	11.263750	0.746986	320.209317	3.328735	20.662666	2.106731	35.577302	3.79E+08	2.353380	13.801380	3.	1.1 -
ZINC	I	4 / 4	3	14.812500	2.331651	125.495469	0.798668	12.935505	1.031935	30.033579	1.05E+03	2.353380	6.871565	3.	3.7 -

E OF ETECTION	REPRESENTATIVE CONCENTRATION	REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES
2030	2030	2030.000000	2030.000000	0.826600	0.809180	0.748000	NONPARAMETRIC DIST			
	-	0.000000	0.000000	0.629110	0.629110	0.748000	LOGNORMAL OVER NORMAL			
78.1	78.1	78.100000	78.100000	0.902250	0.822750	0.748000	NONPARAMETRIC DIST			
0.23	0.23	0.201710	0.230000	0.629110	0.629110	0.748000	LOGNORMAL OVER NORMAL			
0.51	0.51	0.458270	0.510000	0.629110	0.629110	0.748000	LOGNORMAL OVER NORMAL			
24100	24100	20929.095528	24100.000000	0.782880	0.973830	0.748000	NONPARAMETRIC DIST			
42.9	42.9	38.195202	42.900000	0.829240	0.824990	0.748000	NONPARAMETRIC DIST			
8.4	8.4	7.636350	8.400000	0.914380	0.917930	0.748000	NONPARAMETRIC DIST			
1.3	1.3	1.152086	1.300000	0.629110	0.629110	0.748000	LOGNORMAL OVER NORMAL			
4600	4600	4600.000000	4600.000000	0.861260	0.860370	0.748000	NONPARAMETRIC DIST			
2.3	2.3	2.049435	2.300000	0.629110	0.629110	0.748000	LOGNORMAL OVER NORMAL			
8610	8610	8294.412309	8610.000000	0.922310	0.948860	0.748000	NONPARAMETRIC DIST			
720	720	628.041133	720.000000	0.803550	0.973400	0.748000	NONPARAMETRIC DIST			
0.077	0.077	0.077000	0.077000	0.853690	0.851240	0.748000	NONPARAMETRIC DIST			
11.3	11.3	11.300000	11.300000	0.783370	0.777830	0.748000	NONPARAMETRIC DIST			
3550	3550	3550.000000	3550.000000	0.918640	0.836620	0.748000	NONPARAMETRIC DIST			
5.3	5.3	4.798870	5.300000	0.629110	0.629110	0.748000	LOGNORMAL OVER NORMAL			
92500	78916.59	78916.590839	92500.000000	0.716030	0.965940	0.748000	NORMAL			
	-	0.000000	0.000000	0.629110	0.847180	0.748000	NORMAL			
42.25	35.58	35.577302	42.250000	0.650380	0.882350	0.748000	NORMAL			
30.9	30.9	30.033579	30.900000	0.890430	0.891430	0.748000	NONPARAMETRIC DIST			

FTESTMES	FTESTCAL	FTESTTAB	ZTESTMES	Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000

SITECODE1	SITECODE2	PHASE	TYPE	SITEREF	SUBSTANCE	IO	SITE RELATED FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN
16			GW	S	ALUMINUM	I	5 / 5	4	20360.000000	8.882223	1052539400.000000	1.643511	36272.224222	1.433314	54941.610742	2.67E+06
16			GW	S	ARSENIC	I	4 / 5	4	34.870000	2.139793	3670.445600	2.339499	67.735198	1.710080	99.448126	3.64E+04
16			GW	S	BARIUM	I	5 / 5	4	330.000000	5.723283	11210.800000	0.184231	118.378630	0.479884	442.861116	6.86E+02
16			GW	S	BERYLLIUM	I	4 / 5	4	2.147000	-0.900178	14.657716	2.999852	4.280437	1.936444	6.227930	1.77E+04
16			GW	S	CADMIUM	I	2 / 5	4	1.176000	-0.856911	3.474304	1.584643	2.083958	1.407410	3.162827	1.28E+02
16			GW	S	CALCIUM	I	5 / 5	4	6658.000000	8.615455	17268376.000000	0.375438	4646.016573	0.685053	11087.470210	2.40E+04
16			GW	S	CHROMIUM	I	5 / 5	4	483.300000	5.011420	630310.760000	1.922291	887.630807	1.550117	1329.559189	1.48E+05
16			GW	S	COBALT	I	5 / 5	4	3.140000	0.839821	8.222400	0.503801	3.205932	0.793569	6.196507	1.57E+01
16			GW	S	COPPER	I	5 / 5	4	17.620000	2.640931	159.373600	0.449520	14.114425	0.749600	31.076565	7.89E+01
16			GW	S	IRON	I	5 / 5	4	84188.000000	9.698051	21753006176.000000	3.338990	164897.718965	2.042973	241399.994903	2.34E+09
16			GW	S	LEAD	I	5 / 5	4	11.360000	1.504060	308.970400	1.404862	19.652303	1.325171	30.096328	7.21E+02
16			GW	S	MAGNESIUM	I	5 / 5	4	5340.000000	8.103002	38443320.000000	0.764420	6932.110068	0.977510	11949.011086	5.59E+04
16			GW	S	MANGANESE	I	5 / 5	4	52.820000	3.721185	830.969600	0.628498	32.229055	0.886354	83.546890	4.34E+02
16			GW	S	MERCURY	I	5 / 5	4	0.104400	-2.310500	0.001431	0.089013	0.042294	0.333567	0.144723	1.59E-01
16			GW	S	NICKEL	I	2 / 5	4	41.025000	1.053636	5168.233750	6.701060	80.375943	2.894188	117.654698	5.62E+10
16			GW	S	POTASSIUM	I	5 / 5	4	13650.000000	8.651128	425871880.000000	1.323298	23072.491196	1.286127	35647.104575	6.87E+05
16			GW	S	SELENIUM	I	1 / 5	4	5.160000	1.197409	35.046400	0.668964	6.618761	0.914443	11.470267	4.01E+01
16			GW	S	SODIUM	I	5 / 5	4	48100.000000	10.676490	313460000.000000	0.262074	19794.569962	0.572357	66971.964097	1.27E+05
16			GW	S	THALLIUM	I	2 / 5	4	6.800000	1.415116	38.176000	1.030035	6.907966	1.134700	13.385992	1.77E+02
16			GW	S	VANADIUM	I	5 / 5	4	203.080000	3.649718	112896.469600	4.659908	375.660202	2.413480	561.231041	5.73E+08
16			GW	S	ZINC	I	5 / 5	4	204.200000	4.545949	13692.160000	3.759057	130.825074	2.167677	328.927443	5.93E+07

TVALUE	HVALUE	CDEGFREE	RANGE OF POSITIVE DETECTION			REPRESENTATIVE CONCENTRATION	REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE
2.131847	6.819942	4.	2110	-	85200	54941.61	54941.610742	85200.000000	0.588560	0.792350	0.762000	NORMAL	2.413554	0.007899
2.131847	8.068989	4.	5.3	-	156	99.45	99.448126	156.000000	0.574910	0.792920	0.762000	NORMAL	2.108999	0.017472
2.131847	2.883825	4.	133	-	432	432.00	432.000000	432.000000	0.861330	0.767660	0.762000	NONPARAMETRIC DIST	2.413554	0.007899
2.131847	9.097449	4.	0.18	-	9.8	6.23	6.227930	9.800000	0.583640	0.893380	0.762000	NORMAL	1.636403	0.050878
2.131847	6.703646	4.	0.41	-	4.9	3.16	3.162827	4.900000	0.583520	0.694490	0.762000	NORMAL OVER LOGNORMAL	0.427603	0.334470
2.131847	3.604116	4.	2530	-	14200	14200.00	11087.470210	14200.000000	0.880070	0.958150	0.762000	NONPARAMETRIC DIST	0.724066	0.234513
2.131847	7.345776	4.	34	-	2070	1329.56	1329.559189	2070.000000	0.588520	0.827000	0.762000	NORMAL	2.189989	0.014263
2.131847	4.035698	4.	1.3	-	8.8	6.20	6.196507	8.800000	0.676750	0.801010	0.762000	NORMAL	-0.241355	0.404640
2.131847	3.857836	4.	5.1	-	41.9	41.90	31.076565	41.900000	0.795940	0.939210	0.762000	NONPARAMETRIC DIST	2.453582	0.007072
2.131847	9.582698	4.	1240	-	379000	241399.99	241399.994903	379000.000000	0.584150	0.900240	0.762000	NORMAL	1.930843	0.026751
2.131847	6.335594	4.	2	-	46.5	30.10	30.096328	46.500000	0.577490	0.691990	0.762000	NORMAL OVER LOGNORMAL	1.971124	0.024355
2.131847	4.808163	4.	1410	-	17700	11949.01	11949.011086	17700.000000	0.631340	0.808470	0.762000	NORMAL	0.241355	0.404640
2.131847	4.420474	4.	10.8	-	79.6	79.60	79.600000	79.600000	0.819350	0.810710	0.762000	NONPARAMETRIC DIST	-0.724066	0.234513
2.131847	2.480465	4.	0.084	-	0.18	0.14	0.144723	0.158632	0.586420	0.602450	0.762000	NORMAL OVER LOGNORMAL	2.423377	0.007688
2.131847	13.482690	4.	20	-	184	117.65	117.654698	184.000000	0.622090	0.769450	0.762000	NORMAL	-0.490716	0.311814
2.131847	6.161565	4.	2510	-	54900	35647.10	35647.104575	54900.000000	0.582760	0.710790	0.762000	NORMAL OVER LOGNORMAL	1.448132	0.073790
2.131847	4.539063	4.	17	-	17	17.00	11.470267	17.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL	0.000000	0.500000
2.131847	3.189131	4.	16100	-	69300	69300.00	66971.964097	69300.000000	0.906920	0.785600	0.762000	NONPARAMETRIC DIST	1.206777	0.113759
2.131847	5.491326	4.	13	-	15.6	15.60	13.385992	15.600000	0.738680	0.710050	0.762000	LOGNORMAL OVER NORMAL	1.305428	0.095874
2.131847	11.273900	4.	1	-	874	561.23	561.231041	874.000000	0.606140	0.912220	0.762000	NORMAL	1.448132	0.073790
2.131847	10.151090	4.	2	-	360	360.00	328.927443	360.000000	0.946880	0.661530	0.762000	LOGNORMAL	1.448132	0.073790

MWTESTMES	FTESTMES	FTESTCAL	FTESTTAB	ZTESTMES	Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO
MEANS DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	17.683600	3.909000	Z-TEST NOT POSSIBLE	0.000000	1.960000	1.0491833	1.8945790	T-TEST CANNOT BE USED	1.127332	4
MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	17.683600	3.909000	Z-TEST NOT POSSIBLE	2.400000	1.960000	0.9671593	1.8945790	T-TEST CANNOT BE USED	0.000000	4
MEANS DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	4.469600	3.909000	Z-TEST NOT POSSIBLE	0.000000	1.960000	4.4979859	1.8945790	T-TEST CANNOT BE USED	0.727438	4
MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	19.175000	3.909000	Z-TEST NOT POSSIBLE	1.650000	1.960000	0.9434949	1.8945790	T-TEST CANNOT BE USED	0.715373	4
MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	10.762100	3.909000	Z-TEST NOT POSSIBLE	0.474300	1.960000	0.8554490	1.8945790	T-TEST CANNOT BE USED	0.493693	4
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	2.046100	3.909000	Z-TEST NOT POSSIBLE	0.000000	1.960000	-0.3137099	1.8945790	T-TEST CANNOT BE USED	1.348005	4
MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	18.524000	3.909000	Z-TEST NOT POSSIBLE	1.792800	1.960000	1.0409507	1.8945790	T-TEST CANNOT BE USED	2.321754	4
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	0.013700	3.909000	Z-TEST NOT POSSIBLE	1.185900	1.960000	-0.2075486	1.8945790	T-TEST CANNOT BE USED	1.404264	4
MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	16.131900	3.909000	Z-TEST NOT POSSIBLE	2.371700	1.960000	2.3751284	1.8945790	T-TEST CANNOT BE USED	0.608438	4
MEANS DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	22.959800	3.909000	Z-TEST NOT POSSIBLE	0.000000	1.960000	0.9770603	1.8945790	T-TEST CANNOT BE USED	0.941601	4
MEANS DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	14.874000	3.909000	Z-TEST NOT POSSIBLE	2.371700	1.960000	1.0251875	1.8945790	T-TEST CANNOT BE USED	0.560296	4
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	1.235300	3.909000	Z-TEST NOT POSSIBLE	0.000000	1.960000	0.3024004	1.8945790	T-TEST CANNOT BE USED	0.984111	4
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	12.010800	3.909000	Z-TEST NOT POSSIBLE	0.000000	1.960000	-1.2929627	1.8945790	T-TEST CANNOT BE USED	1.744446	4
MEANS DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	2.147200	3.909000	Z-TEST NOT POSSIBLE	0.000000	1.960000	1.9701243	1.8945790	T-TEST CANNOT BE USED	0.283863	4
MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	13.197300	3.909000	Z-TEST NOT POSSIBLE	-1.897400	1.960000	0.8247843	1.8945790	T-TEST CANNOT BE USED	0.611872	4
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	12.550100	3.909000	Z-TEST NOT POSSIBLE	0.000000	1.960000	0.9615661	1.8945790	T-TEST CANNOT BE USED	0.789091	4
MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	4.546400	3.909000	Z-TEST NOT POSSIBLE	-0.179300	1.960000	0.6380207	1.8945790	T-TEST CANNOT BE USED	0.439625	4
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	1.759000	3.909000	Z-TEST NOT POSSIBLE	0.000000	1.960000	0.9199630	1.8945790	T-TEST CANNOT BE USED	1.591201	4
MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	1.759000	3.909000	Z-TEST NOT POSSIBLE	1.434300	1.960000	1.4273569	1.8945790	T-TEST CANNOT BE USED	0.000000	4
MEANS NOT DIFFERENT BY NONPARA	UNEQUAL VARIANCES, NORMAL	12.788800	3.909000	Z-TEST NOT POSSIBLE	1.185900	1.960000	1.0057981	1.8945790	T-TEST CANNOT BE USED	2.106731	4
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	9.269200	3.909000	Z-TEST NOT POSSIBLE	0.000000	1.960000	2.8443739	1.8945790	T-TEST CANNOT BE USED	1.031935	4

BKGDACO	BKGDLACO
1057.250000	6.546197
1.650000	0.500775
54.325000	3.836683
0.098750	-2.542736
0.270000	-1.413885
8310.000000	8.359801
14.667500	1.251572
3.600000	0.750925
0.613750	-0.650293
2483.500000	7.516555
1.137500	-0.007534
4180.000000	8.010331
240.850000	4.524369
0.059750	-2.847550
7.375000	1.863742
2386.000000	7.593480
2.975000	1.008270
28472.500000	9.336404
1.800000	0.587787
11.263750	0.746986
14.812500	2.331651

APPENDIX I.a.8

EXAMPLE QUANTITATIVE RISK ASSESSMENT CALCULATIONS

SITE 16 - GROUNDWATER ORGANIC RESULTS

SUBSTANCE	IO	BACKGROUND FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANG POSITIVE D
1,2-DICHLOROETHENE (TOTAL)	O	NOT DETECTED	3	5.000000	1.609438	0.000000	0.000000	0.000000	0.000000	5.000000	1.00E+07	2.353380	10000000.000000	3.	-
BENZENE	O	NOT DETECTED	3	5.000000	1.609438	0.000000	0.000000	0.000000	0.000000	5.000000	1.00E+07	2.353380	10000000.000000	3.	-
BIS(2-ETHYLHEXYL)PHTHALATE	O	NOT DETECTED	3	5.000000	1.609438	0.000000	0.000000	0.000000	0.000000	5.000000	1.00E+07	2.353380	10000000.000000	3.	-
BROMODICHLOROMETHANE	O	NOT DETECTED	3	5.000000	1.609438	0.000000	0.000000	0.000000	0.000000	5.000000	1.00E+07	2.353380	10000000.000000	3.	-
CHLOROFORM	O	NOT DETECTED	3	5.000000	1.609438	0.000000	0.000000	0.000000	0.000000	5.000000	1.00E+07	2.353380	10000000.000000	3.	-
ETHYLBENZENE	O	NOT DETECTED	3	5.000000	1.609438	0.000000	0.000000	0.000000	0.000000	5.000000	1.00E+07	2.353380	10000000.000000	3.	-
NAPHTHALENE	O	NOT DETECTED	3	5.000000	1.609438	0.000000	0.000000	0.000000	0.000000	5.000000	1.00E+07	2.353380	10000000.000000	3.	-
PHENOL	O	NOT DETECTED	3	5.000000	1.609438	0.000000	0.000000	0.000000	0.000000	5.000000	1.00E+07	2.353380	10000000.000000	3.	-
TETRACHLOROETHENE	O	NOT DETECTED	3	5.000000	1.609438	0.000000	0.000000	0.000000	0.000000	5.000000	1.00E+07	2.353380	10000000.000000	3.	-
TOLUENE	O	NOT DETECTED	3	5.000000	1.609438	0.000000	0.000000	0.000000	0.000000	5.000000	1.00E+07	2.353380	10000000.000000	3.	-
XYLENE (TOTAL)	O	NOT DETECTED	3	5.000000	1.609438	0.000000	0.000000	0.000000	0.000000	5.000000	1.00E+07	2.353380	10000000.000000	3.	-

OF TECTION	REPRESENTATIVE CONCENTRATION	REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES	FTESTCAL	FTESTTAB	ZTESTMES
	-	0.000000	0.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL							
	-	0.000000	0.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL							

Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO	SITECODE1	SITECODE2	PHASE	TYPE	SITEREF	SUBSTANCE	IO	SITE-RELATED FREQUENCY OF DETECTION
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			GW	S	1,2-DICHLOROETHENE (TOTAL	O	1 / 5
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			GW	S	BENZENE	O	1 / 5
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			GW	S	BIS(2-ETHYLHEXYL)PHTHALAT	O	2 / 5
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			GW	S	BROMODICHLOROMETHANE	O	1 / 5
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			GW	S	CHLOROFORM	O	3 / 5
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			GW	S	ETHYLBENZENE	O	1 / 5
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			GW	S	NAPHTHALENE	O	2 / 5
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			GW	S	PHENOL	O	1 / 5
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			GW	S	TETRACHLOROETHENE	O	1 / 5
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			GW	S	TOLUENE	O	1 / 5
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	16			GW	S	XYLENE (TOTAL)	O	1 / 5

DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANGE OF POSITIVE DETECTION	REPRESENTATIVE CONCENTRATION	REPCONNOR
4	11.600000	2.015068	174.240000	0.658142	14.758049	0.907015	25.670191	8.74E+01	2.131847	4.507631	4.	38	38	25.670191
4	44.000000	2.347214	6084.000000	2.177253	87.206651	1.649717	127.142033	2.53E+04	2.131847	7.795655	4.	200	200	127.142033
4	3.800000	1.185385	2.560000	0.390426	1.788854	0.698593	5.505477	1.50E+01	2.131847	3.656527	4.	1 - 3	3	3.000000
4	4.200000	1.287550	2.560000	0.414446	1.788854	0.719763	5.905477	1.80E+01	2.131847	3.739355	4.	1	1	1.000000
4	6.800000	1.807197	13.360000	0.189521	4.086563	0.486725	10.696092	1.39E+01	2.131847	2.905108	4.	4 - 14	10.70	10.696092
4	4.400000	1.426180	1.440000	0.134334	1.341641	0.409778	5.679108	7.84E+00	2.131847	2.677918	4.	2	2	2.000000
4	3.800000	1.185385	2.560000	0.390426	1.788854	0.698593	5.505477	1.50E+01	2.131847	3.656527	4.	1 - 3	3	3.000000
4	6.400000	1.784532	7.840000	0.122631	3.130495	0.391522	9.384586	1.08E+01	2.131847	2.628094	4.	12	10.76	9.384586
4	4.200000	1.287550	2.560000	0.414446	1.788854	0.719763	5.905477	1.80E+01	2.131847	3.739355	4.	1	1	1.000000
4	5.400000	1.676732	0.640000	0.018114	0.894427	0.150475	6.252739	6.34E+00	2.131847	2.112399	4.	7	6.34	6.252739
4	9.200000	1.939170	70.560000	0.434892	9.391486	0.737303	18.153758	3.72E+01	2.131847	3.808770	4.	26	26	18.153758

REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES	FTESTCAL	FTESTTAB	ZTESTMES
38.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL	0.852803	0.196884	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	22.039500	3.847900	Z-TEST NOT POSSIBLE
200.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL	0.852803	0.196884	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	22.039500	3.847900	Z-TEST NOT POSSIBLE
3.000000	0.770870	0.729080	0.762000	LOGNORMAL	-1.305430	0.095874	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	22.039500	3.847900	Z-TEST NOT POSSIBLE
1.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL	-0.852803	0.196884	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	22.039500	3.847900	Z-TEST NOT POSSIBLE
13.910472	0.710290	0.811080	0.762000	NORMAL	0.570137	0.284292	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	22.039500	3.847900	Z-TEST NOT POSSIBLE
2.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL	-0.852803	0.196884	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	22.039500	3.847900	Z-TEST NOT POSSIBLE
3.000000	0.770870	0.729080	0.762000	LOGNORMAL	-1.305430	0.095874	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	22.039500	3.847900	Z-TEST NOT POSSIBLE
10.758058	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL	0.852803	0.196884	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	22.039500	3.847900	Z-TEST NOT POSSIBLE
1.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL	-0.852803	0.196884	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	22.039500	3.847900	Z-TEST NOT POSSIBLE
6.340673	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL	0.852803	0.196884	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	22.039500	3.847900	Z-TEST NOT POSSIBLE
26.000000	0.552280	0.552280	0.762000	LOGNORMAL OVER NORMAL	0.852803	0.196884	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	22.039500	3.847900	Z-TEST NOT POSSIBLE

Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO
0.948700	1.960000	0.8819171	1.8945790	T-TEST CANNOT BE USED	0.000000	4	5.000000	1.609438
0.948700	1.960000	0.8819171	1.8945790	T-TEST CANNOT BE USED	0.000000	4	5.000000	1.609438
1.434300	1.960000	-1.3228759	1.8945790	T-TEST CANNOT BE USED	0.000000	4	5.000000	1.609438
0.948700	1.960000	-0.8819173	1.8945790	T-TEST CANNOT BE USED	0.000000	4	5.000000	1.609438
1.897400	1.960000	0.8686145	1.8945790	T-TEST CANNOT BE USED	0.000000	4	5.000000	1.609438
0.948700	1.960000	-0.8819170	1.8945790	T-TEST CANNOT BE USED	0.000000	4	5.000000	1.609438
1.434300	1.960000	-1.3228759	1.8945790	T-TEST CANNOT BE USED	0.000000	4	5.000000	1.609438
0.948700	1.960000	0.8819172	1.8945790	T-TEST CANNOT BE USED	0.000000	4	5.000000	1.609438
0.948700	1.960000	-0.8819173	1.8945790	T-TEST CANNOT BE USED	0.000000	4	5.000000	1.609438
0.948700	1.960000	0.8819173	1.8945790	T-TEST CANNOT BE USED	0.000000	4	5.000000	1.609438
0.948700	1.960000	0.8819171	1.8945790	T-TEST CANNOT BE USED	0.000000	4	5.000000	1.609438

APPENDIX I.a.9

EXAMPLE QUANTITATIVE RISK ASSESSMENT CALCULATIONS

SITE 15 - SURFACE WATER INORGANIC RESULTS

SUBSTANCE	IO	BACKGROUND FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANG POSITIVE D
ALUMINUM	I	3/3	2	352.666667	5.848029	3946.888889	0.036655	76.943702	0.234484	482.382569	6.41E+02	2.919986	3.543895	2.	265 -
BARIUM	I	3/3	2	26.866667	3.242891	58.108889	0.104241	9.336131	0.395425	42.606027	1.17E+02	2.919986	5.164579	2.	16.3 -
BERYLLIUM	I	2/3	2	0.205000	-1.785386	0.011817	0.476735	0.133135	0.845637	0.429446	1.75E+02	2.919986	11.027850	2.	0.22 -
CADMIUM	I	1/3	2	0.116667	-2.215002	0.002006	0.125102	0.054848	0.433189	0.209133	6.73E-01	2.919986	5.631228	2.	0.18 -
CALCIUM	I	3/3	2	4564.000000	7.801548	16510018.666667	1.616486	4976.447327	1.557154	12953.567131	4.41E+13	2.919986	20.347580	2.	462 -
COBALT	I	3/3	2	1.270000	0.175481	0.212467	0.124361	0.564535	0.431905	2.221724	7.27E+00	2.919986	5.615039	2.	0.81 -
COPPER	I	2/3	2	3.698333	0.247646	18.751672	2.568932	5.303537	1.983007	12.639326	2.57E+16	2.919986	25.656030	2.	1.1 -
IRON	I	3/3	2	520.000000	6.059109	64802.666667	0.484069	311.775560	0.852117	1045.608294	4.98E+05	2.919986	11.112730	2.	160 -
LEAD	I	1/3	2	1.713333	-0.168967	3.609089	1.362193	2.326722	1.429437	5.635848	3.71E+08	2.919986	18.677470	2.	4.4 -
MAGNESIUM	I	3/3	2	1262.666667	6.770944	1149093.555556	0.720909	1312.874835	1.039886	3475.982882	3.23E+07	2.919986	13.573090	2.	369 -
MANGANESE	I	3/3	2	29.966667	3.223658	332.802222	0.337829	22.342859	0.711859	67.633481	3.45E+03	2.919986	9.275451	2.	14 -
MERCURY	I	2/3	2	0.019167	-4.127922	0.000084	0.418710	0.011251	0.792505	0.038135	7.21E+00	2.919986	10.331850	2.	0.023 -
NICKEL	I	3/3	2	4.300000	1.336788	4.346667	0.247723	2.553429	0.609577	8.604710	1.40E+02	2.919986	7.932766	2.	2.1 -
POTASSIUM	I	2/3	2	741.166667	5.952168	617507.722222	1.319427	962.424846	1.406819	2363.675120	9.04E+10	2.919986	18.381730	2.	251 -
SODIUM	I	NOT DETECTED	2	1.250000	0.223144	0.000000	0.000000	0.000000	0.000000	1.250000	1.00E+07	2.919986	10000000.000000	2.	-
ZINC	I	3/3	2	16.333333	2.631350	88.595556	0.315755	11.527937	0.688210	35.767760	1.38E+03	2.919986	8.965276	2.	7.6 -

OF TECTION	REPRESENTATIVE CONCENTRATION	REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES
409	409	409.000000	409.000000	0.875630	0.856370	0.767000	NONPARAMETRIC DIST			
34	34	34.000000	34.000000	0.898570	0.864210	0.767000	NONPARAMETRIC DIST			
0.33	0.33	0.330000	0.330000	0.990480	0.922830	0.767000	NONPARAMETRIC DIST			
0.18	0.18	0.180000	0.180000	0.750000	0.750000	0.767000	LOGNORMAL OVER NORMAL			
10100	10100	10100.000000	10100.000000	0.937720	0.981090	0.767000	NONPARAMETRIC DIST			
1.9	1.9	1.900000	1.900000	0.931990	0.974160	0.767000	NONPARAMETRIC DIST			
9.8	9.8	9.800000	9.800000	0.819980	0.995480	0.767000	NONPARAMETRIC DIST			
702	702	702.000000	702.000000	0.755530	0.752900	0.767000	LOGNORMAL OVER NORMAL			
4.4	4.4	4.400000	4.400000	0.750000	0.750000	0.767000	LOGNORMAL OVER NORMAL			
2770	2770	2770.000000	2770.000000	0.836140	0.939430	0.767000	NONPARAMETRIC DIST			
55.5	55.5	55.500000	55.500000	0.862500	0.935890	0.767000	NONPARAMETRIC DIST			
0.028	0.028	0.028000	0.028000	0.912940	0.848950	0.767000	NONPARAMETRIC DIST			
7.1	7.1	7.100000	7.100000	0.958590	0.998370	0.767000	NONPARAMETRIC DIST			
1850	1850	1850.000000	1850.000000	0.805460	0.931000	0.767000	NONPARAMETRIC DIST			
	.	0.000000	0.000000	0.970650	0.959820	0.767000	NONPARAMETRIC DIST			
29.4	29.4	29.400000	29.400000	0.894030	0.966040	0.767000	NONPARAMETRIC DIST			

FTESTMES	FTESTCAL	FTESTTAB	ZTESTMES	Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000
						0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000

SITECODE1	SITECODE2	PHASE	TYPE	SITEREF	SUBSTANCE	IO	SITE-RELATED FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN
15			SW	S	ALUMINUM	I	2 / 2	1	221.000000	5.233718	13689.000000	0.347307	165.462987	0.833435	959.708166	1.00E+07
15			SW	S	BARIUM	I	2 / 2	1	42.050000	3.722913	55.502500	0.032062	10.535891	0.253228	89.087400	1.00E+07
15			SW	S	BERYLLIUM	I	2 / 2	1	0.550000	-0.820981	0.108900	0.480453	0.466690	0.980258	2.633534	1.00E+07
15			SW	S	CADMIUM	I	2 / 2	1	0.340000	-1.082718	0.000900	0.007826	0.042426	0.125109	0.529411	1.00E+07
15			SW	S	CALCIUM	I	2 / 2	1	24550.000000	10.103865	5522500.000000	0.009219	3323.401872	0.135789	39387.300752	1.00E+07
15			SW	S	COBALT	I	2 / 2	1	7.950000	1.999100	8.702500	0.151837	4.171930	0.551066	26.575548	1.00E+07
15			SW	S	COPPER	I	2 / 2	1	5.050000	1.555423	3.062500	0.130682	2.474874	0.511238	16.099055	1.00E+07
15			SW	S	IRON	I	2 / 2	1	7700.000000	8.948490	57600.000000	0.000972	339.411255	0.044094	9215.298800	1.00E+07
15			SW	S	LEAD	I	1 / 2	1	1.185000	-0.150553	0.664225	0.711829	1.152584	1.193172	6.330702	1.00E+07
15			SW	S	MAGNESIUM	I	2 / 2	1	8160.000000	9.001415	739600.000000	0.011190	1216.223664	0.149603	13589.820702	1.00E+07
15			SW	S	MANGANESE	I	2 / 2	1	1002.500000	6.903336	13806.250000	0.013865	166.170094	0.166521	1744.365039	1.00E+07
15			SW	S	MERCURY	I	2 / 2	1	0.120000	-2.123748	0.000100	0.006977	0.014142	0.118125	0.183137	1.00E+07
15			SW	S	NICKEL	I	2 / 2	1	9.050000	2.124248	11.902500	0.161187	4.879037	0.567780	30.832421	1.00E+07
15			SW	S	POTASSIUM	I	2 / 2	1	4525.000000	8.414458	119025.000000	0.005836	487.903679	0.108034	6703.242025	1.00E+07
15			SW	S	SODIUM	I	2 / 2	1	71100.000000	11.162449	94090000.000000	0.018847	13717.871555	0.194148	132343.326500	1.00E+07
15			SW	S	ZINC	I	2 / 2	1	41.400000	3.454412	712.890000	0.587622	37.759502	1.084086	209.976991	1.00E+07

TVALUE	HVALUE	CDEGFREE	RANGE OF POSITIVE DETECTION			REPRESENTATIVE CONCENTRATION	REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE
6.313745	10000000.000000	1.	104	-	338	338	338.000000	338.000000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	-1.069050	0.142525
6.313745	10000000.000000	1.	34.6	-	49.5	49.5	49.500000	49.500000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	1.603567	0.054405
6.313745	10000000.000000	1.	0.22	-	0.88	0.88	0.880000	0.880000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	0.819538	0.206240
6.313745	10000000.000000	1.	0.31	-	0.37	0.37	0.370000	0.370000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	1.639075	0.050599
6.313745	10000000.000000	1.	22200	-	26900	26900	26900.000000	26900.000000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	1.603567	0.054405
6.313745	10000000.000000	1.	5	-	10.9	10.9	10.900000	10.900000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	1.603567	0.054405
6.313745	10000000.000000	1.	3.3	-	6.8	6.8	6.800000	6.800000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	0.534522	0.296490
6.313745	10000000.000000	1.	7460	-	7940	7940	7940.000000	7940.000000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	1.603567	0.054405
6.313745	10000000.000000	1.	2	-	2	2	2.000000	2.000000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	0.000000	0.500000
6.313745	10000000.000000	1.	7300	-	9020	9020	9020.000000	9020.000000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	1.603567	0.054405
6.313745	10000000.000000	1.	885	-	1120	1120	1120.000000	1120.000000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	1.603567	0.054405
6.313745	10000000.000000	1.	0.11	-	0.13	0.13	0.130000	0.130000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	1.603567	0.054405
6.313745	10000000.000000	1.	5.6	-	12.5	12.5	12.500000	12.500000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	1.069045	0.142525
6.313745	10000000.000000	1.	4180	-	4870	4870	4870.000000	4870.000000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	1.603567	0.054405
6.313745	10000000.000000	1.	61400	-	80800	80800	80800.000000	80800.000000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	1.603567	0.054405
6.313745	10000000.000000	1.	14.7	-	68.1	68.1	68.100000	68.100000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	1.069045	0.142525

MWTESTMES	FTESTMES	FTESTCAL	FTESTTAB	ZTESTMES	Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	0.149300	4.350000	Z-TEST NOT POSSIBLE	0.000000	1.960000	-1.2614809	2.3533800	T-TEST CANNOT BE USED	0.234484	3
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	0.003500	4.350000	Z-TEST NOT POSSIBLE	0.000000	1.960000	1.7054672	2.3533800	T-TEST CANNOT BE USED	0.395425	3
MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.412100	4.350000	Z-TEST NOT POSSIBLE	0.912900	1.960000	1.3007569	2.3533800	T-TEST CANNOT BE USED	0.845637	3
MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.015200	4.350000	Z-TEST NOT POSSIBLE	1.490700	1.960000	4.7928738	2.3533800	T-TEST CANNOT BE USED	0.433189	3
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	0.036900	4.350000	Z-TEST NOT POSSIBLE	0.000000	1.960000	4.8722574	2.3533800	T-TEST CANNOT BE USED	1.557154	3
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	1.067600	4.350000	Z-TEST NOT POSSIBLE	0.000000	1.960000	2.9838746	2.3533800	T-TEST CANNOT BE USED	0.431905	3
MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.125300	4.350000	Z-TEST NOT POSSIBLE	0.912900	1.960000	0.3247119	2.3533800	T-TEST CANNOT BE USED	1.963007	3
MEANS NOT DIFFERENT BY NONPARA	EQUAL VARIANCES, LOGNORMAL	1.387600	4.350000	Z-TEST NOT POSSIBLE	0.000000	1.960000	-9.5399432	2.3533800	T-TEST CANNOT BE USED	0.852117	3
MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.107300	4.350000	Z-TEST NOT POSSIBLE	0.372700	1.960000	-0.2875204	2.3533800	T-TEST CANNOT BE USED	1.429437	3
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	0.001400	4.350000	Z-TEST NOT POSSIBLE	0.000000	1.960000	5.8960896	2.3533800	T-TEST CANNOT BE USED	1.039886	3
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	1.074500	4.350000	Z-TEST NOT POSSIBLE	0.000000	1.960000	10.9091254	2.3533800	T-TEST CANNOT BE USED	0.711859	3
MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.012700	4.350000	Z-TEST NOT POSSIBLE	0.912900	1.960000	8.9872164	2.3533800	T-TEST CANNOT BE USED	0.792505	3
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	0.105800	4.350000	Z-TEST NOT POSSIBLE	0.000000	1.960000	1.4847576	2.3533800	T-TEST CANNOT BE USED	0.609577	3
MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	0.100700	4.350000	Z-TEST NOT POSSIBLE	0.912900	1.960000	4.9653580	2.3533800	T-TEST CANNOT BE USED	1.406819	3
MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	4.495400	4.350000	Z-TEST NOT POSSIBLE	2.236100	1.960000	9.5886275	2.3533800	T-TEST CANNOT BE USED	0.122483	3
MEANS NOT DIFFERENT BY NONPARA	F-/T-TEST NA, DISTRIBS. DIFFERENT	0.367600	4.350000	Z-TEST NOT POSSIBLE	0.000000	1.960000	1.1563872	2.3533800	T-TEST CANNOT BE USED	0.688210	3

BKGDACO	BKGDLACO
352.666667	5.848029
26.866667	3.242891
0.205000	-1.785386
0.116667	-2.215002
4564.000000	7.801548
1.270000	0.175481
3.698333	0.247646
6.059109	6.059109
1.713333	-0.168967
1262.666667	6.770944
29.966667	3.223658
0.019167	-4.127922
4.300000	1.336788
741.166667	5.952168
1758.333333	7.467194
16.333333	2.631350

APPENDIX I.a.10

EXAMPLE QUANTITATIVE RISK ASSESSMENT CALCULATIONS

SITE 15 - SURFACE WATER ORGANIC RESULTS

SUBSTANCE	IO	BACKGROUND FREQUENCY OF DETECTION	DEGFREE	AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANG POSITIVE D
4,4'-DDD	O	NOT DETECTED	0	0.050000	-2.995732	0.000000	0.000000	0.000000	0.000000	10000000.000000	1.00E+07	10000000.000000	10000000.000000	0.	-

OF TECTION	REPRESENTATIVE CONCENTRATION	REPCONNOR	REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES	FTESTCAL	FTESTTAB	ZTESTMES
	-	0.000000	0.000000	1.000000	1.000000	0.000000	NONPARAMETRIC DIST							

Z	ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO	SITECODE1	SITECODE2	PHASE	TYPE	SITEREF	SUBSTANCE	IO	SITE-RELATED FREQUENCY OF DETECTION	DEGFREE
		0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	0	0.000000	0.000000	15			SW	S	4,4'-DDD	O	1 / 1	0

AVECONC	LAVECONC	VAR	LVAR	STDEV	LSTDEV	ARTHMEAN	GEOMEAN	TVALUE	HVALUE	CDEGFREE	RANGE OF POSITIVE DETECTION	REPRESENTATIVE CONCENTRATION	REPCONNOR
0.001800	-6.319969	0.000000	0.000000	0.000000	0.000000	10000000.000000	1.00E+07	10000000.000000	10000000.000000	0.	0.0018	0.0018	0.001800

REPCONLOG	WNORM	WLOG	WTABL	SWILMES	MWUSTAT	MWPVALUE	MWTESTMES	FTESTMES	FTESTCAL	FTESTTAB	ZTESTMES	Z
0.001800	1.000000	1.000000	0.000000	NONPARAMETRIC DIST	-1.240350	0.107424	MEANS NOT DIFFERENT BY NONPARA	TOO MANY NDs FOR T-TEST	22.039500	3.847900	Z-TEST NOT POSSIBLE	1.414200

ZT	TCAL2	TVAL2	TTESTMES	BKGDLSD	BKGDNO	BKGDACO	BKGDLACO
1.960000	0.0000000	10000000.0000000	T-TEST CANNOT BE USED	0.000000	1	0.050000	-2.995732

APPENDIX I.b.

TOXICITY PROFILES FOR COPCs

APPENDIX I.b.

SUMMARY OF TOXICOLOGICAL PROFILES FOR POTENTIAL CHEMICALS OF CONCERN

TABLE OF CONTENTS

I.b.1 ACENAPHTHYLENE I.b.1
I.b.1.1 Non-carcinogenic Toxicity I.b.1

I.b.2 ALDRIN/DIELDRIN I.b.1
I.b.2.1 Pharmacokinetics I.b.1

I.b.3 ALUMINUM I.b.2
I.b.3.1 Non-carcinogenic Toxicity I.b.2
I.b.3.2 Carcinogenicity I.b.2

I.b.4 2-AMINO-4,6-DINITROTOLUENE I.b.2

I.b.5 4-AMINO-2,6-DINITROTOLUENE I.b.2

I.b.6 ANTIMONY I.b.2
I.b.6.1 Pharmacokinetics I.b.2
I.b.6.2 Non-carcinogenic Toxicity I.b.2
I.b.6.3 Carcinogenicity I.b.3

I.b.7 ARSENIC I.b.3
I.b.7.1 Pharmacokinetics I.b.3
I.b.7.2 Non-carcinogenic Toxicity I.b.4
I.b.7.3 Carcinogenicity I.b.4

I.b.8 BARIUM I.b.5
I.b.8.1 Non-carcinogenic Toxicity I.b.5
I.b.8.2 Carcinogenicity I.b.5

I.b.9 BENZENE I.b.5
I.b.9.1 Non-carcinogenic Toxicity I.b.5
I.b.9.2 Carcinogenicity I.b.5

I.b.10 BENZO(B)FLUORANTHENE I.b.6
I.b.10.1 Non-carcinogenic Toxicity I.b.6
I.b.10.2 Carcinogenicity I.b.6

I.b.11 BENZO(G,H,I)PERYLENE I.b.6
I.b.11.1 Non-carcinogenic Toxicity I.b.6
I.b.11.2 Carcinogenicity I.b.6

I.b.12 BENZO(K)FLUORANTHENE I.b.7
I.b.12.1 Non-carcinogenic Toxicity I.b.7
I.b.12.2 Carcinogenicity I.b.7

I.b.13 BERYLLIUM I.b.7
I.b.13.1 Non-carcinogenic Toxicity I.b.7
I.b.13.2 Carcinogenicity I.b.7

I.b.14 BIS(2-ETHYLHEXYL)PHTHALATE I.b.8
I.b.14.1 Non-carcinogenic Toxicity I.b.8
I.b.14.2 Carcinogenicity I.b.8

I.b.15 BROMODICHLOROMETHANE I.b.8
I.b.15.1 Non-carcinogenic Toxicity I.b.8
I.b.15.2 Carcinogenicity I.b.9

I.b.16 2-BUTANONE I.b.9
I.b.16.1 Non-carcinogenic Toxicity I.b.9
I.b.16.2 Carcinogenicity I.b.9

I.b.17 BUTYLBENZYLPHTHALATE I.b.10
I.b.17.1 Non-carcinogenic Toxicity I.b.10
I.b.17.2 Carcinogenicity I.b.10

I.b.18 CADMIUM I.b.10
I.b.18.1 Pharmacokinetics I.b.10
I.b.18.2 Non-carcinogenic Toxicity I.b.10
I.b.18.3 Carcinogenicity I.b.11

I.b.19 CARBAZOLE I.b.11
I.b.19.1 Non-carcinogenic Toxicity I.b.11
I.b.19.2 Carcinogenicity I.b.11

I.b.20 CARBON DISULFIDE I.b.12
I.b.20.1 Non-carcinogenic Toxicity I.b.12
I.b.20.2 Carcinogenicity I.b.12

I.b.21 CHLORDANE I.b.12
I.b.21.1 Pharmacokinetics I.b.12
I.b.21.2 Non-carcinogenic Toxicity I.b.13
I.b.21.3 Carcinogenicity I.b.13

I.b.22 CHLOROBENZENE I.b.13
I.b.22.1 Non-carcinogenic Toxicity I.b.14
I.b.22.2 Carcinogenicity I.b.14

I.b.23 CHLOROFORM I.b.14
I.b.23.1 Non-carcinogenic Toxicity I.b.14
I.b.23.2 Carcinogenicity I.b.15

I.b.24 CHROMIUM I.b.15
I.b.24.1 Non-carcinogenic Toxicity I.b.15
I.b.24.2 Carcinogenicity I.b.16

I.b.25 CHRYSENE I.b.16
I.b.25.1 Non-carcinogenic Toxicity I.b.16
I.b.25.2 Carcinogenicity I.b.16

I.b.26 COBALT I.b.16
I.b.26.1 Non-carcinogenic Toxicity I.b.16
I.b.26.2 Carcinogenicity I.b.18

I.b.27 COPPER I.b.18
I.b.27.1 Non-carcinogenic Toxicity I.b.18
I.b.27.2 Carcinogenicity I.b.18

I.b.28 CYANIDE I.b.18
I.b.28.1 Non-carcinogenic Toxicity I.b.18
I.b.28.2 Carcinogenicity I.b.19

I.b.29 4,4'-DDD I.b.19
I.b.29.1 Non-carcinogenic Toxicity I.b.19
I.b.29.2 Carcinogenicity I.b.19

I.b.30 4,4'-DDE I.b.20
I.b.30.1 Non-carcinogenic Toxicity I.b.20
I.b.30.2 Carcingoenicity I.b.20

I.b.31 DDT I.b.20
I.b.31.1 Pharmacokinetics I.b.20
I.b.31.2 Non-carcinogenic Toxicity I.b.21
I.b.31.3 Carcinogenicity I.b.22

I.b.32 DIBENZOFURAN I.b.22
I.b.32.1 Non-carcinogenic Toxicity I.b.22
I.b.32.2 Carcinogenicity I.b.22

I.b.33 DI-N-BUTYLPHTHALATE I.b.22
I.b.33.1 Non-carcinogenic Toxicity I.b.22
I.b.33.2 Carcinogenicity I.b.23

I.b.34 1,2-DICHLOROBENZENE I.b.23
I.b.34.1 Non-carcinogenic Toxicity I.b.23
I.b.34.2 Carcinogenicity I.b.23

I.b.35 1,4-DICHLOROBENZENE I.b.23
I.b.35.1 Pharmacokinetics I.b.23
I.b.35.2 Non-carcinogenic Toxicity I.b.24
I.b.35.3 Carcinogenicity I.b.24

I.b.36 1,2-DICHLOROETHANE I.b.24
I.b.36.1 Non-carcinogenic Toxicity I.b.24
I.b.36.2 Carcinogenicity I.b.25

I.b.37 1,1-DICHLOROETHENE I.b.25
I.b.37.1 Non-carcinogenic Toxicity I.b.25
I.b.37.2 Carcinogenicity I.b.25

I.b.38 1,2-DICHLOROETHENE, TOTAL I.b.26
I.b.38.1 Non-carcinogenic Toxicity I.b.26
I.b.38.2 Carcinogenicity I.b.26

I.b.39 2,4-DICHLOROPHENOL I.b.26
I.b.39.1 Non-carcinogenic Toxicity I.b.26
I.b.39.2 Carcinogenicity I.b.27

I.b.40 DIETHYLPHTHALATE I.b.27
I.b.40.1 Non-carcinogenic Toxicity I.b.27
I.b.40.2 Carcinogenicity I.b.28

I.b.41 2,4-DINITROTOLUENE I.b.28
I.b.41. Pharmacokinetics I.b.28
I.b.41.2 Non-carcinogenic Toxicity I.b.28

I.b.42 DI-N-OCTYLPHTHALATE I.b.29
I.b.42.1 Non-carcinogenic Toxicity I.b.29
I.b.42.2 Carcinogenicity I.b.29

I.b.43 ENDOSULFAN I/ ENDOSULFAN II I.b.29
I.b.43.1 Non-carcinogenic Toxicity I.b.29
I.b.43.2 Carcinogenicity I.b.29

I.b.44 ENDOSULFAN SULFATE I.b.29

I.b.45 ENDRIN/ ENDRIN ALDEHYDE I.b.30
I.b.45.1 Non-carcinogenic Toxicity I.b.30
I.b.45.2 Carcinogenicity I.b.30

I.b.46 ENDRIN KETONE I.b.30

I.b.47 ETHYLBENZENE I.b.30
I.b.47.1 Non-carcinogenic Toxicity I.b.30
I.b.47.2 Carcinogenicity I.b.31

I.b.48 HEPTACHLOR/ HEPTACHLOR EPOXIDE I.b.31
I.b.48.1 Pharmacokinetics I.b.31
I.b.48.2 Carcinogenicity I.b.32

I.b.49 HEXACHLOROHEXANES I.b.32
I.b.49.1 Pharmacokinetics I.b.32

I.b.50 HEXACHLOROETHANE I.b.32
I.b.50.1 Non-carcinogenic Toxicity I.b.32
I.b.50.2 Carcinogenicity I.b.32

I.b.51 HMX I.b.33
I.b.51.1 Pharmacokinetics I.b.33
I.b.51.2 Non-carcinogenic Toxicity I.b.33
I.b.51.3 Carcinogenicity I.b.33

I.b.52 INDENO(1,2,3-CD)PYRENE I.b.33
I.b.52.1 Non-carcinogenic Toxicity I.b.33
I.b.52.2 Carcinogenicity I.b.34

I.b.53 IRON I.b.34
I.b.53.1 Non-carcinogenic Toxicity I.b.34
I.b.53.2 Carcinogenicity I.b.34

I.b.54 ISOPHORONE I.b.34
I.b.54.1 Non-carcinogenic Toxicity I.b.34
I.b.54.2 Carcinogenicity I.b.35

I.b.55 LEAD I.b.35
I.b.55.1 Pharmacokinetics I.b.35
I.b.55.2 Non-carcinogenic Toxicity I.b.35
I.b.55.3 Carcinogenicity I.b.37

I.b.56 NITROBENZENE I.b.37
I.b.56.1 Pharmacokinetics I.b.37
I.b.56.2 Carcinogenicity I.b.37

I.b.57 MAGNESIUM I.b.38
I.b.57.1 Pharmacokinetics I.b.38

I.b.58 MANGANESE I.b.38
I.b.58.1 Non-carcinogenic Toxicity I.b.38
I.b.58.2 Carcinogenicity I.b.39

I.b.59 MERCURY I.b.39
I.b.59.1 Pharmacokinetics I.b.39
I.b.59.2 Non-carcinogenic Toxicity I.b.40
I.b.59.3 Carcinogenicity I.b.41

I.b.60 METHOXYCHLOR I.b.41
I.b.60.1 Pharmacokinetics I.b.41
I.b.60.1 Non-carcinogenic Toxicity I.b.41
I.b.60.3 Carcinogenicity I.b.42

I.b.61 METHYLENE CHLORIDE I.b.42
I.b.61.1 Non-carcinogenic Toxicity I.b.42
I.b.61.2 Carcinogenicity I.b.42

I.b.62 2-METHYLNAPHTHALENE I.b.43
I.b.62.1 Non-carcinogenic Toxicity I.b.43
I.b.62.2 Carcinogenicity I.b.43

I.b.63 4-METHYL-2-PENTANONE I.b.43
I.b.63.1 Non-carcinogenic Toxicity I.b.43
I.b.63.2 Carcinogenicity I.b.43

I.b.64 2-METHYLPHENOL I.b.44
I.b.64.1 Non-carcinogenic Toxicity I.b.44
I.b.64.2 Carcinogenicity I.b.44

I.b.65 4-METHYLPHENOL I.b.44
I.b.65.1 Non-carcinogenic Toxicity I.b.44
I.b.65.2 Carcinogenicity I.b.45

I.b.66 NICKEL I.b.45
I.b.66.1 Non-carcinogenic Toxicity I.b.45
I.b.66.2 Carcinogenicity I.b.45

I.b.67 NITROCELLULOSE I.b.45
I.b.67.1 Pharmacokinetics I.b.45
I.b.67.2 Non-carcinogenic Toxicity I.b.46
I.b.67.3 Carcinogenicity I.b.46

I.b.68 N-NITROSODIPHENYLAMINE I.b.46
I.b.68.1 Non-carcinogenic Toxicity I.b.46
I.b.68.2 Carcinogenicity I.b.46

I.b.69 PHENANTHRENE I.b.46
I.b.69.1 Non-carcinogenic Toxicity I.b.46
I.b.69.2 Carcinogenicity I.b.47

I.b.70 PHENOL I.b.47
I.b.70.1 Non-carcinogenic Toxicity I.b.47
I.b.70.2 Carcinogenicity I.b.47

I.b.71 POLYAROMATIC HYDROCARBONS I.b.47
I.b.71.1 Pharmacokinetics I.b.47
I.b.71.2 Non-carcinogenic Toxicity I.b.48
I.b.71.3 Carcinogenicity I.b.50

I.b.72 POLYCHLORINATED BIPHENYLS I.b.51
I.b.72.1 Non-carcinogenic Toxicity I.b.51
I.b.72.1.1 Non-carcinogenic Toxicity for Arochlor 1254 . . . . . I.b.52
I.b.72.2 Carcinogenicity I.b.52

I.b.73 RDX I.b.53
I.b.73.1 Pharmacokinetics I.b.53
I.b.73.2 Non-carcinogenic Toxicity I.b.53
I.b.73.3 Carcinogenicity I.b.53

I.b.74 SELENIUM I.b.54
I.b.74.1 Non-carcinogenic Toxicity I.b.54
I.b.74.2 Carcinogenicity I.b.54

I.b.75 SILVER I.b.55
I.b.75.1 Pharmacokinetics I.b.55
I.b.75.2 Non-carcinogenic Toxicity I.b.55
I.b.75.3 Carcinogenicity I.b.55

I.b.76 STYRENE I.b.56
I.b.76.1 Non-carcinogenic Toxicity I.b.56
I.b.76.2 Carcinogenicity I.b.56

I.b.77 TETRACHLOROETHENE I.b.56
I.b.77.1 Non-carcinogenic Toxicity I.b.56
I.b.77.2 Carcinogenicity I.b.57

I.b.78 THALLIUM I.b.57
I.b.78.1 Non-carcinogenic Toxicity I.b.57
I.b.78.2 Carcinogenicity I.b.57

I.b.79 TOLUENE I.b.58
I.b.79.1 Non-carcinogenic Toxicity I.b.58
I.b.79.2 Carcinogenicity I.b.58

I.b.80 1,2,4-TRICHLOROBENZENE I.b.58
I.b.80.1 Pharmacokinetics I.b.58

I.b.81 1,1,1-TRICHLOROETHANE I.b.59
I.b.81.1 Non-carcinogenic Toxicity I.b.59
I.b.81.2 Carcinogenicity I.b.59

I.b.82 1,1,2-TRICHLOROETHANE I.b.60
I.b.82.1 Non-carcinogenic Toxicity I.b.60
I.b.82.2 Carcinogenicity I.b.60

I.b.83 TRICHLOROETHENE I.b.60
I.b.83.1 Non-carcinogenic Toxicity I.b.60
I.b.83.2 Carcinogenicity I.b.60

I.b.84 2,4,6-TRINITROTOLUENE I.b.61
I.b.84.1 Pharmacokinetics I.b.61
I.b.84.2 Non-carcinogenic Toxicity I.b.61
I.b.84.3 Carcinogenicity I.b.61

I.b.85 VANADIUM I.b.62
I.b.85.1 Non-carcinogenic Toxicity I.b.62
I.b.85.2 Carcinogenicity I.b.62

I.b.86 VINYL CHLORIDE I.b.62
I.b.86.1 Non-carcinogenic Toxicity I.b.62
I.b.86.2 Carcinogenicity I.b.62

I.b.87 XYLENES, TOTAL I.b.63
I.b.87.1 Non-carcinogenic Toxicity I.b.63
I.b.87.2 Carcinogenicity I.b.63

I.b.88 ZINC I.b.63
X.88.1 Pharmacokinetics I.b.63
I.b.88.2 Non-carcinogenic Toxicity I.b.64
I.b.88.3 Carcinogenicity I.b.64

REFERENCES I.b.65

SUMMARY OF TOXICOLOGICAL PROFILES FOR POTENTIAL CHEMICALS OF CONCERN SITE-WIDE - GROUNDWATER, SURFACE WATER, SEDIMENT, SURFACE AND SUBSURFACE SOILS NWS EARLE, COLTS NECK, NEW JERSEY

I.b.1 ACENAPHTHYLENE

I.b.1.1 Non-carcinogenic Toxicity

Non-carcinogenic toxicity data were not located for acenaphthylene, but the chemical is structurally very similar to acenaphthene. Acenaphthene appears to be a mild hepatotoxicant, and possibly a nephrotoxicant, in rodents (EPA 1995a). It is reasonable to suspect that acenaphthylene may induce similar effects.

I.b.1.2 Carcinogenicity

The EPA (1993a) classifies acenaphthylene as a cancer weight-of-evidence Group D compound (not classifiable as to carcinogenicity to humans), based on no human cancer data and inadequate cancer data in animals. The animal data consist of an inadequately reported lifetime skin painting study in which skin tumors were not observed in mice treated with acenaphthylene (Cook 1932). Tumors were observed in mice treated with other PAHs.

I.b.2 ALDRIN/DIELDRIN (Clement 1985)

I.b.2.1 Pharmacokinetics

Both aldrin and dieldrin are carcinogens, causing increases in a variety of tumors in rats at low but not at high doses and producing a higher incidence of liver tumors in mice. The reason for this reversed dose-response relationship is unclear. Neither appears to be mutagenic when tested in a number of systems. Aldrin and dieldrin are both toxic to the reproductive system and teratogenic. Reproductive effects include decreased fertility, increased fetal death, and effects on gestation; while teratogenic effects include cleft palate, webbed foot, and skeletal anomalies. Chronic effects attributed to aldrin and dieldrin include liver toxicity and central nervous system abnormalities. Both chemicals are acutely toxic; the oral LD_{50} is around 50 mg/kg, and the dermal LD_{50} is about 100 mg/kg.

I.b.3 ALUMINUM

I.b.3.1 Non-carcinogenic Toxicity

Aluminum is not generally regarded as an industrial poison. Inhalation of finely divided powders has been reported as a cause of pulmonary fibrosis. Aluminum in aerosols has been implicated in Alzheimers disease. EPA has not published an inhalation reference dose for aluminum, but the EPA published oral RfD is 1.00 mg/kg/day (EPA 1994b).

I.b.3.2 Carcinogenicity

No oral or inhalation cancer slope factor is available for aluminum.

I.b.4 2-AMINO-4,6-DINITROTOLUENE

2-Amino-4,6-dinitrotoluene is a reduction product of TNT. Since it is structurally similar to 2,4-dinitrotoluene, this substance should be used as a surrogate.

I.b.5 4-AMINO-2,6-DINITROTOLUENE

4,Amino-2,6-dinitrotoluene is a reduction product of TNT. Since it is structurally similar to 2,4-dinitrotoluene, this substance should be used as a surrogate.

I.b.6 ANTIMONY

I.b.6.1 Pharmacokinetics

Ingested antimony is absorbed slowly and incompletely from the gastrointestinal (GI) tract (Iffland 1988). Within a few days of acute exposure, highest tissue concentrations are found in the liver, kidney, and thyroid. Organs of storage include skin, bone, and teeth. Highest concentrations in deceased smelter workers (inhalation exposure) occurred in the lungs and skeleton. Excretion is largely via the urine or feces, although some is incorporated into the hair.

I.b.6.2 Non-carcinogenic Toxicity

Acute intoxication from ingestion of large doses of antimony induces GI disturbances, dehydration, and cardiac effects in humans (Iffland 1988). Chronic effects from occupational exposure include irritation of

the respiratory tract, pneumoconiosis, pustular eruptions of the skin called "antimony spots," allergic contact dermatitis, and cardiac effects, including abnormalities of the electrocardiograph (ECG) and myocardial changes. Cardiac effects were also observed in rats and rabbits exposed by inhalation for six weeks and in animals (dogs, and possibly other species) treated by intravenous injection (Elinder and Friberg 1986a).

Chronic oral exposure studies in laboratory animals include two briefly reported lifetime drinking water studies in rats and mice (Kanisawa and Schroeder 1969; Schroeder et al. 1970). The only dose tested, 5 ppm potassium antimony tartrate, resulted in reduced longevity in both species and in reduced mean heart weight in the rats. The EPA (1995a) verified an RfD of 0.0004 mg/kg/day for chronic oral exposure to antimony from the LOAEL of 5 ppm potassium antimony tartrate (0.35 mg antimony/kg body weight-day) in the lifetime study in rats (Schroeder et al. 1970). An uncertainty factor of 1, 000 was applied; factors of 10 each for inter- and intraspecies variation and to estimate an NOAEL from an LOAEL. The heart is considered a likely target organ for chronic oral exposure of humans.

I.b.6.3 Carcinogenicity

Data were not located regarding the carcinogenicity of antimony to humans. Antimony fed to rats did not produce an excess of tumors (Goyer 1991), but a high frequency of lung tumors was observed in rats exposed by inhalation to antimony trioxide for one year (Elinder and Friberg 1986a). Antimony is classified in EPA cancer weight-of-evidence Group D (not classifiable as to carcinogenicity to humans) (EPA 1987a).

I.b.7 ARSENIC

I.b.7.1 Pharmacokinetics

Several studies confirm that soluble inorganic arsenic compounds and organic arsenic compounds are almost completely (>90 percent) absorbed from the GI tract in both animals and humans (Ishinishi et al. 1986). The absorption efficiency of insoluble inorganic arsenic compounds depends on particle size and stomach pH. Initial distribution of absorbed arsenic is to the liver, kidneys, and lungs, followed by redistribution to hair, nails, teeth, bone, and skin, which are considered tissues of accumulation. Arsenic has a longer half-life in the blood of rats, compared with other animals and humans, because of firm binding to the hemoglobin in erythrocytes.

Metabolism of inorganic arsenic includes reversible oxidation-reduction so that both arsenite (valence of 3) and arsenate (valence of 5) are present in the urine of animals treated with arsenic of either valence (Ishinishi et al. 1986). Arsenite is subsequently oxidized and methylated by a saturable mechanism to form mono- or dimethylarsenate; the latter is the predominant metabolite in the urine of animals or humans. Organic arsenic compounds (arsenilic acid, cacodylic acid) are not readily converted to inorganic arsenic.

Excretion of organic or inorganic arsenic is largely via the urine, but considerable species variation exists. Continuously exposed humans appear to excrete 60 to 70 percent of their daily intake of arsenate or arsenite via the urine.

I.b.7.2 Non-carcinogenic Toxicity

A lethal dose of arsenic trioxide in humans is 70 to 180 mg (approximately 50 to 140 mg arsenic; Ishinishi et al. 1986). Acute oral exposure of humans to high doses of arsenic produce liver swelling, skin lesions, disturbed heart function, and neurological effects. The only non-carcinogenic effects in humans clearly attributable to chronic oral exposure to arsenic are dermal hyperpigmentation and keratosis, as revealed by studies of several hundred Chinese exposed to naturally occurring arsenic in well water (Tseng 1977; Tseng et al. 1968; EPA 1995a). Similar effects were observed in persons exposed to high levels of arsenic in water in Utah and the northern part of Mexico (Cebrian et al. 1983; Southwick et al. 1983). Occupational (predominantly inhalation) exposure is also associated with neurological deficits, anemia, and cardiovascular effects (Ishinishi et al. 1986), but concomitant exposure to other chemicals cannot be ruled out. The EPA (1995a) derived an RfD of 0.3 µg/kg/day for chronic oral exposure, based on an NOAEL of 0.8 µg/kg/day for skin lesions from the Chinese data. The principal target organ for arsenic appears to be the skin. The nervous system and cardiovascular systems appear to be less significant target organs. Inorganic arsenic may be an essential nutrient, exerting beneficial effects on growth, health, and feed conversion efficiency (Underwood 1977).

I.b.7.3 Carcinogenicity

Inorganic arsenic is clearly a carcinogen in humans. Inhalation exposure is associated with increased risk of lung cancer in persons employed as smelter workers, in arsenical pesticide applicators, and in a population residing near a pesticide manufacturing plant (EPA 1995a). Oral exposure to high levels in well water is associated with increased risk of skin cancer (Tseng 1977; EPA 1995a). Extensive animal testing with various forms of arsenic given by many routes of exposure to several species, however, has not demonstrated the carcinogenicity of arsenic (International Agency for Research on Cancer [IARC] 1980). The EPA (1995a) classifies inorganic arsenic in cancer weight-of-evidence Group A (human carcinogen), and recommends an oral unit risk of 0.00005 µg/L in drinking water, based on the incidence of skin cancer in the Tseng (1977) study. The EPA (1995a) notes that the uncertainties associated with the oral unit risk are considerably less than those for most carcinogens, so that the unit risk might be reduced an order of magnitude. An inhalation unit risk of 0.0043 per $\mu g/m^3$ was derived for inorganic arsenic from the incidence of lung cancer in occupationally exposed men (EPA 1995a).

I.b.8 BARIUM

I.b.8.1 Non-carcinogenic Toxicity

Barium is a naturally occurring alkaline earth metal that comprises approximately 0.04 percent of the earth's crust (Reeves 1986a). Acute oral toxicity was manifested by GI upset, altered cardiac performance, and transient hypertension, convulsions, and muscular paralysis. Repeated oral exposures were associated with hypertension. Occupational exposure to insoluble barium sulfate induced benign pneumoconiosis (ACGIH 1991). The EPA (1995a) presented a verified chronic oral RfD of 0.07 mg/kg/day, based on an NOAEL of 0.21 mg/kg/day in a ten-week study in humans exposed to barium in drinking water and an uncertainty factor of 3. The EPA (1995a) presented the same value as a provisional RfD for subchronic oral exposure. A provisional chronic inhalation RfC of 0.0005 mg/m^3 and a provisional subchronic inhalation RfC of 0.005 were based on an NOEL for fetotoxicity in a four-month intermittent-exposure inhalation study in rats (EPA 1995a). Uncertainty factors of 1, 000 and 100 were used for the chronic and subchronic RfC values, respectively. The chronic and subchronic inhalation RfC values are equivalent to 0.0001 and 0.001 mg/kg/day (EPA 1994b), assuming a human inhalation rate of 20 m^3/day and body weight of 70 kg. Barium is principally a muscle toxin. Its targets are the GI system, skeletal muscle, the cardiovascular system, and the fetus.

I.b.8.2 Carcinogenicity

The EPA (1994b) classifies barium as a cancer weight-of-evidence Group D substance (not classifiable as to carcinogenicity in humans). Cancer risk is not estimated for Group D substances.

I.b.9 BENZENE

I.b.9.1 Non-carcinogenic Toxicity

In humans, short-term inhalation exposure to benzene induced CNS effects such as drowsiness, dizziness, and headaches; long-term exposure induced anemia (ACGIH 1991). Oral dosing in animals induced hematopoietic effects (Agency for Toxic Substances and Disease Registry [ATSDR] 1989a). An oral RfD value was not located for benzene, but an inhalation RfD value of 0.002 mg/kg/day was derived (EPA 1995b) for benzene. The CNS and the hematopoietic system are the target organs of benzene.

I.b.9.2 Carcinogenicity

The EPA (1995a) classifies benzene in cancer weight-of-evidence Group A (human carcinogen) based on several studies of increased risk of non-lymphocytic leukemia associated with occupational exposure,

supported by an increased incidence of neoplasia in rats and mice exposed by inhalation and gavage. A verified oral slope factor of 0.029 per mg/kg/day (EPA 1995a) and inhalation unit risk of 8.3 E-06 $\mu g/m^3$ is based on the increased incidence of leukemia in several occupational (inhalation exposure) studies. The inhalation unit risk is equivalent to 0.029 per mg/kg/day (EPA 1995a), assuming an inhalation rate of 20 m^3/day and a body weight of 70 kg for humans.

I.b.10 BENZO(B)FLUORANTHENE

I.b.10.1 Non-carcinogenic Toxicity

Little information is available on benzo(b)fluoranthene. However based on the similarities of chemical structures, most properties should be similar to benzo(a)pyrene.

I.b.10.2 Carcinogenicity

A Clement's relative potency factor (RFP) has been developed (Clement International, 1990) for benzo(b)fluoranthene which allows the estimation of CSFs of 0.73 (EPA 1995b) and 0.61 per mg/kg/day (EPA 1995b) for the oral and inhalation routes, respectively. The EPA (1995a) has classified benzo(b)fluoranthene in cancer weight-of-evidence Group B2 (Probable Human Carcinogen, sufficient evidence of carcinogenicity in animals with inadequate or lack of evidence in humans) based on lung tumors in mice.

I.b.11 BENZO(G,H,I)PERYLENE

I.b.11.1 Non-carcinogenic Toxicity

Little information is available on benzo(g,h,i)perylene. However based on the similarities of chemical structures, most properties should be similar to benzo(a)pyrene.

I.b.11.2 Carcinogenicity

The EPA (1995a) has classified benzo(g,h,i)perylene in cancer weight-of-evidence Group D (Not classifiable as to human carcinogenicity, inadequate or no evidence).

I.b.12 BENZO(K)FLUORANTHENE

I.b.12.1 Non-carcinogenic Toxicity

Little information is available on benzo(k)fluoranthene. However, based on the similarities of the chemical structures, most properties should be similar to benzo(a)pyrene.

I.b.12.2 Carcinogenicity

A Clement's relative potency factor (RFP) has been developed (Clement International, 1990) for benzo(k)fluoranthene which allows the estimation of 0.073 (EPA 1995b) and 0.061 per mg/kg/day (EPA 1995b) for the CSF for the oral and inhalation route, respectively. The EPA (1995a) has classified benzo(k)fluoranthene in cancer weight-of-evidence Group B2 (Probable Human Carcinogen, sufficient evidence of carcinogenicity in animals with inadequate or lack of evidence in humans) based on lung tumors in mice.

I.b.13 BERYLLIUM

I.b.13.1 Non-carcinogenic Toxicity

Beryllium has a low order of toxicity when ingested because it is poorly absorbed from the GI tract (Reeves 1986b). Occupational exposure was associated with dermatitis, acute pneumonitis, and chronic pulmonary granulomatosis (berylliosis). Berylliosis was also observed in humans living in the vicinity of a beryllium plant. Similar pulmonary effects were observed in laboratory animals subjected to inhalation exposure. A verified chronic oral RfD value of 0.005 mg/kg/day (EPA 1995a) was based on an NOAEL in a lifetime drinking water study in rats and an uncertainty factor of 100 (EPA 1995a). The EPA (1994b) presented the same value as a provisional subchronic oral RfD. The target organ for inhalation exposure appears to be the lung; a target organ is not identified for oral exposure.

I.b.13.2 Carcinogenicity

The EPA (1995a) classifies beryllium in cancer weight-of-evidence Group B2 (probable human carcinogen) based on inadequate human (occupational) cancer data and sufficient animal data. A significant increase in lung tumors occurred in rats and in rhesus monkeys subjected to inhalation exposure or intratracheal instillation of a variety of beryllium compounds. Osteogenic sarcomas were induced in rabbits and mice, but not in rats or guinea pigs, injected intravenously with various beryllium compounds. Oral studies in animals yielded inconclusive results. The EPA (1995a) derived an oral slope factor of 4.3 per mg/kg/day (EPA 1995a) from a statistically nonsignificant increase in total tumors in a lifetime drinking water study in

rats. An inhalation unit risk of 0.0024 per $\mu g/m^3$, equivalent to 8.4 per mg/kg/day (EPA 1995a) (assuming an inhalation rate of 20 m^3/day and body weight of 70 kg for humans), was derived from an occupational study.

I.b.14 BIS(2-ETHYLHEXYL)PHTHALATE (DI[2-ETHYLHEXYL]PHTHALATE)

I.b.14.1 Non-carcinogenic Toxicity

The acute oral toxicity of bis(2-ethylhexyl)phthalate is very low; oral $LD_{50/30}$ (lethal dose to 50 percent of population within 30 days without medical treatment) values in rats and mice were 33,800 and 26,300 mg/kg, respectively (ACGIH 1991). Repeated high-dose oral exposures were associated with decreased growth, altered organ weights, testicular degeneration, and developmental effects. The EPA (1995a) presented a verified chronic oral RfD of 0.02 mg/kg/day based on an LOAEL for increased relative liver weight in guinea pigs and an uncertainty factor of 1,000. The EPA (1994b) adopted the chronic oral RfD as the provisional subchronic oral RfD. The principal target organs for the toxicity of bis(2-ethylhexyl)phthalate are the liver and testis.

I.b.14.2 Carcinogenicity

The EPA (1995a) classifies bis(2-ethylhexyl)phthalate in cancer weight-of-evidence Group B2 (probable human carcinogen), based on inadequate human cancer data (one limited occupational study) and sufficient cancer data in laboratory animals. An oral slope factor of 0.014 per mg/kg/day (EPA 1995a) was based on the increased incidence of liver tumors in a dietary study in male mice.

I.b.15 BROMODICHLOROMETHANE

I.b.15.1 Non-carcinogenic Toxicity

Chronic gavage treatment with bromodichloromethane induced histopathologic evidence of degeneration of the liver and kidney in rats and mice, and hyperplastic lesions of the thyroid in the mice (EPA 1995a). The EPA (1995a) presented a verified chronic oral RfD of 0.02 mg/kg/day based on an NOAEL for kidney effects in mice and an uncertainty factor of 1,000. The EPA (1994b) presented the same value as a provisional subchronic oral RfD. The principal target organs of bromodichloromethane are the liver and kidney; the thyroid may be a target in mice.

I.b.15.2 Carcinogenicity

The EPA (1995a) classifies bromodichloromethane in cancer weight-of-evidence Group B2 (probable human carcinogen), based on inadequate human data and sufficient animal data. The human data consist of epidemiologic studies that associate chlorination of drinking water with increased risk of several different types of cancer. Bromodichloromethane is one of several trihalogenated methanes formed from the interaction of chlorine with organic matter in water. Animal studies associated treatment with several different tumor types in rats and mice. The EPA (1995a) presented a verified oral slope factor of 0.13 per mg/kg/day, based on the increased incidence of liver tumors in mice treated by gavage. An inhalation risk estimate was not derived.

I.b.16 2-BUTANONE (METHYL ETHYL KETONE)

I.b.16.1 Non-carcinogenic Toxicity

Toxicity data for oral exposure to 2-butanone were not located. The EPA (1995a) presented an RfD for chronic oral exposure of 0.60 mg/kg/day, based on the results of a 9-week feeding study in rats and an uncertainty factor of 3,000. The subchronic oral RfD is 0.2 mg/kg/day, based on the chronic oral RfD and an uncertainty factor of 1,000 (EPA 1993b).

Humans exposed to 2-butanone vapor reported slight nose and throat irritation (EPA 1995a). The critical effect of inhalation exposure of animals to 2-butanone appears to be developmental toxicity. The EPA (1995a) presented a verified chronic inhalation RfC of 1 mg/m^3, equivalent to 0.3 mg/kg/day for a 70-kg human inhaling 20 m^3 of air/day, based on an NOAEL for developmental effects in mice and an uncertainty factor of 3,000. The EPA (1994b) presented a provisional subchronic inhalation RfC of 3 mg/m^3, based on the 12-week study described in the previous paragraph, but mathematically derived by an obsolete methodology. A more defensible approach would be to adopt the chronic inhalation RfC of 1 mg/m^3 as being protective for subchronic exposure as well. The subchronic RfC of 1 mg/m^3 is equivalent to 0.3 mg/kg/day, as previously described.

Target organs for 2-butanone are the fetus, respiratory tract, and the CNS.

I.b.16.2 Carcinogenicity

EPA (1995a) classifies 2-butanone as a cancer weight-of-evidence Group D compound (not classifiable as to carcinogenicity to humans). Quantitative risk estimates are not derived for Group D compounds.

I.b.17 BUTYLBENZYLPHTHALATE

I.b.17.1 Non-carcinogenic Toxicity

The U.S. EPA (1995a) estimated an oral RfD of 0.2 mg/kg/day for this chemical from a subchronic NOAEL of 159 mg/kg/day and an uncertainty factor of 1,000 for interspecies and intraspecies variability and subchronic to chronic extrapolation. The critical effect for the NOAEL study was increased liver-to-body and liver-to-brain weights in rats. Testicular atrophy was noted in male rats exposed to high doses (2875 mg/kg/day) of butylbenzylphthalate. Increased liver and kidney weights were observed by various researchers.

I.b.17.2 Carcinogenicity

Butylbenzylphthalate is classified by the U.S. EPA (EPA 1994b) as a Group C carcinogen (possible human carcinogen). Available data, which are limited, are inconclusive regarding the carcinogenicity of this compound. The effects of butylbenzylphthalate on female rats exposed via oral administration included increased mononuclear cell leukemia. However, no carcinogenic effects were evident for female mice and male rats and no CSF has been developed.

I.b.18 CADMIUM

I.b.18.1 Pharmacokinetics

Estimates of cadmium uptake by the respiratory tract range from 10 to 50 percent; uptake is greatest for fumes and small particles and least for large dust particles (Friberg et al. 1986; Goyer 1991). GI absorption of ingested cadmium is ordinarily 5 to 8 percent, but may reach 20 percent in cases of serious dietary iron deficiency. Highest tissue levels are normally found in the kidneys followed by the liver, although levels in the liver may exceed those in the kidneys of persons suffering from cadmium-induced renal dysfunction. The half-life of cadmium in the kidneys and liver may be as long as 10-30 years. Fecal and urinary excretion of cadmium are approximately equivalent in normal humans exposed to small amounts. Urinary excretion increases markedly in humans with cadmium-induced renal disease.

I.b.18.2 Non-carcinogenic Toxicity

Acute inhalation exposure to fumes or particles of cadmium induces respiratory symptoms, general weakness, and, in severe cases, respiratory insufficiency, shock, and death (Friberg et al. 1986). Acute oral exposure induces GI disturbances. Chronic inhalation exposure induces pulmonary emphysema, and chronic exposure by either route consistently produces renal tubular disease in humans and laboratory

animals. Proteinuria is a reliable early indicator of cadmium-induced kidney disease. The combination of pulmonary emphysema and renal tubular disease, if severe, may result in early mortality. Painful osteomalacia and osteoporosis may arise from altered metabolism of bone minerals secondary to renal damage. The combination of renal and skeletal damage is called itai-itai disease in Japan. Cadmium exposure has been associated with liver damage, but the liver appears to be less sensitive than the kidney. The kidney is the primary target organ of cadmium toxicity. The EPA (1995a) derived chronic oral RfD values of 0.5 µg/kg/day for cadmium ingested in water and 1 µg/kg/day for cadmium ingested in food, based on a toxicokinetic model that predicted NOAELs from renal cortical concentrations of cadmium. The different RfD values reflect assumed differences in GI absorption of cadmium from water (5 percent) and food (2.5 percent). An inhalation RfD of 0.06 ug/kg/day (EPA 1995b) was derived for cadmium by EPA.

I.b.18.3 Carcinogenicity

Carcinogenicity data in humans consist of several occupational studies that associate cadmium exposure with lung cancer, but concomitant exposure to other carcinogenic chemicals and smoking were not adequately controlled. Other occupational studies reported significantly increased risk of prostatic cancer, but this effect was not observed in the largest occupational study of workers exposed to high levels (Thun et al. 1985). The animal data consist of an inhalation study in rats that showed a significant increase in lung tumors, and several parenteral injection studies that produced injection site tumors. No evidence of carcinogenicity, however, was observed in seven oral studies in rats and mice. The EPA (1995a) classifies cadmium a cancer weight-of-evidence Group B1 substance for inhalation exposure on the basis of limited evidence of carcinogenicity in humans and sufficient evidence in animals. The data were insufficient to classify cadmium as carcinogenic to humans exposed by the oral route. The EPA (1995a) derived an inhalation unit risk of 0.0018 µg/m^3 from the occupational exposure study by Thun et al. (1985). The EPA presented an inhalation cancer slope factor of 6.3 per mg/kg/day (EPA 1995a).

I.b.19 CARBAZOLE

I.b.19.1 Non-carcinogenic Toxicity

Carbazole is a poison by intraperitoneal route. It is moderately toxic by ingestion (Sax and Lewis 1989).

I.b.19.2 Carcinogenicity

The EPA (1994b) has published a CSF of 0.02 per mg/kg/day for the oral route of exposure. The EPA (1995a) has classified carbazole in cancer weight-of-evidence Group B2 (Probable Human Carcinogen, sufficient evidence of carcinogenicity in animals with inadequate or lack of evidence in humans) based on liver tumors in mice.

I.b.20 CARBON DISULFIDE

I.b.20.1 Non-carcinogenic Toxicity

Carbon disulfide is a human poison by ingestion and possibly other routes. It is mildly toxic to humans by inhalation. It is an experimental poison by intraperitoneal route. The main toxic effect is on the central nervous system, acting as a narcotic and anesthetic in acute poisoning with death following from respiratory failure. In chronic poisoning the effect on the nervous system is one of central and peripheral damage which may be permanent if the damage has been severe (Sax and Lewis 1989). Target organs are the CNS, PNS, CVS, eyes, kidneys, liver, and skin (NIOSH 1990).

The EPA (1995a) has reported an RfD of 0.1 mg/kg/day for the oral route of exposure using an uncertainty factor of 100. The EPA (1995a) has also reported a RfD of 0.20 mg/kg/day for the inhalation route.

I.b.20.2 Carcinogenicity

Carbon disulfide is an experimental teratogen. Other experimental reproductive effects have been noted. Human reproductive effects on spermatogenesis by inhalation have been noted. Some human mutagenic data exists (Sax and Lewis, 1989).

I.b.21 CHLORDANE

Technical chlordane is a mixture of at least 50 related compounds (ATSDR 1989b). The principal components of the mixture are cis- and trans-chlordane, heptachlor, cis- and trans-nonachlor, and alpha-, beta- and gamma-chlordane. Each component has its own environmental fate and transport kinetics, so it is unlikely that the chlordane identified at the site would have the same chemical composition as technical chlordane. It is unclear which chlordane component(s) were found at the site.

I.b.21.1 Pharmacokinetics

Kinetic studies in rats, in which the area under the curve was compared following intravenous and oral dosing, indicate that approximately 80 percent of an oral dose of trans-chlordane is absorbed from the GI tract (Ohno et al. 1986). In animals, absorbed chlordane is distributed most rapidly to the liver and kidneys, probably because of the extensive vascularity of these organs (Ohno et al. 1986), followed by redistribution to adipose tissue (Barnett and Dorough 1974). In humans, levels of chlordane residues in adipose tissue increase with increasing duration of exposure (ATSDR 1989b). Metabolism involves principally oxidation, dechlorination, and conjugation, yielding lipophilic products that accumulate in adipose tissue as well as more polar products that are excreted. Chlordane residues are excreted principally through the bile,

although considerable species differences occur. Lactation is an important mechanism of excretion of chlordane residues retained in body fat.

I.b.21.2 Non-carcinogenic Toxicity

An acute oral lethal dose of chlordane in humans is estimated to be 25 to 50 mg/kg (ATSDR 1989b). Symptoms of acute oral or inhalation intoxication in humans consistently include GI disturbances such as vomiting, cramps, and diarrhea, and neurological effects including headache, irritability, dizziness, incoordination, convulsions, and coma. Data were not located regarding symptoms or effects in humans chronically exposed by the oral route, and no noncancer effects were observed in several studies of occupationally exposed humans. Mild liver lesions were observed in chronic oral studies in rats and mice. Prenatal or early postnatal exposure of mice to chlordane damages the developing immune system and nervous system. Target organs of chlordane include the liver, nervous system, and the fetus and neonate.

The EPA (1995a) derived an RfD of 0.06 µg/kg/day for chronic oral exposure to chlordane, based on an NOEL of 0.055 mg/kg/day for liver effects in a 30-month dietary study in rats (Velsicol Chemical Company 1983). An uncertainty factor of 1,000 was applied; factors of 10 each for inter- and intraspecies variation, and to reflect deficiencies in the database.

I.b.21.3 Carcinogenicity

The EPA (1995a) classifies chlordane in cancer weight-of-evidence Group B2, based on inadequate evidence in humans and sufficient evidence in animals. The human data consist of several epidemiologic studies of chlordane manufacturing workers and pesticide applicators. The only indication of a carcinogenic effect was a borderline significantly increased incidence of bladder cancer in one study of pesticide applicators, but chlordane exposure was not quantified and the workers were concomitantly exposed to other carcinogenic pesticides. The animal data consist of several studies in which oral exposure induced a dose-related increase in the incidence of liver tumors. The evidence for carcinogenicity in rats is equivocal. The EPA (1995a) derived an oral slope factor of 1.3 per mg/kg/day and an inhalation unit risk of 0.00037 per µg/m^3 based on liver tumor incidence in two dietary studies in mice. The unit risk is equivalent to an inhalation reference dose of 1.29 per mg/kg/day (EPA 1995a), assuming humans inhale 20m^3 of air/day and weigh 70 kg.

I.b.22 CHLOROBENZENE

I.b.22.1 Non-carcinogenic Toxicity

Oral exposure of animals to chlorobenzene induced liver effects (EPA 1995a). Inhalation exposure of animals induced narcosis and other CNS effects as well as lung, liver, and kidney changes (ACGIH 1991). Minimal occupational exposure data indicated that chlorobenzene induces respiratory tract irritation and CNS effects (headache) in workers exposed to high levels. The EPA (1995a) presented a verified chronic oral RfD of 0.02 mg/kg/day, based on an NOAEL for liver lesions in a 13-week oral study in dogs and an uncertainty factor of 1,000. The EPA (1994b) presented a provisional subchronic oral RfD of 0.2 mg/kg/day, based on the same NOAEL and an uncertainty factor of 100. A provisional chronic inhalation RfC of 0.02 mg/m^3 is based on an LOAEL for liver and kidney effects in rats exposed by inhalation for 120 days and an uncertainty factor of 10,000 (EPA 1994b). The provisional subchronic inhalation RfC, based on the same LOAEL and an uncertainty factor of 1,000, is 0.2 mg/m^3. The chronic inhalation RfC value is equivalent to 0.006 mg/kg/day (EPA 1994b), assuming an inhalation rate of 20 m^3/day and a body weight of 70 kg for humans. Target organs for the toxicity of chlorobenzene include the liver, CNS, lung, and kidney.

I.b.22.2 Carcinogenicity

Chlorobenzene is classified as an EPA cancer weight-of-evidence Group D compound (not classifiable as to carcinogenicity for humans), based on no available human cancer data and inadequate animal data (EPA 1995a). Quantitative risk estimates are not derived for Group D compounds.

I.b.23 CHLOROFORM

I.b.23.1 Non-carcinogenic Toxicity

Oral or inhalation exposure of animals to chloroform was associated with liver and kidney damage (ACGIH 1991; EPA 1995a). In humans, acute inhalation exposure to high levels induced narcosis, ventricular fibrillation, and death (ACGIH 1991). Limited occupational data associated chronic exposure to chloroform with CNS depression, digestive disturbances, and enlarged livers. The EPA (1995a) presented a verified chronic oral RfD of 0.01 mg/kg/day based on an LOAEL for fatty cyst formation in the livers of dogs treated orally for 7.5 years and an uncertainty factor of 1,000. The same value was presented as a provisional subchronic oral RfD (EPA 1993a). Target organs for the toxicity of chloroform include the liver and kidney for oral and inhalation exposure, and the heart and CNS for inhalation exposure.

I.b.23.2 Carcinogenicity

Chloroform is classified as a cancer weight-of-evidence Group B2 compound (probable human carcinogen), based on increased incidence of several tumor types in rats and liver tumors in mice (EPA 1995a). Human carcinogenicity data are inadequate. An oral slope factor of 0.0061 per mg/kg/day (EPA 1995a) was derived from the incidence of kidney tumors in rats treated with chloroform in drinking water for two years. An inhalation unit risk of 2.3E-05 per $\mu g/m^3$ was based on the incidence of hepatocellular carcinomas in mice treated by gavage for 78 weeks. The inhalation unit risk is equivalent to 0.081 per mg/kg/day (EPA 1995a), assuming an inhalation rate of 20 m^3/day and a body weight of 70 kg for humans.

I.b.24 CHROMIUM

I.b.24.1 Non-carcinogenic Toxicity

In nature, chromium (III) predominates over chromium (VI) (Langård and Norseth 1986). Little chromium (VI) exists in biological materials, except shortly after exposure, because reduction to chromium (III) occurs rapidly. Chromium (III) is considered a nutritionally essential trace element and is considerably less toxic than chromium (VI). No effects were observed in rats consuming 1800 mg chromium (III)/kg/day in the diet for over two years (EPA 1995a). The NOEL of 1800 mg/kg/day and an uncertainty factor of 1,000 was the basis for a verified chronic oral RfD of 1 mg/kg/day (EPA 1995a). The same NOEL and an uncertainty factor of 100 was the basis for a provisional subchronic oral RfD of 10 mg/kg/day (EPA 1995a).

Acute oral exposure of humans to high doses of chromium (VI) induced neurological effects, GI hemorrhage and fluid loss, and kidney and liver effects. Parenteral dosing of animals with chromium (VI) is selectively toxic to the kidney tubules. An NOAEL of 2.4 mg chromium (VI)/kg/day in a one-year drinking water study in rats and an uncertainty factor of 500 was the basis of a verified RfD of 0.005 mg/kg/day for chronic oral exposure (EPA 1995a). The same NOAEL and an uncertainty factor of 100 was the basis of a provisional subchronic oral RfD of 0.02 mg/kg/day (EPA 1995a).

Occupational (inhalation and dermal) exposure to chromium (III) compounds induced dermatitis (ACGIH 1991). Similar exposure to chromium (VI) induced ulcerative and allergic contact dermatitis, irritation of the upper respiratory tract including ulceration of the mucosa and perforation of the nasal septum, and possibly kidney effects. Inhalation RfC values were not located.

A target organ was not identified for chromium (III). The kidney appears to be the principal target organ for repeated oral dosing with chromium (VI). Additional target organs for dermal and inhalation exposure include the skin and respiratory tract.

I.b.24.2 Carcinogenicity

Data were not located regarding the carcinogenicity of chromium (III). The EPA (1995a) classifies chromium (VI) in cancer weight-of-evidence Group A (human carcinogen), based on the consistent observation of increased risk of lung cancer in occupational studies of workers in chromate production or the chrome pigment industry. Parenteral dosing of animals with chromium (VI) compounds consistently induced injection-site tumors. There is no evidence that oral exposure to chromium (VI) induces cancer. An inhalation unit risk of 0.012 per $\mu g/m^3$, equivalent to 42 per mg/kg/day (EPA 1995a), assuming humans inhale 20 m^3/day and weigh 70 kg, was based on increased risk of lung cancer deaths in chromate production workers.

I.b.25 CHRYSENE

I.b.25.1 Non-carcinogenic Toxicity

Chrysene is absorbed through the oral route of exposure. Absorption may also occur following dermal exposure. Data are not available to determine whether chrysene is absorbed via the lungs. Absorbed chrysene is distributed to several tissues, i.e. it was found in a all five tissues in a study reported in 1983. It is accumulated preferentially in the adipose and mammary tissue.

There is no information on other toxic effects of chrysene in human and laboratory animals following inhalation, oral and dermal exposures (ATSDR 1987).

I.b.25.2 Carcinogenicity

A Clement's relative potency factor (RFP) has been developed for chrysene. This allows the estimation of CSFs of 0.0073 (EPA 1995b) and 0.0061 per mg/kg/day (EPA 1995b) for the oral and inhalation routes respectively. The EPA (1995a) has classified chrysene in cancer weight-of-evidence Group B2 (Probable Human Carcinogen, sufficient evidence of carcinogenicity in animals with inadequate or lack of evidence in humans) based on tumors and malignant lymphoma in mice and chromosomal abnormalities in hamsters.

I.b.26 COBALT

I.b.26.1 Non-carcinogenic Toxicity

Acute high oral or parenteral doses of cobalt in humans or animals induced myocardial degeneration often leading to mortality, erythropoiesis, enlarged thyroid, and, in animals, renal tubular degeneration (Elinder and Friberg 1986b). Chronic ingestion from the consumption of beer containing high concentrations of

cobalt was associated with "beer-drinkers cardiomyopathy," which includes polycythemia and goiter, as well as marked myocardial degeneration and mortality. The therapeutic use of 0.16 to 0.32 mg cobalt/kg/day in anemic, anephric dialysis patients for 12 to 32 weeks induced a significant, but reversible, rise in blood hemoglobin concentration (EPA 1992b).

Occupational (inhalation and dermal) exposure was associated with allergic dermatitis, chronic interstitial pneumonitis, reversibly impaired lung function, occupational asthma, and myocardial effects (ACGIH 1991). Cobalt was determined to be the etiologic factor in hard metal disease, the syndrome of respiratory symptoms, and pneumoconiosis associated with inhalation exposure to dusts containing tungsten carbide with cobalt powder as a binder (Elinder and Friberg 1986b). The lowest occupational air concentration of cobalt associated with hard metal disease was 0.003 mg cobalt/m^3 (Sprince et al. 1988). It should be noted that the workers were also exposed to tungsten and sometimes to titanium, tantalum, and niobium (Elinder and Friberg 1986b). Similar lung effects were seen in animals exposed to cobalt by inhalation.

The developmental toxicity of cobalt was tested in rodents treated orally with cobalt chloride (EPA 1992b). Maternal effects (unspecified) were reported in rats treated with 5.4 to 21.8 mg cobalt/kg/day from gestation day 14 through lactation day 21. Effects on the offspring included stunted growth at 5.4 mg cobalt/kg/day and reduced survival at 21.8 mg cobalt/kg/day. In rats treated with 6.2, 12.4, or 24.8 mg cobalt/kg/day on gestation days 6 through 15, maternal effects included reduced food consumption and body weight gain and altered hematologic parameters, although it is unclear at what dose level(s) these effects occurred. There were no effects on fetal survival, although a nonsignificant increase in fetal stunting was observed in rats treated with ≥ 12.4 mg cobalt/kg/day. Mice treated with 81.7 mg cobalt/kg/day had reduced maternal weight gain, but no fetal effects.

Several studies reported testicular degeneration and atrophy in rats treated with cobalt chloride in the diet or drinking water at concentrations equivalent to doses of 5.7 to 30.2 mg cobalt/kg/day (EPA 1992b).

Cobalt is nutritionally essential as a cofactor in cyanocobalamin (vitamin B12) (EPA 1992b). Cobalt is universally present in the diet. Average daily adult dietary intakes of cobalt range from 0.16 to 0.58 mg/day (0.002 to 0.008 mg/kg/day, assuming adults weigh 70 kg) (Tipton et al. 1966; Schroeder et al. 1967). In 9- to 12-year-old children, dietary intakes of cobalt range from 0.3 to 1.77 mg/day (Murthy et al. 1971; National Research Council 1989). Assuming an average weight for children in this age range of 28 kg (National Research Council, 1989), the dietary intakes are equivalent to 0.01 to 0.06 mg/kg/day.

The EPA (1995b) established an oral reference dose for cobalt of 0.06 mg/kg/day based on the upper range of dietary intake for children.

The EPA (1990b) derived an interim inhalation RfC from the LOAEL of 0.003 mg cobalt/m^3 associated with hard metal disease in occupationally exposed humans (Sprince et al. 1988). Correcting for intermittent occupational exposure (10 m^3 of air inhaled per work day/20 m^3 of air inhaled per day x 5 work days per week/7 days per week) yielded an adjusted LOAEL of 0.001 mg/m^3. Application of an uncertainty factor of 1,000 resulted in an interim chronic inhalation RfC of 1 E-06 mg/m^3. Assuming humans inhale 20 m^3 of air/day and weigh 70 kg, the RfC is equivalent to 2.9 E-07 mg/kg/day, rounded to 3 E-07 mg/kg/day.

Important target organs in orally exposed humans are the heart, erythrocyte, and thyroid. Target organs for occupational exposure are the skin, lungs, and heart.

I.b.26.2 Carcinogenicity

Data regarding the carcinogenicity of cobalt were not located.

I.b.27 COPPER

I.b.27.1 Non-carcinogenic Toxicity

Copper is a nutritionally essential element that functions as a cofactor in several enzyme systems (Aaseth and Norseth 1986). Acute exposure to large oral doses of copper salts was associated with GI disturbances, hemolysis, and liver and kidney lesions. Chronic oral toxicity in humans has not been reported. Chronic oral exposure of animals was associated with an iron-deficiency type of anemia, hemolysis, and lesions in the liver and kidneys. Occupational exposure may induce metal fume fever, and, in cases of chronic exposure to high levels, hemolysis and anemia (ACGIH 1991). Neither oral nor inhalation RfD or RfC values were located for copper. The target organs for copper are the erythrocyte, liver, and kidney, and, for inhalation exposure, the lung.

I.b.27.2 Carcinogenicity

Copper is classified in cancer weight-of-evidence Group D (not classifiable as to carcinogenicity to humans) (EPA 1995a). Quantitative risk estimates are not derived for Group D chemicals.

I.b.28 CYANIDE

I.b.28.1 Non-carcinogenic Toxicity

Acute exposure to cyanide induced histotoxic hypoxia (inability of the tissues to use oxygen); death was due to central respiratory arrest (Smith 1991). Chronic dietary exposure to cyanide was associated with

reduced body weight gain, decreased thyroid activity, myelin degeneration, and reduced fertility in rats (EPA 1995a). The EPA (1995a) presented a verified RfD of 0.02 mg/kg/day for oral exposure to cyanide, based on an NOAEL in a two-year study in rats that consumed food fumigated with hydrogen cyanide, and an uncertainty factor of 500. The same value was adopted as the provisional RfD for subchronic oral exposure (EPA 1994b). The target organs for acute exposure are the CNS, respiratory system, and cardiovascular system (ACGIH 1991). Target organs for chronic oral exposure to cyanide appear to be the thyroid and nervous system.

I.b.28.2 Carcinogenicity

The EPA (1995a) classifies cyanide as a cancer weight-of-evidence Group D substance (not classifiable as to carcinogenicity to humans). Quantitative risk estimates are not derived for Group D chemicals.

I.b.29 4,4'-DDD (p,p'-DICHLORODIPHENYL DICHLOROETHANE)

Typically, individuals are not exposed to DDT, DDE, or DDD individually, but rather to a mixture of all three compounds since DDE and DDD are contaminants, as well as degradation and metabolic products of DDT (ATSDR 1993b). Pharmacokinetics and toxicity effects should be similar to DDT and reference should be made to that section.

I.b.29.1 Non-carcinogenic Toxicity

A suggestive relationship between high serum levels of DDT and DDE and subsequent development of vascular disease, especially hypertension was noted in individuals exposed to pesticides. No adverse effects on the cardiovascular system were noted for rats and mice. Positive correlations were reported between serum DDE and the presence of elevated serum levels of liver enzymes which are indices of liver damage (ATSDR 1993b). The nervous system is one of the primary target systems for DDT toxicity in humans after acute high doses. No reference doses are available for DDD.

I.b.29.2 Carcinogenicity

An increased incidence of lung tumors was observed in male and female mice and liver tumors and tyroid tumors were reported to have occurred in male rats (EPA 1995a). DDD is structurally similar to, and is a known metabolite of DDT which is classified by EPA as a probable human carcinogen. The EPA (1995a) also classifies DDD as a cancer weight-of-evidence Class B2 (probable human carcinogen) substance. Human epidemiological data are not available for DDD. The EPA (1995a) has reported a Cancer Slope Factor of 0.24 per mg/kg/day for the oral route of exposure.

I.b.30 4,4'-DDE

Typically, individuals are not exposed to DDT, DDE, or DDD individually, but rather to a mixture of all three compounds since DDE and DDD are contaminants, as well as degradation and metabolic products of DDT (ATSDR 1993b). Pharmacokinetics and toxicity effects should be similar to DDT and reference should be made to that section.

I.b.30.1 Non-carcinogenic Toxicity

Positive correlations were reported between serum DDE and the presence of elevated serum levels of liver enzymes which are indices of liver damage. A suggestive relationship between high serum levels of DDT and DDE and subsequent development of vascular disease, especially hypertension was noted in individuals exposed to pesticides. No adverse effects on the cardiovascular system were noted for rats and mice (ATSDR 1993b) There are no oral or inhalation reference dose values available for 4,4'-DDE.

I.b.30.2 Carcingoenicity

An increase of liver tumors was noted in mice and hamsters which ingested DDE. Increased weight loss and mortality was also observed in the studies. Thyroid tumors in female rats fed DDE were noted. Based on these studies, DDE was classified by EPA as a cancer weight-of-evidence B2, probable human carcinogen. The oral slope factor for DDE is 0.34 per mg/kg/day.

I.b.31 DDT (4,4'-DICHLORODIPHENYL-TRICHLOROETHANE)

I.b.31.1 Pharmacokinetics

Dichlorodiphenyltrichlorothane (DDT) is readily absorbed when dissolved in oils, fats, or lipid solvents, but is poorly absorbed as dry powder or aqueous suspension. Once absorbed, DDT concentrates in adipose tissue. Storage in fat is protective because it decreases the amount of chemicals at the site of toxic action, the brain. At a constant rate of intake, concentrations in adipose tissue reach a steady state and remain relatively constant. When exposure ceases, DDT is slowly eliminated. The rate of elimination is estimated to be 1 percent of stored DDT excreted per day (Gartrell 1985).

After absorption in mammals, DDT degrades by dehydrochlorination to unsaturated DDE and by substitution of hydrogen for one chlorine atom yielding DDD. DDD is further metabolized through a series of intermediates yielding DDA. DDA is relatively water soluble and excreted primarily in the urine. Ingestion studies of DDT administered to volunteers demonstrated that within 24 hours, urinary DDA excretion

increased detectably. Excretion of DDT as DDA appeared to be totally dependent on preferential reductive dechlorination of DDT to DDD (rather than DDE) and then to DDA (Clayton 1981).

I.b.31.2 Non-carcinogenic Toxicity

The CNS is an important target organ in humans acutely exposed to DDT. Symptoms include altered sensory perception, headache, nausea, disequilibrium, confusion, tremors, and convulsions (Hayes 1982; ATSDR 1993b). Tremors and hyperirritability were observed in chronically exposed animals (NCI 1978c; Rossi et al. 1977). The liver appears to be the other important target organ, at least in animals. Liver effects include enzyme induction, increased liver weight, increased serum levels of liver enzymes, hepatocellular hypertrophy, and necrosis (ATSDR 1993b). The EPA (1995a) derived an RfD of 0.5 µg/kg/day for chronic oral exposure from an NOEL of 0.05 mg/kg/day for liver effects in a 15- to 27-week feeding study in rats (Laug et al. 1950). An uncertainty factor of 100 was applied with factors of 10 each for inter- and intraspecies variation.

Dermal exposure has been associated with no illness and usually no irritation. Subcutaneous injection of colloidal suspensions of DDT in saline up to 30 ppm caused no irritation. Studies of DDT-impregnated clothing have found it to cause no irritation (Hayes 1982). The earliest symptom of acute DDT poisoning is paresthesia of the mouth and lower part of the face. This is followed by paresthesia of same areas and of the tongue and then dizziness, and tremors of extremities, confusion, malaise, headache, fatigue, and delayed vomiting. Vomiting is probably of central origin and not due to local irritation. Convulsions occur only in severe poisoning. Onset may be as soon as 30 minutes after ingestion of a large dose or as late as six hours after smaller but still-toxic doses. Recovery from mild poisoning usually is essentially complete in 24 hours, but recovery from severe poisoning requires several days (Hayes 1982).

There is no documented evidence that dietary absorption of DDT, alone or in combination with insecticides of the aldrin-toxaphene group, has caused cancer in the general population. No evidence has been presented that DDT has caused cancer among the millions of individuals (almost entirely men) who have been handling or spraying DDT (as dust, solution, and suspension) in all parts of the world and under all possible climatic conditions.

DDT is a mixture of p,p'-DDT and related compounds. One of the more important of the DDT isomers is o,p'-DDT. These agents have prominent estrogenic effects that have been well-characterized in a number of assay systems (Johnson, et al. 1988). The estrogenicity of DDT has lead to the supposition that it may adversely affect reproductive outcome by causing birth defects, increasing pregnancy complications, or affecting fertility (RTC 1990).

A verified chronic oral RfD value of 0.0005 mg/kg/day (EPA 1995a) was based on a NOEL of 0.05 mg/kg/day in a 27-week rat feeding study and on an uncertainty factor of 100.

I.b.31.3 Carcinogenicity

The EPA (1995a) has classified DDT in cancer weight-of-evidence Group B 2 (probable human carcinogen) based on the observation of tumors (generally of the liver) in seven studies in various mouse strains and in three studies in rats. The EPA (1995a) derived an oral slope factor of 0.34 per mg/kg/day from liver tumors in oral (diet) studies in the mouse and the rat. An inhalation unit risk of 9.7×10^{-5} per mg/m^3, equivalent to 0.34 per mg/kg/day (assuming a 70 kg adult inhales 20 m^3 of air/day), was derived from the same oral (diet) studies.

I.b.32 DIBENZOFURAN

I.b.32.1 Non-carcinogenic Toxicity

An oral reference dose of 0.0043 mg/kg/day (EPA 1995b) was established for dibenzofuran.

I.b.32.2 Carcinogenicity

The U.S. EPA (EPA 1994b) cancer weight-of-evidence grouping for dibenzofuran is Group D (not classifiable with regard to human carcinogenicity). Although some studies have been undertaken which evaluate the carcinogenicity of dibenzofuran in mixtures, no human or animal studies were located which evaluate the carcinogenicity of dibenzofuran alone. One study (EPA 1994b) indicates that this compound is not mutagenic.

I.b.33 DI-N-BUTYLPHTHALATE (DIBUTYLPHTHALATE)

I.b.33.1 Non-carcinogenic Toxicity

The oral and inhalation toxicities of di-n-butylphthalate appear to be quite low (ACGIH 1991). Oral doses of 2,000 mg/kg/day for 10 days induced testicular degeneration in mice and guinea pigs, but not in rats or hamsters. A one-year dietary study with di-n-butylphthalate resulted in mortality of half the rats within the first week; no adverse effects were observed in the survivors (EPA 1995a). A verified chronic oral RfD of 0.1 mg/kg/day was derived from the NOAEL in the one-year rat study and an uncertainty factor of 1,000. The same NOAEL and an uncertainty factor of 100 were the basis of a provisional subchronic oral RfD of 1 mg/kg/day (EPA 1994b). The testis appears to be a target organ for oral exposure in some species.

I.b.33.2 Carcinogenicity

The EPA (1995a) classifies di-n-butylphthalate in cancer weight-of-evidence Group D (not classifiable as to carcinogenicity to humans), based on an absence of human or animal cancer data. Quantitative risk estimates are not derived for Group D chemicals.

I.b.34 1,2-DICHLOROBENZENE

I.b.34.1 Non-carcinogenic Toxicity

In a 2-year rat study, an increase in renal tubular regeneration and a decrease in survival in high dose animals was observed but was of questionable significance. Therefore, a NOAEL of 120 mg/kg/day (adjusted to 85.7 mg/kg/day) was established with an uncertainty factor of 1,000 to allow for the extrapolation of dose from animals to humans, uncertainty in the threshold for sensitive humans and the lack of studies assessing reproductive effects and adequate chronic toxicity in a second species (EPA 1995a). Based on the NOAEL, an oral reference dose of 0.09 mg/kg/day (EPA 1995a) was established. An inhalation reference dose of 0.04 mg/kg/day was derived for 1,2-dichlorobenzene (EPA 1994b).

I.b.34.2 Carcinogenicity

The EPA (1995a) classifies 1,2-dichlorobenzene as a cancer weight-of-evidence Group D substance (not classifiable as to carcinogenicity in humans). Cancer risk is not estimated for Group D substances.

I.b.35 1,4-DICHLOROBENZENE (para-DICHLOROBENZENE)

I.b.35.1 Pharmacokinetics

No data are available to quantitatively evaluate the absorption of 1,4-dichlorobenzene. Absorption via oral administration is assumed to be 100 percent since this chemical is similar in structure to benzene and smaller chlorinated aliphatic hydrocarbons. Approximately 20 percent of the compound is absorbed following inhalational exposure. The dermal absorption of 1,4-dichlorobenzene has not been studied (ATSDR, 1991b).

Once absorbed, whether through inhalation or oral exposure, 1,4-dichlorobenzene is mainly deposited in fatty tissue and the liver and kidneys to a lower extent. The major urinary metabolite of 1,4-dichlorobenzene is 2,5-dichlorophenol. This metabolite is eliminated as conjugates of glucuronic and sulfuric acids.

I.b.35.2 Non-carcinogenic Toxicity

Studies indicate that the liver is the primary target organ associated with toxic effects for 1,4-dichlorobenzene. Malaise, nausea, anemia, proteinuria, hematuria, as well as liver effects, were observed in humans exposed to this chemical (ATSDR 1991b).

The U.S. EPA (1994b) derived an inhalation RfC for 1,4-dichlorobenzene of 6 E-5 $\mu g/m^3$ from a NOAEL of 301 mg/m^3 for increased liver weights and an uncertainty factor of 100, which is equivalent to an RfD of 0.23 mg/kg/day (EPA 1995a). The NOAEL was estimated from a subchronic two-generation reproductive study where male and female rats were exposed to varying concentrations of 1,4-dichlorobenzene vapors. Although this study lacked chronic data, chronic lifetime exposure studies support the conclusions drawn in the study.

Oral LD_{50} values for male and female rats were identified as 3,900 and 3,800 mg/kg respectively (ATSDR 1991b). A NOAEL of 300 mg/kg/day for hepatic effects was derived. No human studies are available regarding toxic effects of 1,4-dichlorobenzene from oral and dermal exposure.

I.b.35.3 Carcinogenicity

The U.S. EPA (1994b) has classified this compound in the cancer weight-of-evidence Group C (possible human carcinogen). This classification is based on several oral exposure studies which indicate that this chemical is carcinogenic in male rats. Cancer effect levels of 150 mg/kg/day and 600 mg/kg/day, respectively, were derived for liver and kidney tumors. No reliable carcinogenicity studies were located for the inhalation of or dermal contact with 1,4-dichlorobenzene. EPA has assigned this compound an oral CSF of 0.024 per mg/kg/day (EPA 1994b).

I.b.36 1,2-DICHLOROETHANE

I.b.36.1 Non-carcinogenic Toxicity

Oral or inhalation exposure of humans or laboratory animals to 1,2-dichloroethane induced liver and kidney effects (ACGIH 1991). Inhalation exposure also induced pulmonary congestion or edema, and, in humans, CNS depression. An oral RfD value was not located, but an inhalation RfD of 0.003 mg/kg/day (EPA 1994b) was assigned by the EPA to 1,2-dichloroethane. The target organs for 1,2-dichloroethane toxicity are the liver, kidney, lung, and CNS.

I.b.36.2 Carcinogenicity

EPA classifies 1,2-dichloroethane as a cancer weight-of-evidence Group B2 compound (probable human carcinogen), based on the induction of several tumor types in rats and mice treated by gavage, and on the induction of benign lung papillomas in mice after dermal application (EPA 1995a). The EPA (1995a) presented a slope factor for oral exposure of 0.091 per mg/kg/day, and a unit risk for inhalation exposure of 2.6E-05 per $\mu g/m^3$, based on the incidence of vascular system hemangiosarcomas in male rats in the gavage study. The inhalation unit risk is equivalent to 0.091 per mg/kg/day (EPA 1995a), assuming humans inhale 20 m^3 of air/day and weigh 70 kg.

I.b.37 1,1-DICHLOROETHENE

I.b.37.1 Non-carcinogenic Toxicity

Chronic oral exposure of laboratory animals to 1,1-dichloroethene induced liver effects (EPA 1995a). In animals, inhalation exposure induced degenerative changes in the liver and kidneys (ATSDR 1989c). No health effects were observed in a limited study of 138 exposed workers (ACGIH 1986). The EPA (1995a) presented a verified RfD for chronic oral exposure of 0.009 mg/kg/day, based on an NOAEL for liver effects in a chronic drinking water study in rats and an uncertainty factor of 1,000. The EPA (1995a) presented the same value as a provisional subchronic oral RfD. The liver and kidneys are the target organs for exposure to 1,1-dichloroethene.

I.b.37.2 Carcinogenicity

EPA classifies 1,1-dichloroethene as a cancer weight-of-evidence Group C compound (possible human carcinogen), based on an inadequate occupational exposure cancer study, limited data in several animal studies, its mutagenicity and ability to alkylate deoxyribonucleic acid (DNA), and its structural similarity to vinyl chloride, a known human carcinogen (EPA 1995a). The eighteen available animal studies (11 by inhalation exposure, 5 by oral exposure, and 1 each by dermal application and subcutaneous injection) were limited in sensitivity by various deficiencies in design. Credible evidence that 1,1-dichloroethene was a complete carcinogen was provided only by one 12-month inhalation study in mice, in which the incidence of kidney adenocarcinomas was significantly greater in the high-dose males than in the control males. A slope factor of 0.6 per mg/kg/day for oral exposure was based on the increased incidence of adrenal pheochromocytomas in male rats treated by gavage for two years, even though the increase was not statistically significant (EPA 1995a). A unit risk for inhalation exposure of 5.0 E-05 per $\mu g/m^3$ was based on the incidence of kidney adenocarcinomas in male mice in the inhalation study mentioned above (EPA 1995a). The unit risk is equivalent to 0.175 per mg/kg/day, assuming humans inhale 20 m^3 of air/day and weigh 70 kg.

I.b.38 1,2-DICHLOROETHENE, TOTAL

I.b.38.1 Non-carcinogenic Toxicity

Repeated oral exposure of rats to cis-1,2-dichloroethene was associated with signs of anemia (decreased hematocrit and hemoglobin) (EPA 1995a). Inhalation exposure to isomeric mixtures of 1,2-dichloroethene induced narcosis, and mixed isomers of 1,2-dichloroethene were used as an anesthetic gas (ACGIH 1991). The EPA (1995a) presented a provisional chronic oral RfD of 0.01 mg/kg/day (EPA 1994b) based on an NOAEL for signs of anemia in rats and an uncertainty factor of 3,000. A provisional subchronic oral RfD of 0.1 mg/kg/day was derived from the same NOAEL and an uncertainty factor of 300. Target organs appear to be the erythrocyte for oral exposure and the CNS for inhalation exposure.

The oral $LD_{50/30}$ for trans-1,2-dichloroethene in rats was 1275 mg/kg; death was preceded by CNS and respiratory depression (ACGIH 1991). Histopathologic examination revealed lesions in the lungs and heart. Prolonged oral administration induced clinicopathologic evidence of mild liver damage (EPA 1995a). An NOAEL for this effect in a 90-day drinking water study in mice and an uncertainty factor of 1,000 was the basis for a verified chronic oral RfD of 0.02 mg/kg/day. A provisional subchronic oral RfD of 0.2 mg/kg/day was derived from the same NOAEL and an uncertainty factor of 100 (EPA 1994b). The target organs for inhalation exposure to trans-1,2-dichloroethene are the CNS, heart, and lungs; the liver appears to be the principal target of oral exposure.

The oral reference dose for total 1,2-dichloroethene is 0.009 mg/kg/day (EPA 1994b).

I.b.38.2 Carcinogenicity

The EPA (1995a) classifies cis-1,2-dichloroethene as a cancer weight-of-evidence Group D compound (not classifiable as to carcinogenicity to humans), based on an absence of human or animal cancer data. Quantitative estimates of cancer risk are not derived for Group D chemicals.

Data regarding the carcinogenicity of trans-1,2-dichloroethene were not located.

I.b.39 2,4-DICHLOROPHENOL

I.b.39.1 Non-carcinogenic Toxicity

The EPA (1994b) presented a chronic oral RfD of 0.003 mg/kg/day, derived from a NOAEL of 3 ppm. The rats exhibited altered immune function in a two generation drinking water reproduction rat study with exposures before and during gestation, parturition, and weaning of pups.
An uncertainty factor of 100 was established by EPA (1995a).

I.b.39.2 Carcinogenicity

Data regarding the carcinogenicity of 2,4-dichlorophenol were not located.

I.b.40 DIETHYLPHTHALATE

I.b.40.1 Non-carcinogenic Toxicity

Diethyl phthalate appears to have a low order of chronic oral toxicity. Reduced food intake and growth rate were the only effects observed in rats fed a diet containing 5 percent diethyl phthalate (3160 mg/kg bw-day) for 16 weeks (Brown et al. 1978). No effects were observed in rats similarly treated with 1 percent in the diet (750 mg/kg bw-day). In a two-year study, retarded growth and reduced food efficiency were observed in rats fed a diet containing 5 percent diethyl phthalate (Food Research Laboratories, Inc. 1955). No effects were observed in rats similarly fed a diet containing 2.5 percent diethyl phthalate. Intraperitoneal injection of pregnant rats induced mild developmental effects (Singh et al. 1972).

The acute oral toxicity of diethyl phthalate is very low; the $LD_{50/30}$ in rats was 9,500 to 31,000 mg/kg (ACGIH 1991). Repeated oral treatment reduced food intake, body weight gain, and food efficiency (body weight gain/unit food intake), and altered organ weights, but produced no histopathologic lesions (EPA 1995a). Based on an NOAEL for decreased weight gain and altered organ weights in a subchronic dietary study in rats and an uncertainty factor of 1,000, EPA (1995a) derived a verified chronic oral RfD of 0.8 mg/kg/day. A provisional subchronic oral RfD of 8 mg/kg/day was based on the same NOAEL and an uncertainty factor of 100 (EPA 1994b). The data were not sufficient to identify target organs for the toxicity of diethyl phthalate.

The EPA (1995a) derived an RfD of 0.8 mg/kg/day for chronic oral exposure from the NOAEL of 750 mg/kg/day in the 16-week feeding study in rats (Brown et al. 1978). An uncertainty factor of 1,000 was applied with factors of 10 each for inter- and intraspecies variation, and to expand from subchronic to chronic exposure.

I.b.40.2 *Carcinogenicity*

The EPA (1995a) classifies diethyl phthalate as a cancer weight-of-evidence Group D compound (not classifiable as to carcinogenicity to humans) on the basis of no cancer data in humans and inadequate cancer data in animals. The only long-term studies, the 16-week and 2-year dietary studies described above, were not designed to measure carcinogenicity. Quantitative risk estimates are not derived for Group D compounds.

I.b.41 2,4-DINITROTOLUENE (2,4-DNT)

I.b.41. Pharmacokinetics

Dinitrotoluene isomers (2,3-, 2,4-, 2,5-, 2,6-, 3,4-, and 3,5-dinitrotoluene) are rapidly absorbed and primarily excreted in the urine (EPA 1994b). Excretion of these compounds in the bile occurs to a lesser extent. The metabolism of dinitrotoluene isomers initially occurs through liver oxidation. Typical urinary metabolites of dinitrotoluene include glucuronide conjugates of 2,4-dinitrobenzyl alcohol and 2-amino-4-nitrobenzyl alcohol.

I.b.41.2 Non-carcinogenic Toxicity

Toxicity studies are not available for 2,6-dinitrotoluene. However, since this chemical is usually found to some extent in the presence of 2,4-dinitrotoluene and because it is structurally similar to 2,4-dinitrotoluene, the toxic effects for the two compounds are assumed to be comparable.

Similar adverse health effects have been noted for animals and humans exposed to 2,4-dinitrotoluene. Neurotoxicity, Heinz bodies changes, and biliary tract herplasia are the primary toxic effects. In human occupational studies (EPA 1994b), neurotoxicity has been characterized by vertigo, paresthesia, tremors, unconsciousness, and paralysis. Inhalation was assumed to be the principal exposure route with minor exposures stemming from dermal absorption and ingestion. Available data is considered inadequate for the derivation of a RfD for inhalation (EPA 1994b). However, an oral RfD of 0.002 mg/kg/day was derived from a NOAEL of 0.2 mg/kg/day for neurotoxicity, Heinz bodies, and biliary tract herplasia (EPA 1994b) and an uncertainty factor of 100 for 2,4-DNT. The NOAEL was developed from a chronic toxicity study where beagle dogs were fed 98 percent pure 2,4-dinitrotoluene for a 2-year period. The uncertainty factor accounts for interspecies and intraspecies variability. A subchronic RfD of 0.002 mg/kg/day is also proposed (EPA 1994b).

I.b.42 DI-N-OCTYLPHTHALATE

I.b.42.1 Non-carcinogenic Toxicity

The oral $LD_{50/30}$ for di-n-octylphthalate in mice was 6513 mg/kg (Sax 1984). Intraperitoneal injection in rats during organogenesis induced teratogenicity. The EPA (1993) presented a chronic oral RfD of 0.02 mg/kg/day (EPA 1994b), based on an LOAEL for increased liver and kidney weight and serum biochemical evidence of liver damage in a dietary study in rats. An uncertainty factor of 1,000 was used. The data suggested that the liver, kidney, and fetus are the target organs for the toxicity of di-n-octylphthalate.

I.b.42.2 Carcinogenicity

Data were not located regarding the carcinogenicity of di-n-octylphthalate.

I.b.43 ENDOSULFAN I/ ENDOSULFAN II

I.b.43.1 Non-carcinogenic Toxicity

The EPA (1994b) presented a subchronic and chronic oral reference dose of 0.006 mg/kg/day for endosulfan based on two studies. In a two year rat study, decreased weight gain, kidney effects, and aneurysms of the blood vessels were the observed critical effects. In a one year oral study, a decreased weight gain was observed in dogs. An oral reference dose of 0.006 mg/kg/day was established for endosulfan.

I.b.43.2 Carcinogenicity

Data regarding the carcinogenicity of endosulfan were not located.

I.b.44 ENDOSULFAN SULFATE

Since specific toxicity information is not available for endosulfan sulfate and the compound is similar structurally to endosulfan, endosulfan should be used as a surrogate. Refer to the endosulfan section for toxicity information.

I.b.45 ENDRIN/ ENDRIN ALDEHYDE

I.b.45.1 Non-carcinogenic Toxicity

Ingestion of endrin or endrin aldehyde, either accidentally or intentionally, can cause central nervous system effects as expressed by muscle contractions, hyperexcitability, and in severe cases, convulsions and sometimes death (ASTDR, 1989b).

Acute exposure of endrin in animals causes central nervous system effects. Nonspecific degeneration of the liver, kidney, and brain was observed in animals exposed to lethal doses of endrin. Endrin can effect the developing fetus producing birth defects and reduced survival (ASTDR 1989b). The EPA presented an oral RfD of 0.0003 mg/kg/day for endrin (EPA 1995a).

I.b.45.2 Carcinogenicity

Endrin was determined not to be carcinogenic in Osbourne Mendel rats and B6C3F1 mice under the conditions of a National Cancer Institute bioassay. This conclusion is consistent with previously reported studies concerning endrin carcinogenicity in rat and mice. Endrin is classified in cancer weight of evidence Group D (not classifiable as to carcinogenicity to humans). Quantitative risk estimates are not derived for Group D chemicals (ASTDR, 1989b).

I.b.46 ENDRIN KETONE

Specific information is not available for endrin ketone, but since it is structurally similar to endrin, endrin should be used as a surrogate. Refer to the endrin section for toxicity information.

I.b.47 ETHYLBENZENE

I.b.47.1 Non-carcinogenic Toxicity

Subchronic to chronic oral or inhalation exposure of laboratory animals to ethyl benzene induced mild liver and kidney lesions (EPA 1995a). Acute inhalation exposure induced irritation of the mucous membranes in animals and humans, and prolonged inhalation exposure induced testicular degeneration in rabbits and monkeys (ACGIH 1991). The EPA (1995a) presented a verified chronic oral RfD for ethyl benzene of 0.1 mg/kg/day based on an NOEL for liver and kidney toxicity in female rats in a subchronic gavage study and an uncertainty factor of 1,000. The EPA (1994b) presented a provisional subchronic oral RfD of 1 mg/kg/day based on the same NOEL and an uncertainty factor of 100. The EPA (1995a) also presented a verified chronic inhalation RfC of 1 mg/m^3 derived from studies on developmental effects in rats and

rabbits and an uncertainty factor of 300. The same value was adopted as the provisional subchronic inhalation exposure (EPA 1994b). The inhalation RfC is equivalent to 0.3 mg/kg/day, assuming humans inhale 20 m^3 of air/day and weigh 70 kg. Target organs for exposure to ethyl benzene include the liver, kidneys, and testes, and, for inhalation exposure, the mucous membranes.

I.b.47.2 Carcinogenicity

Ethyl benzene is classified as a cancer weight-of-evidence Group D compound (not classifiable as to carcinogenicity to humans) (EPA 1995a) based on an absence of human or animal cancer studies. Quantitative estimates are not derived for Group D chemicals.

I.b.48 HEPTACHLOR/ HEPTACHLOR EPOXIDE (Clement 1985)

I.b.48.1 Pharmacokinetics

Heptachlor and heptachlor epoxide are liver carcinogens when administered orally to mice. Results from mutagenicity bioassays suggest that these compounds also may have genotoxic activity. Reproductive and teratogenic effects in rats include decreased litter size, shortened life span of suckling rats, and development of cataracts in offspring.

Tests with laboratory animals, primarily rodents, demonstrate acute and chronic toxic effects due to heptachlor exposure. Although heptachlor and heptachlor epoxide are absorbed most readily through the gastrointestinal tract, inhalation and skin contact are also potential routes of exposure. Acute exposure by various routes can cause development of hepatic vein thrombi and can effect the central nervous system and cause death. Chronic exposure induces liver changes, affects hepatic microsomal enzyme activity, and causes increased mortality in offspring. The oral LD_{50} in the rat is 40 mg/kg for heptachlor and 47 mg/kg for heptachlor epoxide.

Although there are reports of acute and chronic toxicity in humans, with symptoms including tremors, convulsions, kidney damage, respiratory collapse, and death, details of such episodes are not well documented. Heptachlor epoxide has been found in a high percentage of human adipose tissue samples, and also in human milk samples and biomagnification of heptachlor/heptachlor epoxide occurs. This compound also has been found in the tissues of stillborn infants, suggesting an ability to cross the placenta and bioaccumulate in the fetus. The EPA has published a RfD of 0.0005 mg/kg/day (EPA 1995a) for heptachlor and 0.013 ug/kg/day for heptachlor epoxide (EPA 1995a).

I.b.48.2 Carcinogenicity

EPA has published oral CSF values for heptachlor and heptachlor epoxide of 4.5 per mg/kg/day and 9.1 mg/kg/day (EPA 1995a), respectively. Inhalation CSFs were derived by EPA (1995a) of 4.55 per mg/kg/day and 9.1 per mg/kg/day for heptachlor and heptachlor epoxide, respectively.

I.b.49 HEXACHLOROHEXANES (MCM) (Clement, 1985)

I.b.49.1 Pharmacokinetics

The alpha, beta, and gamma isomers of hexachlorocyclohexane have all been shown to cause liver tumors in mice but not in other tested species. HCH has not been thoroughly tested for genotoxic effects but does not appear to be mutagenic. The alpha, beta, and delta isomers have not been tested for their teratogenic or reproductive toxicological potential. Lindane (gamma-MCM) has been tested and was not teratogenic, but in two studies it decreased the number of live young produced. Alpha-HCH has been shown to cause nonmalignant lesions in the liver of test animals at doses below those required to induce tumors. Lindane has been associated with the development of aplastic anemia in humans.

I.b.50 HEXACHLOROETHANE (Clement 1985)

I.b.50.1 Non-carcinogenic Toxicity

Hexachloroethane has not been reported to be mutagenic. Reduced litter sizes were observed after oral administration of 5,000 mg/kg to pregnant rats. Hexachloroethane's major physiological effects in animals is on the central nervous system. Oral doses of 1-1.4 g/kg caused weakness, staggering gait, and twitching muscles in dogs. Hepatic dysfunction and renal damage were also reported in various experiments. The oral LD_{50} for rats was 4,460 mg/kg. The EPA has published an oral RfD of 0.001 mg/kg/day (EPA 1995a). The dermal LD_{50} for rabbits was more than 32,000 mg/kg.

I.b.50.2 Carcinogenicity

There is limited evidence that hexachloroethane is carcinogenic in experimental animals. In a National Cancer Institute study, hexachloroethane administered by gavage produced malignant liver tumors in male and female b6c3f1 mice. It did not cause a statistically significant increase in tumors in Osborne-Mendel rats, but some rare renal tumors did develop. The EPA has published oral and inhalation slope factors of 0.014 and 0.014 per mg/kg/day (EPA 1995a).

I.b.51 HMX (HIGH MELTING EXPLOSIVE; OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7 TETRAZOCINE)

I.b.51.1 Pharmacokinetics

Absorption of HMX is poor via oral administration. Approximately 5 percent of HMX was retained in the body after oral exposure (U.S. EPA, 1988a). Most of the oral administered dose, approximately 70 percent, was recovered in the feces. The poor absorption of this chemical may be attributed to its low solubility in water.

I.b.51.2 Non-carcinogenic Toxicity

The subchronic toxic effects of HMX on rats were studied by the U.S. DOD. Observed target organ responses to this chemical were different for male and female rats. Liver toxicity was noted for high-dose male rats, whereas high-dose female rats experienced kidney changes. Based on this study, an oral RfD of 0.05 mg/kg/day (EPA 1995a) was derived by the U.S. EPA (1994b) from a NOAEL of 50 mg/kg/day and an uncertainty factor of 1,000. The uncertainty factor was applied to account for extrapolation of data from animals to humans, the threshold sensitivity of humans, and the extrapolation of subchronic to chronic exposure.

I.b.51.3 Carcinogenicity

No epidemiological studies or cancer bioassays are available to evaluate the potential carcinogenicity of HMX (EPA 1994b). The U.S. EPA cancer weight-of-evidence classification for this compound is Group D, not classifiable to human carcinogenicity. Quantitative risk estimates are not derived for Group D chemicals.

I.b.52 INDENO(1,2,3-CD)PYRENE

I.b.52.1 Non-carcinogenic Toxicity

Little information was found on the toxicity of indeno(1,2,3-cd)pyrene. Because of its structural similarity its properties should resemble benzo(a)pyrene. Refer to the benzo(a)pyrene section for toxicity information.

I.b.52.2 Carcinogenicity

A Clement's relative potency factor (RFP) has been developed for indeno(1,2,3-cd)pyrene. This allows the estimation of CSFs of 0.73 and 0.61 per mg/kg/day for the oral and inhalation routes respectively. The EPA (1995a) has classified indeno(1,2,3-cd)pyrene in cancer weight-of-evidence Group B2 (Probable Human Carcinogen, sufficient evidence of carcinogenicity in animals with inadequate or lack of evidence in humans) based on tumors in mice following lung implants.

I.b.53 IRON

I.b.53.1 Non-carcinogenic Toxicity

Iron is potentially toxic in all forms and by all routes of exposure. Inorganic iron is a poison by the intraperitoneal route. The inhalation of large amounts of iron dust may result in iron pneumoconiosis or arc welders lung. Chronic exposure to excess levels of iron (>50-100 mg Iron/day) can result in pathological deposition of iron in tissues. The target organs are the pancreas and liver (Sax and Lewis 1989).

Iron compounds are of varying toxicity. Iron oxides are a potential risk in all industrial settings. In general, ferrous compounds are more toxic than ferric compounds. Acute exposure to excessive levels of ferrous compounds can cause liver and kidney damage, altered respiratory rates and convulsions (Sax and Lewis 1989). An oral RfD of 0.3 mg/kg/day has recently been published for iron by EPA (1995b). No inhalation RfD has been found for iron.

I.b.53.2 Carcinogenicity

Some iron compounds are suspected human carcinogens. Iron dust is an experimental neoplastigen and an increased incidence of lung cancer has been associated with exposure to iron dust. Iron oxide is an experimental tumorigen and a suspected human carcinogen. (Sax and Lewis 1989). EPA has not published oral or inhalation slope factors for iron.

I.b.54 ISOPHORONE

I.b.54.1 Non-carcinogenic Toxicity

The EPA (1994b) presented a chronic oral RfD of 0.2 mg/kg/day, derived from a NOAEL of 150 mg/kg/day for kidney lesions in a 90-day oral dog study, and an uncertainty factor of 100.

I.b.54.2 Carcinogenicity

The oral slope factor for isophorone was established as 0.95 per ug/kg/day by EPA(1994b).

I.b.55 LEAD

I.b.55.1 Pharmacokinetics

Studies in humans indicate that an average of 10 percent of ingested lead is absorbed, but estimates as high as 40 percent were obtained in some individuals (Tsuchiya 1986). Nutritional factors have a profound effect on GI absorption efficiency. Children absorb ingested lead more efficiently than adults; absorption efficiencies up to 53 percent were recorded for children three months to eight years of age. Similar results were obtained for laboratory animals; absorption efficiencies of 5 to 10 percent were obtained for adults and ≥50 percent were obtained for young animals. The deposition rate of inhaled lead averages approximately 30 to 50 percent, depending on particle size, with as much as 60 percent deposition of very small particles (0.03 μm) near highways. All lead deposited in the lungs is eventually absorbed.

Approximately 95 percent of the lead in the blood is located in the erythrocytes (EPA 1991a). Lead in the plasma exchanges with several body compartments, including the internal organs, bone, and several excretory pathways. In humans, lead concentrations in bone increase with age (Tsuchiya 1986). About 90 percent of the body burden of lead is located in the skeleton. Neonatal blood concentrations are about 85 percent of maternal concentrations (EPA 1990c). Excretion of absorbed lead is principally through the urine, although GI secretion, biliary excretion, and loss through hair, nails, and sweat are also significant.

I.b.55.2 Non-carcinogenic Toxicity

The non-carcinogenic toxicity of lead to humans has been well characterized through decades of medical observation and scientific research (EPA 1995a). The principal effects of acute oral exposure are colic with diffuse paroxysmal abdominal pain (probably due to vagal irritation), anemia, and, in severe cases, acute encephalopathy, particularly in children (Tsuchiya 1986). The primary effects of long-term exposure are neurological and hematological. Limited occupational data indicate that long-term exposure to lead may induce kidney damage. The principal target organs of lead toxicity are the erythrocyte and the nervous system. Some of the effects on the blood, particularly changes in levels of certain blood enzymes, and subtle neurologic behavioral changes in children, appear to occur at levels so low as to be considered non-threshold effects.

EPA (1994b) presents no inhalation RfC for lead, but referred to the National Ambient Air Quality Standard (NAAQS) for lead. The NAAQSs are based solely on human health considerations and are designed to

protect the most sensitive subgroup of the human population. The NAAQS for lead is 1.5 $\mu g/m^3$, averaged quarterly (EPA 1994b).

The EPA (1991a, 1995a) determined that it is inappropriate to derive an RfD for oral exposure to lead for several reasons. First, the use of an RfD assumes that a threshold for toxicity exists, below which adverse effects are not expected to occur; however, the most sensitive effects of lead exposure, impaired neurologic behavioral development in children and altered blood enzyme levels associated with anemia, may occur at blood lead concentrations so low as to be considered practically non-threshold in nature. Second, RfD values are specific for the route of exposure for which they are derived. Lead, however, is ubiquitous, so that exposure occurs from virtually all media and by all pathways simultaneously, making it practically impossible to quantify the contribution to blood lead from any one route of exposure. Finally, the dose-response relationships common to many toxicants, and upon which derivation of an RfD is based, do not hold true for lead. This is because the fate of lead within the body depends, in part, on the amount and rate of previous exposures, the age of the recipient, and the rate of exposure. There is, however, a reasonably good correlation between blood lead concentration and effect. Therefore, blood lead concentration is the appropriate parameter on which to base the regulation of lead.

The EPA UBK lead model is an iterated set of equations that estimate blood lead concentration in children aged 0 to 7 years (EPA 1991a; 1991c). The biokinetic part of the model describes the movement of lead between the plasma and several body compartments and estimates the resultant blood lead concentration. The rate of the movement of lead between the plasma and each compartment is a function of the transition or residence time (i.e., the mean time for lead to leave the plasma and enter a given compartment, or the mean residence time for lead in that compartment). Compartments modeled include the erythrocytes, liver, kidneys, all the other soft tissue of the body, cortical bone, and trabecular bone. Excretory pathways and their rates are also modeled. These include the mean time for excretion from the plasma to the urine, from the liver to the bile, and from the other soft tissues to the hair, skin, sweat, etc. The model permits the user to adjust the transition and residence times.

EPA guidance establishes an interim soil cleanup level for lead of 400 parts per million (ppm) to be applied at Superfund sites. This value is considered by EPA to be protective for direct contact with lead-contaminated soils in residential settings. The guidance is to be followed when current or predicted land use is residential.

I.b.55.3 Carcinogenicity

EPA (1995a) classifies lead in cancer weight-of-evidence Group B2 (probable human carcinogen), based on inadequate evidence of cancer in humans and sufficient animal evidence. The human data consist of several epidemiologic occupational studies that yielded confusing results. All of the studies lacked quantitative exposure data and failed to control for smoking and concomitant exposure to other possibly carcinogenic metals. Rat and mouse bioassays showed statistically significant increases in renal tumors following dietary and subcutaneous exposure to several soluble lead salts. Various lead compounds were observed to induce chromosomal alterations in vivo and in vitro, sister chromatid exchange in exposed workers, and cell transformation in Syrian hamster embryo cells; to enhance simian adenovirus induction; and to alter molecular processes that regulate gene expression. EPA (1995a) declined to estimate risk for oral exposure to lead because many factors (e.g., age, general health, nutritional status, existing body burden and duration of exposure) influence the bioavailability of ingested lead, introducing a great deal of uncertainty into any estimate of risk.

I.b.56 NITROBENZENE

I.b.56.1 Pharmacokinetics

When nitrobenzene is ingested or inhaled, the outstanding systemic effect is methemoglobin formation. When the iron component of hemoglobin is converted from the ferrous state to the ferric state, the resultant methemoglobin is no longer capable of releasing oxygen to the tissue of the body.

Numerous accidental poisonings and deaths in humans from ingestion of nitrobenzene have been reported but these studies usually lack clear chemical identification of nitrobenzene as the ingested substance.

Target organs are the blood liver, kidneys, CVS, and skin (NIOSH, 1990).

The EPA has published an RfD of 0.0005 mg/kg/day (1995a) for the oral route of exposure and a RfD of 0.0006 mg/kg/day (EPA 1994b) for the inhalation route of exposure.

I.b.56.2 Carcinogenicity

No studies were located regarding the carcinogenic potential of nitrobenzene in humans or animals (ATSDR, 1989, draft). The EPA (1993a) has classified nitrobenzene in cancer weight-of-evidence Group D (not classifiable as to Human Carcinogenicity, i.e. inadequate or no evidence).

I.b.57 MAGNESIUM (Clement 1985)

I.b.57.1 Pharmacokinetics

There is no evidence to suggest that magnesium has carcinogenic, mutagenic, teratogenic, or reproductive effects in humans or experimental animals. Magnesium oxide fumes can produce metal fume fever in humans and experimental animals. Exposure to magnesium oxide dust may cause irritation of the eyes and respiratory tract. Human exposure to magnesium usually occurs by ingestion. Magnesium is an essential element for humans, animals, and plants. Ingestion of 3.6 to 4.2 mg/kg/day is thought to be adequate for maintenance of magnesium balance in humans. The average adult American is estimated to ingest 240 to 480 mg/kg/day in food and water. However, magnesium is absorbed relatively poorly by the gastrointestinal tract and also is readily excreted in the urine. Excessive magnesium retention in the body generally only occurs as a result of severe kidney disease. Symptoms of hypermagnesemia can include a sharp drop in blood pressure, and respiratory paralysis due to central nervous system depression. Ingestion of magnesium salts at concentrations over 700 mg/liter can have a laxative effect. However, humans can adapt to ingestion of these levels in a relatively short time. Magnesium has a very unpleasant taste in water at concentrations producing toxic effects.

Different magnesium compounds vary in the severity of their toxic effects to experimental animals. Such effects include central nervous system and purgative effects similar to those seen in humans. Subcutaneous injection of powdered magnesium or magnesium alloys can produce symptoms in experimental animals resembling gas gangrene. Application of powdered magnesium to abraded skin can produce an inflammatory reaction. However, these types of skin effects have not been reported in exposed worker.

I.b.58 MANGANESE

I.b.58.1 Non-carcinogenic Toxicity

Manganese is nutritionally required in humans for normal growth and health (EPA 1995a) Humans exposed to approximately 0.8 mg manganese/kg/day in drinking water exhibited lethargy, mental disturbances (1/16 committed suicide), and other neurologic effects. The elderly appeared to be more sensitive than children. Oral treatment of laboratory rodents induced biochemical changes in the brain, but rodents did not exhibit the neurological signs exhibited by humans. Occupational exposure to high concentrations in air induced a generally typical spectrum of neurological effects, and increased incidence of pneumonia (ACGIH 1986).

Very recently, a chronic oral RfD of 0.005 mg/kg/day (EPA 1995a) has been made available for manganese (EPA 1994). The EPA (1995a) presented a verified chronic inhalation RfC of 0.00005 mg/m^3 based on an LOAEL for respiratory symptoms and psychomotor disturbances in occupationally exposed humans and an uncertainty factor of 1,000. The EPA (1992b) presented the same value as a subchronic inhalation RfC. The inhalation RfC is equivalent to 0.000014 mg/kg/day (EPA 1995a), assuming humans inhale 20 m^3 of air/day and weigh 70 kg. The CNS and respiratory tract are target organs of inhalation exposure to manganese.

I.b.58.2 Carcinogenicity

The EPA (1995a) classifies manganese in cancer weight-of-evidence Group D (not classifiable as to carcinogenicity to humans). Quantitative cancer risk estimates are not derived for Group D chemicals.

I.b.59 MERCURY

Mercury occurs in three forms: elemental, organic, and inorganic. Although the toxicity of all forms is mediated by the mercury cation, the extent of absorption and pattern of distribution within the body, which determines the effects observed, depends on the form to which the organism is exposed (Goyer 1991). Bacterial activity in the environment converts inorganic mercury to methyl mercury (Berlin 1986a). It is likely that either inorganic mercury or methyl mercury may be taken up by plants and enter the food chain, and this discussion will focus on inorganic and methyl mercury. Exposure to elemental mercury, which is more likely to occur in an occupational setting, is not discussed herein.

I.b.59.1 Pharmacokinetics

The GI absorption of inorganic mercury salts is about 2 to 10 percent in humans, and slightly higher in experimental animals (Berlin 1986a; Goyer 1991). Inorganic mercury in the blood is roughly equally divided between the plasma and erythrocytes. Distribution is preferentially to the kidney, with somewhat lower concentrations found in the liver, and even lower levels found in the skin, spleen, testes, and brain (Berlin 1986a). Inorganic mercury is excreted principally through the feces and urine, with minor pathways including the secretions of exocrine glands and exhalation of elemental mercury vapor.

Methyl mercury is nearly completely (90 to 95 percent) absorbed from the GI tract (Berlin 1986a). The concentration of methyl mercury in the erythrocytes is about 10 times that in the plasma. Methyl mercury leaves the blood slowly, showing particular affinity for the brain, particularly in primates. In rats, 1 percent of the body burden of methyl mercury is found in the brain, but in humans, 10 percent of the body burden is found in the brain. Somewhat lower levels are found in the liver and kidney. During pregnancy, methyl mercury accumulates in the fetal brain, often at levels higher than in the maternal brain. Most tissues

except the brain transform methyl mercury to inorganic mercury. Excretion of methyl mercury is principally via the bile, with a half-life of 70 days in humans not suffering from toxicity. Following exposure to methyl mercury, some of the mercury in the bile exists as methyl mercury and some as the inorganic form. The inorganic form is largely passed in the feces, but methyl mercury is subject to enterohepatic recirculation. Another important excretory pathway for methyl mercury is lactation.

I.b.59.2 Non-carcinogenic Toxicity

Target organs for inorganic or methyl mercury include the kidney, nervous system, fetus, and neonate. Acute oral exposure to high doses of inorganic mercury causes severe damage to the GI mucosa because of the corrosive nature of mercury salts, which may lead to bloody diarrhea, shock, circulatory collapse, and death (Berlin 1986a; Goyer 1991). Acute sublethal poisoning induces severe kidney damage. Chronic exposure induces an autoimmune glomerular disease and renal tubular injury. The EPA (1994b) presented a verified RfD of 0.3 µg/mg-day for chronic oral exposure to inorganic mercury, based on kidney effects in rats.

Acute or chronic exposure to methyl mercury leads to neurologic dysfunction (Berlin 1986a; Goyer 1991). The region of the nervous system affected is species-dependent. Methyl mercury poisoning in rats induces peripheral nerve damage and kidney effects. In humans, the sensory cortex appears to be the most sensitive. The brain of the fetus and the neonate may be unusually sensitive to methyl mercury; retarded neurologic development was observed in prenatally exposed children whose mothers showed no clinical signs of poisoning. The EPA (1995a) derived an RfD of 0.1 µg/kg/day for chronic oral exposure to methyl mercury based on neurological effects in environmentally exposed humans. An intake of 3 µg/kg/day was the LOAEL corresponding to a blood level of 200 ng/mL, which was associated with CNS effects. An uncertainty factor of 10 was used to estimate an NOAEL from an LOAEL. An inhalation RfC of 0.0003 mg/kg/day (uncertainty factor of 30) has been established for inorganic mercury based on neurotoxic effects in humans. This translates into a chronic RfD of 0.086 ug/kg/day (EPA, 1994b).

I.b.59.3 Carcinogenicity

The EPA (1995a) classifies inorganic mercury in cancer weight-of-evidence Group D (not classifiable as to carcinogenicity to humans), based on no data regarding cancer in humans, and inadequate animal and supporting data. In an intraperitoneal injection study with metallic mercury in rats, sarcomas developed only in those tissues in direct contact with the test material (Druckrey et al. 1957). A two-year dietary study in rats with mercuric acetate (inorganic mercury) yielded no evidence of carcinogenicity (Fitzhugh et al. 1950). In mice, however, dietary exposure to high doses of mercury chloride for up to 78 weeks induced renal adenomas and adenocarcinomas (Mitsumori et al. 1981). The EPA has not yet evaluated the carcinogenicity of organic mercury. No carcinogenic effect, however, was observed in a two-year feeding study with phenylmercuric acetate in rats (Fitzhugh et al. 1950).

I.b.60 METHOXYCHLOR

I.b.60.1 Pharmacokinetics

Methoxychlor is well absorbed by the gastrointestinal tract and to a lesser extent by the skin. Once in the bloodstream, methoxychlor appears to distribute to most tissues of the body, with the highest levels usually found in fat. Methoxychlor is metabolized fairly rapidly by the liver to phenolic and estrogenic compounds and neither the parent compound nor the metabolites tend to accumulate in fat or other tissue. Most of the ingested dose of methoxychlor is eliminated in the feces via biliary excretion of metabolites. Urinary excretion contributes to a lesser extent (approximately 10% total) (ATSDR 1993c). Methoxychlor and its metabolites were also found to be cleared fairly rapidly from mice (98% in 24 hours). Therefore, there does not appear to be much potential for cumulative or delayed toxicity.

I.b.60.1 Non-carcinogenic Toxicity

No reports were located in which adverse health effects in humans were causally related to methoxychlor exposure. However, aplastic anemia was noted in one worker exposed to a mixture of methoxychlor and captan, and neurological effects (deafness, parasthesias, footdrop) were noted in another worker exposed to a mixture of methoxychlor and malathion. In animal studies, high doses of methoxychlor were found to cause neurological injury (tremors, convulsions), but most studies indicate that the reproductive system is the most sensitive target for methoxychlor. Genotoxic studies have yielded negative results in bacterial systems, and mixed results in cultured mammalian cells.

Methoxychlor would be acutely lethal to humans only at large oral doses, since the acute toxicity of methoxychlor is relatively low, with oral LD_{50} values of 5,000-7,000 mg/kg/day reported for rats and 2,900 mg/kg in mice. Data from oral studies in animals indicate that the reproductive system is the most sensitive

target of methoxychlor-induced toxicity. Some metabolites and contaminants of methoxychlor are estrogenic and are capable of producing adverse effects on the male and female reproductive system (ATSDR 1993c). Based on a 13 day rabbit study with a loss of litter, the NOAEL was 5.01 mg/kg/day. EPA established an oral RfD of 0.0005 mg/kg/day with an uncertainty factor of 1,000 (EPA 1994b).

I.b.60.3 Carcinogenicity

EPA (1995a) has concluded that animal data do not support the conclusion that methoxychlor is carcinogenic. In the absence of human data and the inconclusive data from animal studies, EPA has classified methoxychlor as a Group D substance, indicating that methoxychlor is not classifiable as to carcinogenicity to humans (ATSDR 1993c).

I.b.61 METHYLENE CHLORIDE

I.b.61.1 Non-carcinogenic Toxicity

Occupational exposure to high concentrations of methylene chloride may induce liver damage (ACGIH 1986). Liver effects were induced in animals by inhalation or oral exposure (EPA 1995a). The EPA (1995a) presented a verified chronic oral RfD for methylene chloride of 0.06 mg/kg/day based on an NOAEL for liver toxicity in male and female rats in chronic drinking water studies and an uncertainty factor of 100. The EPA (1994b) presented the same value as a provisional subchronic oral RfD. The EPA (1994b) also presented a provisional subchronic and chronic inhalation RfC of 3 mg/m^3, derived from an NOAEL for liver toxicity in a two-year intermittent exposure inhalation study in rats and an uncertainty factor of 100. The inhalation RfC is equivalent to 0.9 mg/kg/day (EPA 1994b), assuming humans inhale 20 m^3 of air/day and weigh 70 kg. The principal target organ for methylene chloride is the liver.

I.b.61.2 Carcinogenicity

Methylene chloride is classified in EPA cancer weight-of-evidence Group B2 (probable human carcinogen), based on inadequate human data and sufficient evidence of carcinogenicity in animals (EPA 1995a). Animal inhalation studies showed increased incidence of hepatocellular neoplasms and alveolar/bronchiolar neoplasms in male and female mice, mammary tumors in rats of either sex, salivary gland sarcomas in male rats, and leukemia in female rats. Oral studies were inconclusive. An oral slope factor of 0.0075 per mg/kg/day (EPA 1995a) was based on the incidence of liver tumors in two inhalation studies in mice. An inhalation unit risk of 4.7 E-07 per μg/m^3 was based on the incidence of liver and lung tumors in one inhalation study. The inhalation unit risk is equivalent to 0.0016 per mg/kg/day (EPA 1995a), based on inhaled dose, assuming humans inhale 20 m^3 of air/day and weigh 70 kg.

I.b.62 2-METHYLNAPHTHALENE

I.b.62.1 Non-carcinogenic Toxicity

Data located regarding the non-carcinogenic toxicity of 2-methylnaphthalene are limited to an oral lowest dose associated with lethality (LD_{Lo}) in rats of 5,000 mg/kg (Sax 1984). Neither oral nor inhalation RfD or RfC values were located.

I.b.62.2 Carcinogenicity

Data regarding the carcinogenicity of 2-methylnaphthalene were not located.

I.b.63 4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE)

The compound 4-methyl-2-pentanone is more commonly known by its synonym, methyl isobutyl ketone (MIBK).

I.b.63.1 Non-carcinogenic Toxicity

The acute toxicity of MIBK is low; oral $LD_{50/30}$ values in rats, mice, and guinea pigs ranged from 1600 to approximately 4600 mg/kg (Krasavage et al. 1982). In a 13-week gavage study in rats, 50 mg/kg/day was an NOEL for liver and kidney effects (EPA 1994b). Acute exposure of laboratory animals to high concentrations in air induced narcosis and death (Krasavage et al. 1982). Repeated inhalation exposures induced CNS effects and increased the kidney- and liver-to-body-weight ratios. Occupational exposure was associated with CNS and GI effects, and, at high concentrations, ocular irritation (ACGIH 1986).

The EPA (1994b) presented a provisional chronic oral RfD of 0.08 mg/kg/day based on the oral NOEL in rats and an uncertainty factor of 1,000. A provisional chronic inhalation RfC of 0.08 mg/m^3 was based on an NOEL for increased kidney and liver weights in a 90-day inhalation study in rats and an uncertainty factor of 1,000. A provisional subchronic inhalation RfC of 0.8 mg/m^3 was derived from the same inhalation NOEL and an uncertainty factor of 100. The chronic and subchronic inhalation RfC values are equivalent to 0.02 and 0.2 mg/kg/day, respectively (EPA 1994b), assuming an inhalation rate of 20 m^3/day and a body weight of 70 kg for humans. The principal target organ for MIBK is the CNS.

I.b.63.2 Carcinogenicity

Data were not located regarding the carcinogenicity of MIBK.

I.b.64 2-METHYLPHENOL (O-CRESOL)

I.b.64.1 Non-carcinogenic Toxicity

The oral toxicity of 2-methylphenol is low; the $LD_{50/30}$ in rats was 1350 mg/kg (ACGIH 1991). Ingestion by animals or humans of mixed isomers of methylphenol was associated with corrosion of the GI tissues, kidney tubular, pancreatic and liver damage, and nodular pneumonia. Occupational exposure of humans or inhalation exposure of animals to mixed isomers of methylphenol was associated with neurological effects, impaired kidney function, and irritation of the respiratory tract. The EPA (1995a) presented a verified chronic oral RfD of 0.05 mg/kg/day based on an NOAEL for decreased body weight and neurotoxicity in a gavage study in rats and an uncertainty factor of 1,000. The EPA (1994b) presented a subchronic oral RfD of 0.5 mg/kg/day based on the same NOAEL and an uncertainty factor of 100. Principal target organs are the nervous system, respiratory mucosa, liver, and kidney.

I.b.64.2 Carcinogenicity

Methylphenol isomers were tumor promoters in the two-stage mouse skin tumor initiation-promotion test (ACGIH 1991). The EPA (1995a) classified 2-methylphenol as a cancer weight-of-evidence Group C compound (possible human carcinogen), but derived no quantitative risk estimates for either oral or inhalation exposure.

I.b.65 4-METHYLPHENOL (P-CRESOL)

I.b.65.1 Non-carcinogenic Toxicity

The oral toxicity of 4-methylphenol is low; the $LD_{50/30}$ in rats is 1,800 mg/kg (ACGIH 1991). Ingestion by animals or humans of mixed isomers of methylphenol was associated with corrosion of the GI tissues, kidney tubular, pancreatic and liver damage, and nodular pneumonia. Occupational exposure of humans or inhalation exposure of animals to mixed isomers of methylphenol was associated with neurological effects, impaired kidney function and irritation of the respiratory tract. The EPA (1994b) presented a provisional chronic oral RfD of 0.005 mg/kg/day based on an NOAEL for decreased body weight and neurotoxicity in a gavage study in rats and an uncertainty factor of 1,000. The EPA (1994b) also presented a provisional subchronic oral RfD of 0.05 mg/kg/day based on the same NOAEL and an uncertainty factor of 100. Principal target organs are the nervous system, respiratory mucosa, liver and kidney.

I.b.65.2 Carcinogenicity

Methylphenol isomers are tumor promoters in the two-stage mouse skin tumor initiation-promotion test (ACGIH 1991). The EPA (1995a) classifies 2-methylphenol as a cancer weight-of-evidence Group C compound (possible human carcinogen), but derives no quantitative risk estimates for either oral or inhalation exposure.

I.b.66 NICKEL

I.b.66.1 Non-carcinogenic Toxicity

In a subchronic gavage study with nickel chloride in water, clinical signs of toxicity in rats included lethargy, ataxia, irregular breathing, reduced body temperature, salivation, and discolored extremities (EPA 1995a). Inhalation exposure was associated with asthma and pulmonary fibrosis in welders using nickel alloys (ACGIH 1986). Lung effects were observed in laboratory animals exposed by inhalation. The EPA (1995a) presented a verified RfD of 0.02 for chronic oral exposure to nickel, based on an NOAEL for decreased organ and body weights in a two-year dietary study with nickel sulfate in rats and an uncertainty factor of 300. The EPA (1994b) presented the same value as a provisional subchronic oral RfD. The CNS appears to be the target organ for the oral toxicity of nickel. The lung is clearly the target organ for inhalation exposure.

I.b.66.2 Carcinogenicity

Occupational exposure to nickel was associated with increased risk of nasal, laryngeal and lung cancer (ATSDR 1988a). Inhalation exposure of rats to nickel subsulfide increased the incidence of lung tumors. The EPA presented an inhalation slope factor for nickel subsulfide of 1.7 per mg/kg/day (EPA 1995a). The EPA (1995a) presents a cancer weight-of-evidence Group A classification (human carcinogen) for nickel, and presents an inhalation unit risk of 0.00024 per $\mu g/m^3$ for nickel refinery dust. The unit risk is equivalent to 0.84 per mg/kg/day, assuming humans inhale 20 m^3 of air/day and weigh 70 kg. The quantitative estimate was derived from the human occupational studies.

I.b.67 NITROCELLULOSE

I.b.67.1 Pharmacokinetics

Limited data exist regarding the pharmacokinetic properties of nitrocellulose. One study indicated that the compound is not absorbed through any route of exposure (EPA 1987b). The chemical was only recovered in the GI tract and feces. The chemical was detected in the feces as soon as 24 hours after exposure.

I.b.67.2 Non-carcinogenic Toxicity

Nitrocellulose is not considered to be toxic unless ingested in tremendous amounts, such as 10 percent of the total diet (EPA 1987b). The acute oral LD_{50} for this chemical is greater than 5,000 mg/kg for both female and male rats. No "abnormal" adverse toxic effects were noted in rats, mice, and dogs exposed to nitrocellulose at high levels (10 percent) for a period of thirteen weeks, 12 months, or 24 months.

I.b.67.3 Carcinogenicity

Data are available which indicate that nitrocellulose is not carcinogenic in animals. No incidences of biological variations and tumors were reported in dogs exposed to this chemical at levels up to 10 percent of their diet (EPA 1987b).

I.b.68 N-NITROSODIPHENYLAMINE (DIPHENYLNITROSAMINE)

I.b.68.1 Non-carcinogenic Toxicity

The acute oral toxicity of N-nitrosodiphenylamine is low; oral $LD_{50/30}$ values in rats and mice are 1650 and 3850 mg/kg, respectively (Sax 1984). Data regarding the non-carcinogenic effects of repeated oral or inhalation exposure were not located.

I.b.68.2 Carcinogenicity

The EPA (1995a) classifies N-nitrosodiphenylamine in cancer weight-of-evidence Group B2 (probable human carcinogen), based on inadequate human data and sufficient evidence for carcinogenicity in animals. A verified oral slope factor of 0.0049 per mg/kg/day was based on increased incidence of bladder tumors in a chronic drinking water study in rats.

I.b.69 PHENANTHRENE

I.b.69.1 Non-carcinogenic Toxicity

Phenanthrene is a poison by intravenous route. It is moderately toxic by ingestion. It is a human skin photosensitizer (Sax and Lewis 1989).

I.b.69.2 Carcinogenicity

Phenanthrene is an experimental neoplastigen and tumorigen by skin contact. (Sax and Lewis, 1989). The EPA (1995a) has classified phenanthrene in cancer weight-of-evidence Group D (Not classifiable as to Human Carcinogenicity, i.e. inadequate or no evidence).

I.b.70 PHENOL

I.b.70.1 Non-carcinogenic Toxicity

Oral $LD_{50/30}$ values for phenol were 300 mg/kg in mice and 414 mg/kg in rats (Sax 1984). Subchronic and chronic oral exposure were associated with depressed growth rate, possibly due to decreased water or food intake, and kidney damage (EPA 1995a). The fetus appears to be more sensitive than adults, showing decreased body weights at doses that are not maternally toxic. Exposure of animals to phenol vapors was associated with damage to the lungs, heart, liver, and kidneys (ACGIH 1986). Phenol vapors are absorbed through the skin as readily as through the lungs. The EPA (1995a) presented a verified chronic oral RfD of 0.6 mg/kg/day, based on an NOAEL for reduced fetal body weight in rats treated by gavage and an uncertainty factor of 100. The EPA (1994b) presented the same value as a provisional RfD for subchronic oral exposure. The principal target organs for the toxicity of phenol are the kidney and the fetus.

I.b.70.2 Carcinogenicity

The EPA (1995a) classifies phenol in cancer weight-of-evidence Group D compound (not classifiable as to carcinogenicity to humans), based on the absence of cancer data in humans and inadequate animal data. Quantitative risk estimates are not derived for Group D compounds.

I.b.71 POLYAROMATIC HYDROCARBONS (PAHs)

PAHs are a large class of ubiquitous natural and anthropogenic chemicals, all with similar chemical structures (ATSDR 1990).

I.b.71.1 Pharmacokinetics

Although quantitative absorption data for the PAHs were not located, benzo(a)pyrene was readily absorbed across the GI (Rees et al. 1971) and respiratory epithelia (Kotin et al. 1969; Vainich et al. 1976). The high lipophilicity of other compounds in this class suggests that other PAHs also would be readily absorbed across GI and respiratory epithelia.

Benzo(a)pyrene was distributed widely in the tissues of treated rats and mice, but primarily to tissues high in fat, such as adipose tissue and mammary gland (Kotin et al. 1969; Schlede et al. 1970a). Patterns of tissue distribution of other PAHs would be expected to be similar because of the high lipophilicity of the members of this class.

Studies of the metabolism of benzo(a)pyrene provide information relevant to other PAHs because of the structural similarities of all members of the class. Metabolism involves microsomal mixed function oxidase hydroxylation of one or more of the phenyl rings with the formation of phenols and dihydrodiols, probably via formation of arene oxide intermediates (EPA 1979a). The dihydrodiols may be further oxidized to diol epoxides, which, for certain members of the class, are known to be the ultimate carcinogens (LaVoie et al. 1982). Conjugation with glutathione or glucuronic acid, and reduction to tetrahydrotetrols are important detoxification pathways. Metabolism of naphthalene resulted in the formation of 1,2-naphthoquinone, which induced cataract formation and retinal damage in rats and rabbits.

Excretion of benzo(a)pyrene or dibenzo(a,h)anthracene residues was reported to be rapid, although quantitative data were not located (EPA 1979b). Excretion occurred mainly via the feces, probably largely due to biliary secretion (Schlede et al. 1970a, 1970b). The EPA (1980) concluded that accumulation in the body tissues of PAHs from chronic low level exposure would be unlikely.

I.b.71.2 Non-carcinogenic Toxicity

Oral non-carcinogenic toxicity data are available for acenaphthene, anthracene, fluoranthene, fluorene, and naphthalene. Newborn infants, children, and adults exposed to naphthalene by ingestion, inhalation, or possibly by skin contact developed hemolytic anemia with associated jaundice and occasionally renal disease (EPA 1980). In a 13-week gavage study in rats, treatment with 50 mg naphthalene/kg, 5 days/week for 13 weeks (35.7 mg/kg/day) induced no effects; higher doses presumably reduced the growth rate (National Toxicology Program (NTP) 1980). Application of an uncertainty factor of 1,000 yielded a provisional RfD for chronic oral exposure of 0.04 mg/kg/day (EPA 1994b). The very mild effect (decreased growth rate) apparently observed at higher doses suggests that the RfD is very conservatively protective.

Acenaphthene appears to be a mild hepatotoxicant, and possibly a nephrotoxicant, in rodents (EPA 1995a). In a comprehensive 90-day toxicity study in mice, gavage treatment with 175 mg/kg/day was an NOAEL; liver weight changes accompanied by hepatocellular hypertrophy and elevated cholesterol levels occurred in mice treated with 350 or 700 mg/kg/day (EPA 1989a). Oral treatment of rats and mice for 32 days with 2,000 mg/kg/day resulted in weight loss and mild liver and kidney lesions (Knobloch et al. 1969). The EPA (1995a) verified a chronic oral RfD for acenaphthene of 0.06 mg/kg/day based on an NOAEL for liver effects in a subchronic gavage study in mice and an uncertainty factor of 3,000. An uncertainty factor of

3,000 was used with factors of 10 each for inter- and intraspecies variation and to expand from subchronic to chronic exposure, and a factor of 3 to reflect gaps in the database, namely lack of adequate data in a second species and lack of developmental and reproductive data. Confidence in the database was low because of the data gaps. Confidence in the critical study was low because the effects were considered adaptive, rather than adverse, which implies that the RfD is extremely conservative. The EPA (1994b) presented a provisional subchronic oral RfD of 0.6 based on the same NOAEL and an uncertainty factor of 300. Target organs for acenaphthene include the liver and kidney.

The toxic potency of anthracene appears to be very low. In a chronic study in rats, doses of 5 to 15 mg/rat (16 to 48 mg/kg/day) via the diet had no effect on longevity or gross or histopathologic appearance on unspecified tissues (Schmahl 1955). Gavage treatment of mice with 1,000 mg/kg/day for at least 90 days had no effects on a comprehensive range of toxicologic parameters (EPA 1989b). The NOEL of 1,000 mg/kg/day in mice and an uncertainty factor of 3,000 (10 each for inter- and intraspecies variation, and 30 for the use of a subchronic study and an incomplete database) yielded a verified RfD for chronic oral exposure of 0.3 mg/kg/day (EPA 1995a). The EPA (1994b) presented a provisional subchronic oral RfD of 3 mg/kg/day based on the same NOEL and an uncertainty factor of 300. The data were inadequate to define target organs for the toxicity of anthracene.

Fluoranthene appears to be toxic to the liver, kidney, and blood. In a comprehensive 13-week gavage study in mice, 125 mg/kg/day was an NOAEL and 250 mg/kg/day was an LOAEL (EPA 1988c). The verified chronic oral RfD for fluoranthene is 0.04 mg/kg/day (EPA 1995a), based on the NOAEL in a comprehensive 13-week gavage study of 125 mg/kg/day in mice and an uncertainty factor of 3,000 (EPA 1995a). The uncertainty factor of 3,000 includes factors of 10 each for inter- and intraspecies variation, and a factor of 30 to expand from subchronic to chronic exposure and to reflect an incomplete database. A provisional subchronic oral RfD of 0.4 mg/kg/day was derived from the same NOAEL and an uncertainty factor of 300. The liver, kidney, and blood appear to be the target organs for the toxicity of fluoranthene.

The critical effects of oral exposure to fluorene appear to be hemolytic anemia and CNS effects. In mice treated by gavage for 13 weeks, 125 mg/kg/day was an NOAEL and 250 mg/kg/day was an LOAEL (EPA 1989c). A verified chronic oral RfD for fluorene of 0.04 mg/kg/day was based on the NOAEL of 125 mg/kg/day for hemolytic anemia in mice (EPA 1995a). An uncertainty factor of 3,000 was used with factors of 10 each for inter- and intraspecies variation and to expand from subchronic to chronic exposure, and a factor of 3 to reflect gaps in the database. The EPA (1994b) presented a provisional subchronic oral RfD of 0.4 mg/kg/day based on the same NOAEL and an uncertainty factor of 300. The target organs of fluorene toxicity are the erythrocyte and the CNS.

Newborn infants, children, and adults exposed to naphthalene by ingestion, inhalation, or possibly by skin contact developed hemolytic anemia with jaundice and, occasionally, renal disease (EPA 1980). In a

13-week gavage study in rats, treatment with naphthalene reduced the growth rate (EPA 1994b). Application of an uncertainty factor of 1,000 to the rat NOEL yielded a provisional RfD for subchronic and chronic oral exposure of 0.04 mg/kg/day (EPA 1994b). The erythrocyte and the kidney appear to be the target organs for the toxicity of naphthalene.

Mild kidney lesions appear to be the critical effects of pyrene. In mice treated by gavage for 13 weeks, 75 mg/kg/day was an NOAEL and 125 mg/kg/day was an LOAEL (EPA 1989a). Even in mice treated with 250 mg/kg/day the lesions were considered minimal to mild. The EPA (1995a) verified a chronic oral RfD for pyrene of 0.03 mg/kg/day based on the NOAEL in mice and an uncertainty factor of 3,000 (10 each for inter- and intraspecies variation and to expand from subchronic to chronic exposure, and a factor of 3 to reflect gaps in the database). The EPA (1994b) presented a provisional subchronic oral RfD of 0.3 mg/kg/day based on the same NOAEL and an uncertainty factor of 300. The kidney is the target organ for the toxicity of pyrene.

I.b.71.3 Carcinogenicity

The PAHs are ubiquitous, being released to the environment from anthropogenic as well as from natural sources (ATSDR 1987). Benzo(a)pyrene is the most extensively studied member of the class, inducing tumors in multiple tissues of virtually all laboratory species tested by all routes of exposure. Although epidemiology studies suggested that complex mixtures that contain PAHs (coal tar, soots, coke oven emissions, cigarette smoke) are carcinogenic to humans (EPA 1995a), the carcinogenicity cannot be attributed to PAHs alone because of the presence of other potentially carcinogenic substances in these mixtures (ATSDR 1987). In addition, recent investigations showed that the PAH fraction of roofing tar, cigarette smoke, and coke oven emissions accounted for only 0.1 to 8 percent of the total mutagenic activity of the unfractionated complex mixture in Salmonella (Lewtas 1988). Aromatic amines, nitrogen heterocyclic compounds, highly oxygenated quinones, diones, and nitrooxygenated compounds, none of which would be expected to arise from in vivo metabolism of PAHs, probably accounted for the majority of the mutagenicity of coke oven emissions and cigarette smoke. Furthermore, coal tar, which contains a mixture of many PAHs, has a long history of use in the clinical treatment of a variety of skin disorders in humans (ATSDR 1987).

Because of the lack of human cancer data, assignment of individual PAHs to EPA cancer weight-of-evidence groups was based largely on the results of animal studies with large doses of purified compound (EPA 1995a). Frequently, unnatural routes of exposure, including implants of the test chemical in beeswax and trioctanoin in the lungs of female Osborne-Mendel rats, intratracheal instillation, and subcutaneous or intraperitoneal injection, were used. Of the PAHs of concern, no EPA cancer weight-of-evidence group classification was provided for acenaphthene (EPA 1995a). Anthracene, benzo(g,h,i)perylene, fluoranthene, fluorene, and naphthalene were classified in Group D (not classifiable as to carcinogenicity to humans),

and benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene were classified in Group B2 (probable human carcinogens).

The EPA (1995a) verified a slope factor for oral exposure to benzo(a)pyrene of 7.3 per mg/kg/day, based on several dietary studies in mice and rats. Neither verified nor provisional quantitative risk estimates were available for the other PAHs in Group B2. The EPA (1980) promulgated an ambient water quality criterion for "total carcinogenic PAHs," based on an oral slope factor derived from a study with benzo(a)pyrene, as being sufficiently protective for the class. Largely because of this precedent, the quantitative risk estimates for benzo(a)pyrene were adopted for the other carcinogenic PAHs when quantitative estimates were needed.

Recent reevaluations of the carcinogenicity and mutagenicity of the Group B2 PAHs suggest that there are large differences between individual PAHs in cancer potency (Krewski et al., 1989). Based on the available cancer and mutagenicity data, and assuming that there is a constant relative potency between different carcinogens across different bioassay systems and that the PAHs under consideration have similar dose-response curves, Thorslund and Charnley (1988) derived relative potency values for several PAHs. A more recent Relative Potency Factor (RPF) scheme for the Group B2 PAHs was based only on the induction of lung epidermoid carcinomas in female Osborne-Mendel rats in the lung-implantation experiments (Clement International 1990). EPA (1995a) presented slope factors for several PAHs: benzo(k)fluoranthene has an oral CSF of 0.073 and an inhalation CSF of 0.061, chrysene has an oral CSF of 0.0073 and an inhalation CSF of 0.0061, carbazole has an oral slope factor of 0.02 per mg/kg/day and an inhalation CSF was not found. EPA presented oral slope factors of 7.3 per mg/kg/day for benzo(a)pyrene and dibenz(a,h) anthracene, 0.73 per mg/kg/day for benzo(a)anthracene and benzo(b)fluoranthene. Inhalation slope factors presented by EPA were 6.1 per mg/kg/day for dibenz(a,h)anthracene and 0.61 for benzo(a)anthracene and benzo(b)fluoranthene.

I.b.72 POLYCHLORINATED BIPHENYLS (PCBs)

I.b.72.1 Non-carcinogenic Toxicity

Epidemiologic studies of women in the United States associated oral PCB exposure with low birth weight or retarded musculoskeletal or neurobehavioral development of their infants (ATSDR 1991a). Oral studies in animals established the liver as the target organ in all species, and the thyroid as an additional target organ in the rat. Effects observed in monkeys included gastritis, anemia, chloracne-like dermatitis, and immunosuppression. Oral treatment of animals induced developmental effects, including retarded neurobehavioral and learning development in monkeys. The EPA (1995a) presented a chronic oral RfD of 0.02 ug/kg/day for Arochlor 1254.

Occupational exposure to PCBs was associated with upper respiratory tract and ocular irritation, loss of appetite, liver enlargement, increased serum concentrations of liver enzymes, skin irritation, rashes and chloracne, and, in heavily exposed female workers, decreased birth weight of their infants (ATSDR 1991a). Concurrent exposure to other chemicals confounded the interpretation of the occupational exposure studies. Laboratory animals exposed by inhalation to Aroclor-1254 vapors exhibited moderate liver degeneration, decreased body weight gain and slight renal tubular degeneration. Neither subchronic nor chronic inhalation RfC values were available.

Target organs for PCBs include the skin, liver, fetus, and neonate.

Specific information was not available for Arochlor 1248 and 1260 but would be assumed to be similar to that of Arochlor 1254.

I.b.72.1.1 Non-carcinogenic Toxicity for Arochlor 1254:

Monkeys that ingested 0.005-0.08 mg/kg/day doses of Arochlor 1254 exhibited ocular exudate, prominence and inflammation of the Meibomian glands and distortion in nail bed formation. Similar changes have been documented in humans for accidental oral ingestion of PCBs. Immunological assessment showed that the monkeys had a significant increase in IgM and IgG antibodies in response to sheep erythrocytes after 23 months of exposure (EPA 1995a). On the basis of the studies described, a LOAEL of 0.005 mg/kg/day was established for Arochlor 1254. An uncertainty factor of 300 was applied to the LOAEL and an oral RfD of 0.02 ug/kg/day was presented for Arochlor 1254 by EPA (1995a). Laboratory animals exposed by inhalation to Arochlor 1254 vapors exhibited moderate liver degeneration, decreased body weight gain and slight kidney effects. Subchronic and chronic inhalation RfC values were not available for Arochlor 1254.

I.b.72.2 Carcinogenicity

The EPA (1995a) classifies the PCBs as EPA cancer weight-of-evidence Group B2 substances (probable human carcinogens), based on inadequate data in humans and sufficient data in animals. The human data consist of several epidemiologic occupational and accidental oral exposure studies with serious limitations, including poorly quantified concentrations of PCBs and durations of exposure, and probable exposures to other potential carcinogens.

The animal data consist of several oral studies in rats and mice with various arochlors, kanechlors, or clophens (commercial PCB mixtures manufactured in the United States, Japan and Germany, respectively) that reported increased incidence of liver tumors in both species (EPA 1995a).

The EPA (1993a) presents a verified oral slope factor of 7.7 per mg/kg/day for all PCBs based on liver tumors in rats treated with Aroclor 1260.

I.b.73 RDX (ROYAL DEMOLITION EXPLOSIVE; HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)

I.b.73.1 Pharmacokinetics

Although RDX is not readily absorbed through the skin (EPA 1994b), oral exposure studies indicate that RDX is rapidly absorbed via oral routes (EPA 1988b). According to observed ingestion and inhalation exposures, evidence exists that this man-made compound is absorbed in the GI tract and may be absorbed in the lungs. However, GI absorption of RDX is regarded as poor (EPA 1988b).

Limited studies are available concerning the distribution, metabolites, and excretion of RDX. RDX is metabolized by the liver and excreted in the urine. According to one study (EPA 1988b), RDX was detected in the urine 48 hours after oral exposure and in the feces 96 hours after exposure.

I.b.73.2 Non-carcinogenic Toxicity

RDX has been found to cause nausea, irritability, convulsions, unconsciousness, and amnesia in humans following oral and inhalation occupational exposure. The U.S. EPA (1994b) derived a chronic oral RfD of 0.003 mg/kg/day (1995a) for RDX from a NOEL of 0.3 mg/kg/day and an uncertainty factor of 100 (for extrapolation of animal doses to humans and uncertainty in the threshold for sensitive humans). This value is based on a 2-year rat feeding study performed by the U.S. DOD where notable critical effects were inflammation of the prostate and increased pigment in the spleen of male rats. Several chronic effects were observed for rats exposed to high doses of RDX. They included increased mortality, hepatoxicity, increased incidences of cataracts in female rats, and behavioral hypersensitivity and renal toxicity in male rats. At a dose of 8 mg/kg/day, increased kidney weights were noted for both male and female rats. Embryonic and maternal toxicity was observed in rats exposed to RDX in developmental toxicity studies (EPA 1988b).

I.b.73.3 Carcinogenicity

The U.S. EPA (1994b) has classified RDX in the cancer weight-of-evidence Group C (possible human carcinogen). Although no epidemiological studies have been conducted on humans, data does exists which indicates that RDX is carcinogenic in animals. Hepatocellular adenomas and carcinomas were observed

in female rats exposed to RDX in their diet. A drinking water unit risk of 0.0000031 per µg/L and an slope factor of 0.11 kg/day/mg was developed based on a U.S. DOD study (EPA 1988b). It should be noted that this slope factor may not be applicable at water concentrations exceeding 3,000 µg/L.

I.b.74 SELENIUM

I.b.74.1 Non-carcinogenic Toxicity

Selenium is a nutritionally essential trace element that is an integral part of the enzyme glutathione peroxidase and other proteins (Högberg and Alexander 1986). The National Research Council (1989) recommended dietary allowances (RDAs) for humans range from 10 to 75 µg/day. Chronic ingestion of 5 mg/day (0.071 mg/kg/day, assuming humans weigh 70 kg) induced selenosis in humans, characterized by abnormal hair and nail formation (Högberg and Alexander 1986). Effects in domestic grazing animals exposed to high levels of selenium included emaciation, lameness, and loss of hair and hooves. Occupational exposure to selenium fume or various selenium compounds was associated with intense ocular and respiratory tract irritation, chemical pneumonia, skin rashes, garlic odor to the breath, metallic taste in the mouth, and various socio-psychological effects (ACGIH 1986). The EPA (1995a) presented a verified RfD of 0.005 mg/kg/day for chronic oral exposure to selenourea, based on effects in humans exposed to selenium in high selenium areas. An uncertainty factor of 3 was used. The EPA (1994b) presented the same value as a provisional subchronic oral RfD. The principal target organs for oral exposure to selenium are the skin, including the nails and hair, and, in animals, the hooves and joints. Targets for inhalation or dermal exposure include the skin and mucous membranes of the eyes and respiratory tract, and possibly the CNS.

I.b.74.2 Carcinogenicity

An impressive body of data indicates that selenium exerts an anticarcinogenic effect (Högberg and Alexander 1986). In laboratory animals, selenium supplementation decreased the incidence of chemical-induced cancers. In humans, the incidence of lymphomas and cancers of the breast, digestive tract, and lung were lower in geographic areas with high soil selenium levels. Occupational data suggest that selenium may protect against lung cancer. Several animal tests with various deficiencies in design and conduct equivocally associated exposure to selenium with cancer induction. In a well controlled oral experiment, selenium sulfide was associated with an increase in the incidence of liver tumors in rats, and with liver and lung tumors in mice. On the basis of this study, EPA (1995a) classified selenium sulfide a cancer weight-of-evidence Group B2 compound (probable human carcinogen), but declined to derive quantitative risk estimates. Selenium and other selenium compounds were classified in cancer weight-of-evidence Group D (not classifiable as to carcinogenicity to humans) (EPA 1995a). Quantitative risk estimates are not derived for Group D substances.

I.b.75 SILVER

I.b.75.1 Pharmacokinetics

The GI absorption of ingested silver in animals was estimated at ≤10 percent; however, absorption of 18 percent was estimated for one human subject given silver acetate (Fowler and Nordberg 1986). Highest tissue levels are located in the liver; lower levels are located in the lungs, brain, spleen, bone marrow, muscle, and skin (Fowler and Nordberg 1986; Goyer 1991). Excretion is virtually entirely through the bile. The excretion kinetics appear to be species- and organ-dependent. In humans, the apparent half-life for silver in the liver is approximately 50 days. Silver in skin also appeared to have a long half-life (not quantified).

I.b.75.2 Non-carcinogenic Toxicity

Silver compounds have been used in dentistry, medicinally in the treatment of burns, as a local disinfectant, and as a drinking water disinfectant (Fowler and Nordberg 1986). The classical syndrome of toxicity, called argyria, is a blue-gray to nearly black discoloration of areas of the skin or the viscera resulting from deposition of microscopic granules of silver compounds in the affected tissues. Argyria results from occupational (inhalation), parenteral, or oral exposure. The EPA (1995a) derived an RfD of 0.005 mg/kg/day for chronic oral exposure based on a 2- to 9-year human i.v. study, where a total i.v. dose of 1 g metallic silver (in the form of 4 g silver arsphenamine) resulted in minimal observed effects (argyria) in patients. This total i.v. dose for metallic silver was converted into an oral dose (LOAEL) of 0.014 mg/kg/day. The chronic oral RfD was derived by dividing the LOAEL by an uncertainty factor of 3, which was applied to account for minimal effects in a subpopulation that has exhibited an increased propensity for the development of argyria.

I.b.75.3 Carcinogenicity

The EPA (1995a) classifies silver in cancer weight-of-evidence Group D (not classifiable as to carcinogenicity to humans). The human data consist of no evidence in the literature of cancer despite frequent medical use of silver compounds. The animal data are limited to studies of implanted silver foil or injected metallic silver that provided unconvincing indications of a carcinogenic response relevant to humans.

I.b.76 STYRENE

I.b.76.1 Non-carcinogenic Toxicity

Inhalation exposure of humans to styrene was associated with unspecified unpleasant symptoms and neurological impairment (ACGIH 1986). Subchronic oral exposure of animals induced liver and kidney lesions and hematologic and histopathologic evidence of hemolysis (EPA 1995a). The EPA (1993a) presented a verified chronic oral RfD of 0.2 mg/kg/day, based on an NOAEL for effects on erythrocytes and the liver in dogs and an uncertainty factor of 1,000. The EPA (1994b) presented a provisional subchronic RfD of 2 mg/kg/day based on the same NOAEL and an uncertainty factor of 100. The EPA (1994b) also presented provisional inhalation RfC values of 1 mg/m^3 for chronic exposure and 10 mg/m^3 for subchronic exposure, based on an NOAEL for CNS effects in humans exposed for 8 hours. An uncertainty factor of 30 was used for derivation of the chronic RfC and an uncertainty factor of 10 was used for the subchronic RfC. The chronic and subchronic RfC values are equivalent to 0.3 mg/kg/day (EPA 1995a) and 3 mg/kg/day, respectively, assuming humans inhale 20 m^3 of air/day and weigh 70 kg. The principal target organs for inhalation exposure to styrene appear to be the CNS. Target organs for oral exposure include the liver, kidney, and erythrocyte.

I.b.76.2 Carcinogenicity

An appropriate cancer weight-of-evidence classification for styrene has not yet been decided by the EPA (1992c). Therefore, no classification and no quantitative estimates are presented.

I.b.77 TETRACHLOROETHENE (PCE)

I.b.77.1 Non-carcinogenic Toxicity

Occupational (inhalation and dermal) exposure to tetrachloroethene was associated with neurologic effects, beginning with incoordination and progressing to dizziness, headache, vertigo, and unconsciousness (ACGIH 1986). The EPA (1995a) presented a verified chronic oral RfD for tetrachloroethene of 0.01 mg/kg/day based on an NOAEL for liver toxicity in mice in a subchronic gavage study, and on an NOEL for depressed body weight gain in rats in a subchronic drinking water study. An uncertainty factor of 1,000 was used. The EPA (1994b) presented a provisional subchronic oral RfD of 0.1 mg/kg/day based on the same NOEL and an uncertainty factor of 100. The CNS is the principal target organ for inhalation exposure and the liver is the principal target organ for oral exposure to tetrachloroethene.

I.b.77.2 Carcinogenicity

Inhalation exposure to tetrachloroethene induced mononuclear cell leukemia in rats, and inhalation or oral exposure induced hepatocellular carcinomas in mice (ATSDR 1988b). EPA (1995b) presented an oral slope factor of 0.052 per mg/kg/day and an inhalation slope factor of 0.002 per mg/kg/day for tetrachloroethene.

I.b.78 THALLIUM, SOLUBLE SALTS

I.b.78.1 Non-carcinogenic Toxicity

Thallium is highly toxic; acute ingestion by humans or laboratory animals induced gastroenteritis, neurological dysfunction, and renal and liver damage (Kazantzis 1986). Chronic ingestion of more moderate doses characteristically caused alopecia. Thallium was used medicinally to induce alopecia in cases of ringworm of the scalp, sometimes with disastrous results. In industrial (inhalation, oral, dermal) exposure, neurologic signs preceded alopecia, suggesting that the nervous system is more sensitive than the hair follicle. The EPA (1993a) presented verified chronic oral RfD values for several thallium salts (thallium acetate, thallium carbonate, thallium chloride, thallium nitrate, and thallium sulfate) based on increased incidence of alopecia and increased serum levels of liver enzymes indicative of hepatocellular damage in rats treated with thallium sulfate for 90 days. An oral RfD for thallium alone, however, was not located. Target organs for thallium include the GI tract (acute exposure), nervous system, skin, kidney, and liver.

I.b.78.2 Carcinogenicity

Several thallium compounds (thallium oxide, thallium acetate, thallium carbonate, thallium chloride, thallium nitrate, thallium sulfate) were classified as cancer weight-of-evidence Group D substances (not classifiable as to carcinogenicity to humans) (EPA 1994). No weight-of-evidence classification was located for thallium alone.

I.b.79 TOLUENE

I.b.79.1 Non-carcinogenic Toxicity

In a subchronic gavage study, high doses of toluene induced slight changes in liver and kidney weights in rats (EPA 1995a). Inhalation exposure of laboratory animals or humans was associated primarily with CNS depression (ATSDR 1989d). Recent developmental toxicity studies in animals suggest that the fetus or offspring may be unusually sensitive to effects on the developing nervous system. The EPA (1995a) presented a verified chronic oral RfD for toluene of 0.2 mg/kg/day based on an NOAEL for changes in liver and kidney weights in rats in a 13-week gavage study and an uncertainty factor of 1,000. A provisional subchronic oral RfD of 2 mg/kg/day was based on the same NOAEL and an uncertainty factor of 100 (EPA 1994b). The EPA (1995a) presented a verified chronic inhalation RfC of 0.4 mg/m^3 based on an LOAEL for neurological effects in occupationally exposed humans and an uncertainty factor of 300. The EPA (1994b) presented a provisional subchronic inhalation RfC of 2 mg/m^3, based on an NOAEL for CNS effects and mucosal irritation in humans and an uncertainty factor of 100. The chronic inhalation RfC is equivalent to 0.1 mg/kg/day (EPA 1995a), assuming humans inhale 20 m^3 of air/day and weigh 70 kg. Similarly estimated, the subchronic inhalation RfC is equivalent to 0.6 mg/kg/day.

I.b.79.2 Carcinogenicity

Toluene is classified as a cancer weight-of-evidence Group D compound (not classifiable as to carcinogenicity to humans), based on no human data and inadequate animal data (EPA 1995a). Quantitative risk estimates are not derived for Group D substances.

I.b.80 1,2,4-TRICHLOROBENZENE (TCB) (Clement 1985)

I.b.80.1 Pharmacokinetics

There are no reports indicating carcinogenic, teratogenic, or mutagenic activity of the trichlorobenzenes in humans or animals. No specific reproductive effects have been found for the TCBs, but embryotoxicity has been noted at a dose level that produces maternal toxicity in rats (Kitchin and Ebron 1983).

Several animal studies on the subchronic toxicity of trichlorobenzenes have been reported. Inhalation studies with 1, 2,4-TCB of 1.5 to 6 months duration in rats, rabbits, dogs, and monkeys have not shown major irreversible effects, although some effects on liver and kidney were found (transient histological changes and increased relative liver weight; (Clement 1985). Increased urinary porphyrin levels were also noted. Also it was reported that mice exposed to TCB (isomers unspecified) for 3 weeks to 3 months showed indications of bone marrow damage. In a chronic study in which mice were administered 1,

2,4-TCB by dermal application, there was a treatment-related increase in the incidence of amyloidosis, which affected a number of organs and was considered a primary cause of death (Clement 1985). EPA presented a chronic oral reference dose of 0.01 mg/kg/day (1995a) and an inhalation RfD of 0.057 mg/kg/day (EPA 1994b).

TCB is an inducer of the microsomal mixed function oxidases and therefore will increase metabolism, leading to the inactivation or activation of chemicals affected by this system.

I.b.81 1,1,1-TRICHLOROETHANE

I.b.81.1 Non-carcinogenic Toxicity

The toxicity of oral exposure to 1,1,1-trichloroethane is low (ACGIH 1986). Chronic ingestion by laboratory animals reduced growth rate, but produced little pathology in internal organs (ATSDR 1990). Acute inhalation exposure of humans or animals to high levels induced death due to narcosis or cardiac sensitization (ACGIH 1986). Occupational exposure was not associated with systemic effects. A provisional chronic inhalation RfC of 1 mg/m^3 was derived from an NOAEL for slight growth retardation in guinea pigs and an uncertainty factor of 1,000. The provisional subchronic inhalation RfC, based on the same NOAEL and an uncertainty factor of 100, was 10 mg/m^3. The chronic and subchronic inhalation RfC values are equivalent to 0.3 and 3 mg/kg/day, respectively, assuming humans inhale 20 m^3 of air/day and weigh 70 kg. Target organs for inhalation exposure to 1,1,1-trichloroethane are the CNS and heart.

I.b.81.2 Carcinogenicity

The EPA (1995a) classifies 1,1,1-trichloroethane as a cancer weight-of-evidence Group D compound (not classifiable as to carcinogenicity to humans). There are no reported human cancer data, and animal studies (78-week gavage studies in rats and mice, and a 12-month inhalation study in rats) were inadequate to determine the carcinogenicity of 1,1,1-trichloroethane in animals. Quantitative cancer risk estimates are not derived for Group D compounds.

I.b.82 1,1,2-TRICHLOROETHANE (Clement 1985)

I.b.82.1 Non-carcinogenic Toxicity

1,1,2-Trichloroethane was not mutagenic when tested using the Ames assay. No information was found concerning the reproductive toxicity or teratogenicity of 1,1,2-trichloroethane. No chronic studies were found on the toxicity of 1,1,2-trichloroethane but single doses as low as 400 mg/kg caused liver and kidney damage in dogs. The oral LD_{50} value for 1,1,2-trichloroethane in rats is 835 mg/kg. EPA (1995a) presented a chronic oral reference dose of 0.004 mg/kg/day for 1,1,2-trichloroethane.

I.b.82.2 Carcinogenicity

1,1,2-Trichloroethane induced hepatocellular carcinomas and pheochromocytoma of the adrenal gland in mal and female mice but did not produce a significant increase in tumor incidence in male or female rats (NCI 1977). EPA presented oral and inhalation slope factors of 0.057 and 0.056 per mg/kg/day (1995a) for 1,1,2-trichloroethane.

I.b.83 TRICHLOROETHENE (TCE)

I.b.83.1 Non-carcinogenic Toxicity

Little is known about the toxicity of prolonged oral exposure to trichloroethene. Acute inhalation exposure to high levels induced anesthesia, tachypnea, and ventricular arrhythmias (ACGIH 1986). Occupational exposure was associated with headache, dizziness, lassitude, and other CNS effects. Prolonged inhalation exposure of animals affected the liver and kidneys. The EPA has published an oral RfD of 0.006 mg/kg/day (1995b) for trichloroethene. An RfC value was not located. The principal target organs for trichloroethene are the CNS and heart, and, to a lesser extent, the liver and kidney.

I.b.83.2 Carcinogenicity

Carcinogenicity studies in laboratory animals showed increased incidence of hepatocellular carcinomas (gavage exposure) and malignant lymphomas (inhalation exposure) in mice and increased incidence of renal adenocarcinomas in male rats (gavage) (EPA 1988d). Cancer studies in humans were inadequate. Interpretation of the data regarding the carcinogenicity of trichloroethene is controversial, and the EPA (1992c) has not adopted a fi[illegible] position on a cancer weight-of-evidence classification or quantitative risk estimates for trichloroethene. For this reason, trichloroethene was removed from the IRIS and the 1992 HEAST (EPA 1992b). Currently, EPA believes the weight-of-evidence to be on the C-B2 continuum

(possible-probable human carcinogen), and offers slope factors of 0.011 per mg/kg/day for oral exposure and 0.006 per mg/kg/day (EPA 1995b) for inhalation exposure as being useful.

I.b.84 2,4,6-TRINITROTOLUENE (TNT)

I.b.84.1 Pharmacokinetics

TNT, which is rapidly biotransformed following exposure, is mainly excreted in the urine and to a lesser extent distributed to the organs. More than 50 percent of administered doses were absorbed in several oral and dermal studies, indicating that the compound is well absorbed (ATSDR 1993a). Observed absorption in the GI tract ranged from 1.7 percent in dogs to 22.7 percent in rabbits. All studies indicate that TNT is extensively metabolized.

I.b.84.2 Non-carcinogenic Toxicity

The TLV for inhalation of TNT is 0.5 mg/m^3. Several adverse health effects including anemia, liver function abnormalities, respiratory complications, and cataracts have been noted in workers exposed to levels above the TLV (ATSDR 1993). These effects may also be attributed to dermal exposure, as well as inhalation occupational exposure, since these exposures occurred simultaneously in the cited studies. No studies are available regarding the developmental or reproductive effects.

Based on a subchronic dog study, the U.S. EPA (1994b) derived an oral RfD of 0.0005 mg/kg/day (EPA 1995a) for TNT from a LOAEL of 0.5 mg/kg/day for liver effects and an uncertainty factor of 1,000. Dogs from all doses groups experienced varying degrees of hepatic swelling and hepatocyomegaly. The uncertainty factor used accounts for extrapolation of animal to humans doses, LOAEL to NOAEL, and subchronic to chronic.

I.b.84.3 Carcinogenicity

TNT is classified as a cancer weight-of-evidence Group C carcinogenic (possible human carcinogen). The U.S. DOD conducted a study to determine the carcinogenic effects of this chemical in rats. A drinking water unit risk of 0.0000009 per µg/L was identified in this study. Urinary bladder papillomas and carcinomas were observed in rats. It should be noted that the unit risk factor should not be used if the water concentration exceeds 0.0001 µg/L, as the slope factor (0.03 kg/mg/day) (EPA 1995a) may vary at this level.

I.b.85 VANADIUM

I.b.85.1 Non-carcinogenic Toxicity

The oral toxicity of vanadium compounds to humans is very low (Lagerkvist et al. 1986), probably because little vanadium is absorbed from the GI tract. Effects in humans exposed by inhalation include upper and lower respiratory tract irritation. A provisional subchronic and chronic oral RfD of 0.007 mg/kg/day (EPA 1994b) was derived from an NOEL in rats in a lifetime drinking water study with vanadyl sulfate and an uncertainty factor of 100 (EPA 1994b). A target organ could not be identified for oral exposure. The respiratory tract is the target organ for inhalation exposure.

I.b.85.2 Carcinogenicity

No information was located regarding the carcinogenicity of vanadium.

I.b.86 VINYL CHLORIDE

I.b.86.1 Non-carcinogenic Toxicity

Data were not located regarding oral exposure of humans to vinyl chloride (ATSDR 1989e). In rats, lifetime dietary ingestion of vinyl chloride slightly but significantly increased mortality and induced mild histopathologic effects in the liver. Several early occupational studies associated vinyl chloride exposure with a syndrome known as vinyl chloride disease, which includes acroosteolysis (dissolution of the ends of the distal phalanges of the hands), circulatory disturbances in the extremities, Raynaud syndrome (sudden, recurrent bilateral cyanosis of the digits), scleroderma, hematologic effects, effects on the lungs, and impaired liver function and liver damage. Mild neurologic effects were also associated with occupational exposure. Long-term inhalation studies in rats and mice identified elevated relative liver weight as a sensitive indicator of liver effects. Neither inhalation RfC values nor oral RfD values for vinyl chloride were located. The principal target organs for vinyl chloride appear to be the CNS and the liver.

I.b.86.2 Carcinogenicity

The EPA (1993a) lists vinyl chloride as an EPA cancer weight-of-evidence Group A compound (human carcinogen) and presents a verified oral slope factor of 1.9 per mg/kg/day (EPA 1994b), based on the increased incidence of liver and lung tumors in a lifetime dietary study in rats. An inhalation unit risk of 8.4 E-05 per $\mu g/m^3$, equivalent to 0.3 per mg/kg/day (EPA 1994b), assuming humans inhale 20 m^3 of air/day and weigh 70 kg, is based on liver tumors in rats intermittently exposed by inhalation for 12 months.

I.b.87 XYLENES, TOTAL

I.b.87.1 Non-carcinogenic Toxicity

Prolonged oral exposure of animals to xylenes was associated with CNS signs and increased mortality, without histopathological alterations in the internal organs (EPA 1995a). Occupational exposure to xylenes induced CNS effects and GI disturbances (ACGIH 1986). Other effects attributed to occupational exposure to xylene (blood dyscrasias, and heart, liver, and kidney damage) may have arisen from concurrent exposure to other chemicals. The EPA (1995a) presented a chronic oral RfD for total xylenes of 2 mg/kg/day based on an NOAEL for hyperactivity and decreased body weight and increased mortality in male rats in chronic gavage studies. An uncertainty factor of 100 was used. The EPA (1992b) presented a subchronic oral RfD of 4 mg/kg/day based on an NOEL for body weight effects in a 13-week gavage study in rats and an uncertainty factor of 100. Inhalation RfC values for xylenes are considered not verifiable by the RfD/RfC Work Group (EPA 1994b). The CNS is the principal target organ for xylenes.

I.b.87.2 Carcinogenicity

Xylene is classified as a cancer weight-of-evidence Group D compound (not classifiable as to carcinogenicity to humans) (EPA 1995a). There are no reported human cancer data, and gavage animal studies in rat and mice of both sexes did not result in significant increases in tumor incidence. Quantitative risk estimates are not derived for Group D substances.

I.b.88 ZINC

X.88.1 Pharmacokinetics

Zinc is a nutritionally required trace element. Estimates of the efficiency of GI absorption of zinc in animals range from <10 to 90 percent (Elinder 1986c). Estimates in normal humans range from approximately 20 to 77 percent (Elinder 1986c; Goyer 1991). The net absorption of zinc appears to be homeostatically controlled, but it is unclear whether GI absorption, intestinal secretion, or both are regulated. Distribution of absorbed zinc is primarily to the liver (Goyer 1991), with subsequent redistribution to bone, muscle, and kidney (Elinder 1986c). Highest tissue concentrations are found in the prostate. Excretion appears to be principally through the feces, in part from biliary secretion, but the relative importance of fecal and urinary excretion is species-dependent. The half-life of zinc absorbed from the GI tracts of humans in normal zinc homeostasis is approximately 162 to 500 days.

I.b.88.2 Non-carcinogenic Toxicity

Humans exposed to high concentrations of aerosols of zinc compounds may experience severe pulmonary damage and death (Elinder 1986c). The usual occupational exposure is to freshly formed fumes of zinc, which can induce a reversible syndrome known as metal fume fever. Orally, zinc exhibits a low order of acute toxicity. Animals dosed with 100 times dietary requirement showed no evidence of toxicity (Goyer 1991). In humans, acute poisoning from foods or beverages prepared in galvanized containers is characterized by GI upset (Elinder 1986c). Chronic oral toxicity in animals is associated with poor growth, GI inflammation, arthritis, lameness, and a microcytic, hypochromic anemia (Elinder 1986c), possibly secondary to copper deficiency (Underwood 1977). The EPA (1992b) presented a verified RfD of 0.3 mg/kg/day (EPA 1995a) for chronic oral exposure to zinc, based on anemia in humans.

I.b.88.3 Carcinogenicity

The EPA (1995a) classifies zinc in cancer weight-of-evidence Group D (not classifiable as to carcinogenicity to humans) based on inadequate evidence for carcinogenicity in humans and animals. The human data consist largely of occupational exposure studies not designed to detect a carcinogenic response, and of reports that prostatic zinc concentrations were lower in cancerous than in noncancerous tissue. The animal data consist of several dietary, drinking water, and zinc injection studies, none of which provided convincing data for a carcinogenic response.

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APPENDIX I.c

RISK ASSESSMENT EXAMPLE CALCULATIONS

APPENDIX I.c

RISK ASSESSMENT EXAMPLE CALCULATIONS

Surface Soil Exposure

Three potential exposure routes are associated with theoretical surface soil direct contact at the NWS Earle sites. These exposure routes include ingestion, dermal contact, and inhalation of fugitive dust. Example calculations for each of these routes of exposure are presented in the following text.

Incidental surface soil ingestion exposure for 4,4'-DDT at Site 15 is estimated for an adult employee from the following equation (EPA, 1989a):

$$IEX = (C \times IR \times FI \times EF \times ED)/(BW \times AT \times CF)$$

where:	IEX	= 4.19E-9 mg/kg/day	= Ingestion exposure
	C	= 0.012 mg/kg	= DDT representative concentration in soil
	IR	= 100 mg soil/day	= Soil ingestion rate
	Fi	= 1.0	= Fraction ingested from contaminated source
	EF	= 250 days/yr	= Exposure frequency
	ED	= 25 yrs	= Exposure duration
	BW	= 70 kg	= Body weight
	AT	= 25550 days	= Averaging time for carcinogens (365 days/yr x 70 yrs)
	CF	= 1E-6 kg soil/mg soil	= Conversion factor

As discussed in Section 2.4.3, the potential receptors for this scenario include adult employees, adult residents, and child residents. For an adult or child resident, an EF of 350 days was assumed. For a child resident, an IR of 200 mg soil/day, a BW of 15 kg, and an ED of 6 years were assumed; for an adult resident, BW and ED were assumed to be 70 kg and 24 years, respectively.

The cancer risk for an adult employee from incidental ingestion of surface soil is calculated as follows:

$$CA = IEX \times SF$$

where:	CA	= 1.43E-9	= incremental (upper bound) risk of developing cancer
	IEX	= 4.19E-9 mg/kg/day	= Ingestion exposure
	SF	= 3.4E-1 $(mg/kg/day)^{-1}$	= carcinogenic slope factor (upper 95 percent confidence limit of a dose-response curve)

The lifetime cancer risk for a resident from incidental ingestion of surface soil is calculated using the above equation and summing the risks for a child (6 years exposure duration) and an adult (24 years duration).

Dermal exposure to 4,4'-DDT from Site 15 surface soil is estimated for an adult employee from the following equation (EPA, 1989a; EPA, 1992f):

$$DEX = (C \times SA \times AF \times ABS \times EF \times ED \times CF)/(BW \times AT)$$

where:	DEX	= 1.83E-8 mg/kg/day	= Dermal exposure dose

C	= 0.012 mg/kg	= Chemical concentration in soil
SA	= 3120 cm^2/event	= Skin surface area available for contact
AF	= 0.05 mg/cm^2	= Soil-to-skin adherence factor
ABS	= 1	= Fraction from contaminated source
EF	= 250 events/yr	= Exposure frequency
ED	= 25 yrs	= Exposure duration
BW	= 70 kg	= Body weight
CF	= 1E-06 kg soil/mg soil	= Conversion factor
AT	= 9125 days	= Averaging time, non-carcinogens (365 days/yr x 25 yrs)

As discussed in Section 2.4.3, the potential receptors for this scenario include adult employees, adult residents, and child residents. For an adult or child resident, an EF of 350 days was assumed. For a child resident, a BW of 15 kg and an ED of 6 years was assumed; for an adult resident, BW and ED were assumed to be 70 kg and 24 years, respectively. It was assumed that the primary areas of skin available for contact would be the hands and arms of adult residents and employees (3120 cm^2) and the arms, hands, and legs of residential children (3910 cm^2). Absorption factors were assumed to be as follows: 0.1 for VOCs, 0.05 for SVOCs/pesticides, 0.06 for PCBs, and 0.01 for metals were used (Feldman and Maibach, 1970; Wester and Maibach, 1985; EPA, 1984a).

The non-cancer hazard quotient for an adult employee from dermal contact with 4,4'-DDT in surface soil at site 15 is calculated as follows:

NC = DEX / RfD

where:	NC	= 4.58E-5	= hazard quotient
	DEX	= 1.83E-8 mg/kg/day	= dermal exposure
	RfD	= 4E-4 mg/kg/day	= dermal reference dose (5E-4 Oral RfD x 0.8 GI absorption factor)

The hazard quotient for a child or adult resident from incidental ingestion of surface soil are calculated using the same equation.

Fugitive dust emissions and exposure to 4,4'-DDT from Site 15 surface soil are estimated for an adult employee from the following equations (Cowherd, et al., 1984; EPA, 1989a):

Exposure to fugitive dust emissions can be estimated by first estimating the rate of distribution and 4,4'-DDT emission from site 15 and then relating this to the exposure rate for the receptors. Site 15 is conservatively estimated to have unlimited erosion potential (associated with small particle size and low vegetative cover). Emission factors were estimated as follows:

$$E_{10} = (0.036) \times (1-V) \times (U/Ut)^3 \times F(x)$$

where:	E_{10}	= 0.1239 g/(m^2 hr)	= Particulates less than 10 microns (PM_{10}) average annual emission flux
	V	= 0.8	= fraction of vegetative cover
	U	= 4.2 m/s	= mean annual wind speed (Baltimore closest city, table 4-1, Cowherd, et al.)
	Ut	= 2.01m/s	= threshold value of wind speed at 7 m (from equation, below)
	F(x)	= 1.9	= function based on x = 0.424 = 0.886 x Ut/U (from Figure 4-3, Cowherd)

$Ut = U^* \times (1/0.4) \times \ln (z/z_0)$

where:	Ut	= 2.01 m/s	= wind speed at height z
	z	= 700 cm	= height above surface (Cowherd)
	z_0	= 70 cm	= roughness height for suburban area, medium buildings (Figure 3-6, Cowherd)
	U^*	= 0.35 m/s	= friction velocity for assumed particle size 0.25mm (Figure 3-4, Cowherd)

From the emission flux, the emission rates are as follows:

$R_{10} = \alpha \times E_{10} \times A \times CF$

where:	R_{10}	= 4.13E-9 g/sec	= Emission rate of 4,4'-DDT
	α	= 1.2E-8	= mass fraction of 4,4'-DDT in soil (12 ug/kg conc. x 10^{-9} kg/ug)
	E_{10}	= 0.1239 g/(m^2hr)	= PM_{10} emission flux
	A	= 100 X 100 m^2	= source area
	CF	= 1/3600 hr/sec	= conversion factor

To estimate the annual average air concentration to receptors near the site, a screening air dispersion model was used as described in Cowherd, et al. The screening model parameters were selected consistent with conservative assumptions
(a 100 X 100 m source area and a 200 m downwind receptor located along the axis of most probable dispersion. Annual average air concentrations were estimated as follows:

$Q_I = R_{10} / P_R$

where:	Q_I	= 1.40E-8 g/sec	= wind erosion scaling factor
	R_{10}	= 4.13E-9 g/sec	= PM_{10} emission rate of a COC
	P_R	= 0.296	= fraction of time wind erosion occurs (Figure 4-7, Cowherd)

$X = Q_I \times F_I \times CF$

where:	X	= 5.35E-11 mg/m^3	= average annual downwind respirable concentration
	Q_I	= 1.40E-8 g/sec	= wind erosion scaling factor
	F_I	= 3.837 (ug/m^3) / (g/sec)	= unscaled conc. due to unit erosion rate (Cowherd, pD 29)
	CF	= 1/1000 mg/ug	= conversion factor

From that concentration, exposure to fugitive dust was then estimated using the following equations:

IEXr = (X x IR x ET x EF x ED x IF-R)/(BW x AT)

and

IEXo = (X x IR x ET x EF x ED x IF-O)/(BW x AT)

where:	IEXr	= 1.55E-13 mg/kg/day	= cancer dose from inhaled fraction retained in lungs for adult employee over 25 yr period

and

IEXo	= 7.77E-13 mg/kg/day	= cancer dose from inhaled fraction that is eventually swallowed for adult employee over 25 yr period
X	= 5.35E-11 mg/m^3	= Downwind air concentration
IR	= 0.83 m^3/hr	= Inhalation rate
ET	= 8 hr/day	= Exposure time
EF	= 250 day/yr	= Exposure frequency
ED	= 25 yr	= Exposure duration
BW	= 70 kg	= Body weight
AT	= 25550 days	= Averaging time, carcinogens (365 days/yr x 70 yrs)
IF-R	= 0.125	= inhaled fraction retained in lungs (Page 61, Cowherd)
IF-O	= 0.625	= inhaled fraction eventually swallowed (Page 61, Cowherd)

The cancer risk for an adult employee from inhalation ingestion of fugitive dust from surface soil is calculated as the sum of the risks from inhalation particles retained in the lungs and inhalation particles that are eventually swallowed:

CA = (IEXr x SFi) + (IEXo x SFo)

where:	CA	= 3.17E-13	= incremental risk of developing cancer from the inhaled fraction retained in lungs (IEXr x SFi) plus risk of developing cancer from the inhaled fraction that is eventually swallowed (IEXs + SFs) for adult employee over 25 yr period
	IEXr	= 1.55E-13 mg/kg/day	= cancer dose from inhaled fraction retained in lungs for adult employee over 25 yr period
	SFi	= 3.4E-1 $(mg/kg/day)^{-1}$	= inhalation carcinogenic slope factor for 4,4'-DDT
	IEXo	= 7.77E-13 mg/kg/day	= cancer dose from inhaled fraction that is eventually swallowed for adult employee over 25 yr period
	SFo	= 3.4E-1 $(mg/kg/day)^{-1}$	= oral carcinogenic slope factor for 4,4'-DDT

The cancer risk for a resident from inhalation of surface soil for an adult employee is calculated using the above equation and summing the risks for a child (6 years exposure duration) and an adult (24 years duration).

As discussed in Section 2.4.3, the potential receptors for this scenario were adult employees, adult residents, and child residents. The input parameters were selected from the options provided in the Cowherd model, including an area of contamination conservatively estimated from the site visits and analytical results as 10000 m^2, terrain factors for a light industrial and suburban residential/institutional type setting, and meteorological factors for the local geographic area. The cover factor was considered to be approximately 80 percent (0.8). For residents, the nearest residences were considered to be 200 m southeast of the site (used to derive the unscaled concentration from the erosion rate). For employees, the assumed distance from the site was zero (< 200 m), and therefore the strongest wind direction at 200 m was used to determine the unscaled concentration from the erosion rate. A median particle size of 0.25 mm was assumed for the study area (see Appendix M); this particle size was used to derive the threshold friction velocity.

Subsurface Soil Exposure

The assumptions for incidental ingestion of, dermal contact with, and inhalation of fugitive dust emissions for COCs in subsurface soils (as future surface soils) are the same as the assumptions and equations for surface soil presented in the previous section.

Sediment Exposure

Two potential exposure routes are associated with theoretical sediment direct contact at the NWS Earle sites. These exposure routes include ingestion and dermal contact during wading/swimming. The methods used to assess these routes of exposure are discussed in the following text. These scenarios were evaluated in the same way as ingestion and dermal exposures for surface soil, which were explained above.

As discussed in Section 2.4.3, the potential receptors were recreational children (25 kg). The input parameters for sediment are the same as those for soil, with notable exceptions. Children involved in wading/swimming activities would be expected to be older than the typical 15-kilogram child (approximately 3 years old). Therefore, the recreational child in the wading/swimming scenario was assumed to be at least 6 years old (25 kilograms). Exposure to sediment during wading was expected to involve almost exclusively the feet; therefore, the exposed surface area for the feet of a 25-kilogram child was used.

Incidental sediment ingestion exposure for 4,4'-DDT at Site 15 is estimated for a child from the following equation (EPA, 1989a):

$$IEX = (C \times IR \times FI \times EF \times ED)/(BW \times AT \times CF)$$

where:	IEX	= 6.05E-10 mg/kg/day	= Ingestion exposure
	C	= 0.046 mg/kg	= DDT representative concentration in sediment
	IR	= 200 mg soil/day	= Sediment ingestion rate
	Fi	= 1.0	= Fraction ingested from contaminated source
	EF	= 7 days/yr	= Exposure frequency
	ED	= 6 yrs	= Exposure duration
	BW	= 30 kg	= Body weight
	AT	= 25550 days	= Averaging time for carcinogens (365 days/yr x 70 yrs)
	CF	= 1E-6 kg soil/mg soil	= Conversion factor

The cancer risk for a child from incidental ingestion of 4,4'-DDT in site 15 sediment is calculated as follows:

CA = IEX x SF

where:	CA	= 2.06E-10	= incremental (upper bound) risk of developing cancer
	IEX	= 6.05E-10 mg/kg/day	= Ingestion exposure
	SF	= 3.4E-1 $(mg/kg/day)^{-1}$	= carcinogenic slope factor (upper 95 percent confidence limit of a dose-response curve)

Dermal exposure to 4,4'-DDT from Site 15 sediment is estimated for a child from the following equation (EPA, 1989a; EPA, 1992f):

DEX = (C X SA x AF x ABS x EF x ED x CF)/(BW x AT)

where:	DEX	= 1.13E-9 mg/kg/day	= Dermal exposure dose
	C	= 0.046 mg/kg	= Chemical concentration in soil
	SA	= 792 cm^2/event	= Skin surface area available for contact
	AF	= 0.05 mg/cm^2	= Soil-to-skin adherence factor
	ABS	= 1.0	= Fraction from contaminated source
	EF	= 7 events/yr	= Exposure frequency
	ED	= 6 yrs	= Exposure duration
	BW	= 30 kg	= Body weight
	CF	= 1E-06 kg soil/mg soil	= Conversion factor
	AT	= 2190 days	= Averaging time, non-carcinogens (365 days/yr x 6 yrs)

Absorption factors were assumed to be as follows: 0.1 for VOCs, 0.05 for SVOCs/pesticides, 0.06 for PCBs, and 0.01 for metals were used (Feldman and Maibach, 1970; Wester and Maibach, 1985; EPA, 1984a).

The non-cancer hazard quotient for a child from dermal contact with 4,4'-DDT in site 15 sediment is calculated as follows:

NC = DEX / RfD

where:	NC	= 2.81E-6	= hazard quotient
	DEX	= 1.13E-9 mg/kg/day	= dermal exposure
	RfD	= 4E-4 mg/kg/day	= dermal reference dose (5E-4 Oral RfD x 0.8 GI absorption factor)

The hazard quotient for a child or adult resident from incidental ingestion of surface soil are calculated using the same equation.

Groundwater Exposure

Three potential exposure routes are associated with theoretical groundwater direct contact at the NWS Earle sites. These exposure routes include ingestion, dermal contact, and inhalation of vapors during showering. The methods used to assess these routes of exposure are discussed in the following text.

Ingestion of benzene in groundwater at site 16 for a future resident was evaluated using the following equation (EPA, 1989a):

$$IEX = (C \times IR \times EF \times ED)/(BW \times AT)$$

where:	IEX	= 1.88E-3	= Ingestional exposure dose (mg/kg/day)
	C	= 0.2 mg/l	= Benzene concentration in water
	IR	= 2 L/day	= Ingestion rate
	EF	= 350 days/yr	= Exposure frequency
	ED	= 24 yr	= Exposure duration
	BW	= 70 kg	= Body weight
	AT	= 25550 days	= Averaging time for carcinogens (365 days/yr x 70 yrs)

As discussed in Section 2.4.3, the potential receptors for this scenario include adult employees, adult residents, and child residents. For an adult employee, an EF of 250 days/yr, an IR of 1 L/day, and an ED of 25 yrs were assumed. For a child resident, an IR of 1L/day, an EF of 350 days/yr, a BW of 15 kg, and an ED of 6 years were assumed; for an adult resident, BW and ED were assumed to be 70 kg and 24 years, respectively.

The lifetime cancer risk for a future resident from ingestion of benzene in groundwater at site 16 is calculated as follows:

$$CA = (IEXc + IEXa) \times SF$$

where:	CA	= 8.63E-5	= incremental (upper bound) lifetime risk of developing cancer
	IEXc	= 1.1E-3 mg/kg/day	= Ingestion exposure for child for 6 years
	IEXa	= 1.88E-3 mg/kg/day	= Ingestion exposure for adult for 24 years
	SF	= 2.9E-2 $(mg/kg/day)^{-1}$	= carcinogenic slope factor (upper 95 percent confidence limit of a dose-response curve)

The lifetime cancer risk for an adult employee from ingestion of groundwater is calculated using the above equations including only the term IEXa (for an adult), assuming an ED of 25 years.

Dermal exposure to benzene in site 16 groundwater for an adult employee was evaluated using the following equations (EPA, 1992f):

$$DAD = (DA \times EV \times ED \times EF \times SA)/(BW \times AT)$$

where:	DAD	= 1.2E-5 mg/kg/day	= Dermally absorbed benzene dose
	DA	= 4.19E-6 $mg/cm^2/event$	= Benzene dose absorbed per event
	EV	= 1event/day	= Event frequency
	EF	= 250 days/yr	= Exposure frequency
	ED	= 25 yrs	= Exposure duration
	SA	= 820 cm^2	= Skin surface area exposed
	BW	= 70 kg	= Body weight
	AT	= 25550 days	= Averaging time, carcinogens (365 days/yr x 70 yrs)

$$DA = 2 \times CF \times Kp\ Cv\ [((6 \times \tau \times t)/\pi)^{0.5}] \text{ for organics, } t < t^*$$

$$DA = Kp \times CF \times Cv\ [t/(1 + B) + [2 \times \tau\ ((1 + 3B)/(1 + B))]] \text{ for organics, } t > t^*$$

where:	DA	= 4.19E-6 mg/cm^2/event	= Benzene dose absorbed per event ($t < t^*$)
	CF	= 0.001 L/cm^3	= Conversion factor
	Kp	= 2.1E-2 cm/hr	= Permeability coefficient from water
	Cv	= 0.2 mg/L	= Benzene concentration in water
	t	= 0.5 hr/event	= Duration of event
	τ	= 0.26 hr	= Lag time
	B	= 0.013	= Partition coefficient

Dermal exposure to arsenic in site 16 groundwater for an adult employee was evaluated using the same equation for DAD, substituting the following expression for DA (EPA, 1992f):

DA = CF x K x Cv x t for inorganics

where:	DA	= 4.97E-8 mg/cm^2/event	= Arsenic dose absorbed per event
	CF	= 0.001 L/cm^3	= Conversion factor
	K	= 1E-3 cm/hr	= Permeability coefficient from water
	Cv	= 0.0994 mg/L	= Arsenic representative conc. in water
	t	= 0.5 hr/event	= Duration of event

The dermal absorption approach is based on the assumption that water contaminants are present in dilute solution and that percutaneous absorption is controlled by the flux of water. As discussed in Section 2.4.3, the potential receptors for this scenario were adult employees (hand washing), adult residents (showering), and child residents (bathing). Adult and child residents were assumed to take daily showers and baths, respectively, and therefore their total body surface areas were used. Employees were assumed to wash their hands for approximately 2 minutes per day at the workplace, and the surface area of their hands and forearms was used. Conventional values were used for most input parameters. K, Kp, B, τ, and t^* were chemical-specific values obtained from EPA, 1992f or derived from the molecular weight and Kow as demonstrated therein. As recommended by the guidance, default K values of 1E-3 cm/hr were used for metals for which experimental values had not been obtained (EPA, 1992f).

The incremental cancer risk for an adult employee from dermal contact with benzene in groundwater at site 16 is calculated as follows:

CA = DAD x SF

where:	CA	= 3.48E-7	= Incremental cancer risk
	DAD	= 1.2E-5 mg/kg/day	= Dermally absorbed benzene dose
	SF	= 2.9E-2 (mg/kg/day)$^{-1}$	= slope factor (2.9E-2 / 1.0 GI absorption factor)

For site 16, inhalation exposure to benzene in groundwater (during showering) was calculated for adult residents only using the following equations (EPA, 1989a; Foster and Chrostowski, 1987):

DI = D x EF x ED / AT

DI	= 3.49E-3 mg/kg/day	= Inhalation dose
D	= 1.06E-2 mg/kg/shower	= Inhalation dose
EF	= 350 showers/yr	= Exposure frequency
ED	= 24 yrs	= Exposure duration
AT	= 25550 days	= Averaging time, carcinogens (365 days/yr x 70 yrs)

The term D is estimated as follows:

$$D = [(VR \times S) / (BW \times Ra \times CF)] \times Q$$

D	= 1.06E-2 mg/kg/shower	= Inhalation dose
Q	= 2.79 min	= Function of air exchange rate and time in shower and shower room
VR	= 14 L/min	= Inhalation rate
S	= 317.37 ug/m^3/min	= Indoor VOC generation rate
BW	= 70 kg	= Body weight
Ra	= 1.667E-2 min^{-1}	= Rate of air exchange
CF	= 10^6 ug X L / (mg X m^3)	= Conversion factor

The term Q is calculated:

$$Q = Ds + [(\exp(-Ra \times Dt))/Ra] - [(\exp(Ra \times (Ds-Dt)))/Ra]$$

Q	= 2.79 min	= Function of air exchange rate and time in shower and shower room
Ds	= 15 min	= Duration of shower
Dt	= 20 min	= Total time in shower room
Ra	= 1.667E-2 min^{-1}	= Rate of air exchange

The term S is estimated as follows:

$$S = Cwd \times FR / SV$$

S	= 317.37 ug/m^3/min	= Indoor voc generation rate
Cwd	= 95.21 ug/L	= Concentration leaving water droplet
FR	= 20 L/min	= Shower flow rate
SV	= 6 m^3	= Shower room air volume

The term Cwd is calculated:

$$Cwd = C \times CF \times (1-\exp[(-KaL \times ts)/60d)])$$

Cwd	= 95.21 ug/L	= Concentration leaving water droplet after time ts
C	= 0.2 mg/L	= Concentration in water
CF	= 1000 ug/mg	= Conversion factor
KaL	= 19.39 cm/hr	= Adjusted overall mass transfer coefficient
ts	= 2 sec	= Shower droplet time
d	= 1 mm	= Shower droplet diameter

The term KaL is calculated:

$$KaL = KL / [(T_1 \times \mu_S)/(T_s \times \mu_1)]^{0.5}$$

KaL	= 19.39 cm/hr	= Adjusted overall mass transfer coefficient
KL	= 14.36 cm/hr	= Mass transfer coefficient
T_1	= 293 °K	= Calibration water temperature of KL
T_s	= 318 °K	= Shower water temperature
μ_1	= 1.002 centipoise	= Water viscosity at T_1

μ_S	= 0.596 centipoise	= Water viscosity at T_s

The term KL is calculated as follows:

$$KL = 1/[(1/kl) + ((R \times T)/(H \times kg))]$$

KL	= 14.36 cm/hr	= Mass transfer coefficient
R	= 8.21E-5 atm m^3/mol/°K	= Ideal gas law constant
T	= 293 °K	= Absolute temperature
H	= 5.5E-3 atm m^3/mole	= Henry's Law constant
kg	= 1440 cm/hr	= Gas-film mass transfer coefficient
kl	= 15 cm/hr	= Liquid-film mass transfer coefficient

The terms kg and kl are calculated:

$$kg = kH \times (MWH / MW)^{0.5}$$

$$kl = kC \times (MWC / MW)^{0.5}$$

kg	= 1440 cm/hr	= Gas-film mass transfer coefficient
kl	= 15.0 cm/hr	= Liquid-film mass transfer coefficient
kH	= 3000 cm/hr	= kg for water
kC	= 20 cm/hr	= kl for carbon dioxide
MWH	= 18 g/mole	= Molecular weight of water
MWC	= 44 g/mole	= Molecular weight of carbon dioxide
MW	= 78.1 g/mole	= Molecular weight of benzene

The volatile chemical generation rate was estimated using the Foster and Chrostowski mass transfer model, which is based on two-phase film theory. The model employs contaminant-specific mass transfer coefficients, Henry's Law constants, droplet drop time, viscosity, temperature, etc. Specific details regarding the application of the mass transfer model can be found in the source documents (Foster and Chrostowski, 1987).

The incremental cancer risk for an adult resident from inhalation exposure (during showering) to benzene in groundwater at site 16 is calculated as follows:

$$CA = DI \times SFi$$

where:	CA	= 1.01E-4	= Incremental cancer risk
	DI	= 3.49E-3 mg/kg/day	= Inhalation benzene dose
	SFi	= 2.9E-2 $(mg/kg/day)^{-1}$	= Inhalation slope factor

It was assumed that small children would take baths rather than showers and that employees would not shower at work; therefore, only adult residents were selected as potential receptors for this pathway.

Surface Water Exposure

Two potential exposure routes are associated with theoretical surface water direct contact at the NWS Earle sites. These exposure routes include ingestion and dermal contact during wading/swimming. The methods used to assess these routes of exposure are discussed in the following text. These scenarios were evaluated in the same way as ingestion and dermal exposures for groundwater, which were explained in the previous section.

The input parameters for this exposure route, along with the rationale for the selection of each value, are presented in Table 2-xx. As discussed in Section 2.4.3, the potential receptors were recreational children (30 kg). The input parameters for surface water are the same as those for groundwater, with notable exceptions. Children involved in wading/swimming activities would be expected to be older than the typical 15-kilogram child (approximately three years old). Therefore, the recreational child in the wading/swimming scenario was assumed to be between six and 12 years old (average weight 30 kilograms). Exposure to surface water during wading was expected to involve either legs, feet, and hands for wading or whole body for swimming.

Ingestion of 4,4'-DDD in surface water at site 15 during wading was evaluated using the following equation (EPA, 1989a):

$$IEX = (C \times IR \times EF \times ED)/(BW \times AT)$$

where:	IEX	= 2.37E-11	= Ingestional exposure dose (mg/kg/day)
	C	= 1.8E-6 mg/l	= 4,4'-DDD concentration in water
	IR	= 0.2 L/day	= Ingestion rate
	EF	= 7 days/yr	= Exposure frequency
	ED	= 6 yr	= Exposure duration
	BW	= 30 kg	= Body weight
	AT	= 25550 days	= Averaging time for carcinogens (365 days/yr x 70 yrs)

The incremental cancer risk for a child from ingestion of 4,4'-DDD in surface water at site 15 is calculated as follows:

$$CA = IEX \times SF$$

where:	CA	= 5.68E-12	= incremental (upper bound) risk of developing cancer
	IEX	= 2.37E-11 mg/kg/day	= Ingestion exposure for child for 6 years
	SF	= 2.4E-1 $(mg/kg/day)^{-1}$	= carcinogenic slope factor (upper 95 percent confidence limit of a dose-response curve)

Dermal exposure to 4,4'-DDD in site 15 surface water during wading was evaluated using the following equations (EPA, 1992f):

$$DAD = (DA \times EV \times ED \times EF \times SA)/(BW \times AT)$$

where:	DAD	= 1.48-9 mg/kg/day	= Dermally absorbed 4,4'-DDD dose
	DA	= 6.27E-9 $mg/cm^2/event$	= 4,4'-DDD dose absorbed per event
	EV	= 1 event/day	= Event frequency
	EF	= 7 days/yr	= Exposure frequency
	ED	= 6 yrs	= Exposure duration
	SA	= 3580 cm^2	= Skin surface area exposed
	BW	= 30 kg	= Body weight
	AT	= 25550 days	= Averaging time, carcinogens (365 days/yr x 70 yrs)

$$DA = 2 \times CF \times Kp\ Cv\ [((6 \times \tau \times t)/\pi)^{0.5}] \text{ for organics, } t < t^*$$

$$DA = Kp \times CF \times Cv\ [t/(1 + B) + [2 \times \tau\ ((1 + 3B)/(1 + B))]] \text{ for organics, } t > t^*$$

where:	DA	= 6.27E-9 mg/cm^2/event	= Benzene dose absorbed per event (t < t*)
	CF	= 0.001 L/cm^3	= Conversion factor
	Kp	= 2.8E-1 cm/hr	= Permeability coefficient from water
	Cv	= 1.8E-6 mg/L	= Benzene concentration in water
	t	= 2.6 hr/event	= Duration of event
	τ	= 7.8 hr	= Lag time
	B	= 63	= Partition coefficient

The dermal absorption approach is based on the assumption that water contaminants are present in dilute solution and that percutaneous absorption is controlled by the flux of water. K, Kp, B, τ, and t* were chemical-specific values obtained from EPA, 1992f or derived from the molecular weight and Kow as demonstrated therein. As recommended by the guidance, default K values of 1E-3 cm/hr were used for metals for which experimental values had not been obtained (EPA, 1992f).

The incremental cancer risk for a recreational child from dermal contact with 4,4'-DDD in surface water at site 15 is calculated as follows:

CA = DAD x SF

where:	CA	= 4.43E-10	= Incremental cancer risk
	DAD	= 1.48E-9 mg/kg/day	= Dermally absorbed benzene dose
	SF	= 3.0E-1 (mg/kg/day)$^{-1}$	= slope factor (2.4E-1 / 0.8 GI absorption factor)

Blood-Lead Modeling

No EPA consensus has been reached concerning an RfD or SF for lead. However, some research has been done concerning typical lead intakes and blood-lead levels. Determinations of lead uptake from soil, sediment, drinking water, and surface water were considered. For the purposes of this risk assessment, each pathway was evaluated separately so that the contribution of lead from each source and each exposure route could be evaluated. Potential blood-lead level increases were estimated and are discussed, along with the potential implications of blood-lead results for each NWS Earle site.

The following information was useful in estimating lead exposure:

No threshold has been defined for effects related to blood-lead increases. The estimated increases at this site are well below the concentrations at which effects such as anemia and neuropathy occur (40 ug/dL and above) (Doull et al., 1986). Effects below 10 ug/dL are difficult to define. Inhibition of certain enzymes involved in red blood cell metabolism has been reported to occur at 10 to 15 ug/dL and possibly lower (EPA, 1991e). Small increases in blood pressure have been related to adults with blood-lead levels down to 7 ug/dL (EPA, 1991e). Probably the most sensitive subpopulation to effects at the 3 to 7 ug/dL range (where the concentrations estimated for this study area would fall) would be infants, whose early neurological development can be affected by blood-lead concentrations reportedly down to 5 ug/dL (EPA, 1991e). Lead is also a fairly common environmental contaminant and, for this reason, typical blood-lead levels in the population at large may already exceed the concentrations discussed here. For boys and girls under age 12, typical United States blood-lead levels for the years 1976 to 1980 ranged from approximately 10 to 17 ug/dL (Doull et al., 1986). For men and women, typical United States blood-lead levels for the years 1976 to 1980 ranged from approximately 10 to 18 ug/dL (Doull et al., 1986).

For drinking water exposure, children 0 to 6 months old are expected to experience blood lead increases at the rate of 0.26 ug/dL per ug/l lead in water up to 15 ug/l and at the rate of 0.04 ug/dL for every ug/l lead in water above 15 ug/l (EPA, 1991e). For older children, the ratio is 0.12 ug/dL blood lead per ug/l lead in water up to 15 ug/l, and 0.06 ug/dL for every ug/l lead in water above 15 ug/l (EPA, 1991e). For adults, the ratio is approximately 0.06 ug/dL blood lead per ug/L in water (EPA, 1991e).

For air exposure, at lead-in-air concentrations less than 3.2 ug/m3 and blood lead less than 30 ug/dL, adults are expected to experience blood-lead increases at the approximate rate of 1.64 + 0.22 ug/dL blood lead per ug/m3 lead in air (EPA, 1986e). At lead-in-air concentrations ranging from 9 to 36 ug/m3 and blood lead ranging from 30 to 40 ug/dL, the increases are nonlinear or may be estimated with a linear slope (ug/dL per ug/m3) of 0.5 (EPA, 1986e). For children, the median slope is reported to be 1.92 ug/dL blood lead per ug/m3) (EPA, 1986e).

Dietary intake of lead is assumed to produce increases of 0.02 to 0.04 ug/dL blood lead per ug/day ingested by adults and 0.16 ug/dL blood lead per ug/day ingested by infants (EPA, 1986e).

Blood-lead levels are estimated to increase by 0.6 to 6.8 ug/dL per 1,000 mg/kg lead in soil (EPA, 1986e).

APPENDIX I.d.

IEUBK LEAD MODEL

APPENDIX I.d.1

NARRATIVE FOR

IEUBK MODEL RESULTS

The following sections of Appendix I (Part d) contain site-specific histograms that present the estimated percentage of children (age 0 to 6 years) with a blood-level above 10 ug/dl based on conditions present at each applicable site. The histograms are output form the IEUBK Model (v. 99). Also included are site-specific input parameters selected for each run of the IEUBK Model. The following NWS Earle Sites are included:

Site 01
Site 02
Site 03
Site 04
Site 05
Site 07
Site 10
Site 11
Site 12
Site 13
Site 15
Site 16
Site 17
Site 19
Site 20
Site 22
Site 23
Site 24/25
Site 26
Site 27
Site 29
Site L
Watershed Samples

APPENDIX I.d.2

HISTOGRAMS FOR

IEUBK MODEL RESULTS

APPENDIX I.d.2.1

HISTOGRAMS FOR

SITE 1 - GROUNDWATER AND SUBSURFACE SOIL DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 14.50 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	18.3	18.3
1-2	18.3	18.3
2-3	18.3	18.3
3-4	18.3	18.3
4-5	18.3	18.3
5-6	18.3	18.3
6-7	18.3	18.3

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

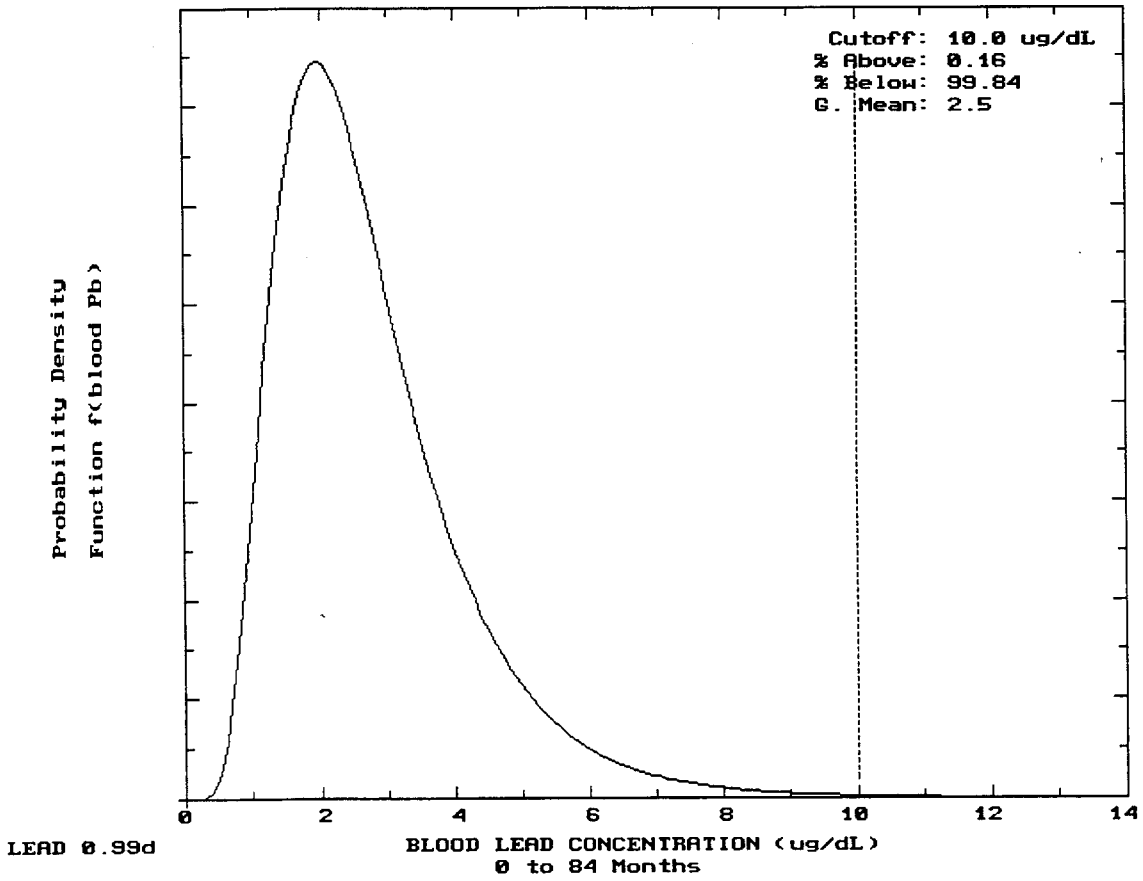
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

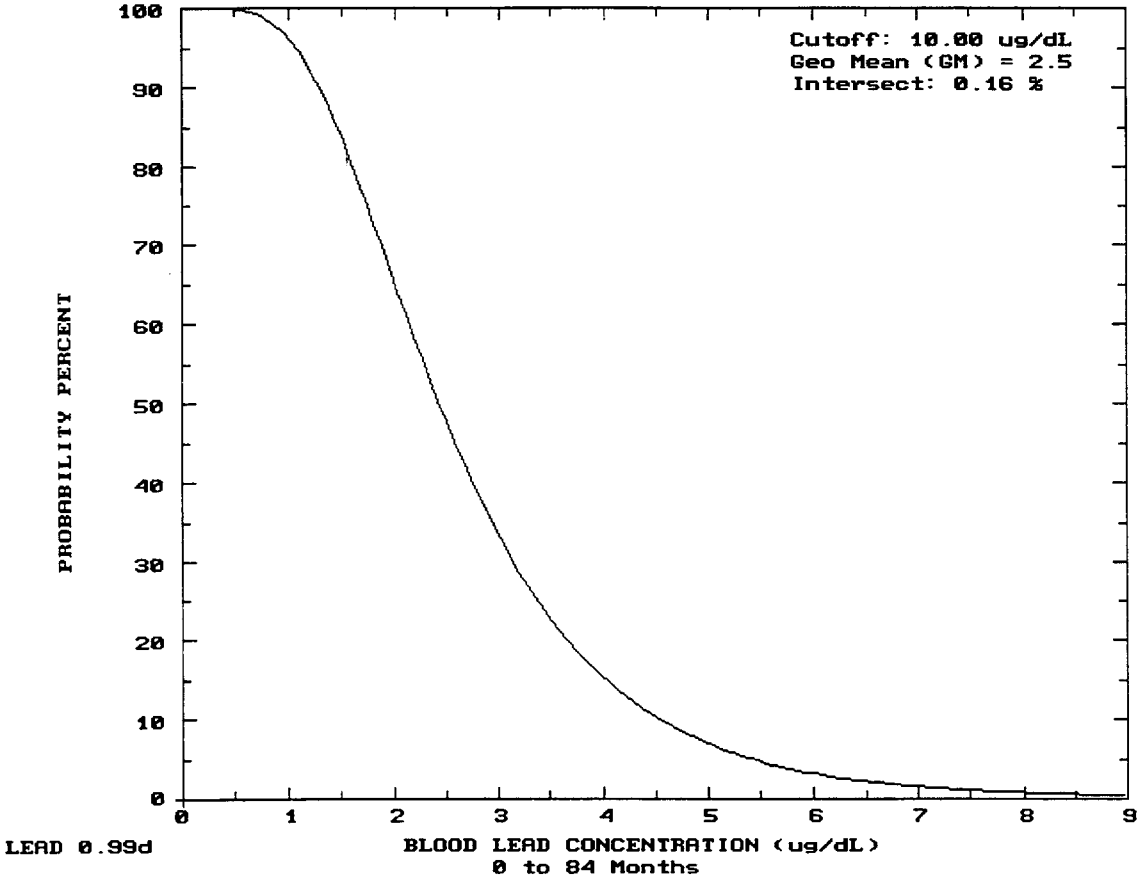
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.4	4.47	0.44
1-2:	2.8	6.87	0.70
2-3:	2.7	7.40	0.70
3-4:	2.6	7.42	0.71
4-5:	2.4	7.31	0.53
5-6:	2.3	7.68	0.48
6-7:	2.3	8.05	0.45

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.63	1.38	0.00	0.02
1-2:	2.72	3.41	0.00	0.03
2-3:	3.07	3.57	0.00	0.06
3-4:	2.98	3.67	0.00	0.07
4-5:	2.89	3.83	0.00	0.07
5-6:	3.06	4.05	0.00	0.09
6-7:	3.38	4.13	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.16
% Below: 99.84
G. Mean: 2.5
Probability Density
Function f(blood Pb)
0
2
4
6
8
10
12
14
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 2.5
Intersect: 0.16 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
8
9
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.2

HISTOGRAMS FOR

SITE 2 - SURFACE SOIL AND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 4.40 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	21.0	21.0
1-2	21.0	21.0
2-3	21.0	21.0
3-4	21.0	21.0
4-5	21.0	21.0
5-6	21.0	21.0
6-7	21.0	21.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

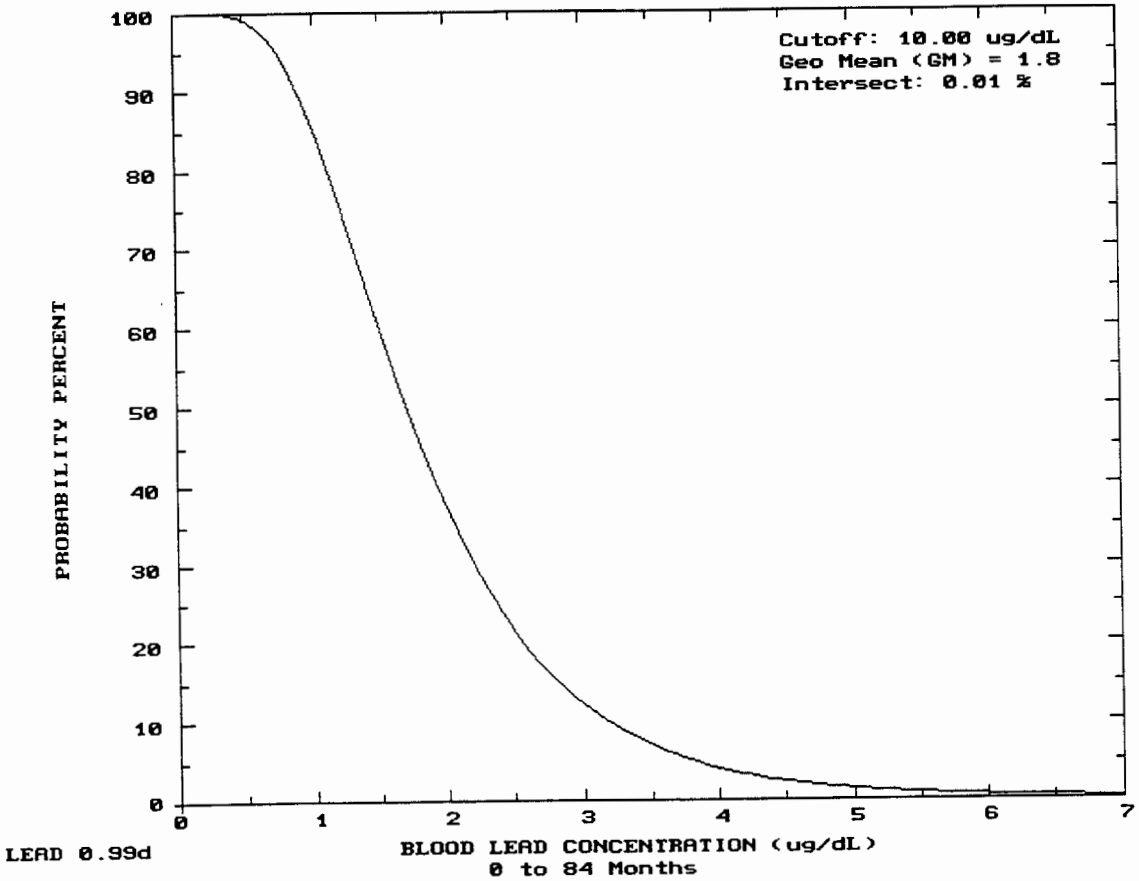
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

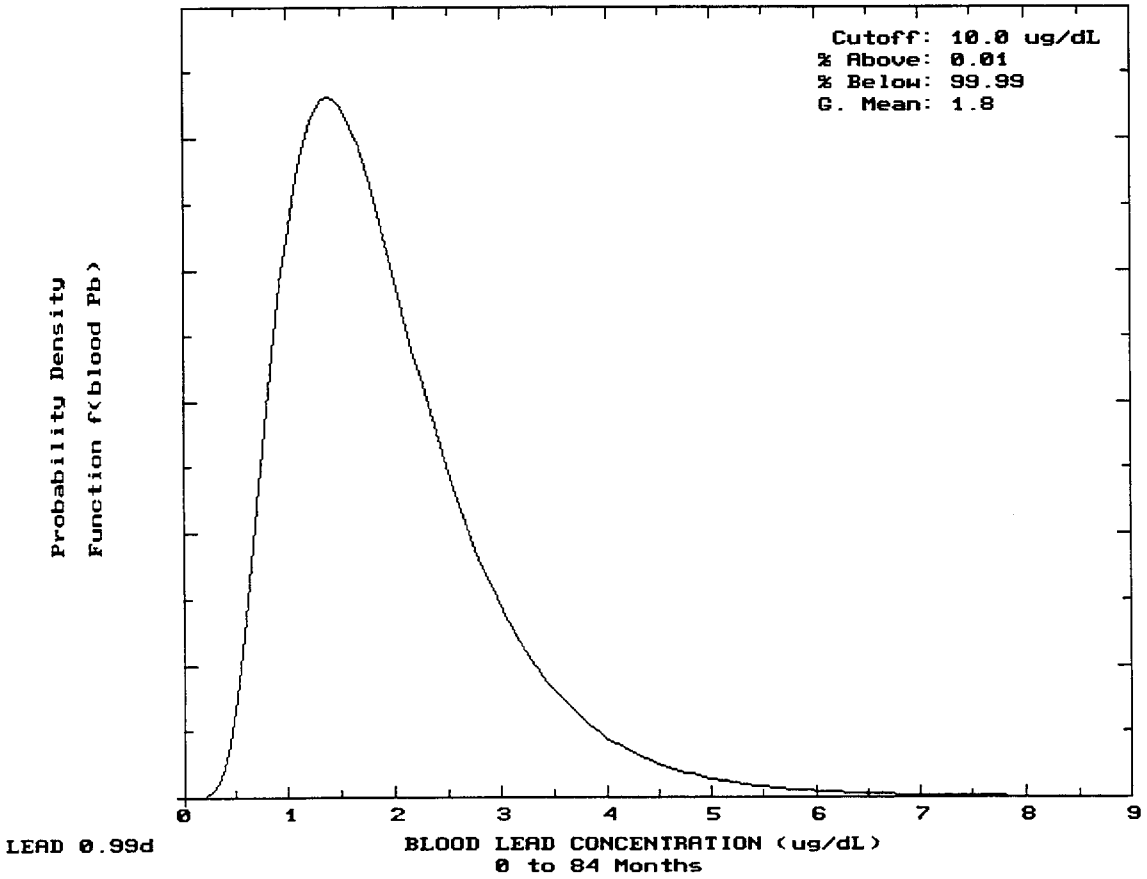
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.0	3.61	0.51
1-2:	2.0	4.68	0.82
2-3:	1.9	5.11	0.82
3-4:	1.8	5.05	0.83
4-5:	1.6	4.79	0.61
5-6:	1.5	4.99	0.55
6-7:	1.5	5.31	0.52

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.65	0.42	0.00	0.02
1-2:	2.78	1.06	0.00	0.03
2-3:	3.13	1.10	0.00	0.06
3-4:	3.02	1.13	0.00	0.07
4-5:	2.93	1.18	0.00	0.07
5-6:	3.10	1.25	0.00	0.09
6-7:	3.42	1.27	0.00	0.09


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.8
Intersect: 0.01 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
LEAD 0.99d


Cutoff: 10.0 ug/dL
% Above: 0.01
% Below: 99.99
G. Mean: 1.8
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
9
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.3

HISTOGRAMS FOR

SITE 3 - GROUNDWATER AND BACKGROUND SURFACE SOIL DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 5.10 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	39.4	39.4
1-2	39.4	39.4
2-3	39.4	39.4
3-4	39.4	39.4
4-5	39.4	39.4
5-6	39.4	39.4
6-7	39.4	39.4

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

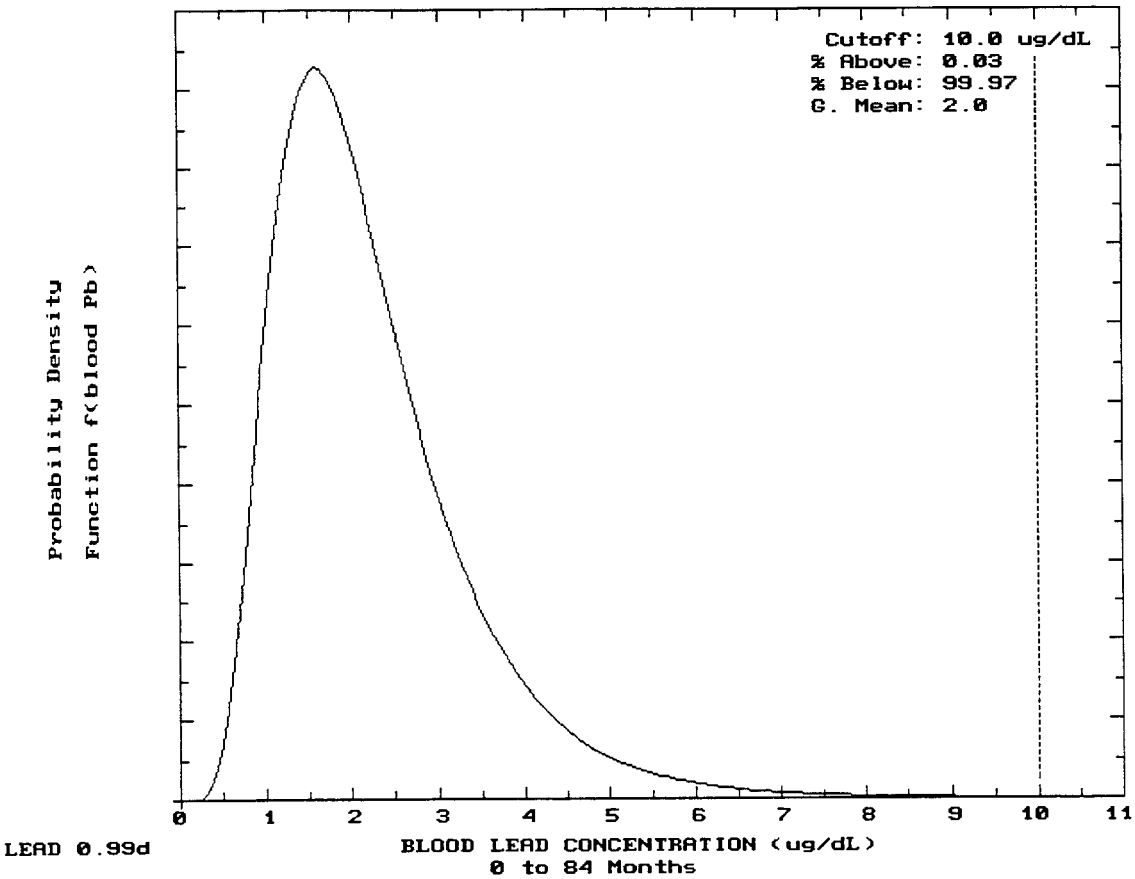
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

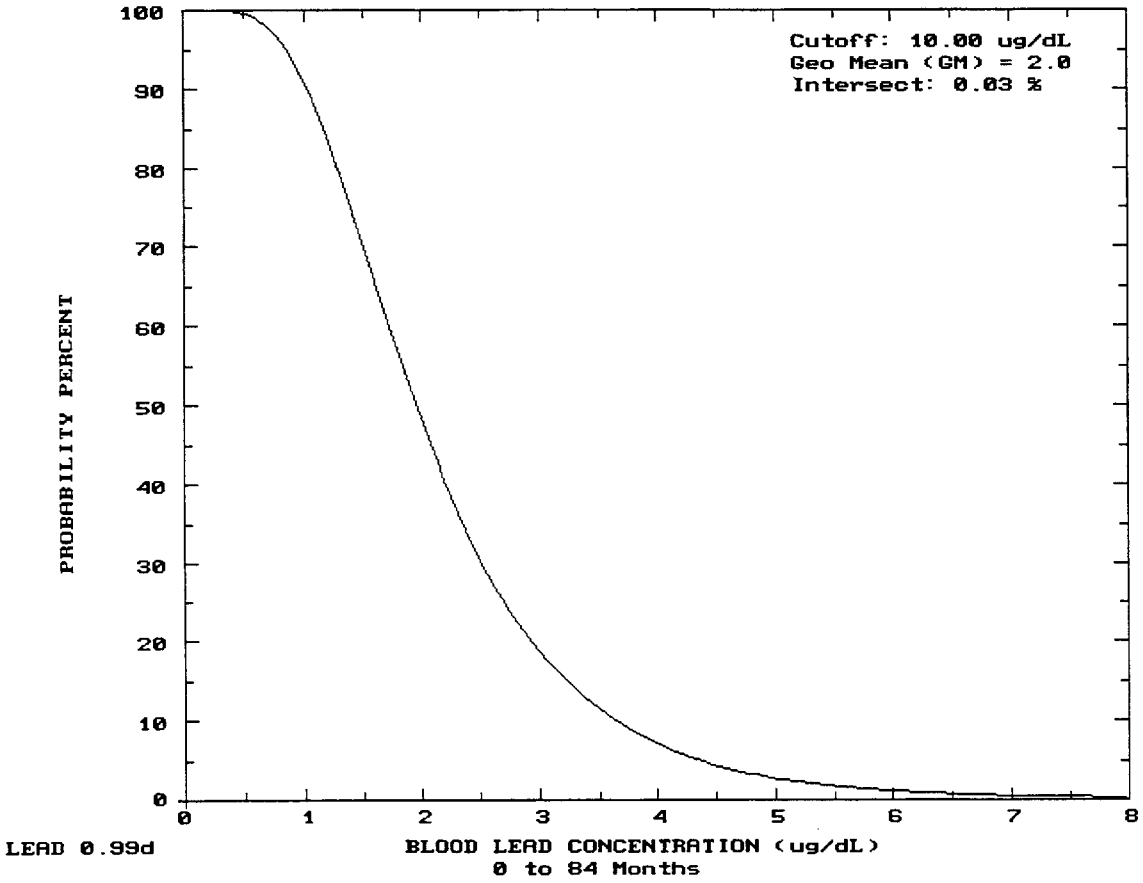
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.3	4.11	0.96
1-2:	2.3	5.53	1.52
2-3:	2.2	5.96	1.53
3-4:	2.1	5.91	1.54
4-5:	1.9	5.49	1.15
5-6:	1.7	5.65	1.04
6-7:	1.7	5.95	0.98

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.64	0.49	0.00	0.02
1-2:	2.75	1.22	0.00	0.03
2-3:	3.11	1.27	0.00	0.06
3-4:	3.01	1.30	0.00	0.07
4-5:	2.92	1.36	0.00	0.07
5-6:	3.09	1.44	0.00	0.09
6-7:	3.41	1.47	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.03
% Below: 99.97
G. Mean: 2.0
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
9
10
11
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 2.0
Intersect: 0.03 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
8
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.4

HISTOGRAMS FOR

SITE 4 - GROUNDWATER AND BACKGROUND SURFACE SOIL DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 3.00 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	39.4	39.4
1-2	39.4	39.4
2-3	39.4	39.4
3-4	39.4	39.4
4-5	39.4	39.4
5-6	39.4	39.4
6-7	39.4	39.4

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

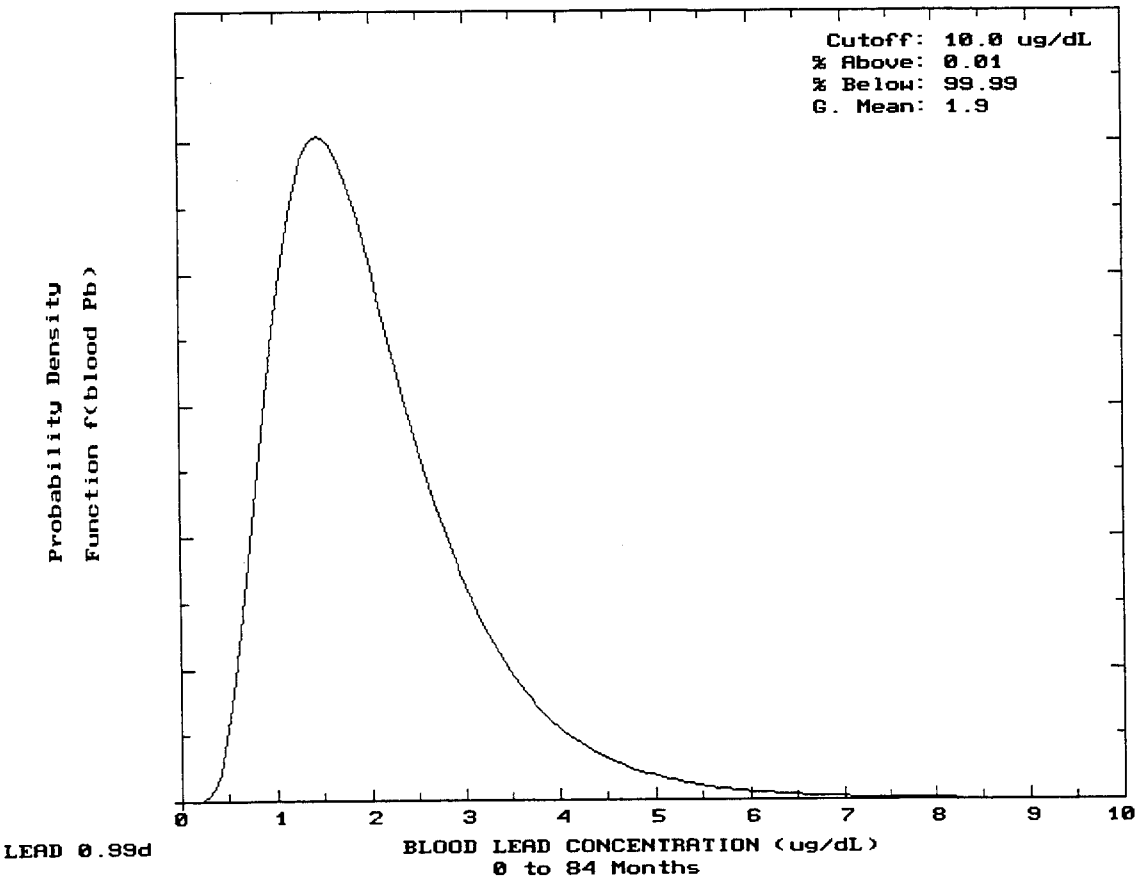
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

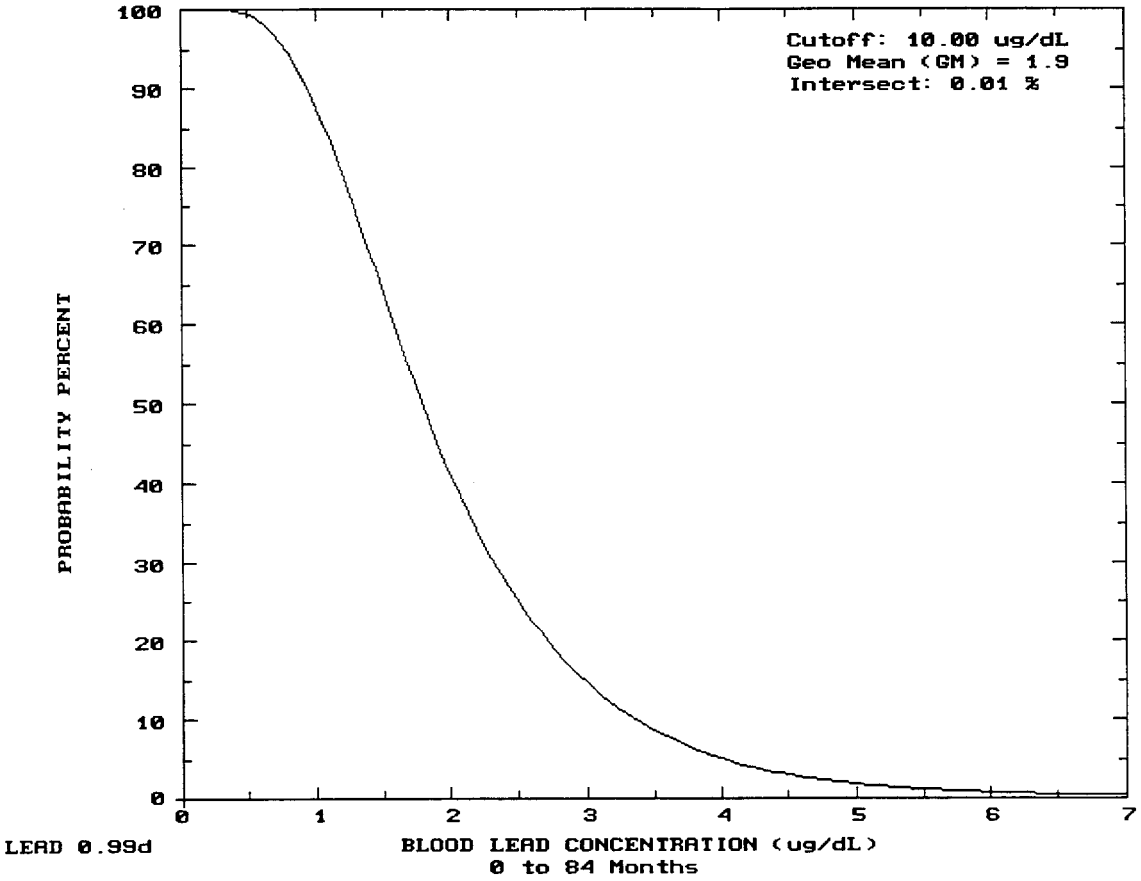
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.1	3.91	0.96
1-2:	2.1	5.05	1.53
2-3:	2.0	5.46	1.53
3-4:	1.9	5.39	1.54
4-5:	1.7	4.95	1.15
5-6:	1.6	5.08	1.04
6-7:	1.5	5.36	0.98

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.65	0.29	0.00	0.02
1-2:	2.77	0.72	0.00	0.03
2-3:	3.12	0.75	0.00	0.06
3-4:	3.02	0.77	0.00	0.07
4-5:	2.93	0.80	0.00	0.07
5-6:	3.09	0.85	0.00	0.09
6-7:	3.42	0.86	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.01
% Below: 99.99
G. Mean: 1.9
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
9
10
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.9
Intersect: 0.01 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.5

HISTOGRAMS FOR

SITE 5 - GROUNDWATER AND BACKGROUND SURFACE SOIL DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 1.80 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	39.4	39.4
1-2	39.4	39.4
2-3	39.4	39.4
3-4	39.4	39.4
4-5	39.4	39.4
5-6	39.4	39.4
6-7	39.4	39.4

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

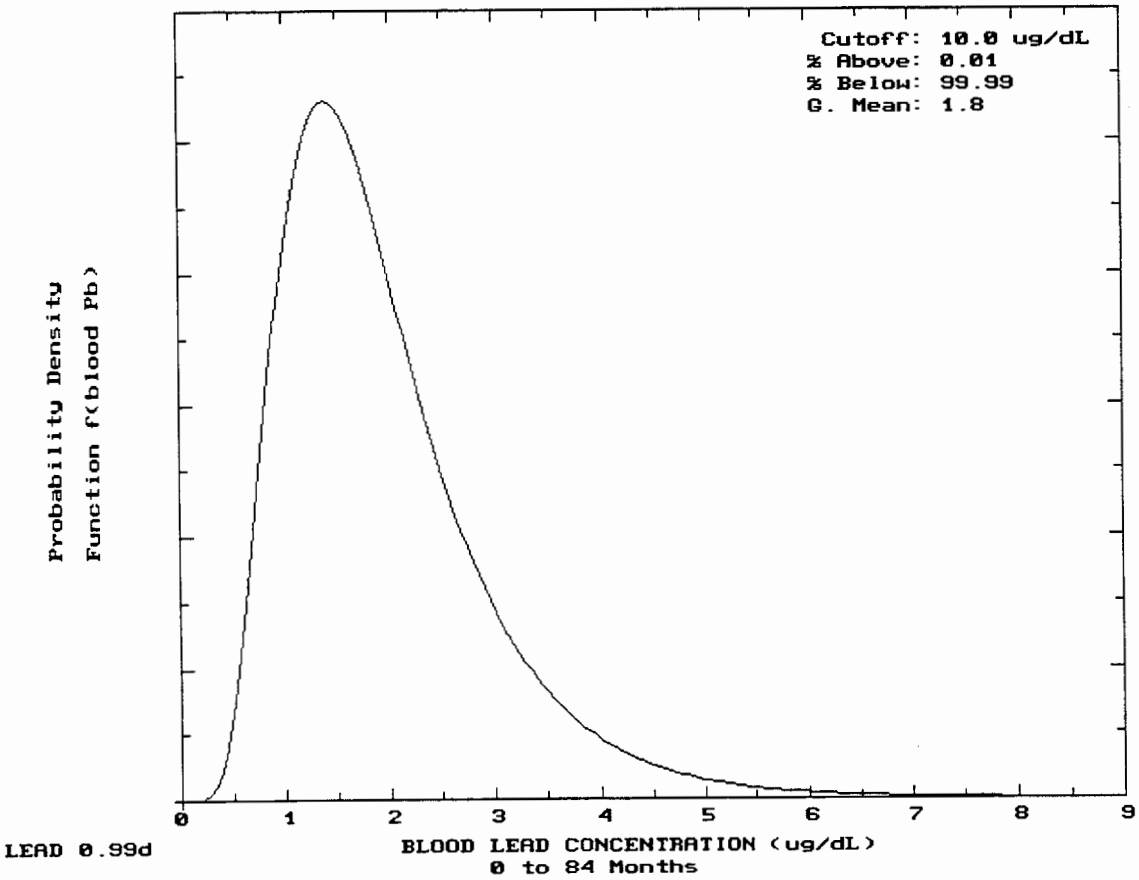
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

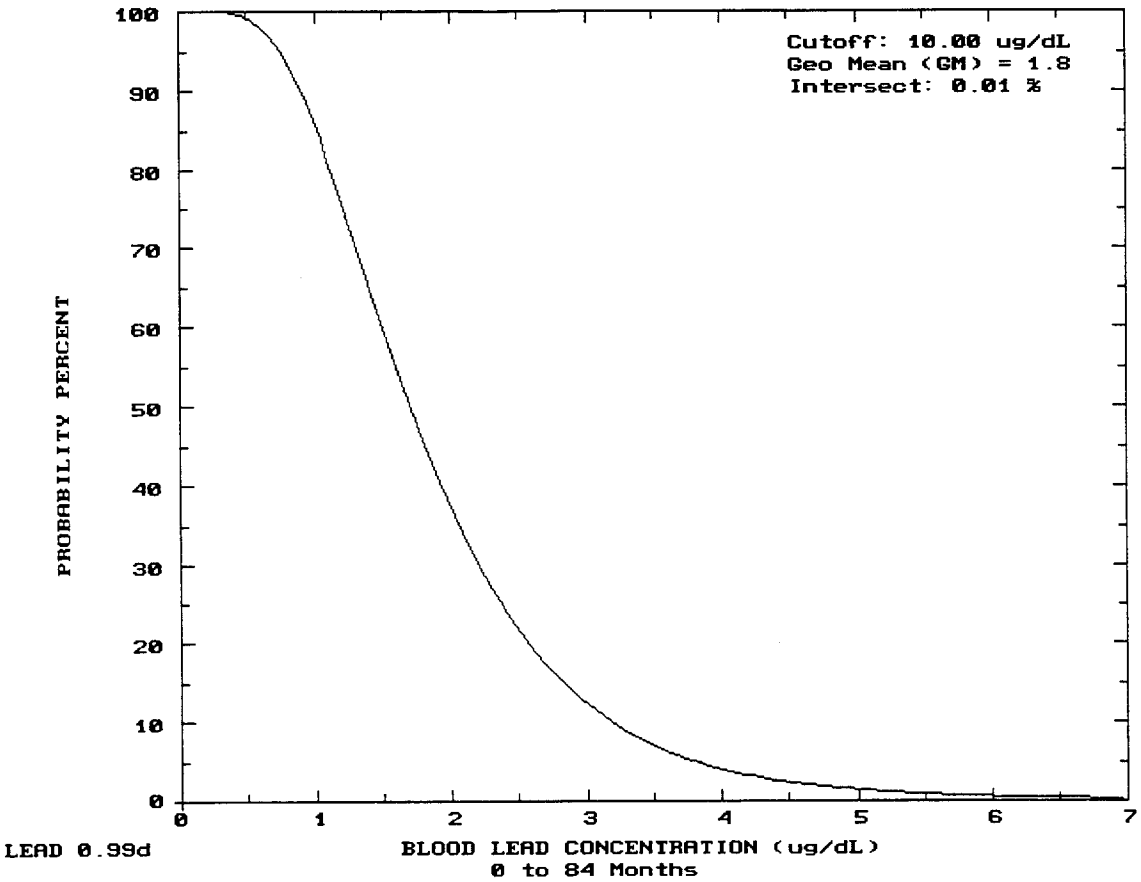
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.1	3.80	0.96
1-2:	2.0	4.77	1.53
2-3:	1.9	5.17	1.54
3-4:	1.8	5.10	1.55
4-5:	1.6	4.63	1.15
5-6:	1.5	4.74	1.04
6-7:	1.4	5.02	0.98

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.65	0.17	0.00	0.02
1-2:	2.77	0.43	0.00	0.03
2-3:	3.12	0.45	0.00	0.06
3-4:	3.02	0.46	0.00	0.07
4-5:	2.93	0.48	0.00	0.07
5-6:	3.10	0.51	0.00	0.09
6-7:	3.42	0.52	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.01
% Below: 99.99
G. Mean: 1.8
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
9
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
LEAD 0.99d


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.8
Intersect: 0.01 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.6

HISTOGRAMS FOR

SITE 7 - GROUNDWATER AND BACKGROUND SURFACE SOIL

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 2.30 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	39.4	39.4
1-2	39.4	39.4
2-3	39.4	39.4
3-4	39.4	39.4
4-5	39.4	39.4
5-6	39.4	39.4
6-7	39.4	39.4

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

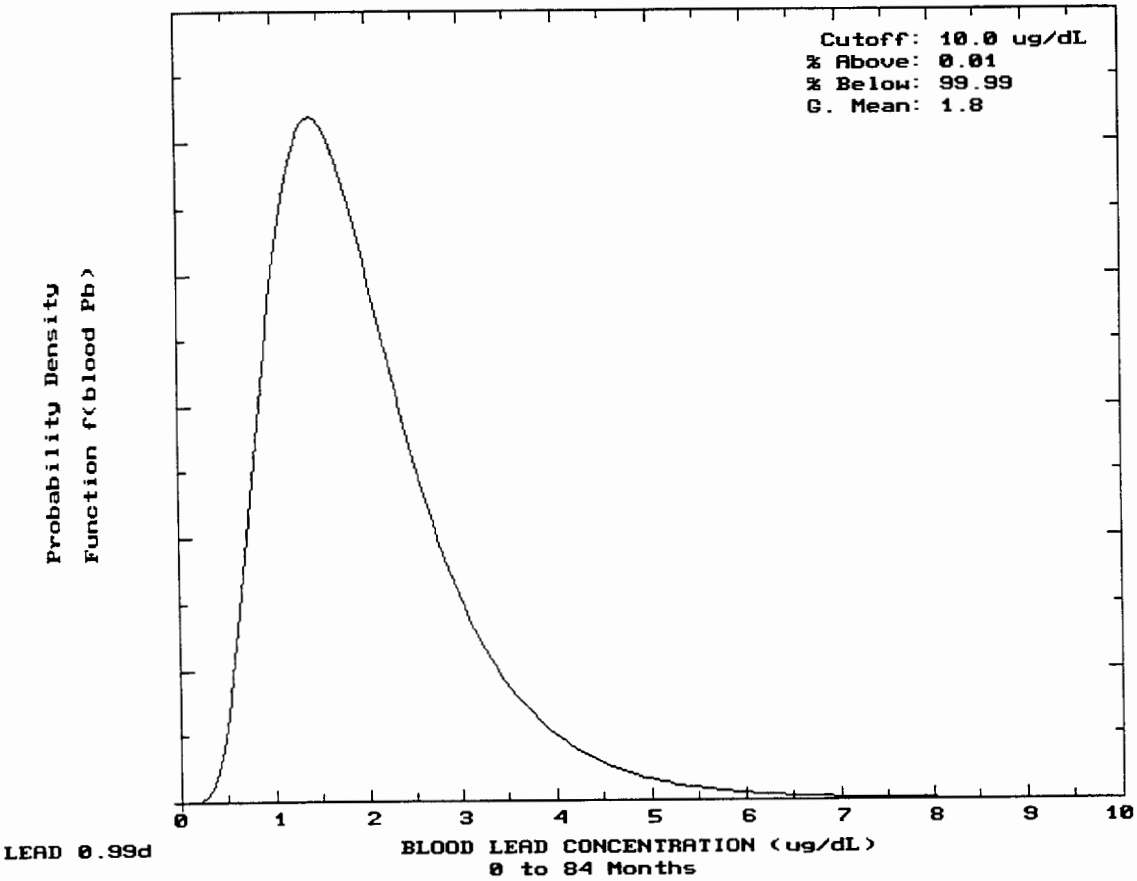
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

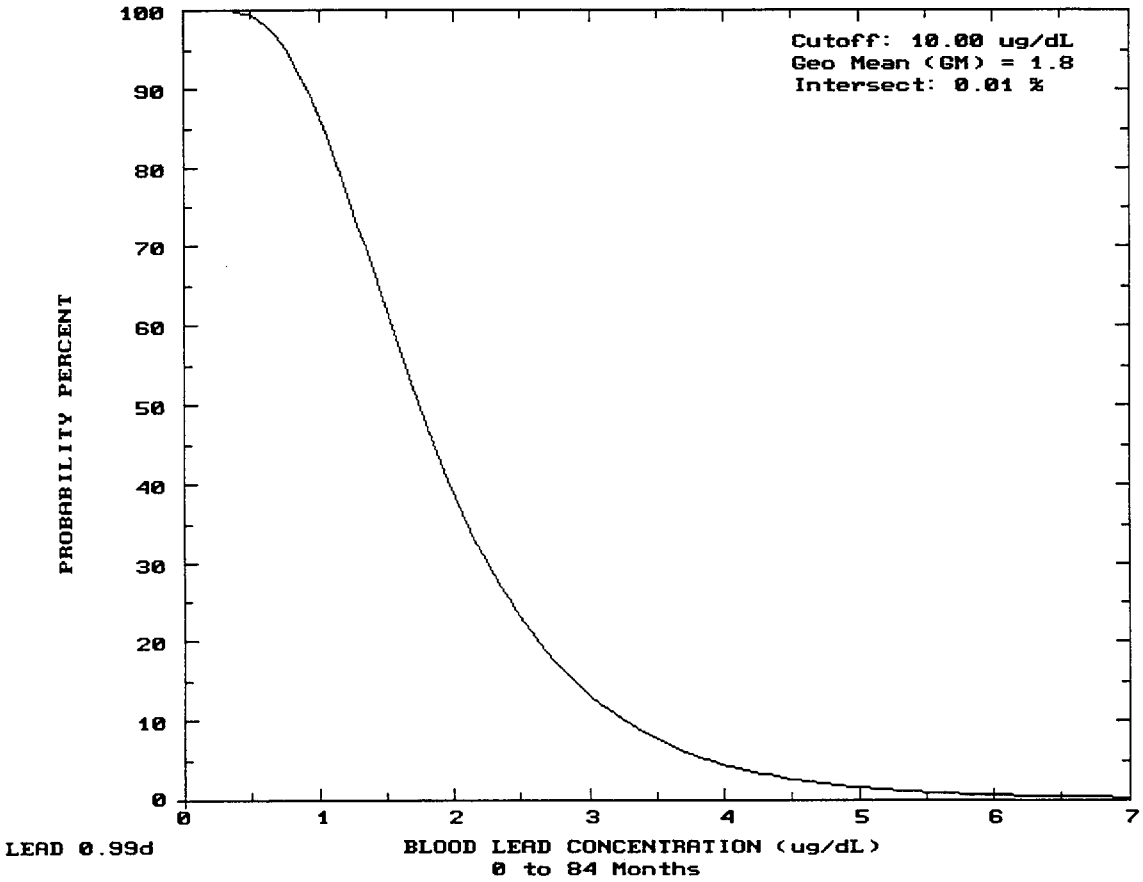
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.1	3.85	0.96
1-2:	2.1	4.89	1.53
2-3:	2.0	5.29	1.54
3-4:	1.8	5.22	1.54
4-5:	1.6	4.76	1.15
5-6:	1.5	4.88	1.04
6-7:	1.4	5.16	0.98

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.65	0.22	0.00	0.02
1-2:	2.77	0.55	0.00	0.03
2-3:	3.12	0.58	0.00	0.06
3-4:	3.02	0.59	0.00	0.07
4-5:	2.93	0.62	0.00	0.07
5-6:	3.10	0.65	0.00	0.09
6-7:	3.42	0.66	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.01
% Below: 99.99
G. Mean: 1.8
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
9
10
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
LEAD 0.99d


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.8
Intersect: 0.01 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.7

HISTOGRAMS FOR

SITE 10 - GROUNDWATER AND BACKGROUND SURFACE SOIL DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 2.15 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	39.4	39.4
1-2	39.4	39.4
2-3	39.4	39.4
3-4	39.4	39.4
4-5	39.4	39.4
5-6	39.4	39.4
6-7	39.4	39.4

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

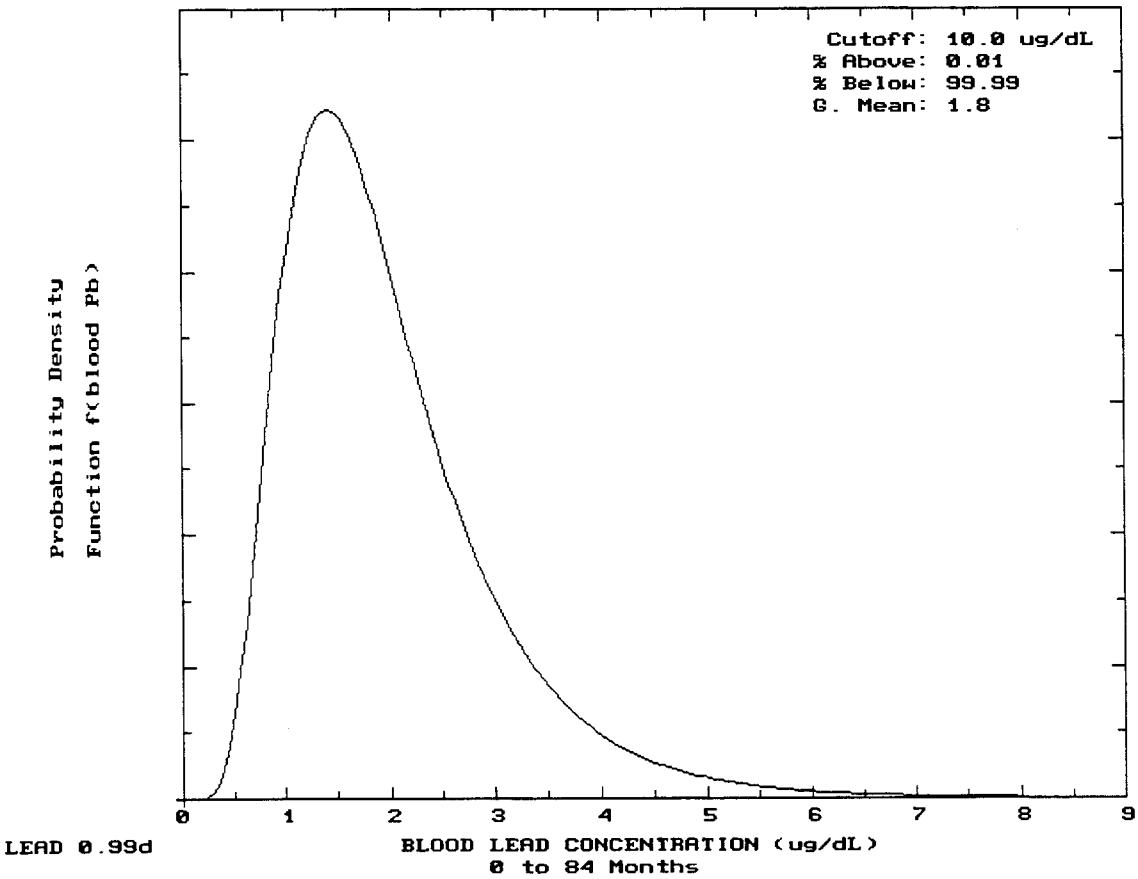
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

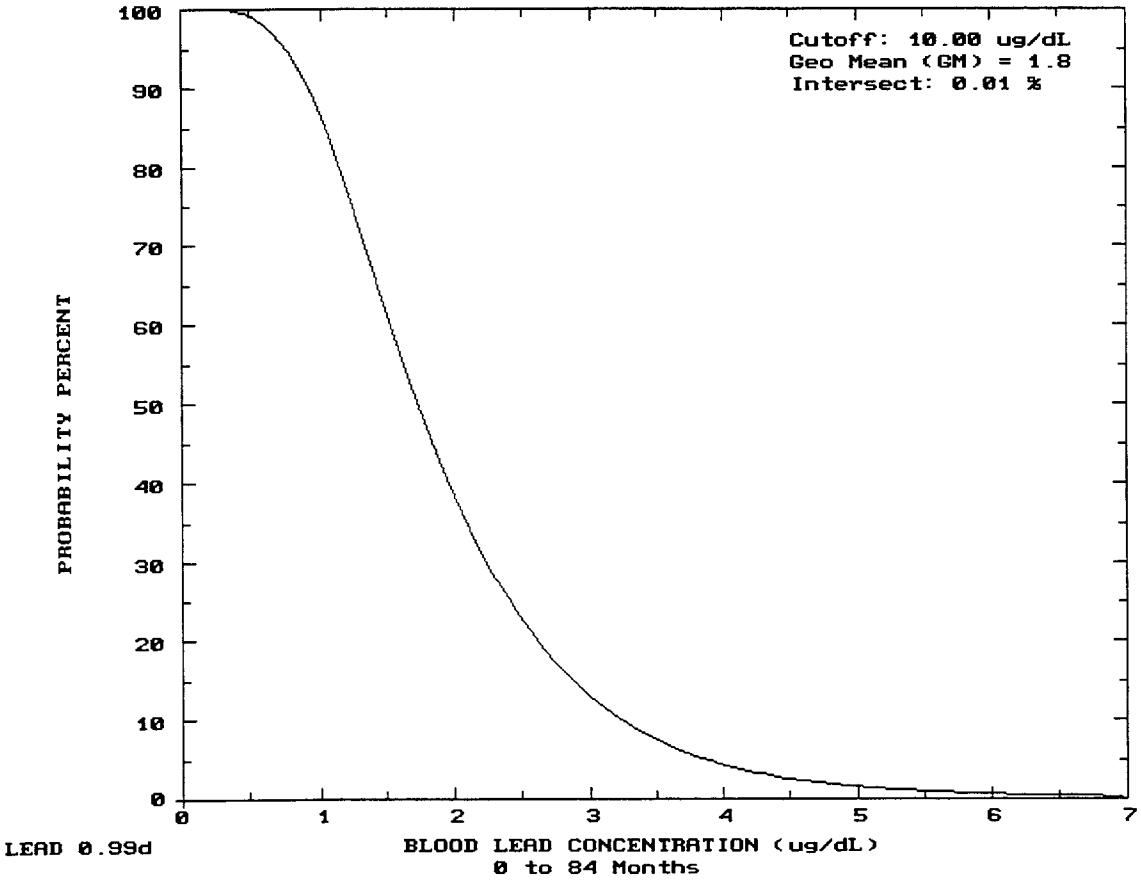
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.1	3.84	0.96
1-2:	2.1	4.85	1.53
2-3:	1.9	5.26	1.54
3-4:	1.8	5.18	1.54
4-5:	1.6	4.73	1.15
5-6:	1.5	4.84	1.04
6-7:	1.4	5.12	0.98

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.65	0.21	0.00	0.02
1-2:	2.77	0.52	0.00	0.03
2-3:	3.12	0.54	0.00	0.06
3-4:	3.02	0.55	0.00	0.07
4-5:	2.93	0.58	0.00	0.07
5-6:	3.10	0.61	0.00	0.09
6-7:	3.42	0.62	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.01
% Below: 99.99
G. Mean: 1.8
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
9
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.8
Intersect: 0.01 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.8

HISTOGRAMS FOR

SITE 11 - GROUNDWATER AND BACKGROUND SURFACE SOIL

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 3.00 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	39.4	39.4
1-2	39.4	39.4
2-3	39.4	39.4
3-4	39.4	39.4
4-5	39.4	39.4
5-6	39.4	39.4
6-7	39.4	39.4

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

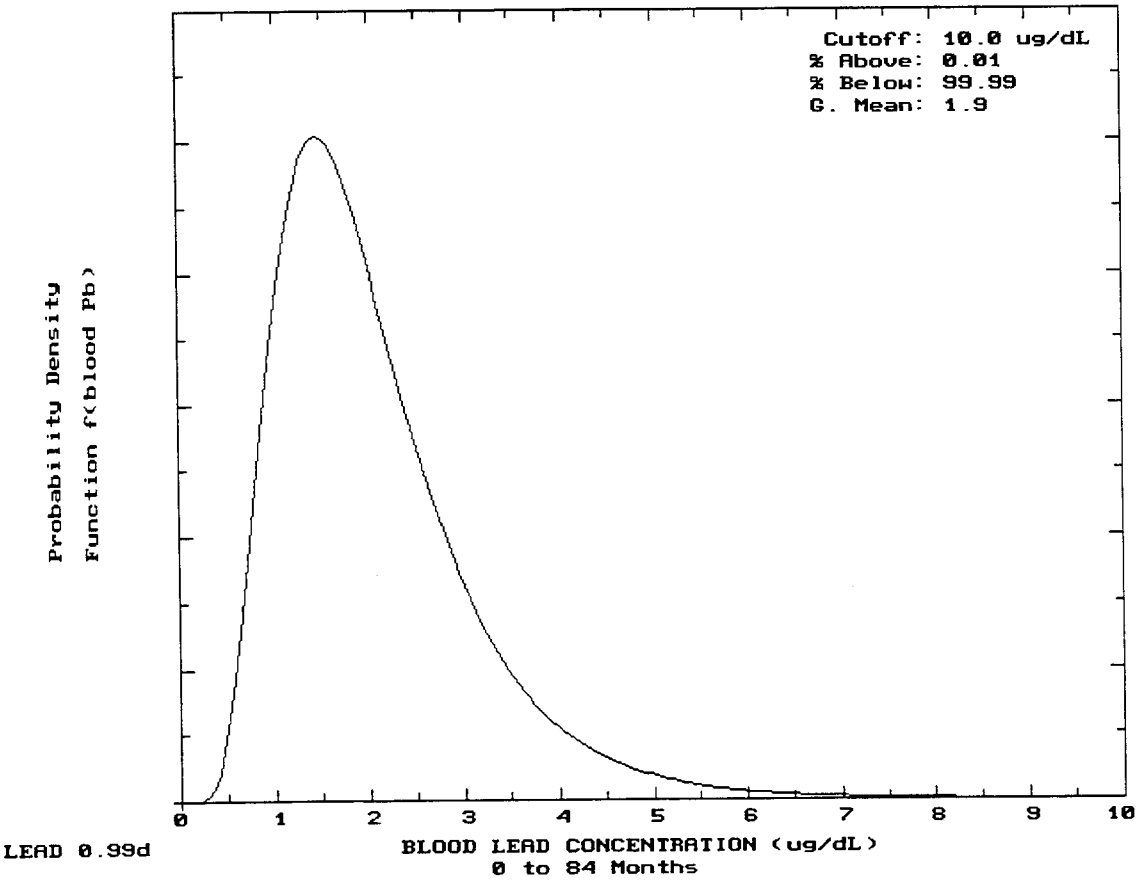
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

CALCULATED BLOOD Pb and Pb UPTAKES:

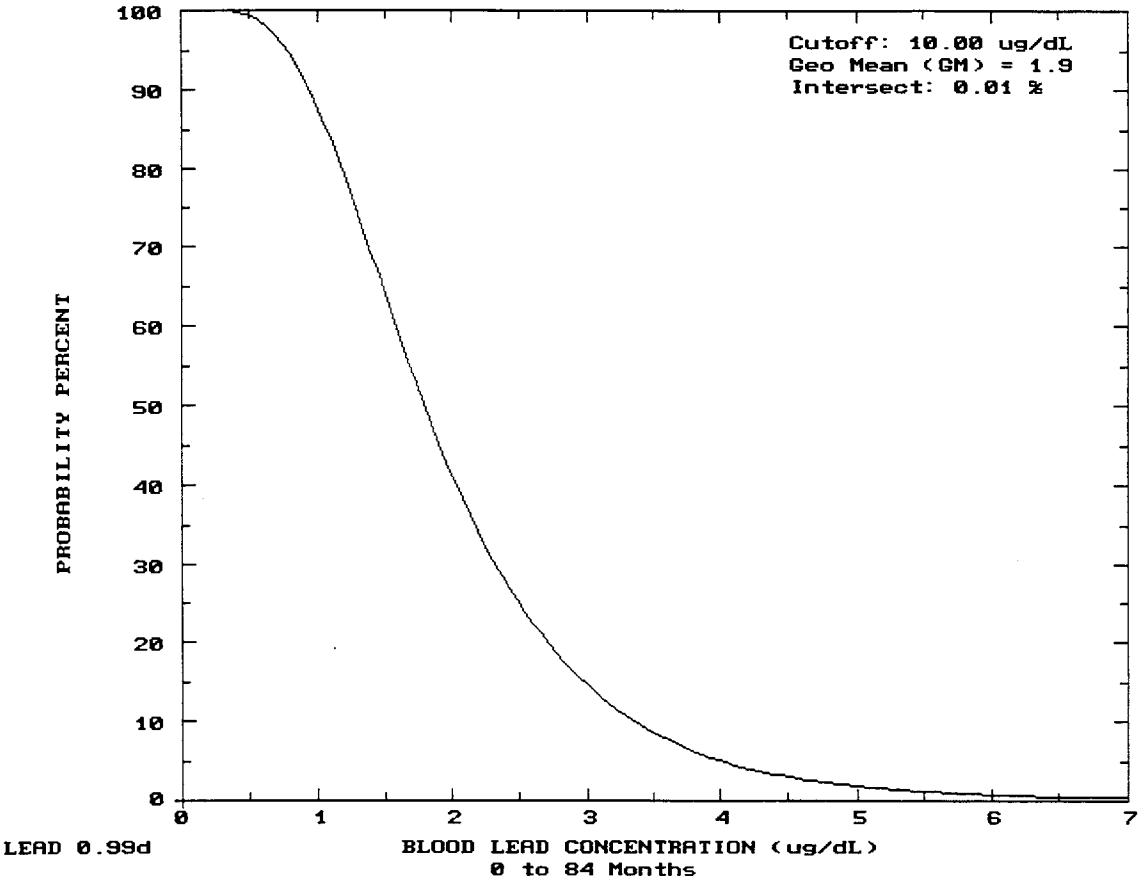
YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.1	3.91	0.96
1-2:	2.1	5.05	1.53
2-3:	2.0	5.46	1.53
3-4:	1.9	5.39	1.54
4-5:	1.7	4.95	1.15
5-6:	1.6	5.08	1.04
6-7:	1.5	5.36	0.98

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.65	0.29	0.00	0.02
1-2:	2.77	0.72	0.00	0.03
2-3:	3.12	0.75	0.00	0.06
3-4:	3.02	0.77	0.00	0.07
4-5:	2.93	0.80	0.00	0.07
5-6:	3.09	0.85	0.00	0.09
6-7:	3.42	0.86	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.01
% Below: 99.99
G. Mean: 1.9
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
9
10
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

LEAD 0.99d


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.9
Intersect: 0.01 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.9

HISTOGRAMS FOR

SITE 12 - SURFACE SOIL AND BACKGROUND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 2.30 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	1130.0	1130.0
1-2	1130.0	1130.0
2-3	1130.0	1130.0
3-4	1130.0	1130.0
4-5	1130.0	1130.0
5-6	1130.0	1130.0
6-7	1130.0	1130.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

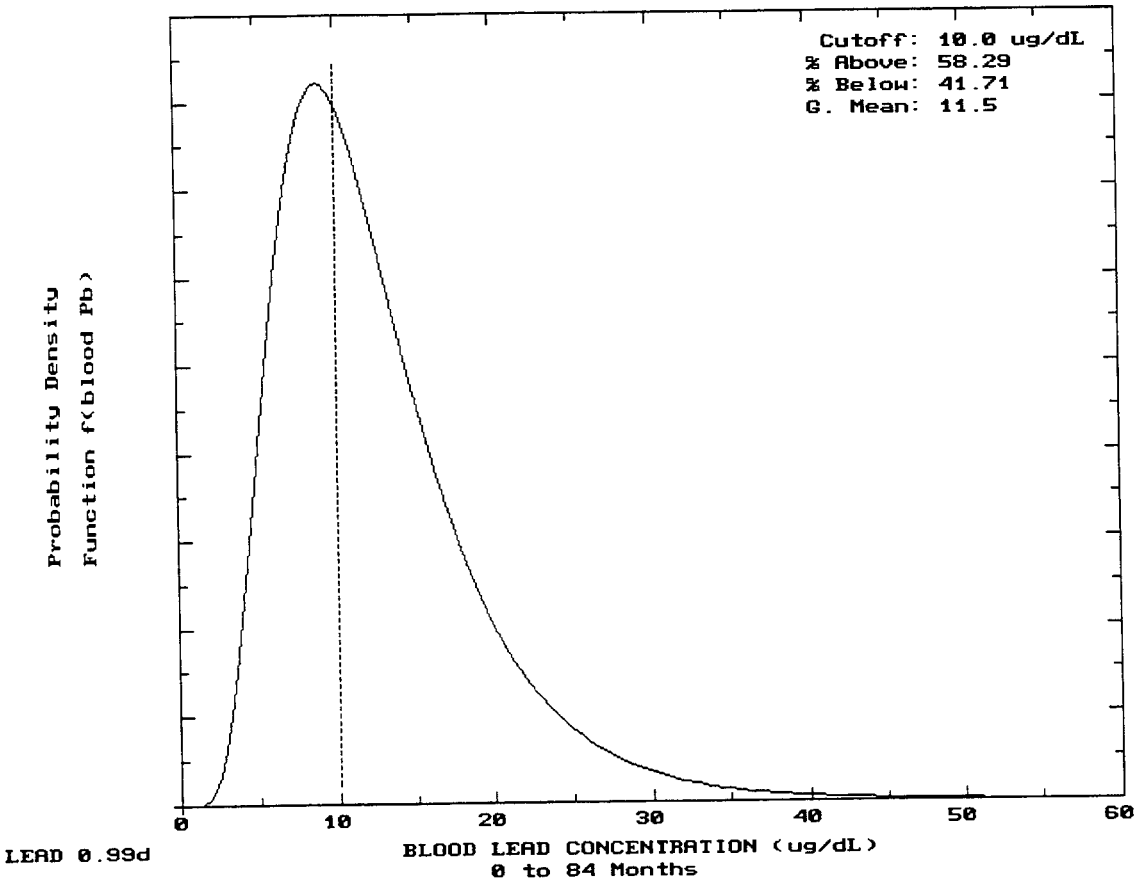
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

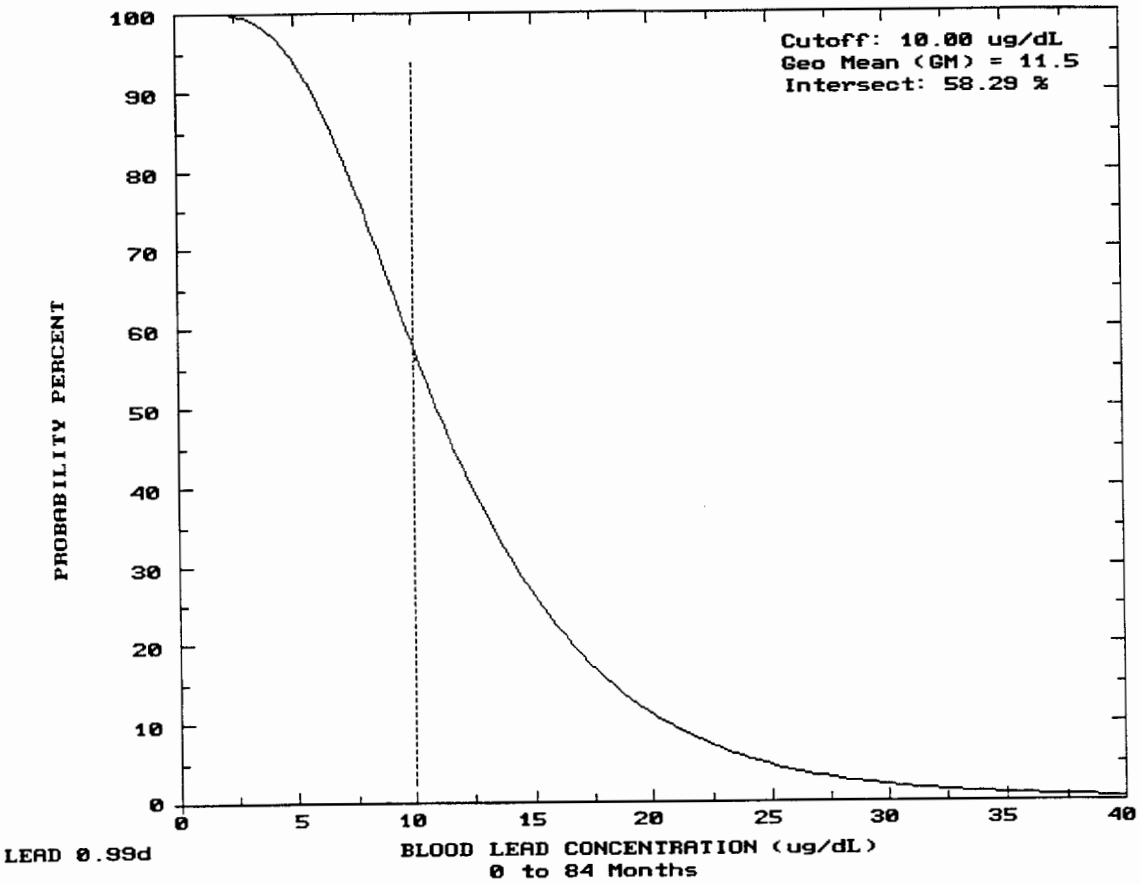
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	12.5	23.99	21.72
1-2:	14.3	35.61	33.07
2-3:	13.5	37.26	34.32
3-4:	13.1	38.49	35.53
4-5:	11.0	31.52	28.40
5-6:	9.4	29.74	26.33
6-7:	8.3	29.02	25.27

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.08	0.17	0.00	0.02
1-2:	2.09	0.42	0.00	0.03
2-3:	2.43	0.45	0.00	0.06
3-4:	2.42	0.47	0.00	0.07
4-5:	2.52	0.53	0.00	0.07
5-6:	2.74	0.58	0.00	0.09
6-7:	3.07	0.59	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 58.29
% Below: 41.71
G. Mean: 11.5
Probability Density
Function f(blood Pb)
0
10
20
30
40
50
60
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
LEAD 0.99d


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 11.5
Intersect: 58.29 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
30
35
40
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
LEAD 0.99d

APPENDIX I.d.2.10

HISTOGRAMS FOR

SITE 13 - GROUNDWATER AND BACKGROUND SURFACE SOIL DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 18.80 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	39.4	39.4
1-2	39.4	39.4
2-3	39.4	39.4
3-4	39.4	39.4
4-5	39.4	39.4
5-6	39.4	39.4
6-7	39.4	39.4

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

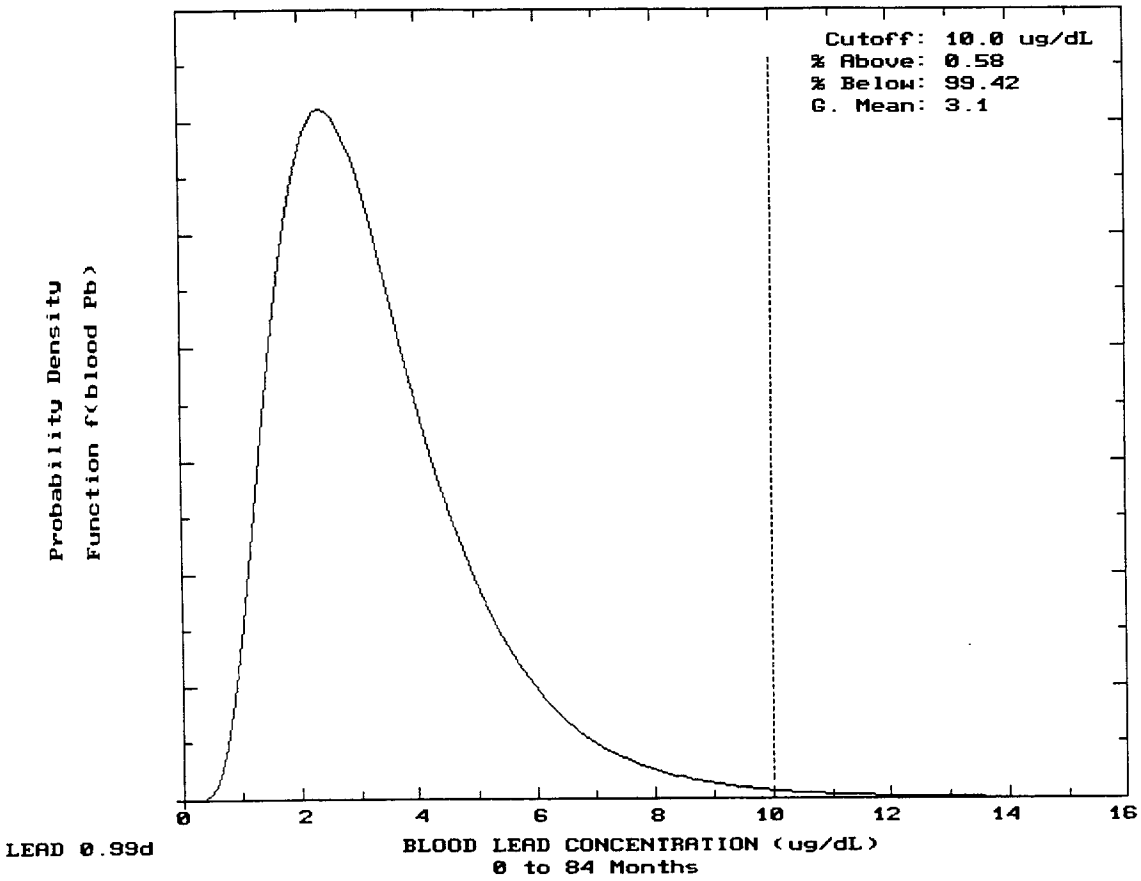
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

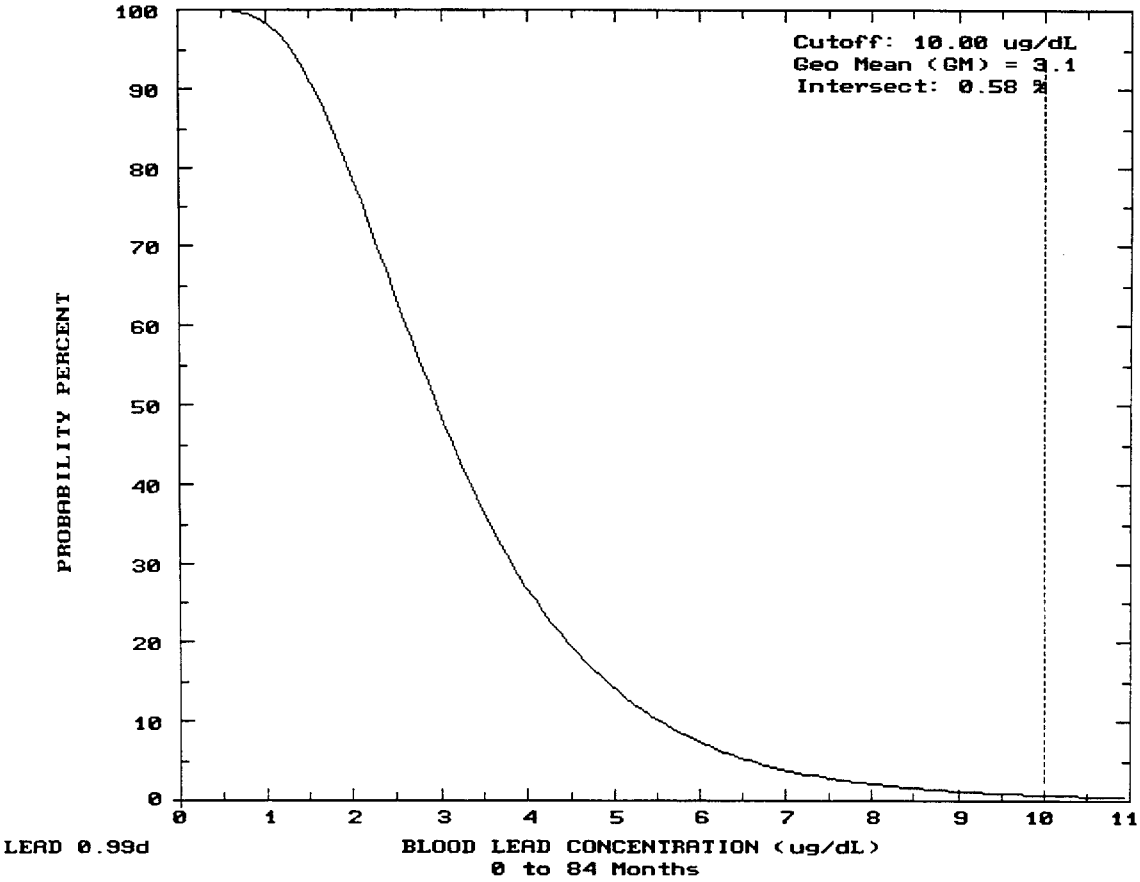
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.9	5.34	0.95
1-2:	3.5	8.56	1.48
2-3:	3.4	9.15	1.49
3-4:	3.2	9.22	1.51
4-5:	3.0	8.98	1.13
5-6:	2.9	9.35	1.02
6-7:	2.7	9.72	0.96

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.60	1.77	0.00	0.02
1-2:	2.68	4.36	0.00	0.03
2-3:	3.03	4.57	0.00	0.06
3-4:	2.94	4.70	0.00	0.07
4-5:	2.86	4.92	0.00	0.07
5-6:	3.03	5.21	0.00	0.09
6-7:	3.35	5.31	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.58
% Below: 99.42
G. Mean: 3.1
Probability Density
Function f(blood Pb)
0
2
4
6
8
10
12
14
16
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 3.1
Intersect: 0.58 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
8
9
10
11
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.11

HISTOGRAMS FOR

SITE 15 - SURFACE SOIL AND BACKGROUND GROUNDWATER

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 2.30 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	110.0	110.0
1-2	110.0	110.0
2-3	110.0	110.0
3-4	110.0	110.0
4-5	110.0	110.0
5-6	110.0	110.0
6-7	110.0	110.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

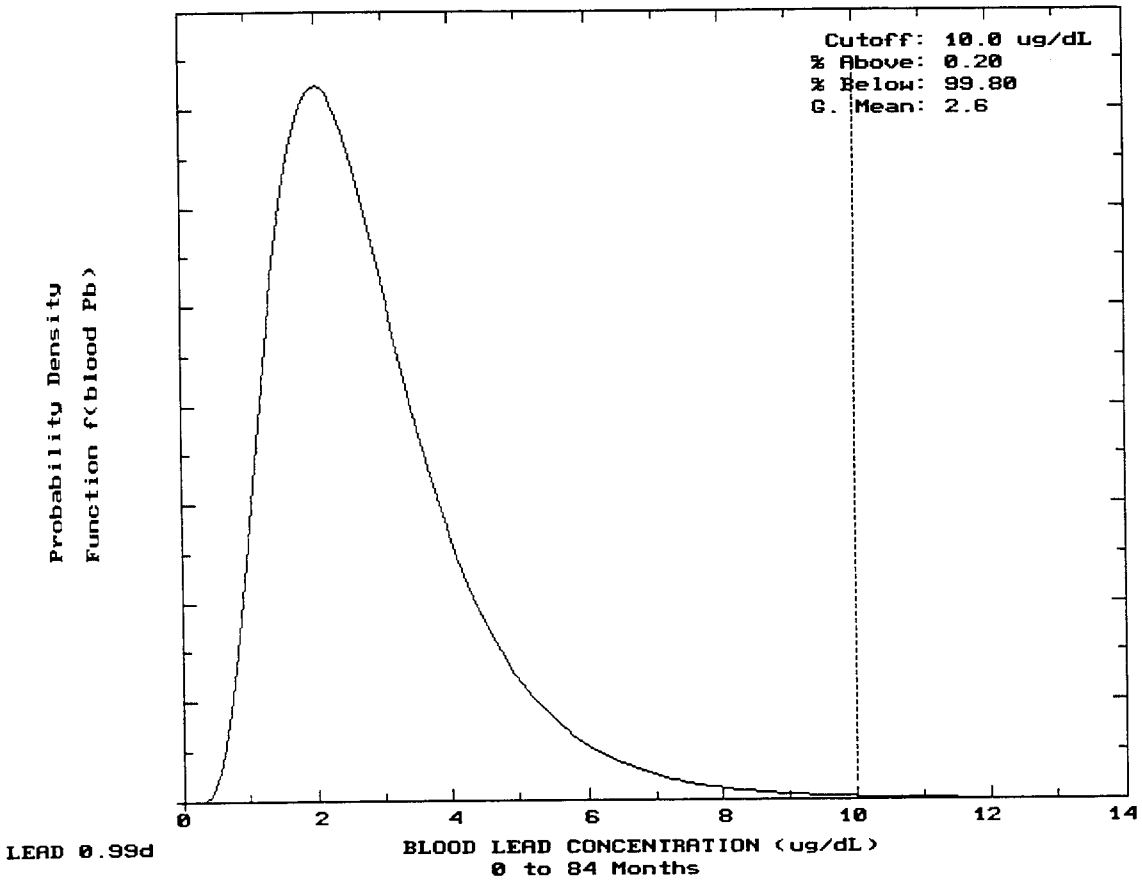
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

CALCULATED BLOOD Pb and Pb UPTAKES:

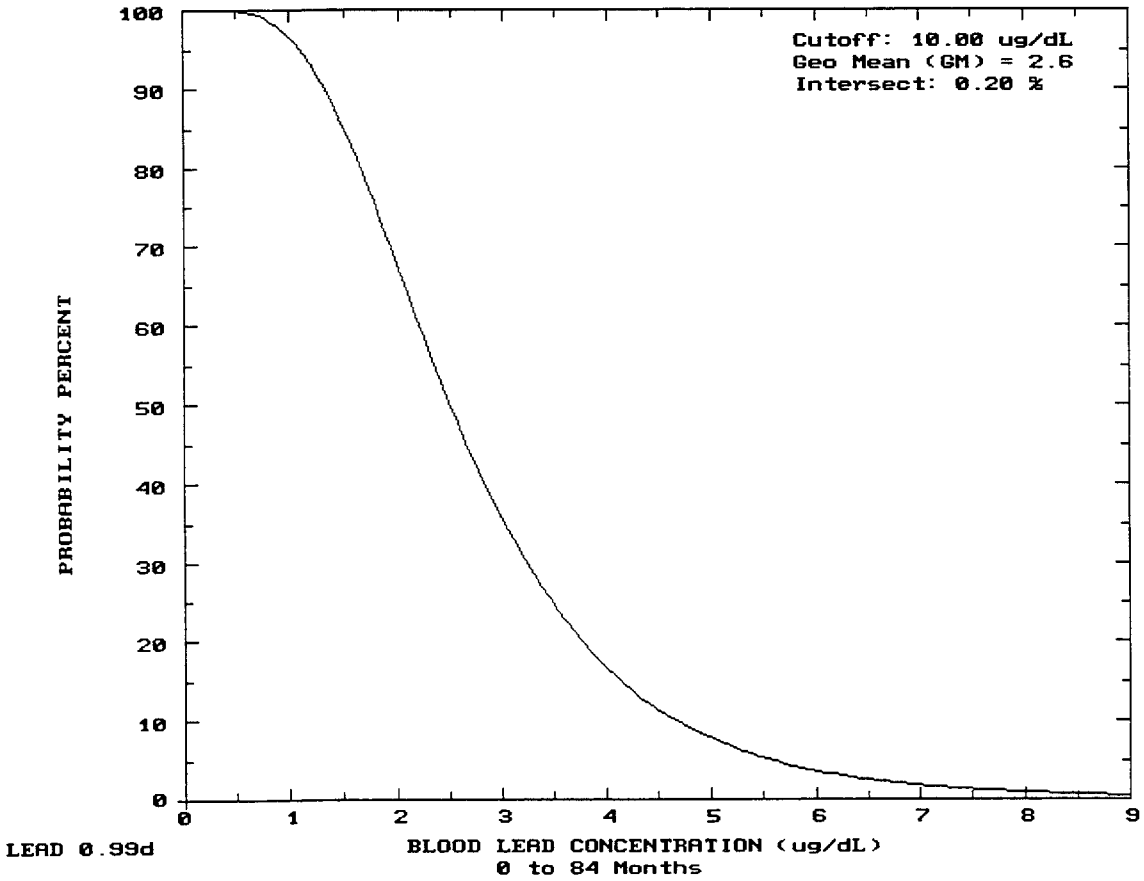
YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	3.0	5.47	2.64
1-2:	3.1	7.46	4.17
2-3:	2.9	7.89	4.20
3-4:	2.8	7.86	4.24
4-5:	2.4	6.76	3.18
5-6:	2.1	6.69	2.88
6-7:	1.9	6.87	2.72

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.60	0.22	0.00	0.02
1-2:	2.71	0.54	0.00	0.03
2-3:	3.06	0.56	0.00	0.06
3-4:	2.97	0.58	0.00	0.07
4-5:	2.90	0.61	0.00	0.07
5-6:	3.07	0.65	0.00	0.09
6-7:	3.40	0.66	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.20
% Below: 99.80
G. Mean: 2.6
Probability Density
Function f(blood Pb)
0
2
4
6
8
10
12
14
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

LEAD 0.99d


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 2.6
Intersect: 0.20 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
8
9
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.12

HISTOGRAMS FOR

SITE 15 - SUBSURFACE SOIL AND
BACKGROUND GROUNDWATER DATA

IEUBK MODEL RESULT

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 2.30 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	6.7	6.7
1-2	6.7	6.7
2-3	6.7	6.7
3-4	6.7	6.7
4-5	6.7	6.7
5-6	6.7	6.7
6-7	6.7	6.7

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

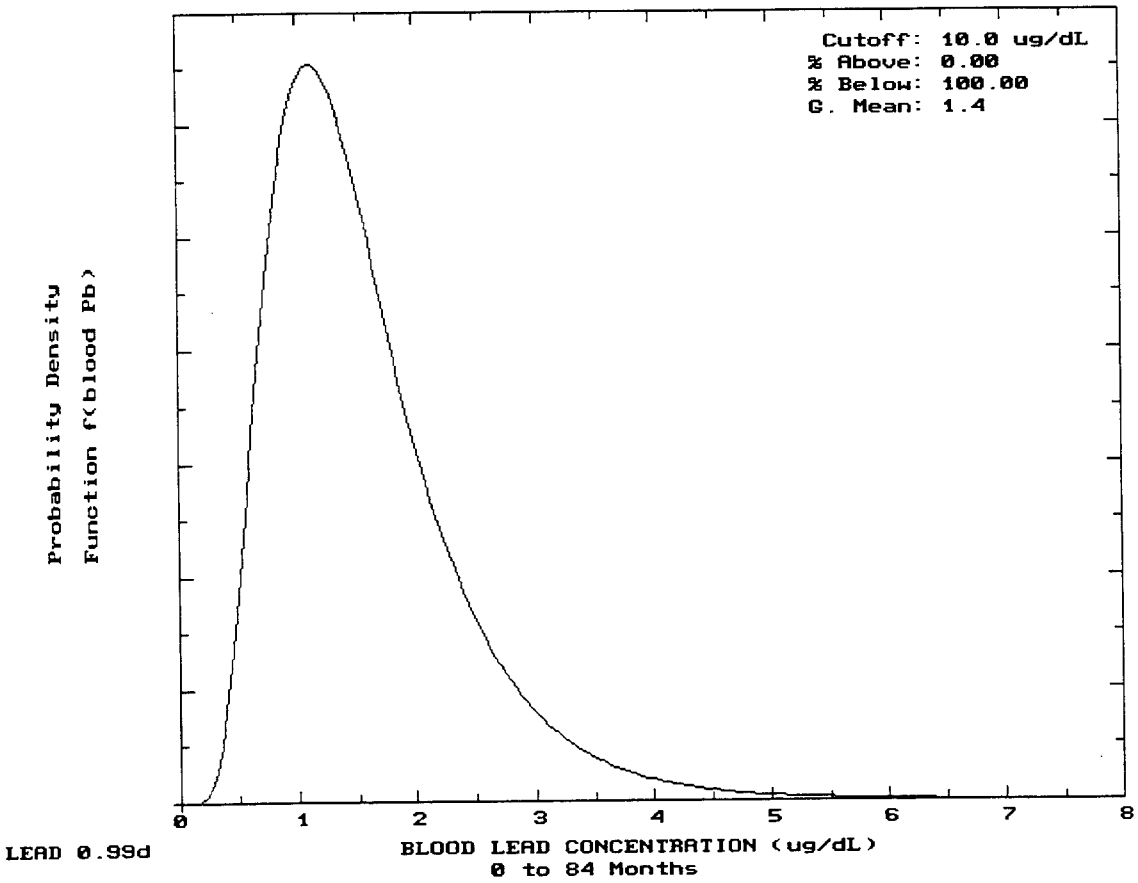
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

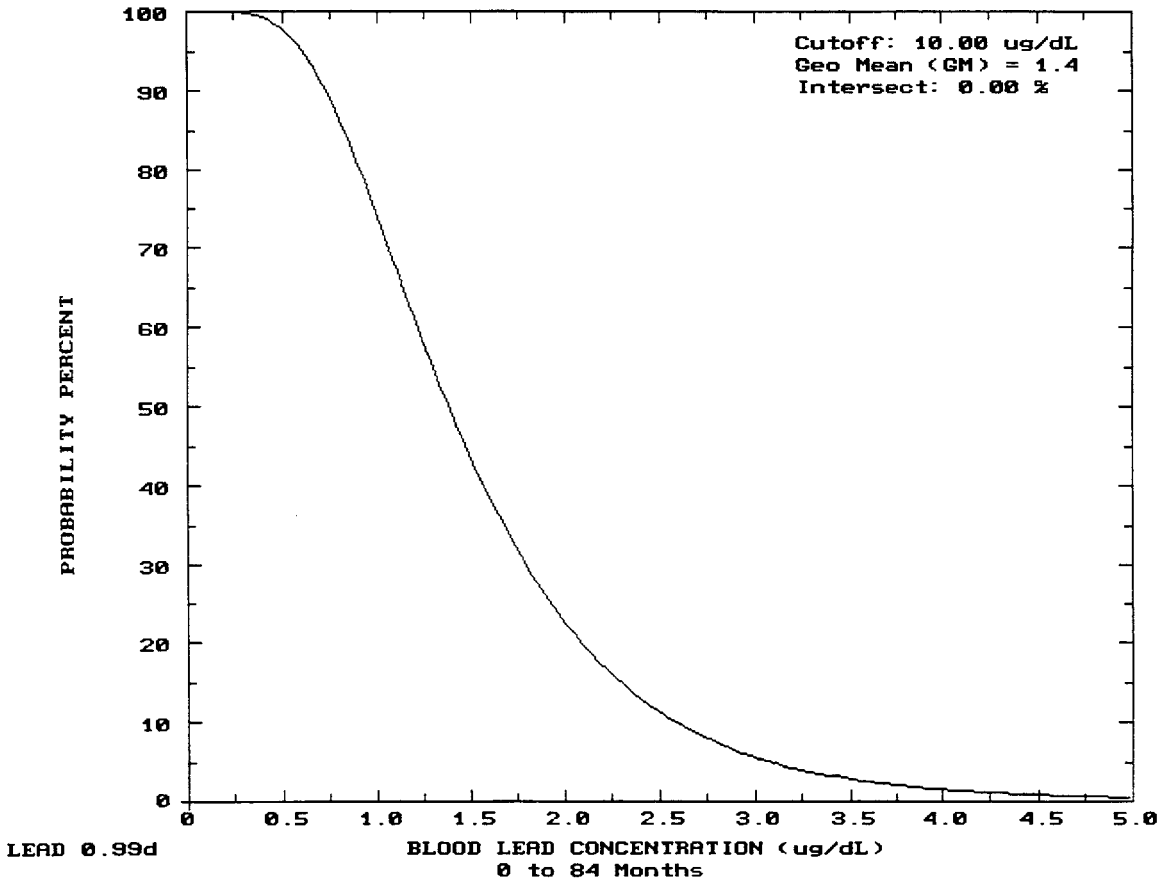
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	1.7	3.08	0.16
1-2:	1.6	3.65	0.26
2-3:	1.5	4.05	0.26
3-4:	1.4	3.97	0.26
4-5:	1.3	3.83	0.20
5-6:	1.2	4.03	0.18
6-7:	1.2	4.36	0.17

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.67	0.22	0.00	0.02
1-2:	2.80	0.56	0.00	0.03
2-3:	3.15	0.58	0.00	0.06
3-4:	3.04	0.59	0.00	0.07
4-5:	2.94	0.62	0.00	0.07
5-6:	3.11	0.65	0.00	0.09
6-7:	3.43	0.67	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.00
% Below: 100.00
G. Mean: 1.4
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
LEAD 0.99d


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.4
Intersect: 0.00 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.13

HISTOGRAMS FOR

SITE 16 - SURFACE SOIL AND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 30.10 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	1030.0	1030.0
1-2	1030.0	1030.0
2-3	1030.0	1030.0
3-4	1030.0	1030.0
4-5	1030.0	1030.0
5-6	1030.0	1030.0
6-7	1030.0	1030.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

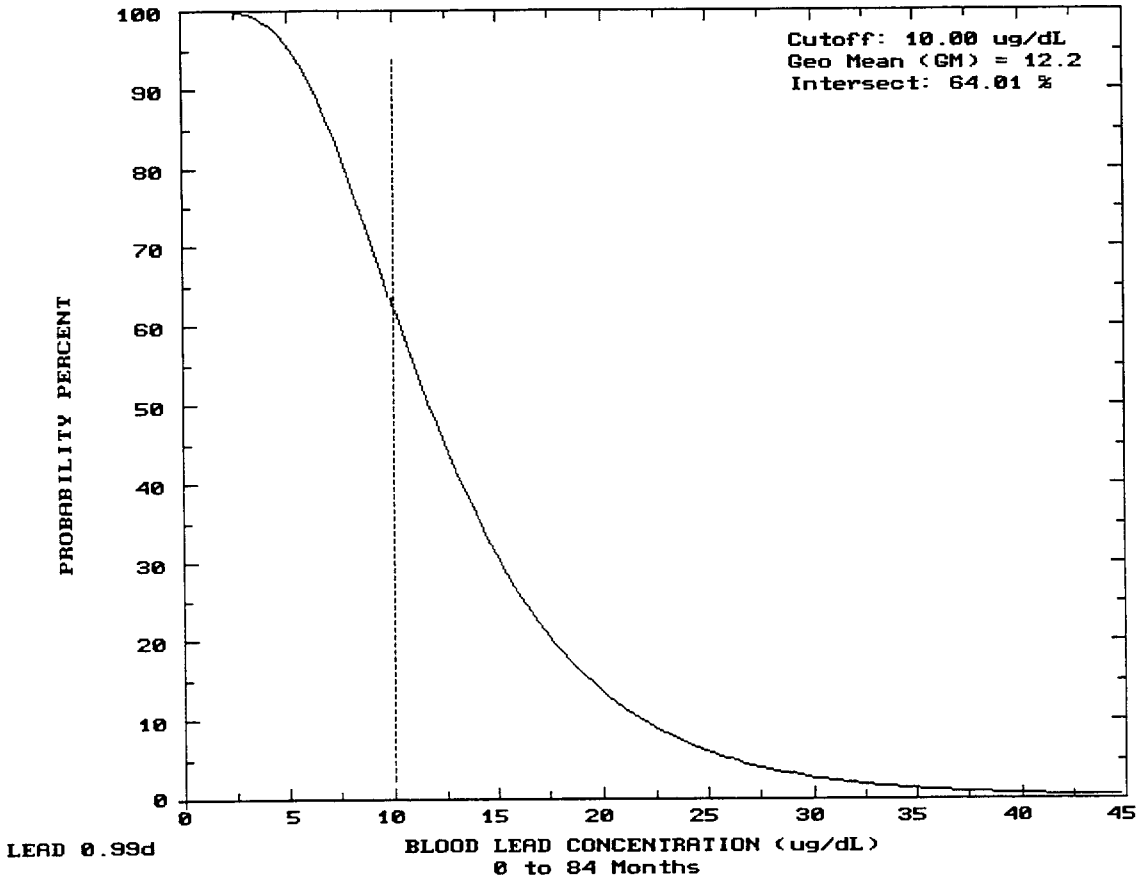
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

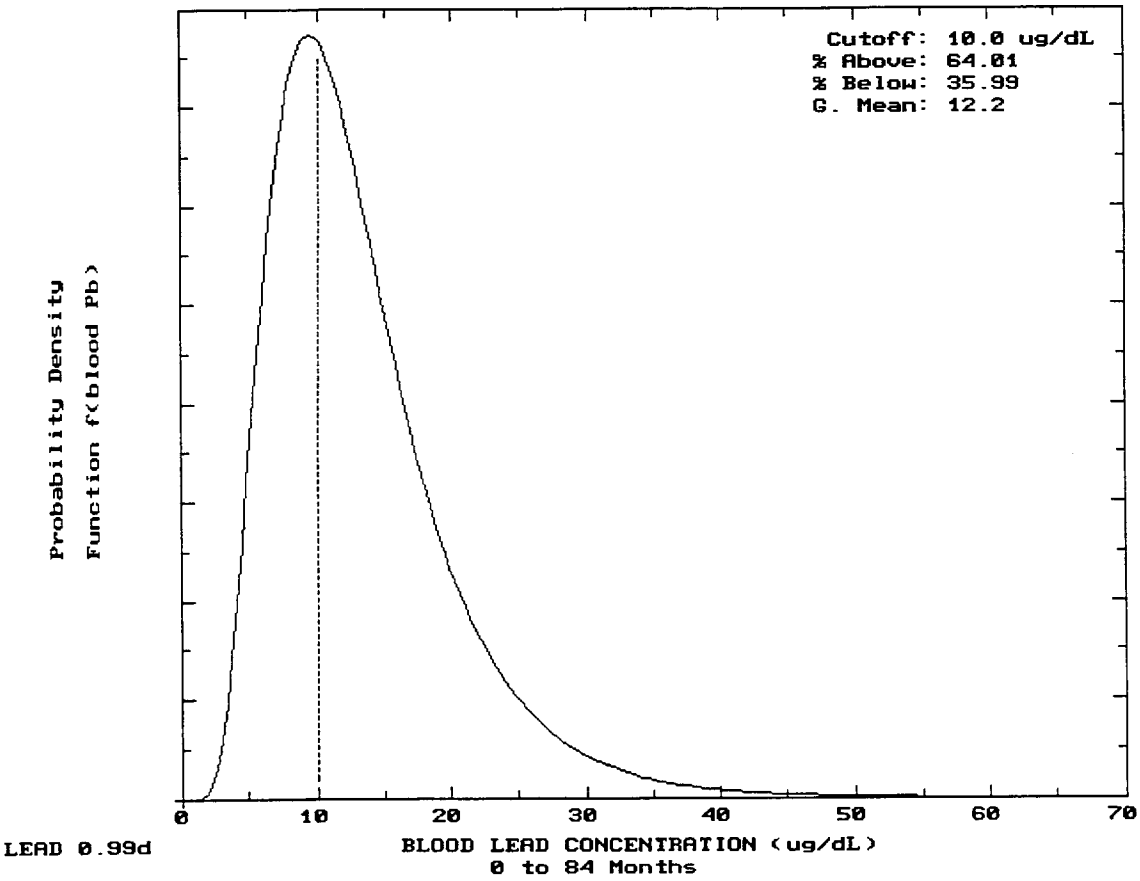
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	12.5	24.13	19.76
1-2:	14.9	37.16	29.71
2-3:	14.2	39.07	30.83
3-4:	13.8	40.51	31.94
4-5:	11.9	34.75	25.41
5-6:	10.4	33.68	23.52
6-7:	9.4	33.31	22.57

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.08	2.26	0.00	0.02
1-2:	2.06	5.36	0.00	0.03
2-3:	2.40	5.78	0.00	0.06
3-4:	2.39	6.11	0.00	0.07
4-5:	2.47	6.81	0.00	0.07
5-6:	2.68	7.38	0.00	0.09
6-7:	3.01	7.63	0.00	0.09


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 12.2
Intersect: 64.01 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
30
35
40
45
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
LEAD 0.99d


Cutoff: 10.0 ug/dL
% Above: 64.01
% Below: 35.99
G. Mean: 12.2
Probability Density
Function f(blood Pb)
0
10
20
30
40
50
60
70
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
LEAD 0.99d

APPENDIX I.d.2.14

HISTOGRAMS FOR

SITE 16 - SUBSURFACE SOIL AND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 30.10 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	13.0	13.0
1-2	13.0	13.0
2-3	13.0	13.0
3-4	13.0	13.0
4-5	13.0	13.0
5-6	13.0	13.0
6-7	13.0	13.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

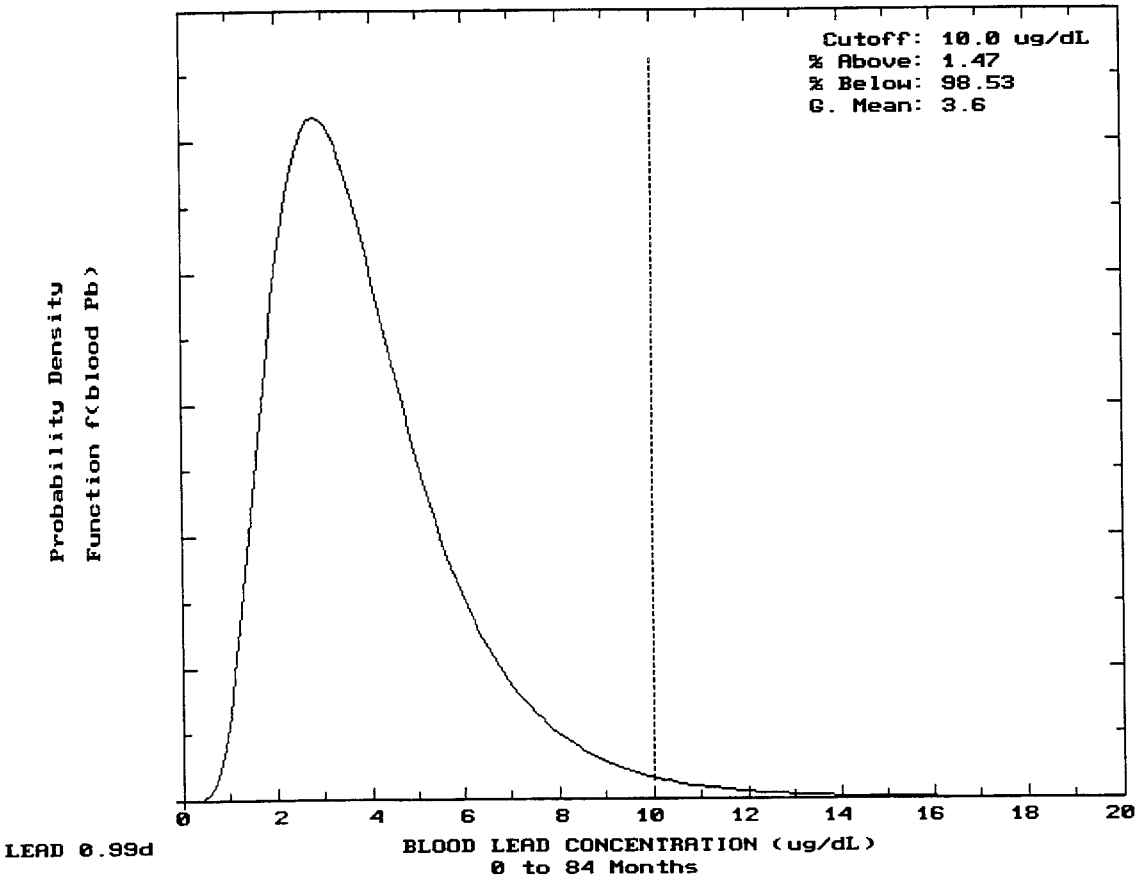
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

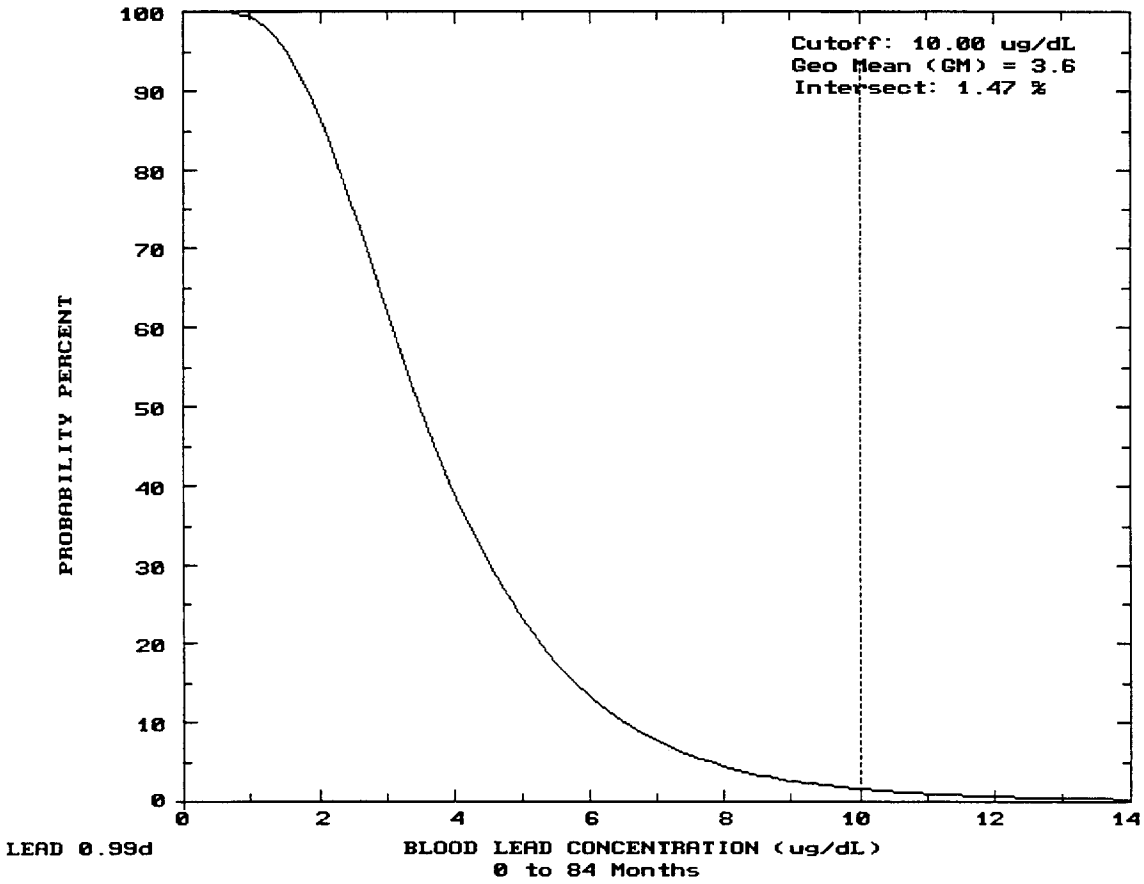
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	3.1	5.74	0.31
1-2:	4.1	10.05	0.48
2-3:	4.0	10.77	0.49
3-4:	3.8	10.91	0.49
4-5:	3.7	11.06	0.37
5-6:	3.5	11.67	0.33
6-7:	3.4	12.14	0.31

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.59	2.82	0.00	0.02
1-2:	2.65	6.89	0.00	0.03
2-3:	3.00	7.22	0.00	0.06
3-4:	2.91	7.44	0.00	0.07
4-5:	2.83	7.79	0.00	0.07
5-6:	3.00	8.25	0.00	0.09
6-7:	3.32	8.41	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 1.47
% Below: 98.53
G. Mean: 3.6
Probability Density
Function f(blood Pb)
0
2
4
6
8
10
12
14
16
18
20
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 3.6
Intersect: 1.47 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.15

HISTOGRAMS FOR

SITE 17 - SURFACE SOIL AND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 5.70 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	7.5	7.5
1-2	7.5	7.5
2-3	7.5	7.5
3-4	7.5	7.5
4-5	7.5	7.5
5-6	7.5	7.5
6-7	7.5	7.5

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

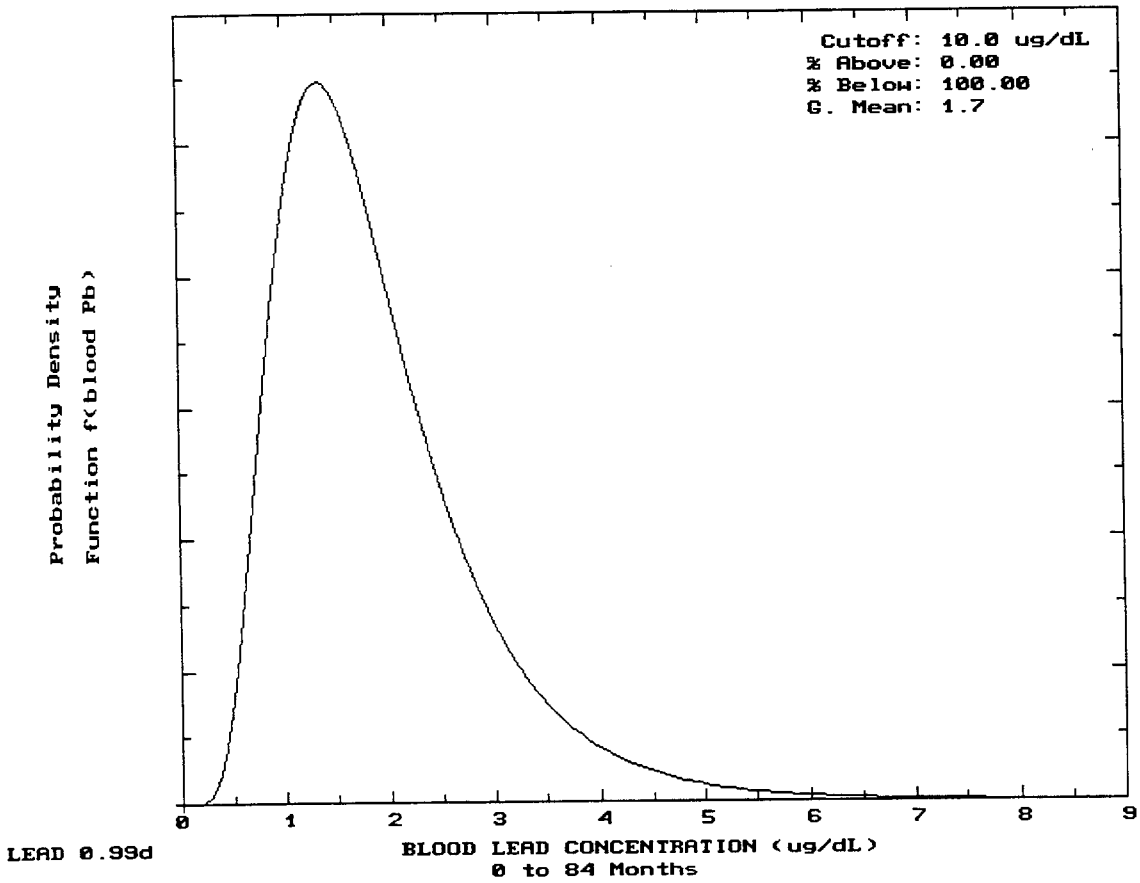
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

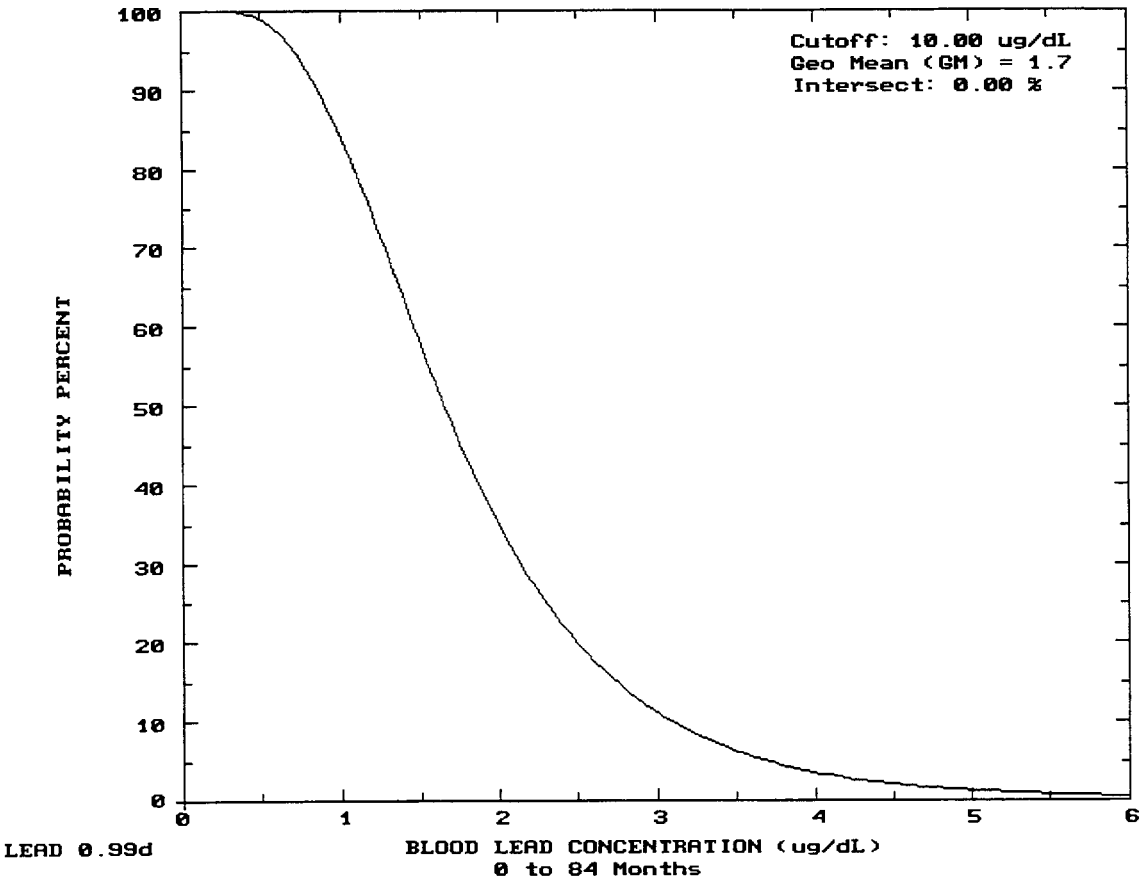
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	1.9	3.41	0.18
1-2:	1.9	4.48	0.29
2-3:	1.8	4.92	0.29
3-4:	1.7	4.85	0.29
4-5:	1.6	4.74	0.22
5-6:	1.5	5.00	0.20
6-7:	1.5	5.34	0.19

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.66	0.55	0.00	0.02
1-2:	2.78	1.37	0.00	0.03
2-3:	3.13	1.43	0.00	0.06
3-4:	3.03	1.47	0.00	0.07
4-5:	2.93	1.53	0.00	0.07
5-6:	3.10	1.61	0.00	0.09
6-7:	3.42	1.64	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.00
% Below: 100.00
G. Mean: 1.7
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
9
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.7
Intersect: 0.00 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.16

HISTOGRAMS FOR

SITE 19 - SUBSURFACE SOIL AND GROUNDWATER DATA

IUBEK MODEL RESULTS

LEAD MODEL Version 0.99d

.IR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 9.93 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	432.0	432.0
1-2	432.0	432.0
2-3	432.0	432.0
3-4	432.0	432.0
4-5	432.0	432.0
5-6	432.0	432.0
6-7	432.0	432.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

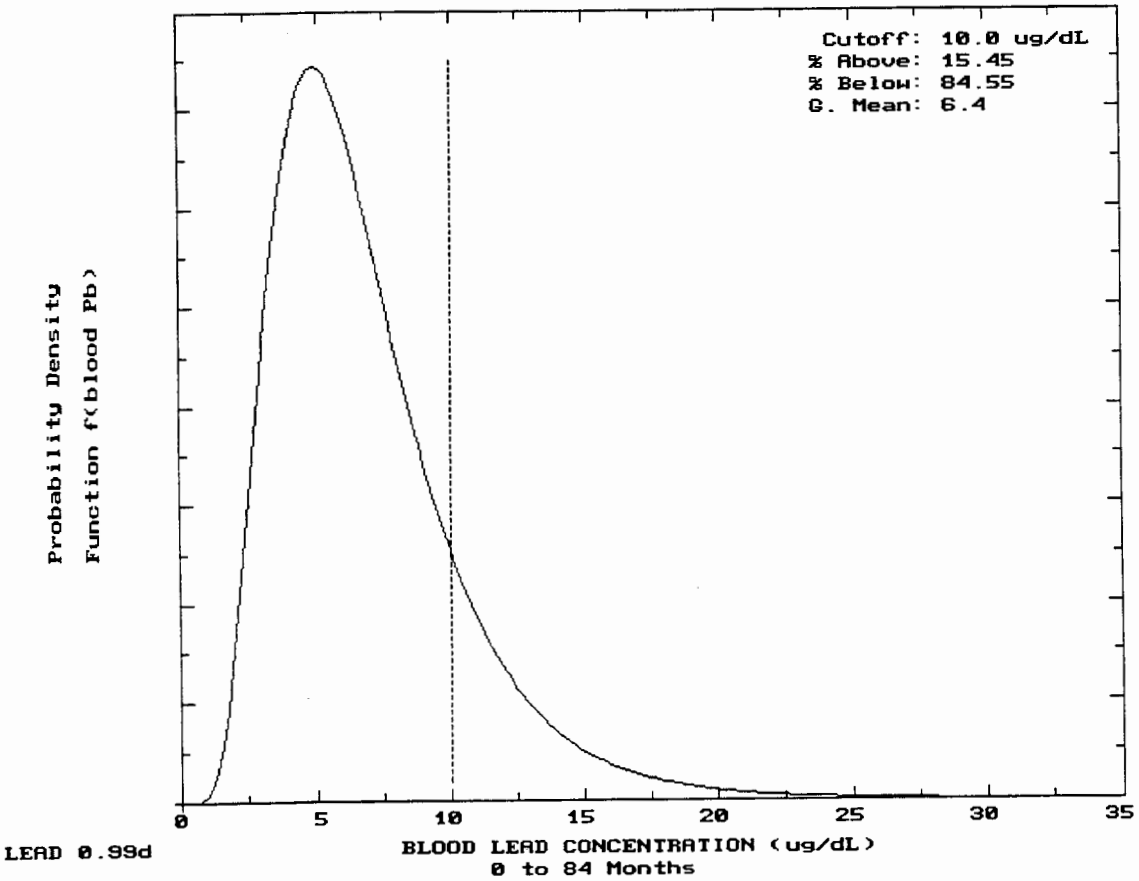
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

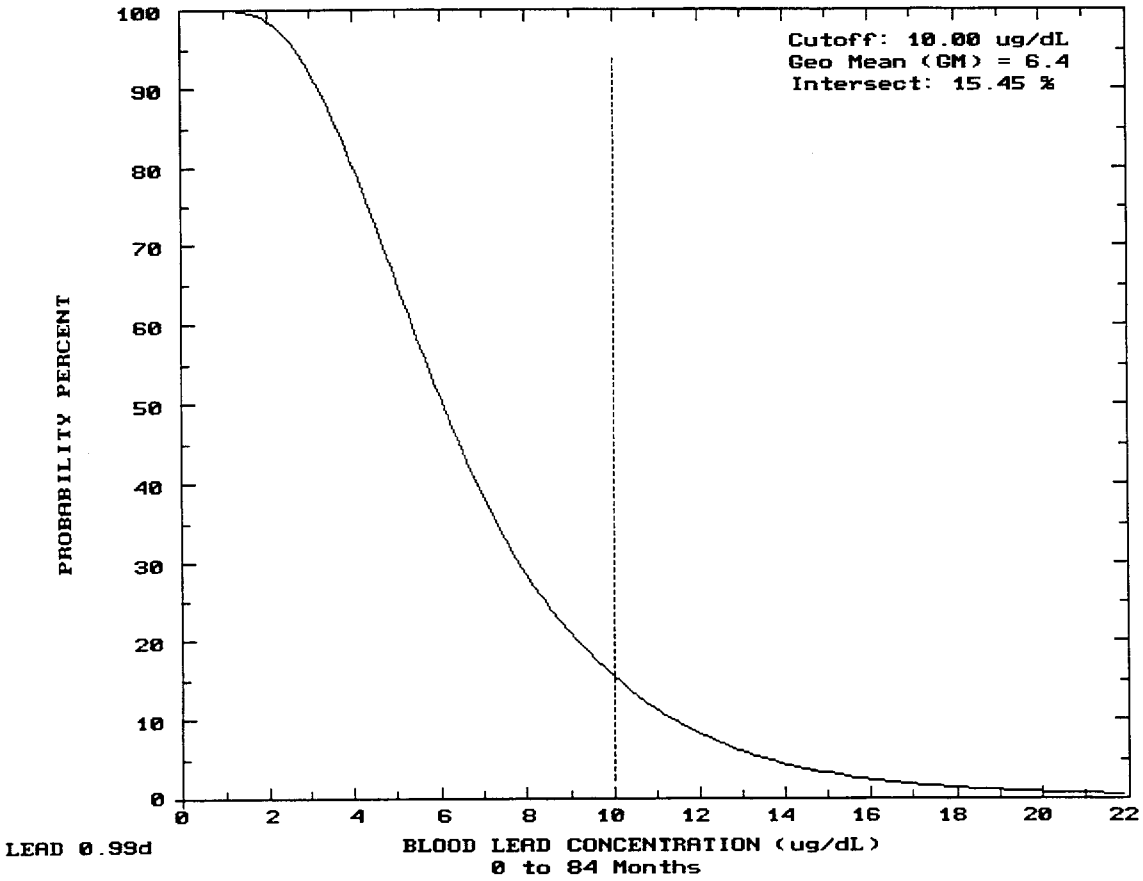
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	6.8	12.77	9.50
1-2:	7.9	19.28	14.73
2-3:	7.4	20.10	15.03
3-4:	7.1	20.45	15.34
4-5:	6.0	17.08	11.80
5-6:	5.2	16.44	10.77
6-7:	4.7	16.31	10.24

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.39	0.86	0.00	0.02
1-2:	2.43	2.09	0.00	0.03
2-3:	2.79	2.22	0.00	0.06
3-4:	2.74	2.31	0.00	0.07
4-5:	2.73	2.49	0.00	0.07
5-6:	2.93	2.66	0.00	0.09
6-7:	3.25	2.72	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 15.45
% Below: 84.55
G. Mean: 6.4
Probability Density
Function f(blood Pb)
0
5
10
15
20
25
30
35
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 6.4
Intersect: 15.45 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
16
18
20
22
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.17

HISTOGRAMS FOR

SITE 20 - SURFACE SOIL AND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 1.50 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	252.0	252.0
1-2	252.0	252.0
2-3	252.0	252.0
3-4	252.0	252.0
4-5	252.0	252.0
5-6	252.0	252.0
6-7	252.0	252.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

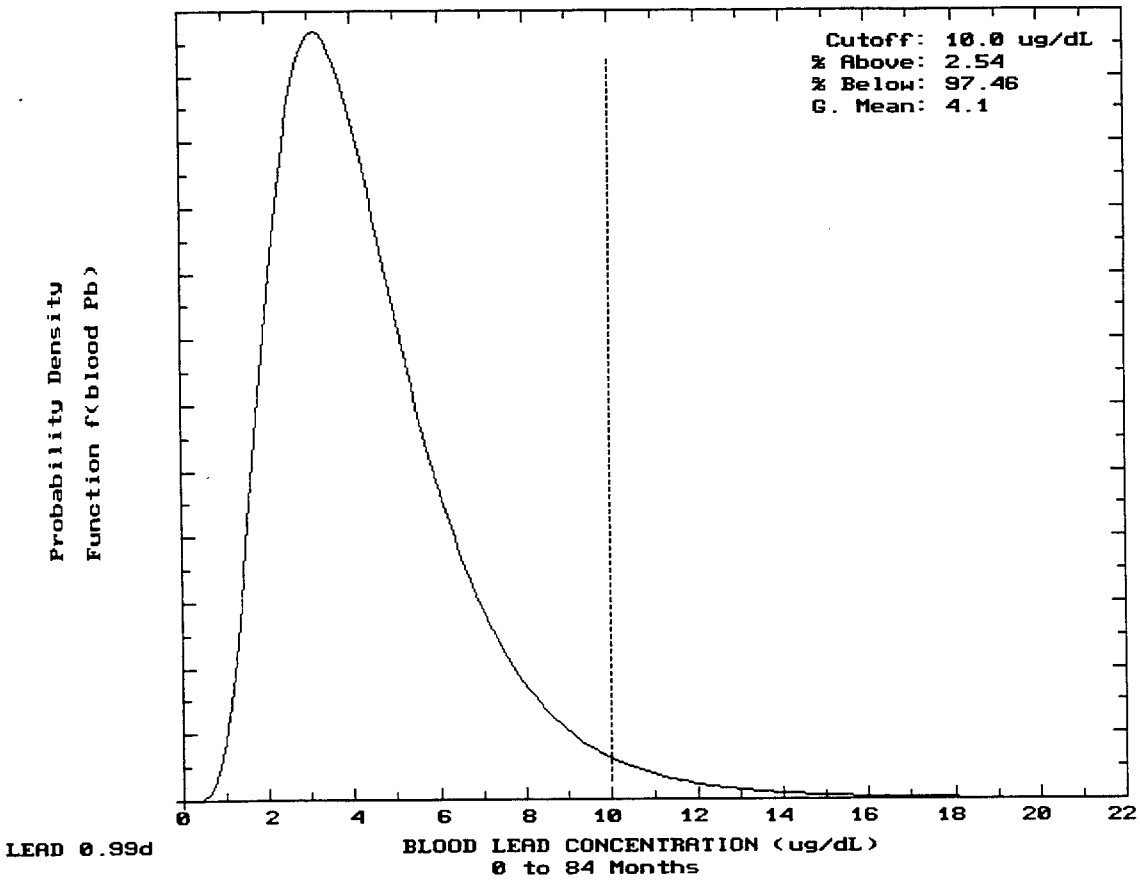
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

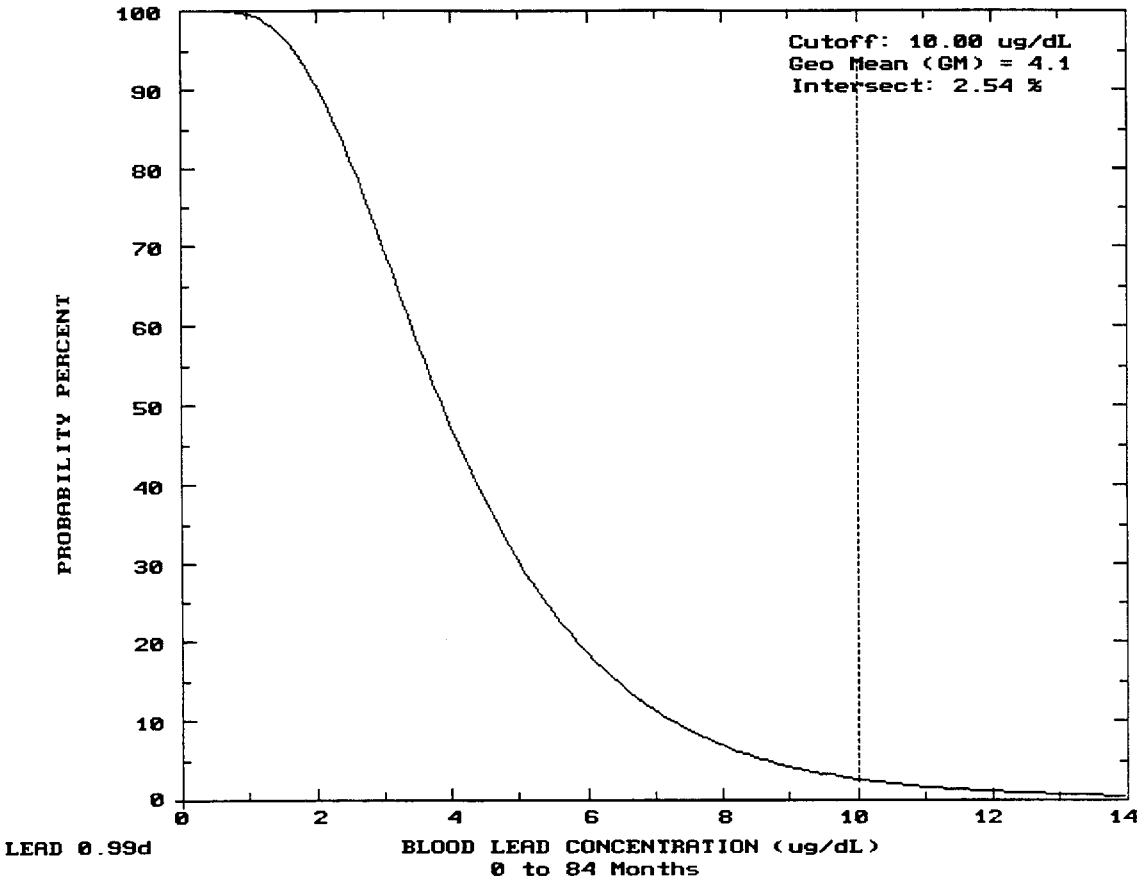
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	4.6	8.50	5.83
1-2:	5.0	12.14	9.17
2-3:	4.7	12.66	9.29
3-4:	4.5	12.72	9.41
4-5:	3.7	10.44	7.14
5-6:	3.2	10.01	6.48
6-7:	2.9	10.01	6.15

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.51	0.14	0.00	0.02
1-2:	2.60	0.34	0.00	0.03
2-3:	2.95	0.35	0.00	0.06
3-4:	2.88	0.37	0.00	0.07
4-5:	2.84	0.39	0.00	0.07
5-6:	3.02	0.41	0.00	0.09
6-7:	3.35	0.42	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 2.54
% Below: 97.46
G. Mean: 4.1
Probability Density
Function f(blood Pb)
0
2
4
6
8
10
12
14
16
18
20
22
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 4.1
Intersect: 2.54 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.18

HISTOGRAMS FOR

SITE 20 - SUBSURFACE SOIL AND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 1.50 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	14.0	14.0
1-2	14.0	14.0
2-3	14.0	14.0
3-4	14.0	14.0
4-5	14.0	14.0
5-6	14.0	14.0
6-7	14.0	14.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

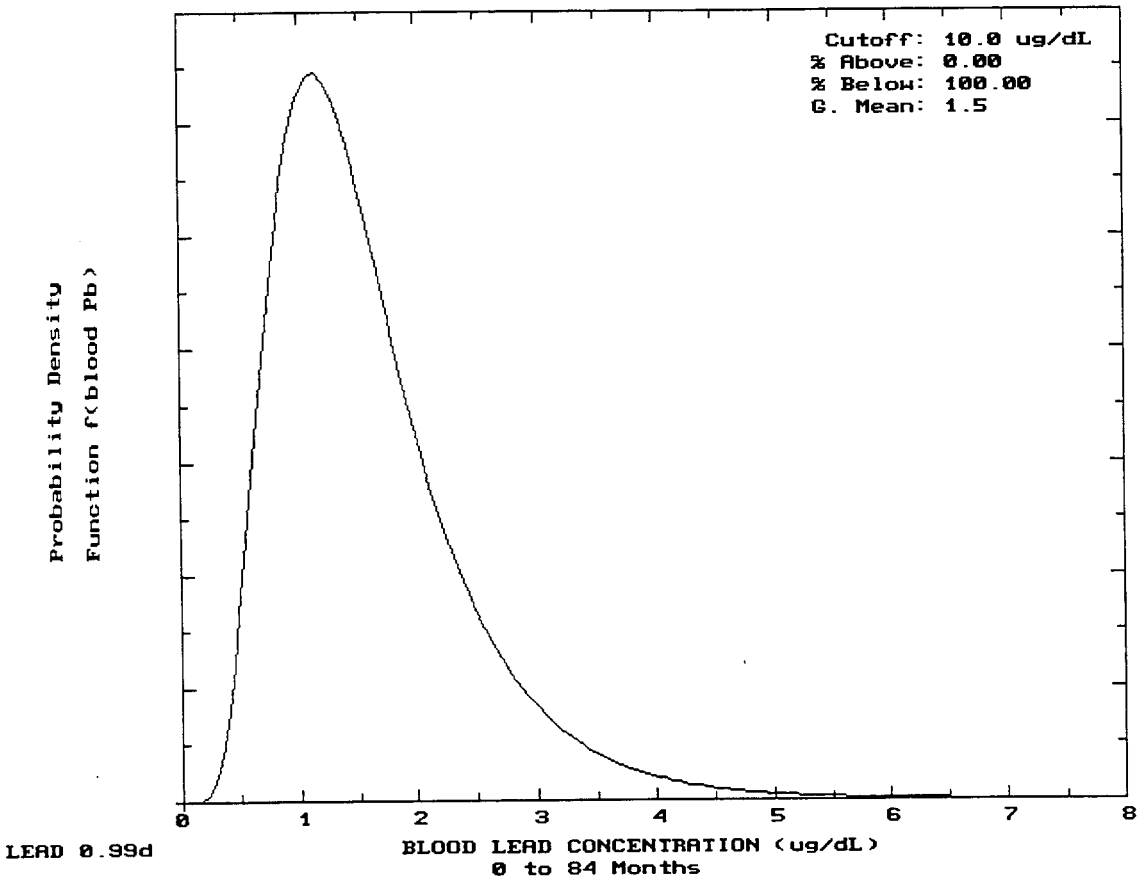
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

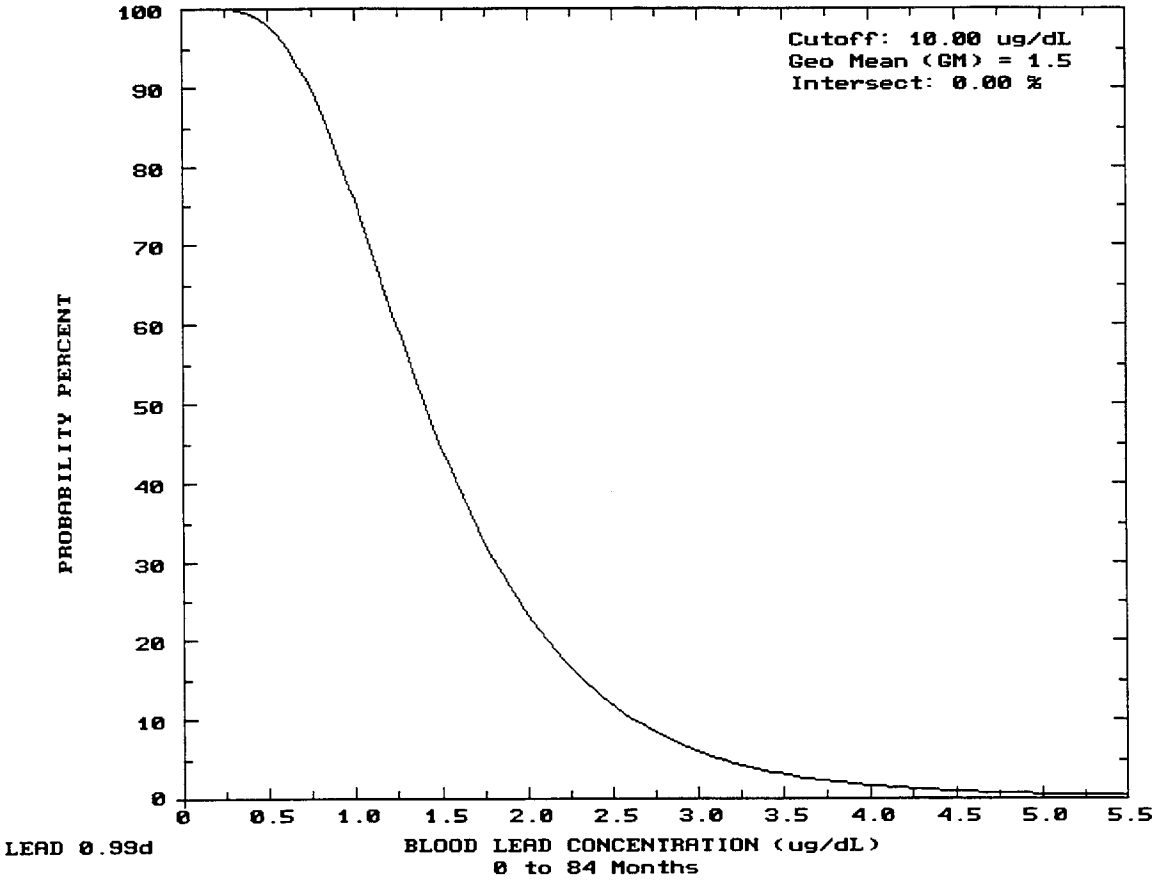
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	1.7	3.18	0.34
1-2:	1.6	3.74	0.55
2-3:	1.5	4.14	0.55
3-4:	1.4	4.05	0.55
4-5:	1.3	3.83	0.41
5-6:	1.2	4.00	0.37
6-7:	1.2	4.31	0.35

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.67	0.14	0.00	0.02
1-2:	2.80	0.36	0.00	0.03
2-3:	3.15	0.38	0.00	0.06
3-4:	3.04	0.39	0.00	0.07
4-5:	2.94	0.40	0.00	0.07
5-6:	3.11	0.43	0.00	0.09
6-7:	3.44	0.43	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.00
% Below: 100.00
G. Mean: 1.5
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
LEAD 0.99d


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.5
Intersect: 0.00 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.19

HISTOGRAMS FOR

SITE 23 - SUBSURFACE SOIL AND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 50.10 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	9.8	9.8
1-2	9.8	9.8
2-3	9.8	9.8
3-4	9.8	9.8
4-5	9.8	9.8
5-6	9.8	9.8
6-7	9.8	9.8

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

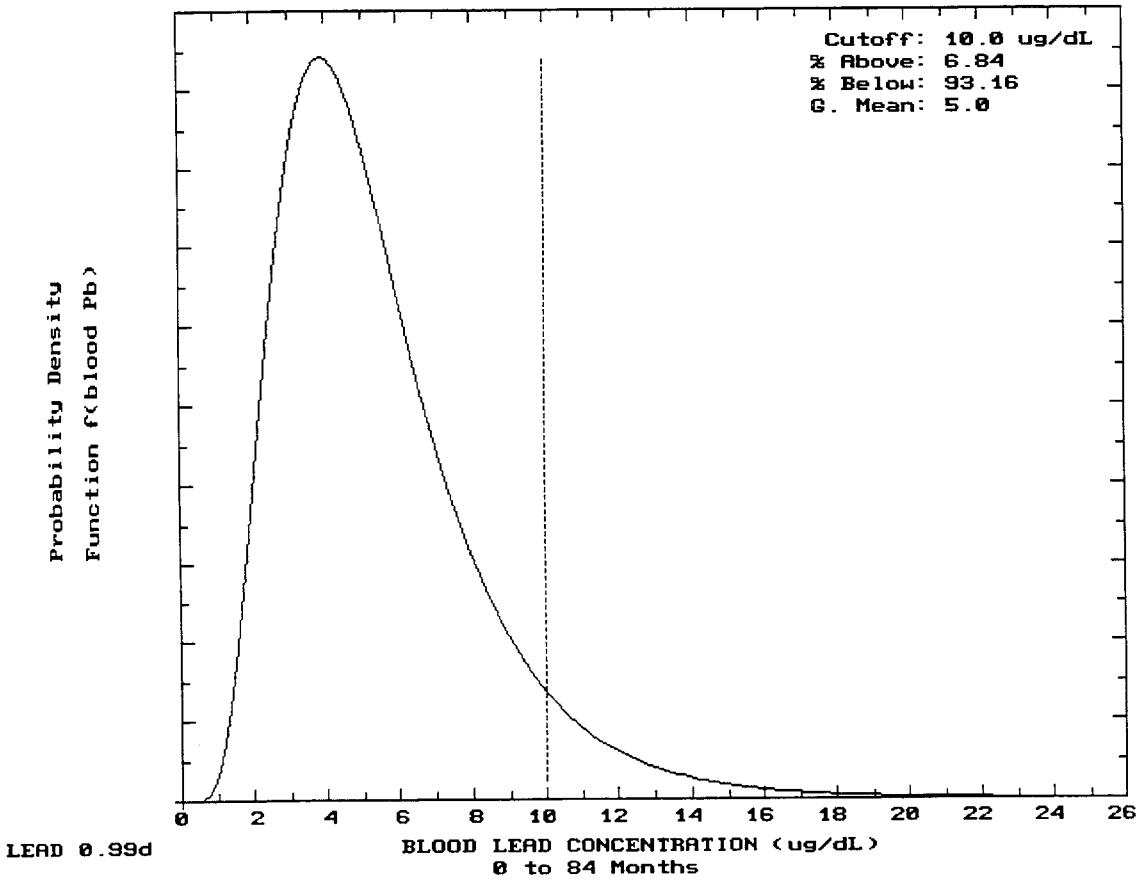
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

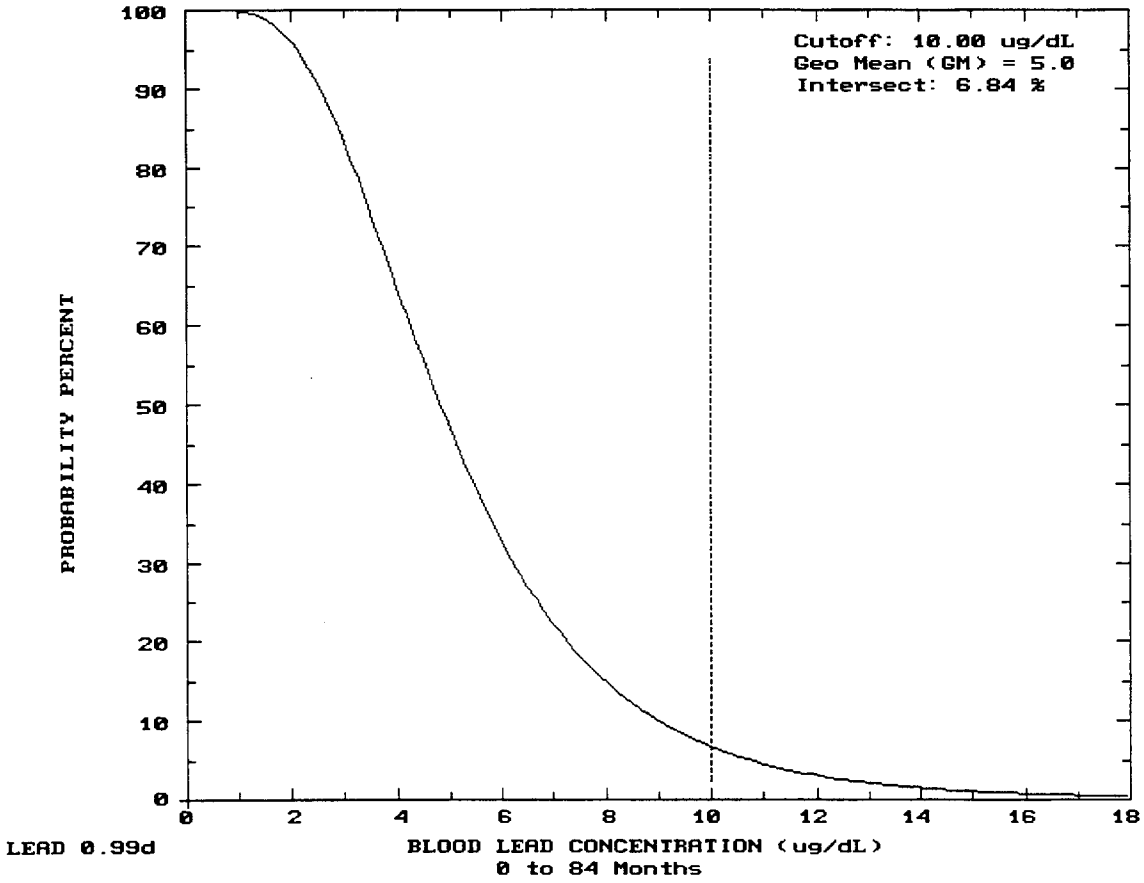
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	4.0	7.40	0.23
1-2:	5.6	14.00	0.35
2-3:	5.5	14.96	0.35
3-4:	5.3	15.30	0.36
4-5:	5.2	15.73	0.27
5-6:	5.0	16.66	0.24
6-7:	4.8	17.25	0.23

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.54	4.60	0.00	0.02
1-2:	2.55	11.06	0.00	0.03
2-3:	2.90	11.64	0.00	0.06
3-4:	2.83	12.04	0.00	0.07
4-5:	2.76	12.64	0.00	0.07
5-6:	2.92	13.40	0.00	0.09
6-7:	3.24	13.68	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 6.84
% Below: 93.16
G. Mean: 5.0
Probability Density
Function f(blood Pb)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 5.0
Intersect: 6.84 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
16
18
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.20

HISTOGRAMS FOR

SITE 24 - SUBSURFACE SOIL AND BACKGROUND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 2.30 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	5.2	5.2
1-2	5.2	5.2
2-3	5.2	5.2
3-4	5.2	5.2
4-5	5.2	5.2
5-6	5.2	5.2
6-7	5.2	5.2

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

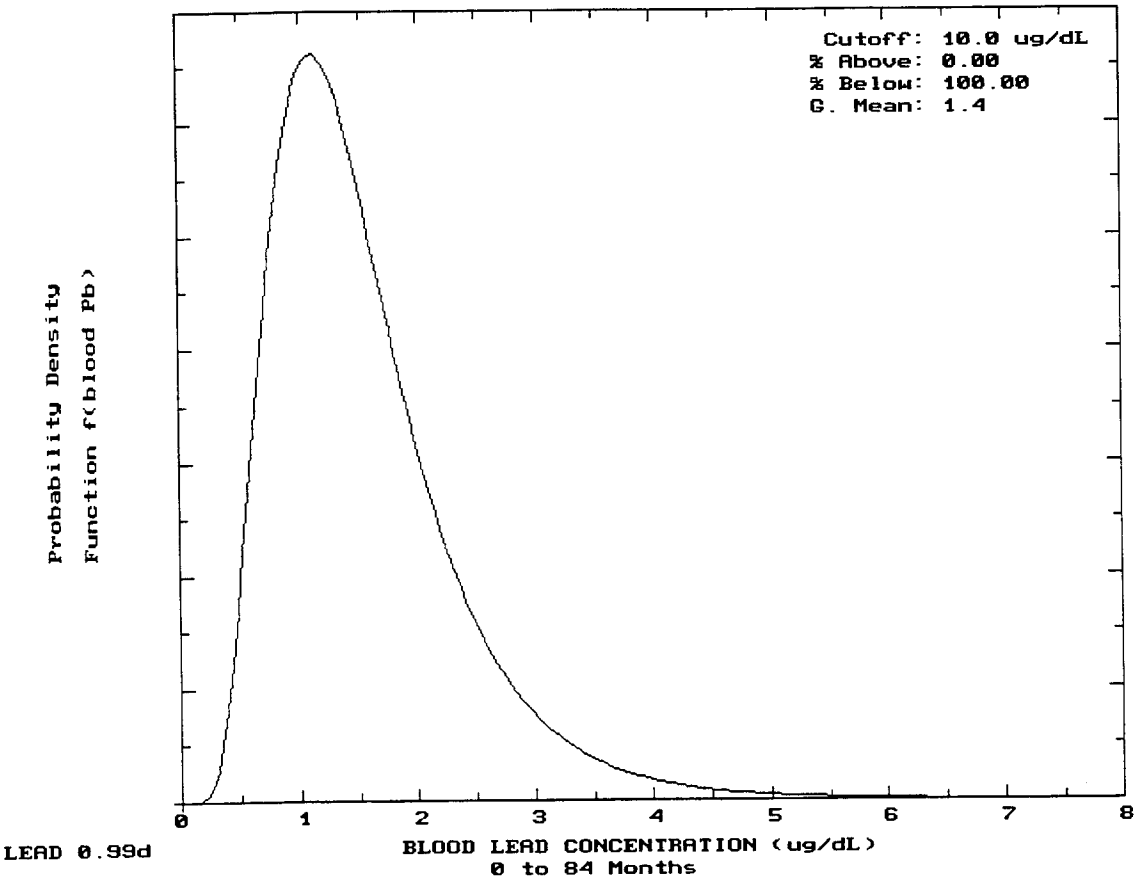
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

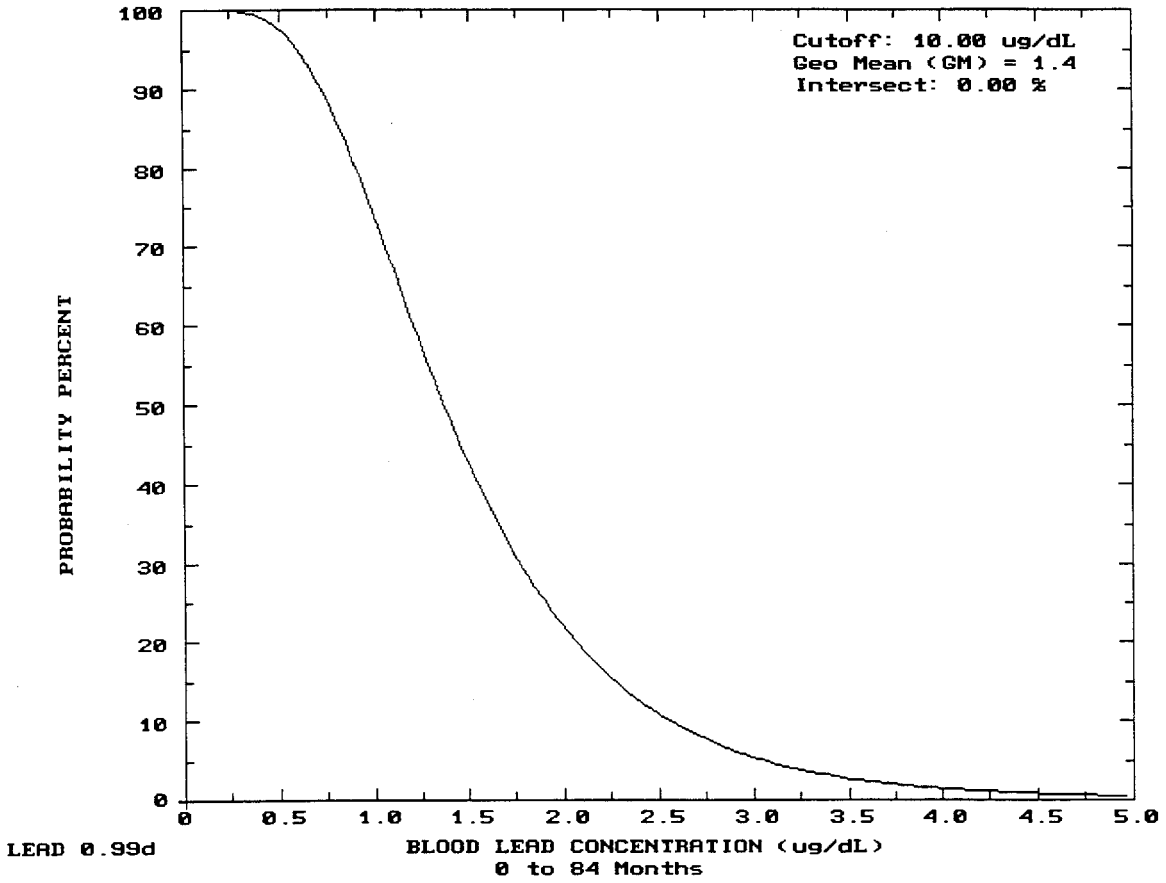
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	1.7	3.04	0.13
1-2:	1.6	3.60	0.20
2-3:	1.5	4.00	0.20
3-4:	1.4	3.91	0.21
4-5:	1.3	3.78	0.15
5-6:	1.2	4.00	0.14
6-7:	1.2	4.32	0.13

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.67	0.22	0.00	0.02
1-2:	2.80	0.56	0.00	0.03
2-3:	3.15	0.58	0.00	0.06
3-4:	3.05	0.59	0.00	0.07
4-5:	2.94	0.62	0.00	0.07
5-6:	3.11	0.65	0.00	0.09
6-7:	3.43	0.67	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.00
% Below: 100.00
G. Mean: 1.4
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.4
Intersect: 0.00 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.21

HISTOGRAMS FOR

SITE 25 - SUBSURFACE SOIL AND BACKGROUND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 2.30 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	39.7	39.7
1-2	39.7	39.7
2-3	39.7	39.7
3-4	39.7	39.7
4-5	39.7	39.7
5-6	39.7	39.7
6-7	39.7	39.7

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

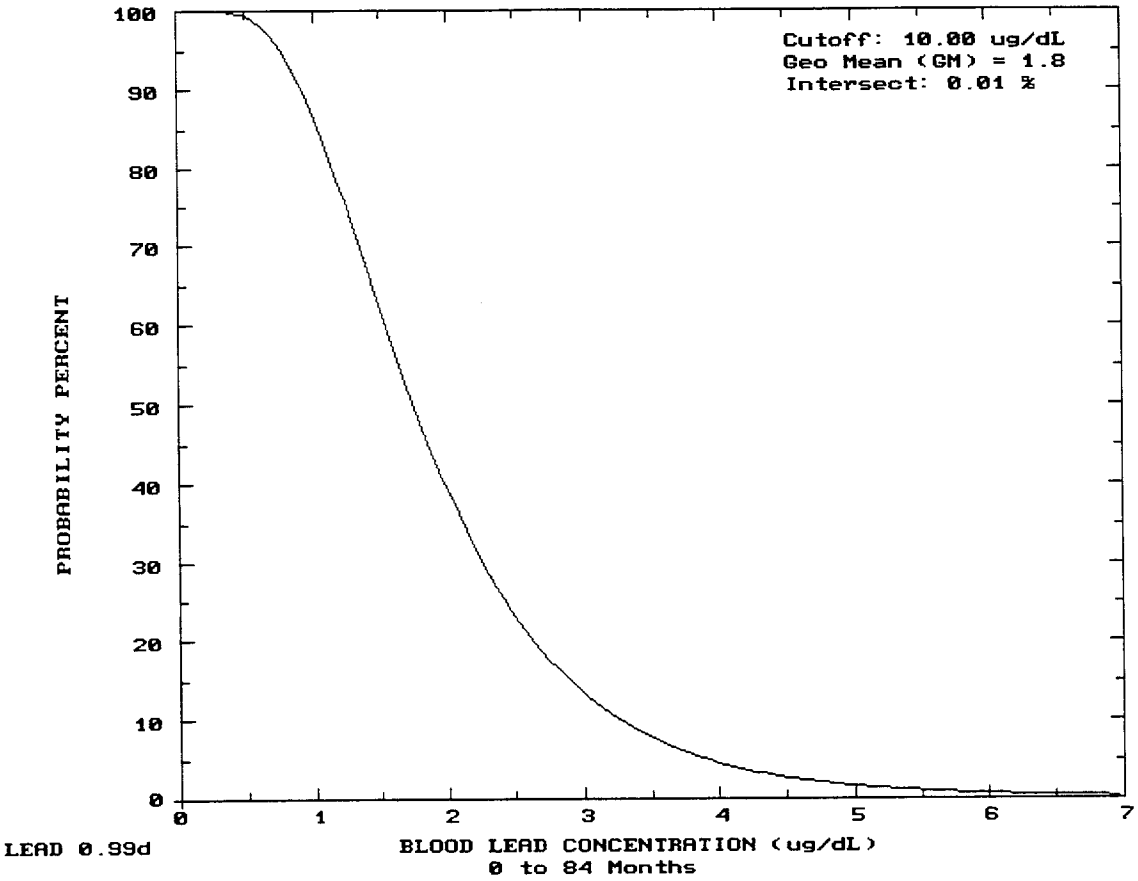
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

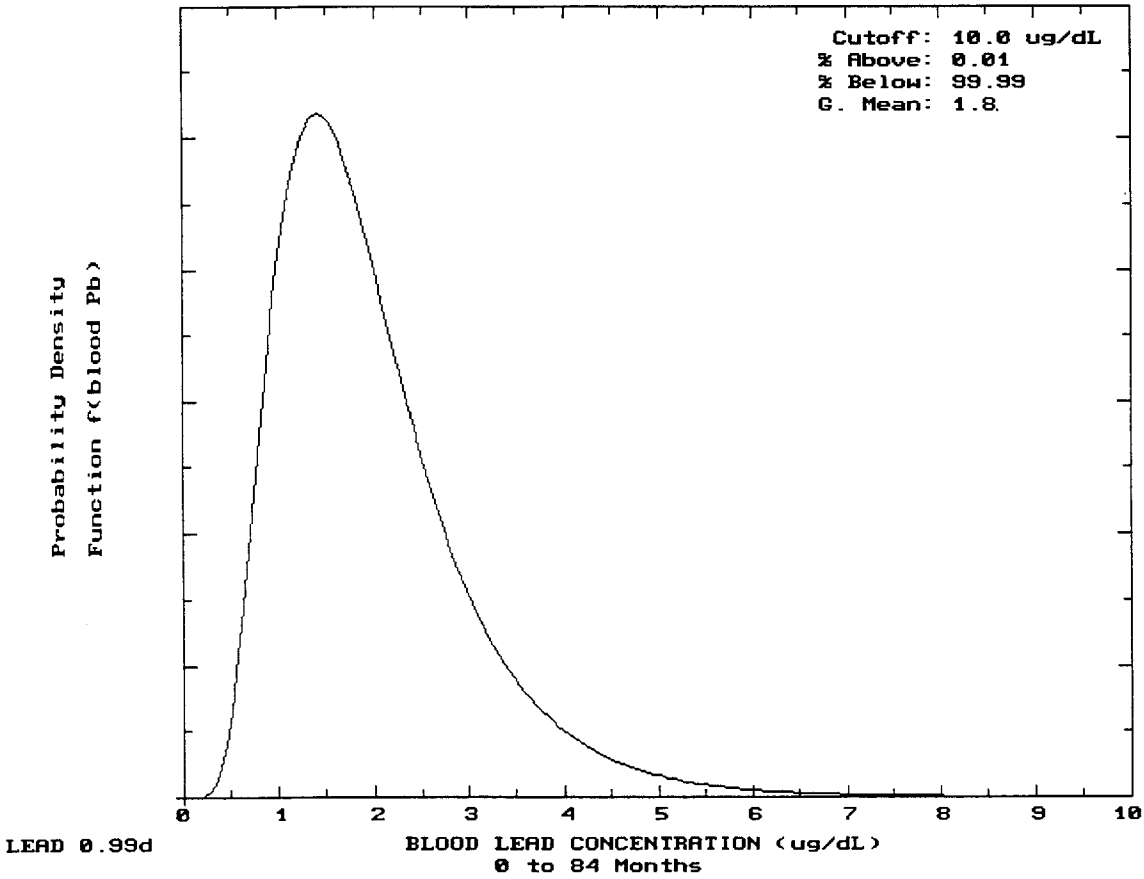
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.1	3.86	0.97
1-2:	2.1	4.90	1.54
2-3:	2.0	5.31	1.55
3-4:	1.9	5.23	1.56
4-5:	1.6	4.77	1.16
5-6:	1.5	4.89	1.05
6-7:	1.4	5.17	0.99

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.65	0.22	0.00	0.02
1-2:	2.77	0.55	0.00	0.03
2-3:	3.12	0.58	0.00	0.06
3-4:	3.02	0.59	0.00	0.07
4-5:	2.93	0.62	0.00	0.07
5-6:	3.10	0.65	0.00	0.09
6-7:	3.42	0.66	0.00	0.09


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.8
Intersect: 0.01 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.0 ug/dL
% Above: 0.01
% Below: 99.99
G. Mean: 1.8
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
9
10
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.22

HISTOGRAMS FOR

SITE 26 - SUBSURFACE SOIL AND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 1.90 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	2.3	2.3
1-2	2.3	2.3
2-3	2.3	2.3
3-4	2.3	2.3
4-5	2.3	2.3
5-6	2.3	2.3
6-7	2.3	2.3

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

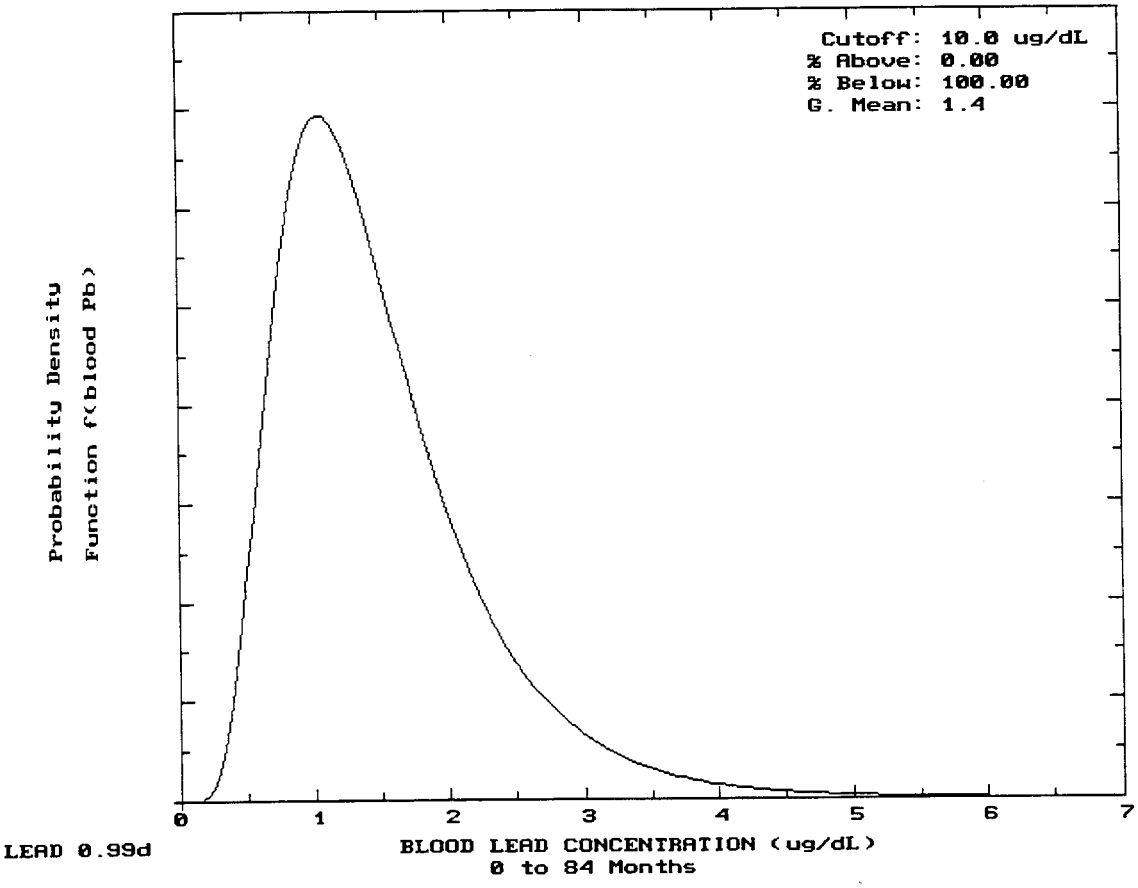
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

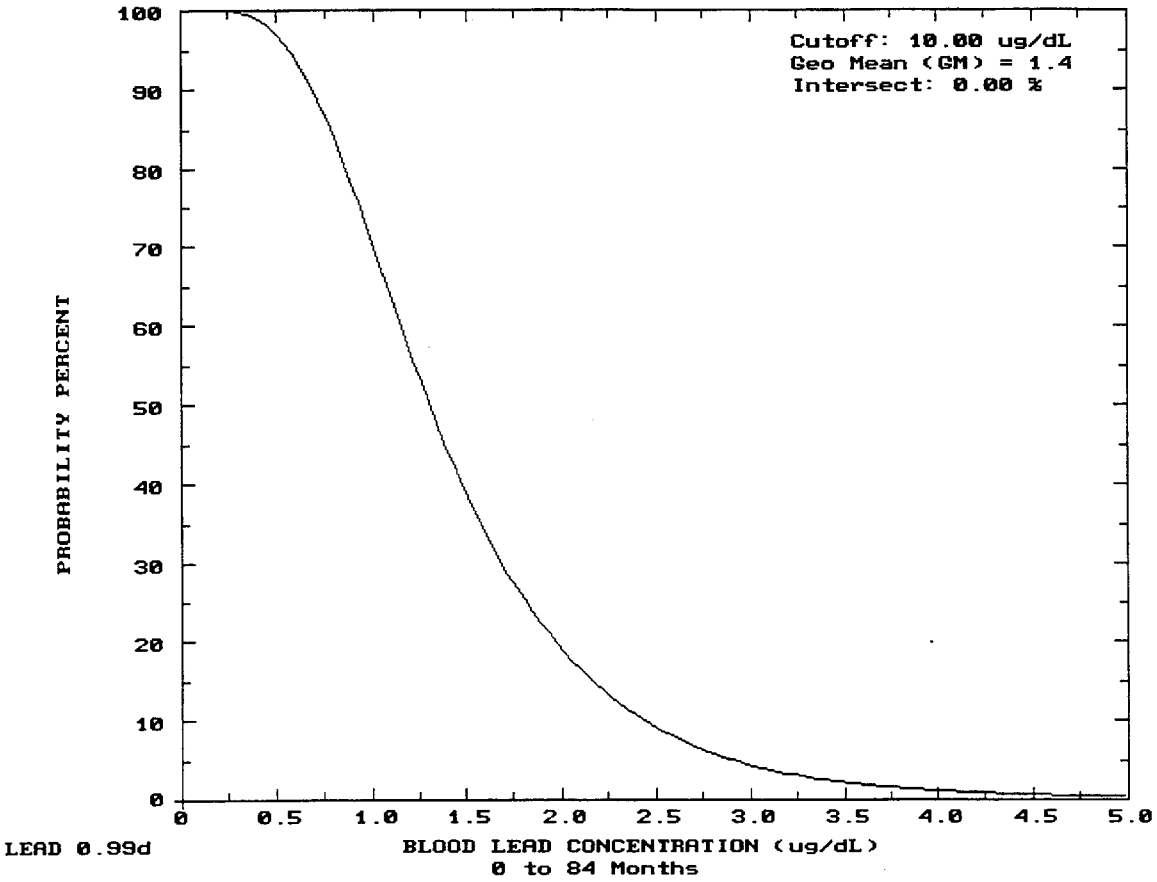
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	1.6	2.94	0.06
1-2:	1.5	3.39	0.09
2-3:	1.4	3.79	0.09
3-4:	1.3	3.70	0.09
4-5:	1.2	3.59	0.07
5-6:	1.2	3.81	0.06
6-7:	1.1	4.14	0.06

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.68	0.18	0.00	0.02
1-2:	2.81	0.46	0.00	0.03
2-3:	3.16	0.48	0.00	0.06
3-4:	3.05	0.49	0.00	0.07
4-5:	2.95	0.51	0.00	0.07
5-6:	3.11	0.54	0.00	0.09
6-7:	3.44	0.55	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.00
% Below: 100.00
G. Mean: 1.4
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.4
Intersect: 0.00 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.23

HISTOGRAMS FOR

SITE 29 - GROUNDWATER AND BACKGROUND SUBSURFACE SOIL DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 2.00 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	39.4	39.4
1-2	39.4	39.4
2-3	39.4	39.4
3-4	39.4	39.4
4-5	39.4	39.4
5-6	39.4	39.4
6-7	39.4	39.4

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

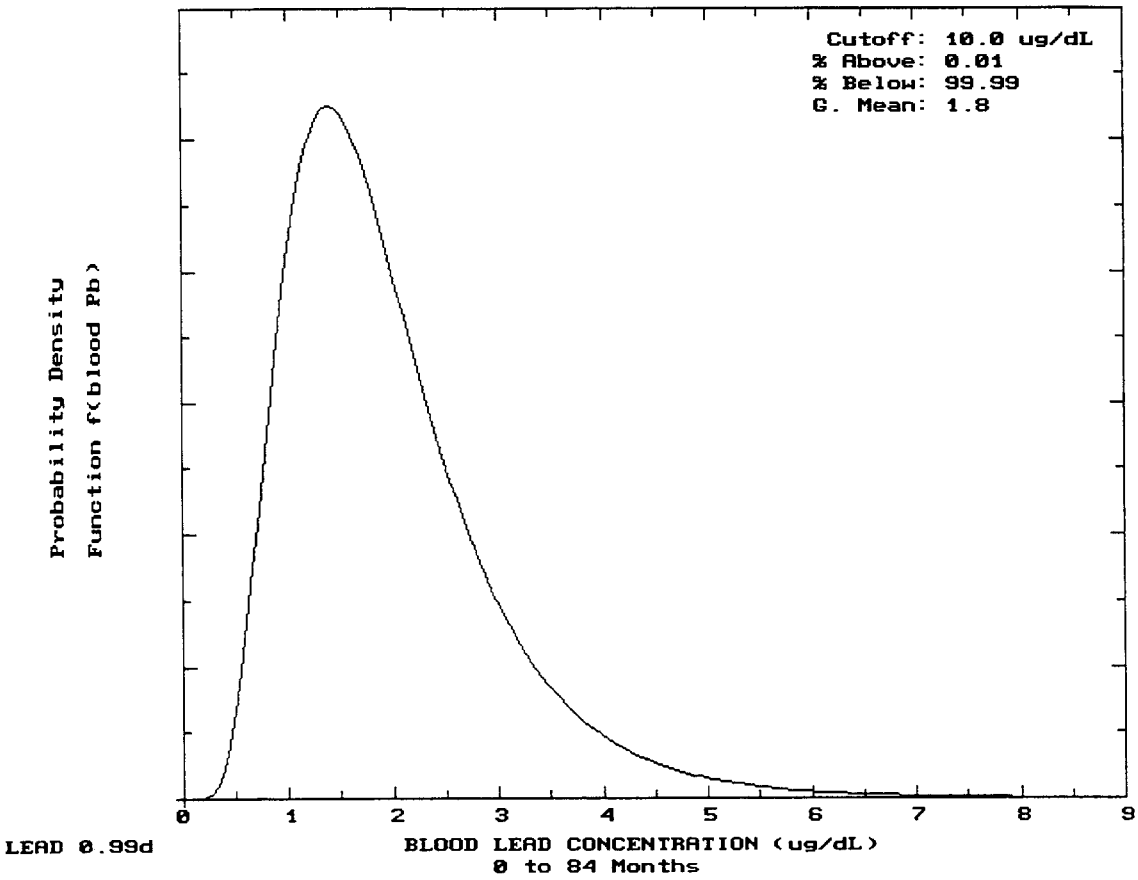
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

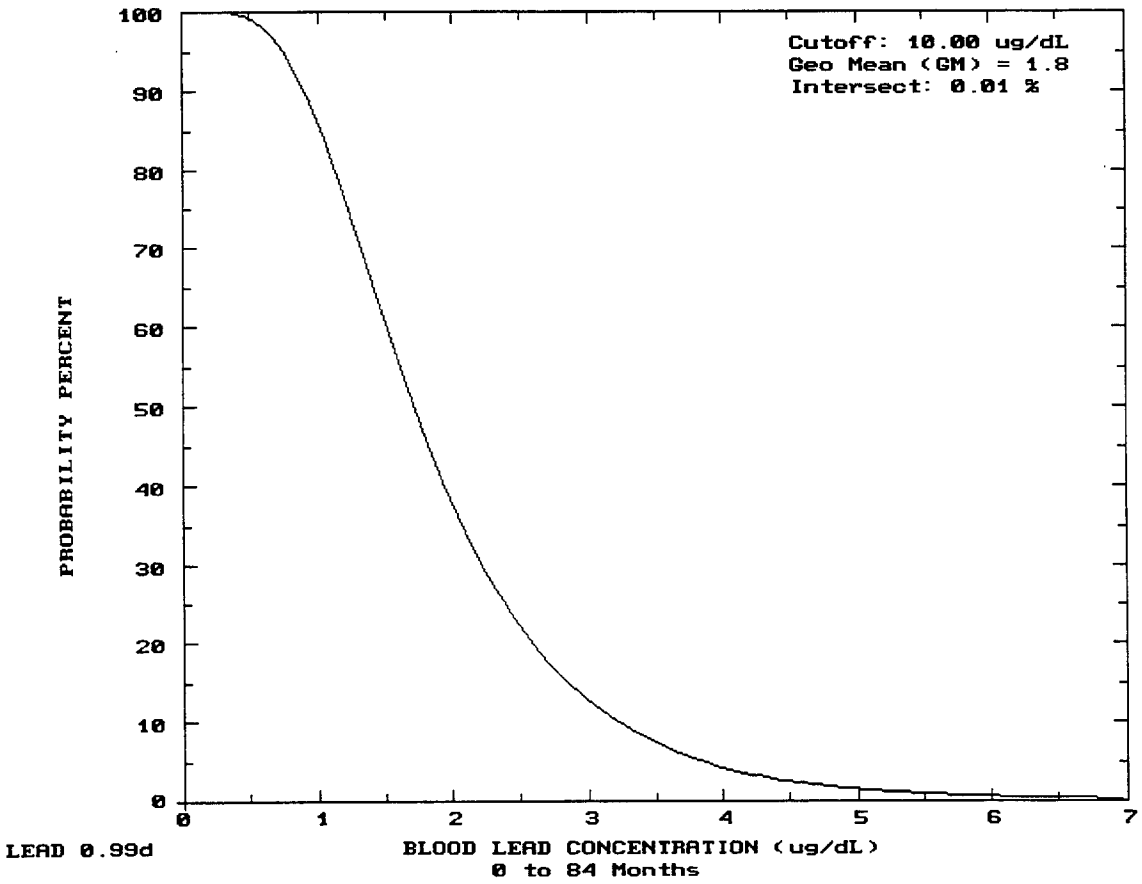
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.1	3.82	0.96
1-2:	2.1	4.82	1.53
2-3:	1.9	5.22	1.54
3-4:	1.8	5.15	1.55
4-5:	1.6	4.69	1.15
5-6:	1.5	4.80	1.04
6-7:	1.4	5.08	0.98

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.65	0.19	0.00	0.02
1-2:	2.77	0.48	0.00	0.03
2-3:	3.12	0.50	0.00	0.06
3-4:	3.02	0.51	0.00	0.07
4-5:	2.93	0.54	0.00	0.07
5-6:	3.10	0.57	0.00	0.09
6-7:	3.42	0.58	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.01
% Below: 99.99
G. Mean: 1.8
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
9
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
LEAD 0.99d


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.8
Intersect: 0.01 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.24

HISTOGRAMS FOR

BACKGROUND SUBSURFACE SOIL AND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

.IR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 2.30 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	21.0	21.0
1-2	21.0	21.0
2-3	21.0	21.0
3-4	21.0	21.0
4-5	21.0	21.0
5-6	21.0	21.0
6-7	21.0	21.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

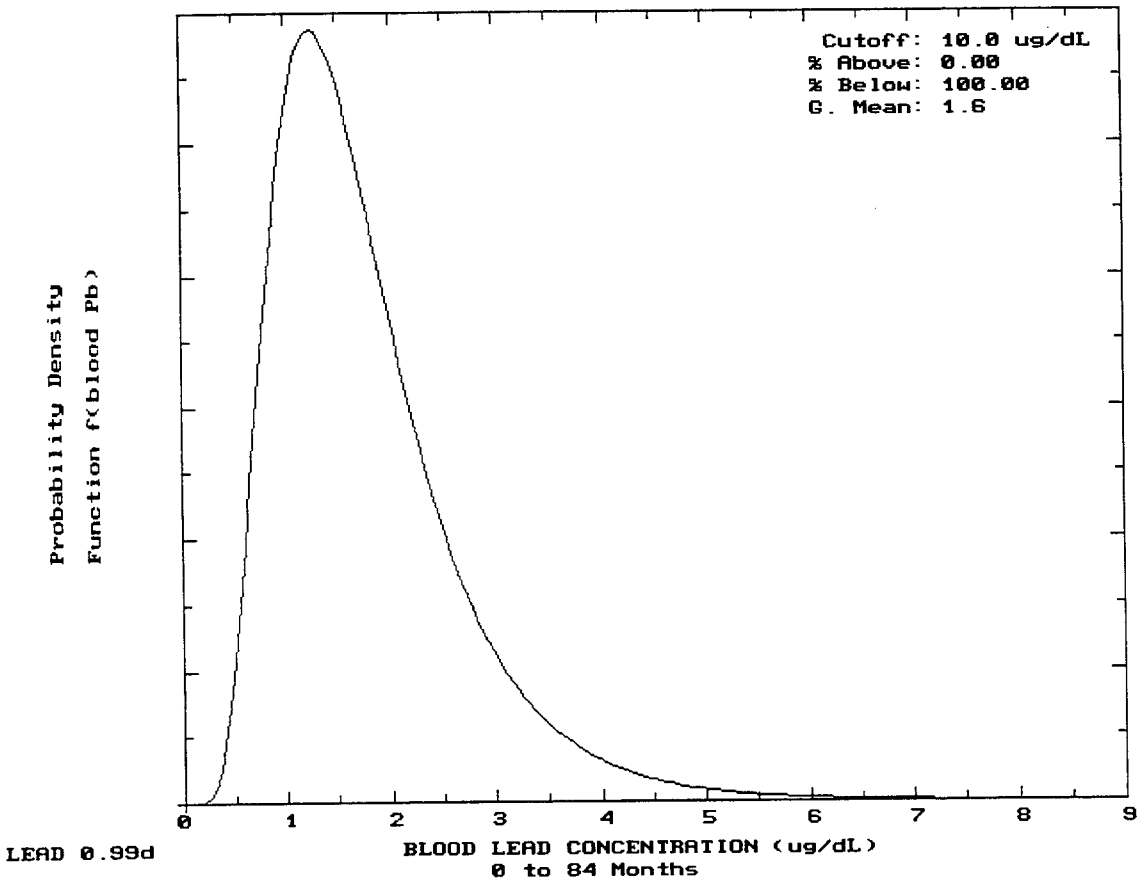
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

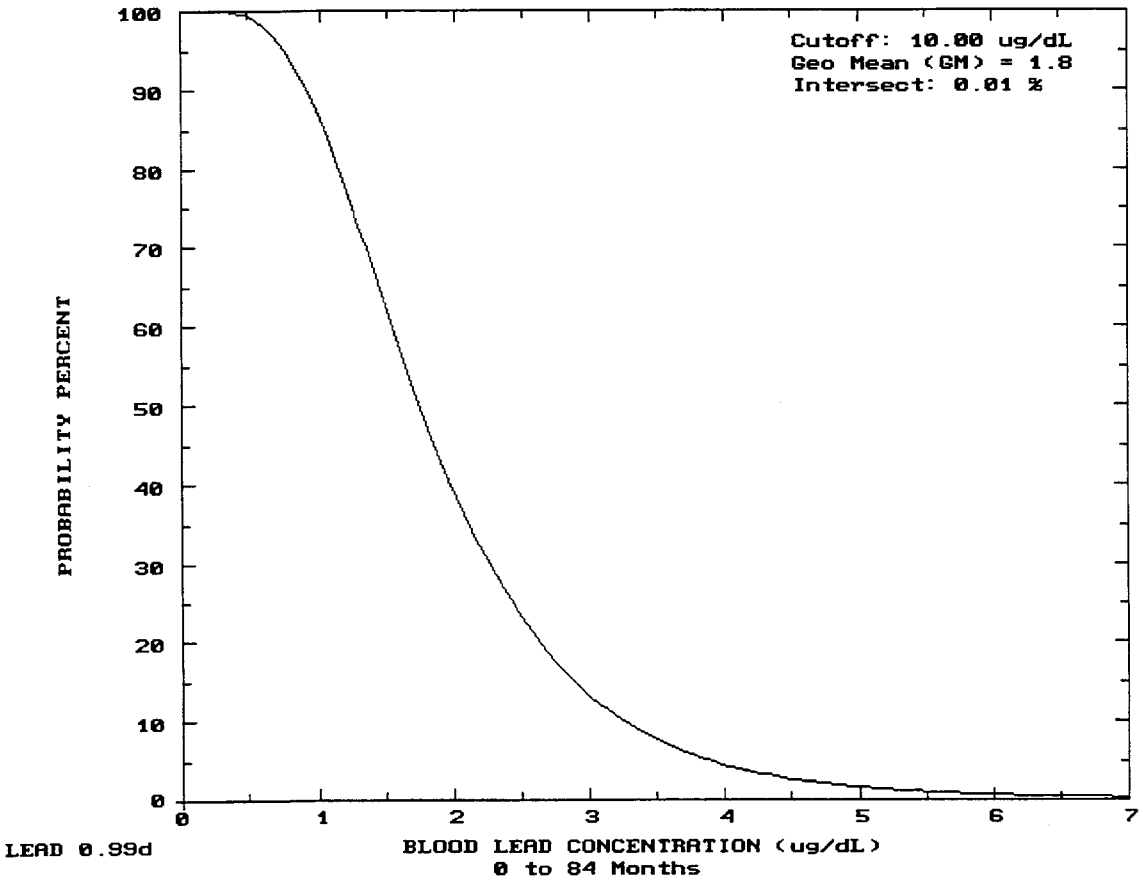
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	1.9	3.42	0.52
1-2:	1.8	4.20	0.82
2-3:	1.7	4.60	0.82
3-4:	1.6	4.52	0.83
4-5:	1.4	4.24	0.62
5-6:	1.4	4.41	0.56
6-7:	1.3	4.71	0.53

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.66	0.22	0.00	0.02
1-2:	2.79	0.55	0.00	0.03
2-3:	3.14	0.58	0.00	0.06
3-4:	3.03	0.59	0.00	0.07
4-5:	2.94	0.62	0.00	0.07
5-6:	3.10	0.65	0.00	0.09
6-7:	3.43	0.66	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.00
% Below: 100.00
G. Mean: 1.6
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
9
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.8
Intersect: 0.01 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.25

HISTOGRAMS FOR

BACKGROUND SURFACE SOIL AND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 2.30 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	39.4	39.4
1-2	39.4	39.4
2-3	39.4	39.4
3-4	39.4	39.4
4-5	39.4	39.4
5-6	39.4	39.4
6-7	39.4	39.4

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

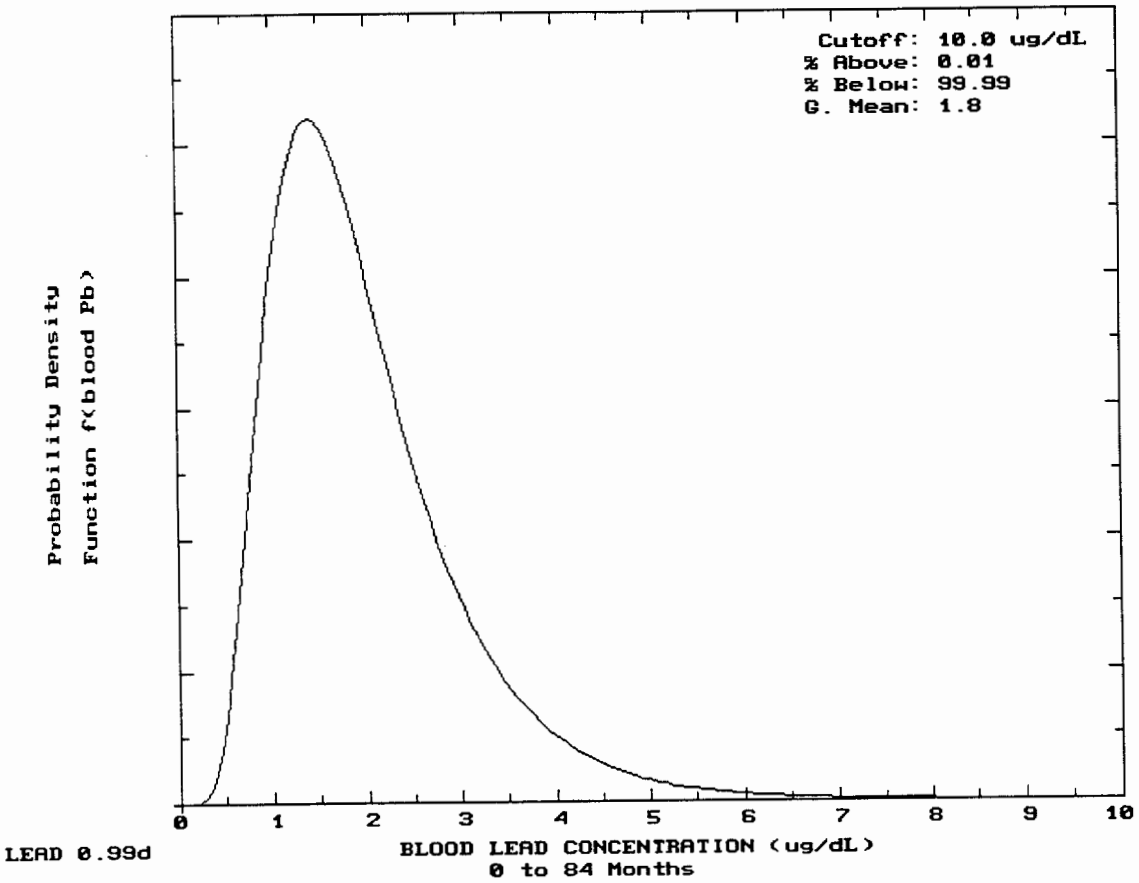
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

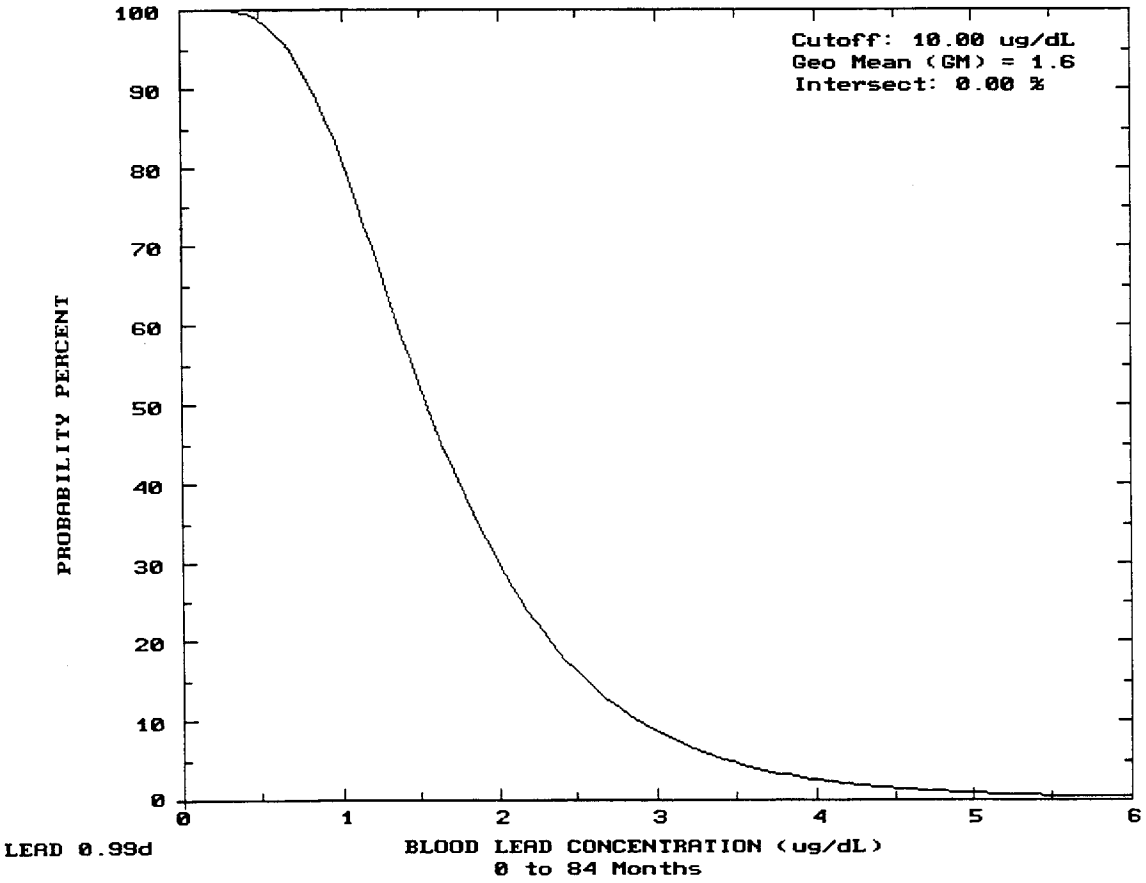
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.1	3.85	0.96
1-2:	2.1	4.89	1.53
2-3:	2.0	5.29	1.54
3-4:	1.8	5.22	1.54
4-5:	1.6	4.76	1.15
5-6:	1.5	4.88	1.04
6-7:	1.4	5.16	0.98

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.54	0.37	0.00	0.02
1-2:	2.63	0.91	0.00	0.03
2-3:	2.98	0.96	0.00	0.06
3-4:	2.90	0.99	0.00	0.07
4-5:	2.85	1.04	0.00	0.07
5-6:	3.03	1.11	0.00	0.09
6-7:	3.36	1.13	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.01
% Below: 99.99
G. Mean: 1.8
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
9
10
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
LEAD 0.99d


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.6
Intersect: 0.00 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.26

HISTOGRAMS FOR

STANDARD DEFAULT GROUNDWATER AND SURFACE SOIL DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 4.00 ug Pb/L DEFAULT
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	200.0	200.0
1-2	200.0	200.0
2-3	200.0	200.0
3-4	200.0	200.0
4-5	200.0	200.0
5-6	200.0	200.0
6-7	200.0	200.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

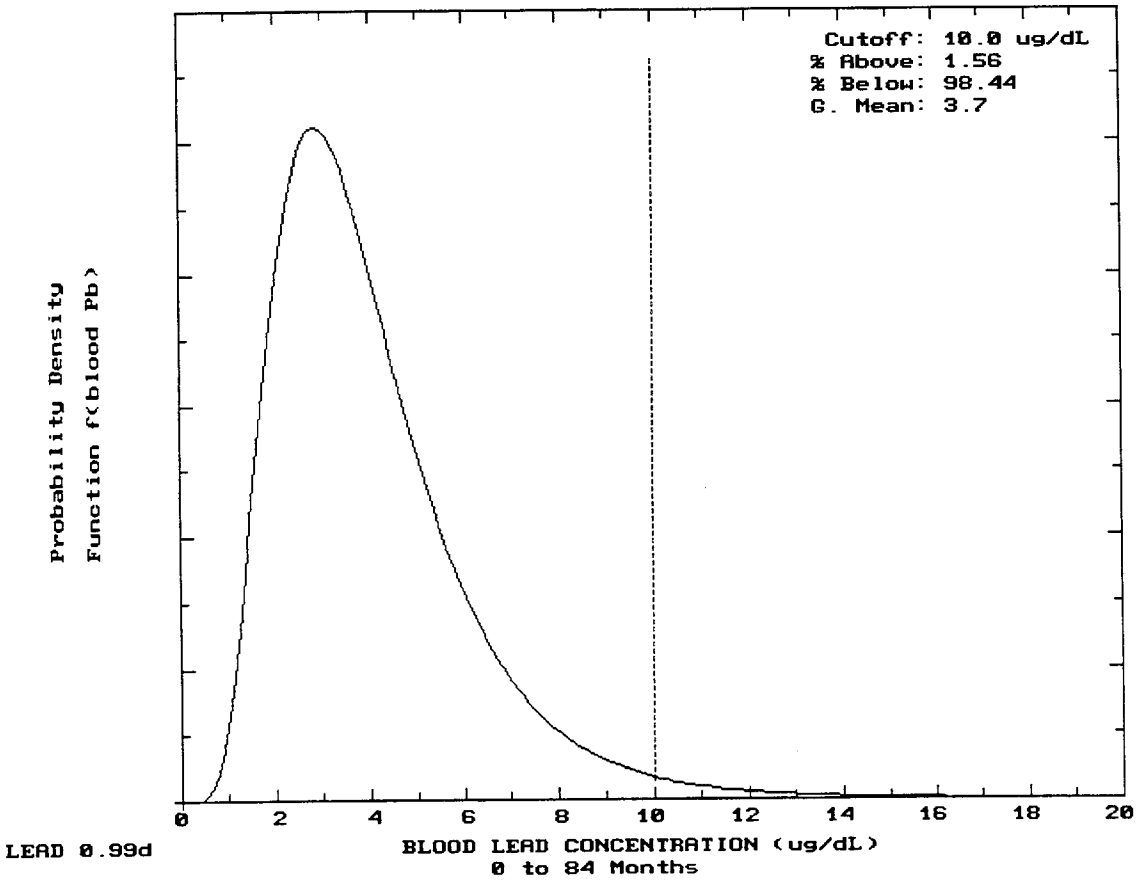
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

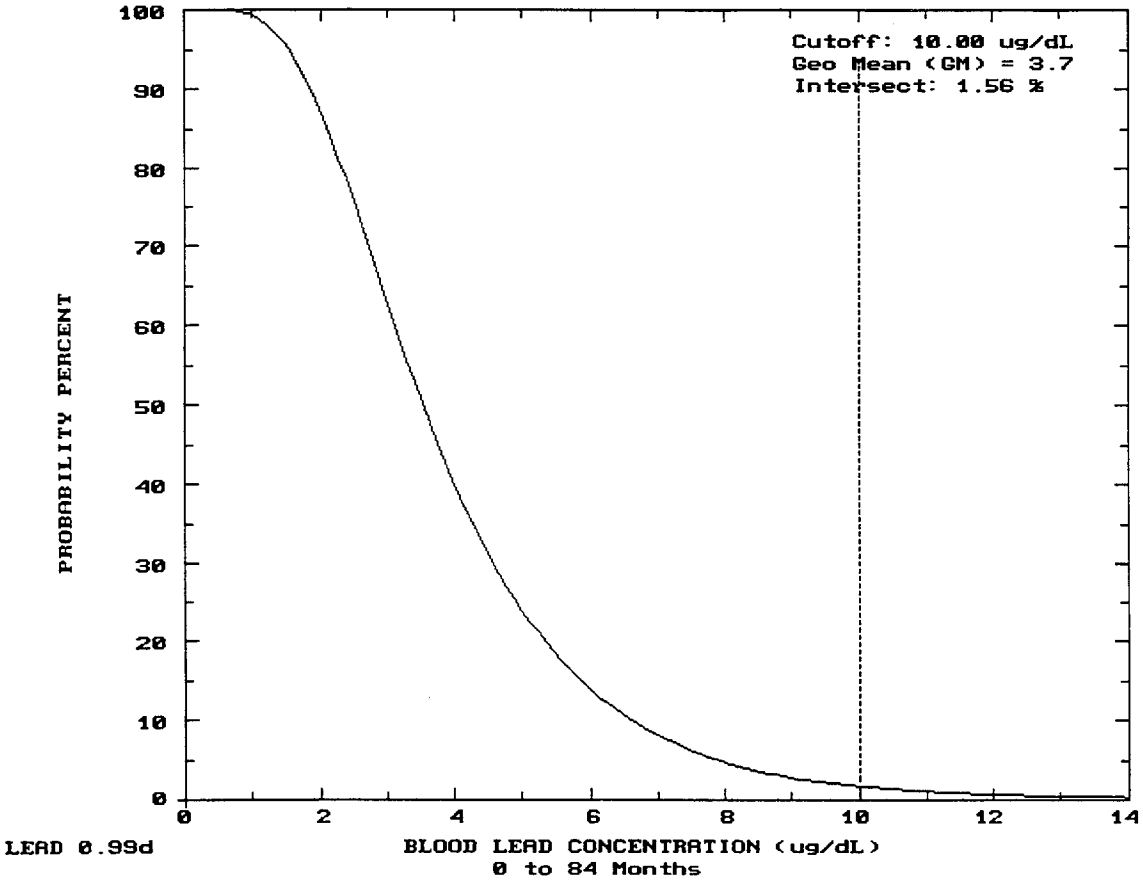
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	4.1	7.60	4.68
1-2:	4.5	10.93	7.36
2-3:	4.2	11.44	7.44
3-4:	4.0	11.48	7.53
4-5:	3.4	9.65	5.69
5-6:	3.0	9.39	5.16
6-7:	2.7	9.47	4.89

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.65	0.22	0.00	0.02
1-2:	2.77	0.55	0.00	0.03
2-3:	3.12	0.58	0.00	0.06
3-4:	3.02	0.59	0.00	0.07
4-5:	2.93	0.62	0.00	0.07
5-6:	3.10	0.65	0.00	0.09
6-7:	3.42	0.66	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 1.56
% Below: 98.44
G. Mean: 3.7
Probability Density
Function f(blood Pb)
0
2
4
6
8
10
12
14
16
18
20
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 3.7
Intersect: 1.56 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX I.d.2.27

HISTOGRAMS FOR

SITE 22 - SUBSURFACE SOIL AND BACKGROUND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

.IR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 2.30 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	29.8	29.8
1-2	29.8	29.8
2-3	29.8	29.8
3-4	29.8	29.8
4-5	29.8	29.8
5-6	29.8	29.8
6-7	29.8	29.8

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

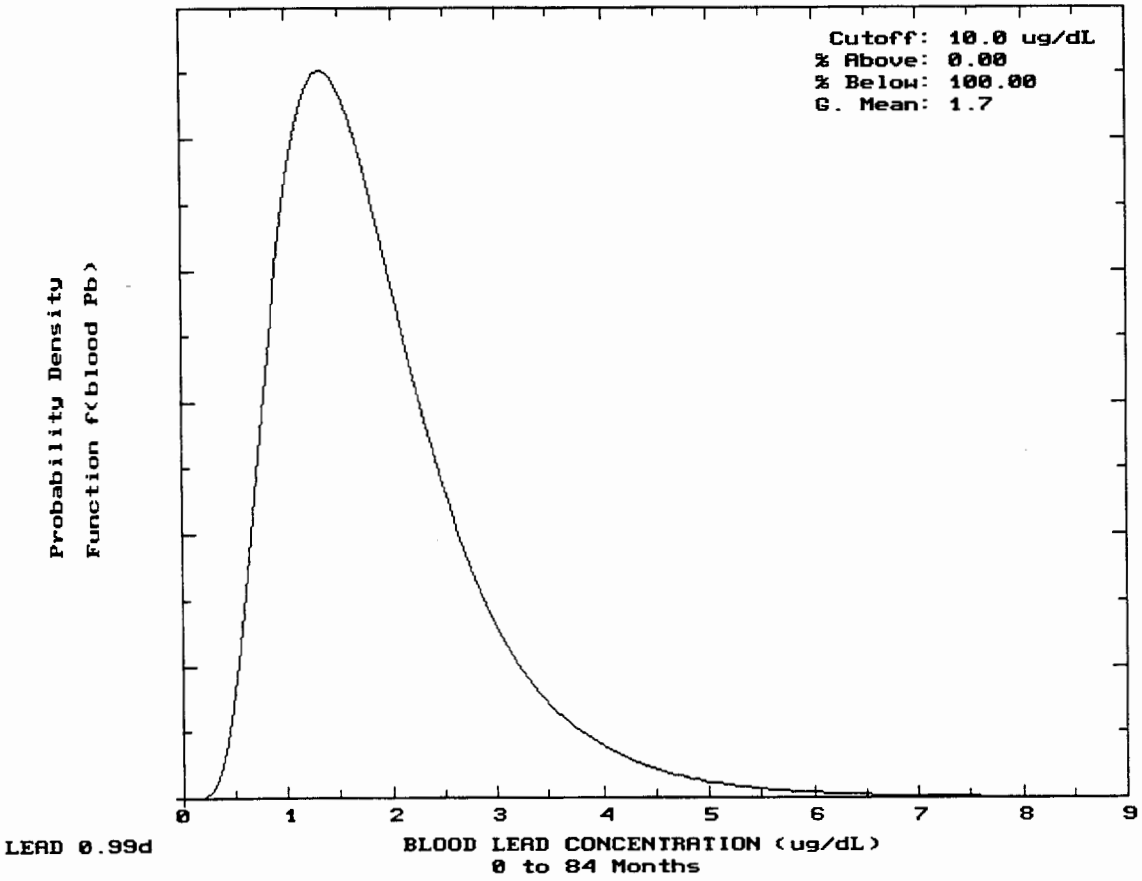
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

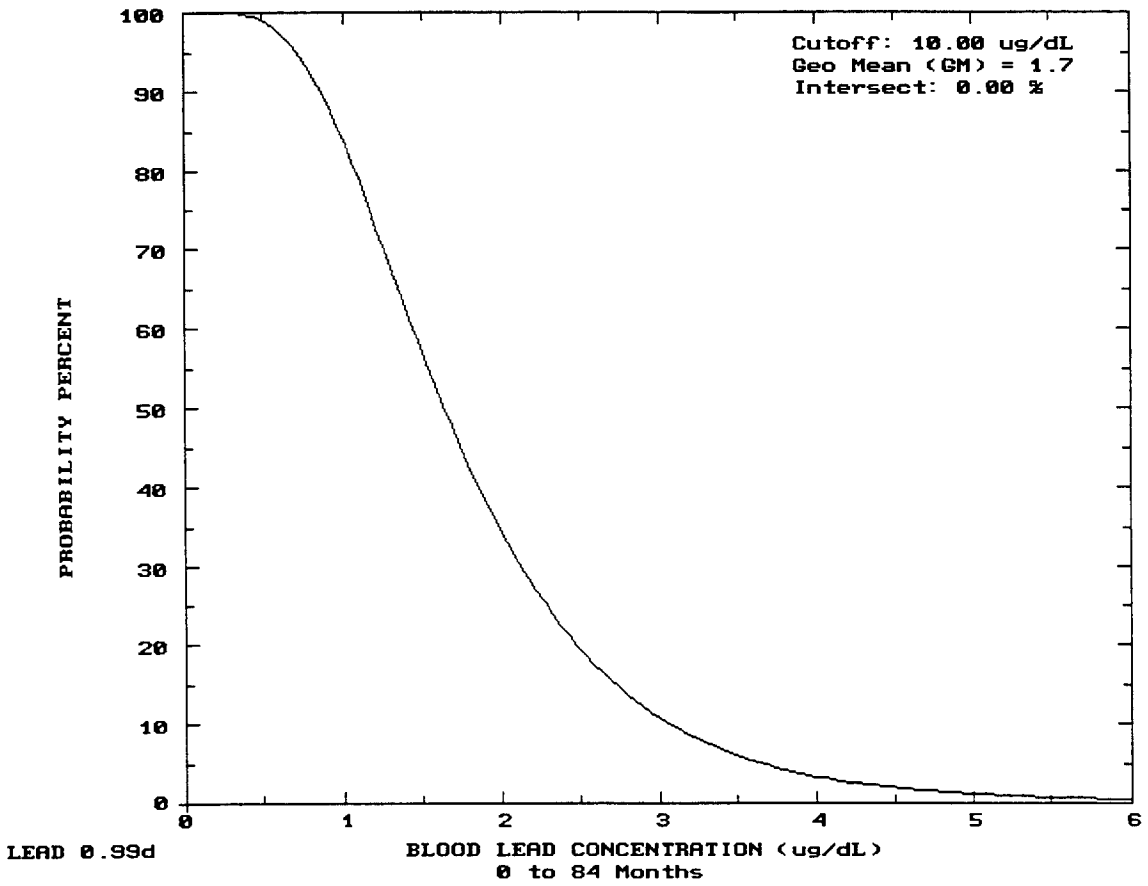
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.0	3.63	0.73
1-2:	1.9	4.53	1.16
2-3:	1.8	4.93	1.16
3-4:	1.7	4.86	1.17
4-5:	1.5	4.49	0.87
5-6:	1.4	4.63	0.79
6-7:	1.4	4.93	0.74

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.65	0.22	0.00	0.02
1-2:	2.78	0.55	0.00	0.03
2-3:	3.13	0.58	0.00	0.06
3-4:	3.03	0.59	0.00	0.07
4-5:	2.93	0.62	0.00	0.07
5-6:	3.10	0.65	0.00	0.09
6-7:	3.43	0.66	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.00
% Below: 100.00
G. Mean: 1.7
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
9
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 1.7
Intersect: 0.00 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

LEAD 0.99d

APPENDIX I.d.2.28

HISTOGRAMS FOR

SITE 22 - SEDIMENT AND BACKGROUND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

IR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 2.30 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	106.0	106.0
1-2	106.0	106.0
2-3	106.0	106.0
3-4	106.0	106.0
4-5	106.0	106.0
5-6	106.0	106.0
6-7	106.0	106.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

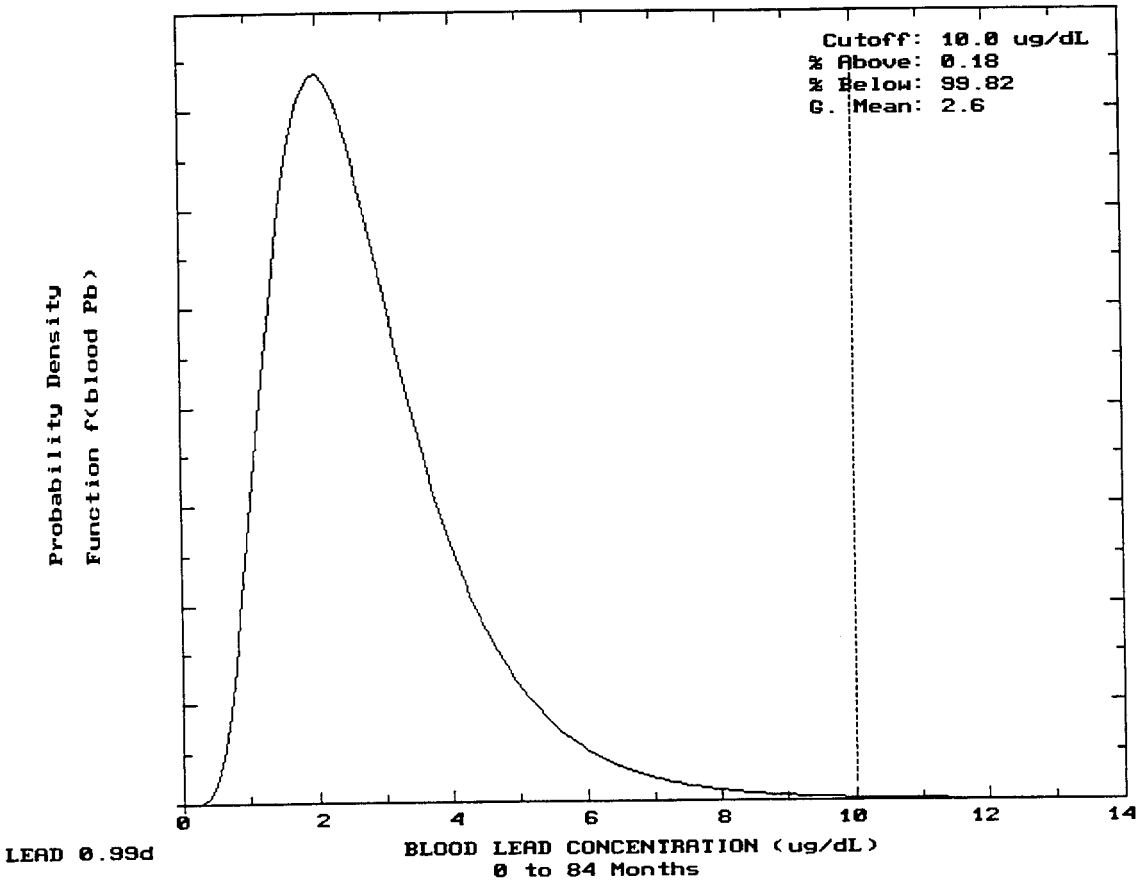
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

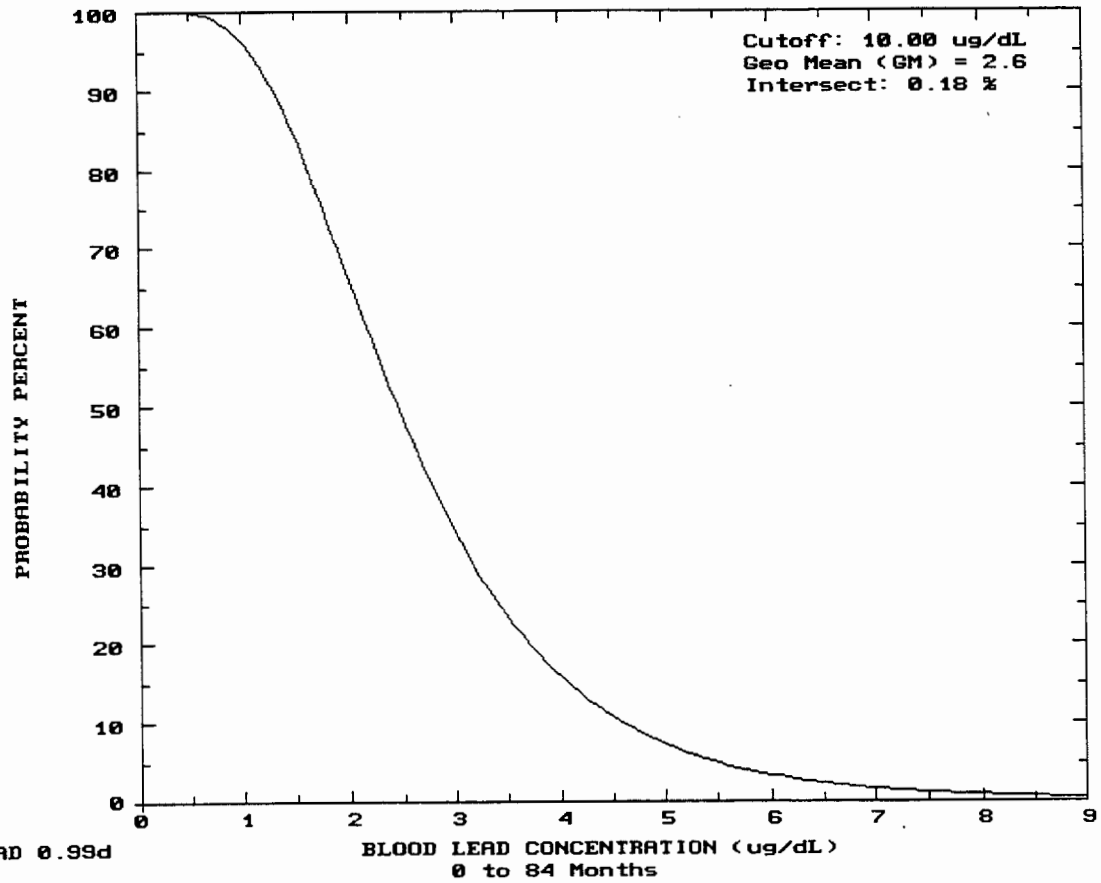
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.9	5.38	2.54
1-2:	3.1	7.31	4.03
2-3:	2.9	7.75	4.05
3-4:	2.7	7.71	4.09
4-5:	2.3	6.64	3.07
5-6:	2.1	6.58	2.77
6-7:	1.9	6.77	2.62

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.60	0.22	0.00	0.02
1-2:	2.71	0.54	0.00	0.03
2-3:	3.06	0.56	0.00	0.06
3-4:	2.97	0.58	0.00	0.07
4-5:	2.90	0.61	0.00	0.07
5-6:	3.07	0.65	0.00	0.09
6-7:	3.40	0.66	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.18
% Below: 99.82
G. Mean: 2.6
Probability Density
Function f(blood Pb)
0
2
4
6
8
10
12
14
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
LEAD 0.99d


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 2.6
Intersect: 0.18 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
8
9
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

LEAD 0.99d

APPENDIX I.d.2.29

HISTOGRAMS FOR

SITE 27 - SUBSURFACE SOIL AND BACKGROUND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

.IR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 2.30 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	137.7	137.7
1-2	137.7	137.7
2-3	137.7	137.7
3-4	137.7	137.7
4-5	137.7	137.7
5-6	137.7	137.7
6-7	137.7	137.7

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

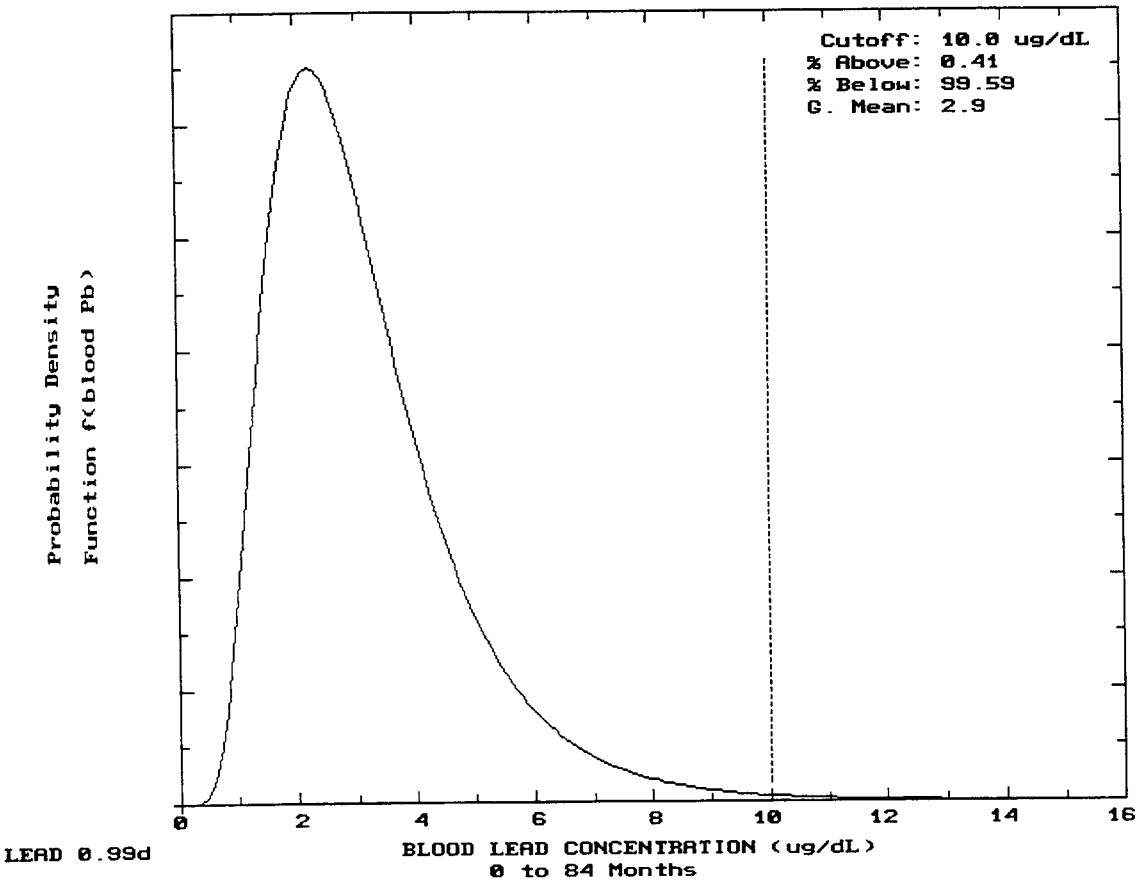
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

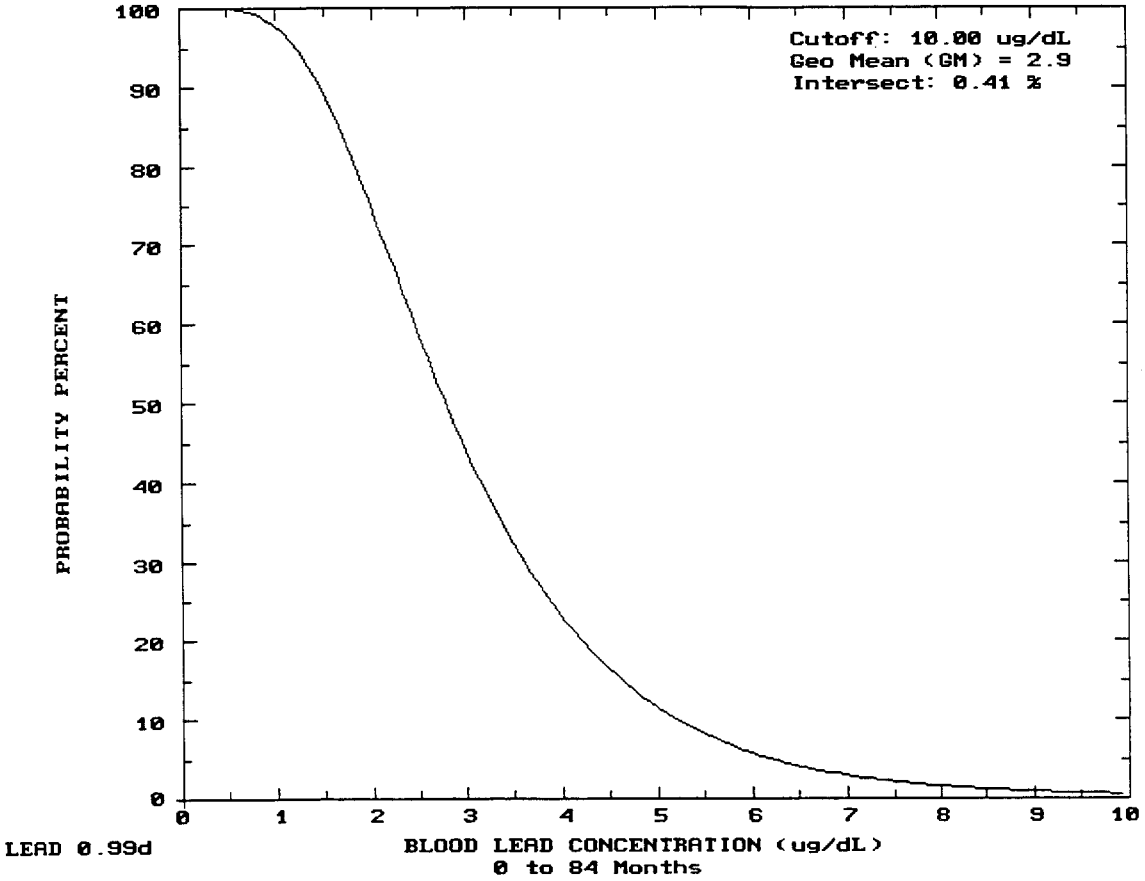
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	3.3	6.09	3.28
1-2:	3.5	8.43	5.18
2-3:	3.3	8.88	5.22
3-4:	3.1	8.87	5.27
4-5:	2.6	7.52	3.97
5-6:	2.3	7.39	3.59
6-7:	2.1	7.53	3.40

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.58	0.21	0.00	0.02
1-2:	2.68	0.53	0.00	0.03
2-3:	3.04	0.56	0.00	0.06
3-4:	2.95	0.58	0.00	0.07
4-5:	2.88	0.61	0.00	0.07
5-6:	3.06	0.64	0.00	0.09
6-7:	3.39	0.66	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.41
% Below: 99.59
G. Mean: 2.9
Probability Density
Function f(blood Pb)
0
2
4
6
8
10
12
14
16
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
LEAD 0.99d


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 2.9
Intersect: 0.41 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
8
9
10
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

LEAD 0.99d

APPENDIX I.d.2.30

HISTOGRAMS FOR

SITE L - SURFACE SOIL AND BACKGROUND GROUNDWATER DATA

IEUBK MODEL RESULTS

LEAD MODEL Version 0.99d

.IR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 2.30 ug Pb/L
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	78.6	78.6
1-2	78.6	78.6
2-3	78.6	78.6
3-4	78.6	78.6
4-5	78.6	78.6
5-6	78.6	78.6
6-7	78.6	78.6

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

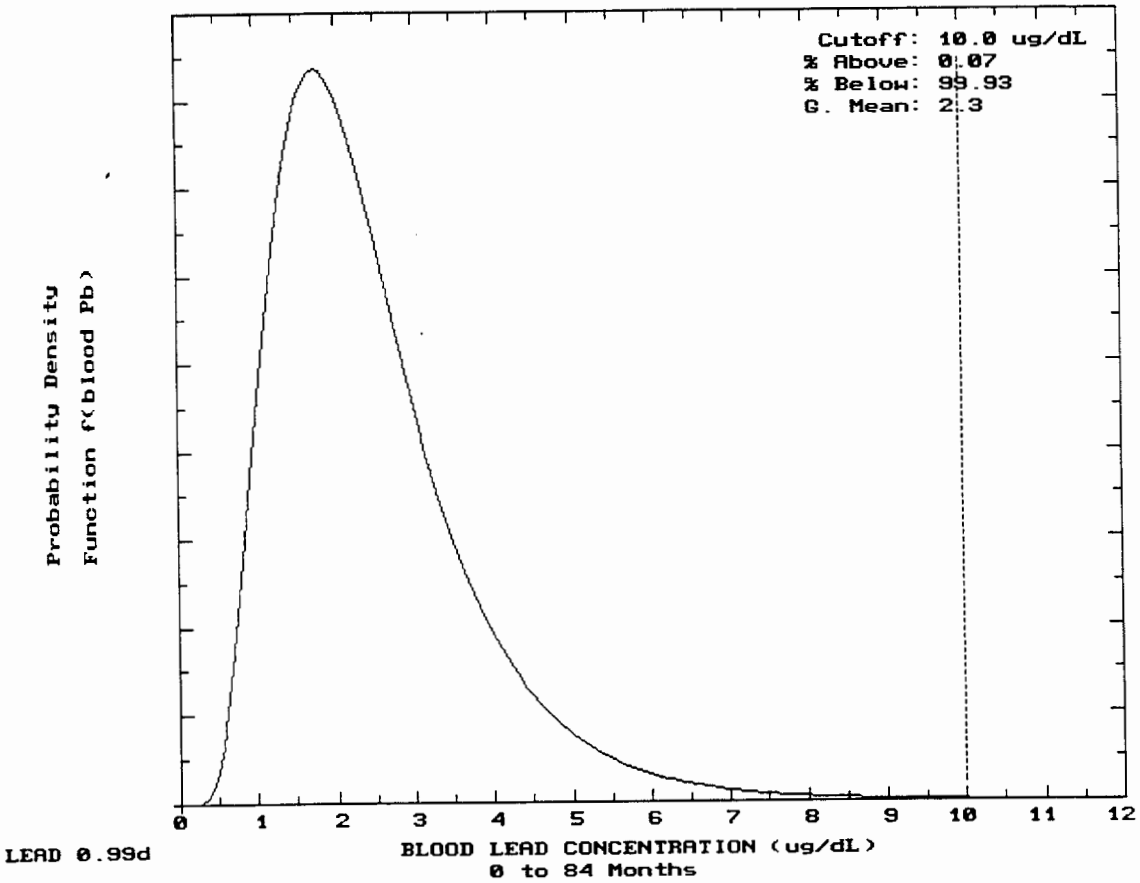
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

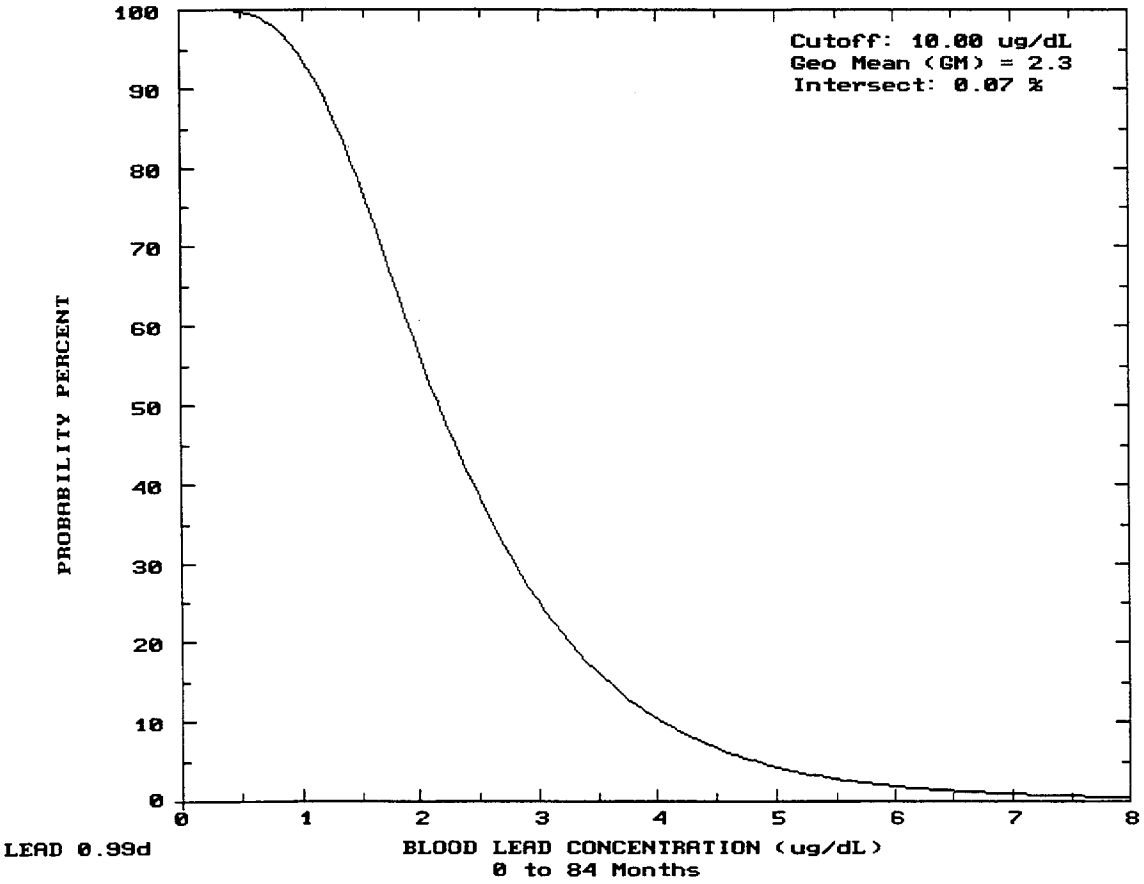
CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	2.6	4.76	1.90
1-2:	2.7	6.33	3.01
2-3:	2.5	6.75	3.03
3-4:	2.4	6.70	3.05
4-5:	2.0	5.88	2.28
5-6:	1.8	5.89	2.06
6-7:	1.7	6.11	1.95

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)

0.5-1:	2.62	0.22	0.00	0.02
1-2:	2.74	0.54	0.00	0.03
2-3:	3.09	0.57	0.00	0.06
3-4:	2.99	0.58	0.00	0.07
4-5:	2.91	0.61	0.00	0.07
5-6:	3.08	0.65	0.00	0.09
6-7:	3.41	0.66	0.00	0.09


Cutoff: 10.0 ug/dL
% Above: 0.07
% Below: 99.93
G. Mean: 2.3
Probability Density
Function f(blood Pb)
0
1
2
3
4
5
6
7
8
9
10
11
12
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
LEAD 0.99d


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 2.3
Intersect: 0.07 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
8
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

LEAD 0.99d

APPENDIX J

GROUNDWATER SAMPLING ENDPOINT TURBIDITY VALUES

APPENDIX J
GROUNDWATER SAMPLE COLLECTION ENDPOINT
TURBIDITY VALUES

MONITORING WELL	TURBIDITY (NTU)
BG GW 01	89
BG GW 02	69
BG GW 03	31
BG GW 04	4
01 GW 01	108
01 GW 02	440
01 GW 03	112
01 GW 04	173
01 GW 05	336
02 GW 01	9
02 GW 02	107
02 GW 03	43
02 GW 04	10
02 GW 05	87
02 GW 06	8
02 GW 07	565
03 GW 01	Sample obtained by bailer
03 GW 02	Dry
03 GW 03	Dry
03 GW 04	Dry
03 GW 05	1
03 GW 06	5
04 GW 01	74
04 GW 02	91
04 GW 03	Dry
04 GW 04	7
04 GW 05	555
04 GW 06	1
04 GW 07	8

APPENDIX J
GROUNDWATER SAMPLE COLLECTION ENDPOINT
TURBIDITY VALUES
PAGE 2 OF 4

MONITORING WELL	TURBIDITY (NTU)
05 GW 01	24
05 GW 02	19
05 GW 03	22
05 GW 04	14
05 GW 05	5
05 GW 06	5
05 GW 07	5
05 GW 08	4
06 GW 01	58
06 GW 02	4
06 GW 03	42
06 GW 04	12
07 GW 01	3
07 GW 02	0
07 GW 03	11
07 GW 04	14
07 GW 05	0
10 GW 01	5
10 GW 02	6
10 GW 03	5
10 GW 04	4
10 GW 05	35
10 GW 06	10
10 GW 07	5
11 GW 01	3
11 GW 02	12
11 GW 03	74
11 GW 04	102
11 GW 05	119

APPENDIX J
GROUNDWATER SAMPLE COLLECTION ENDPOINT
TURBIDITY VALUES
PAGE 3 OF 4

MONITORING WELL	TURBIDITY (NTU)
13 GW 01	854
13 GW 02	395
13 GW 03	695
13 GW 04	154
13 GW 05	8
16 GW 01	41
16 GW 02	315
16 GW 03	529
16 GW 04	138
16 GW 05	11
16 GW 06	≥999
MW1 11	11
17 GW 01	18
17 GW 03	23
17 GW 04	2
17 GW 05	123
19 GW 01	58
19 GW 02	12
19 GW 03	15
19 GW 05	0
19 GW 06	6
19 GW 07	36
23 GW 01	787
23 GW 02	457
23 GW 03	871
26 GW 01	74
26 GW 02	33
26 GW 03	25
26 GW 04	9

APPENDIX J
GROUNDWATER SAMPLE COLLECTION ENDPOINT
TURBIDITY VALUES
PAGE 4 OF 4

MONITORING WELL	TURBIDITY (NTU)
26 GW 05	37
26 GW 06	65
29 GW 01	21
29 GW 02	38

APPENDIX K

DEDICATED LOW FLOW PUMP SPECIFICATIONS

APPENDIX K.a.

DEDICATED LOW FLOW PUMP CONTAMINANT FREE CERTIFICATIONS

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695018
Batch Number:	GEO 402743
Lab Code:	GA MW1-1

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695019
Batch Number:	GEO 402743
Lab Code:	GA MW1-2

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695020
Batch Number:	GEO 402743
Lab Code:	GA MW1-3

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020595856
Batch Number:	GEO 402743
Lab Code:	GA MW1-04

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020595854
Batch Number:	GEO 402743
Lab Code:	GA MW01-05

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695063
Batch Number:	GEO 402743
Lab Code:	GA MW2-1

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695048
Batch Number:	GEO 402743
Lab Code:	GA MW2-2

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695077
Batch Number:	GEO 402743
Lab Code:	GA MW2-3

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020595874
Batch Number:	GEO 402743
Lab Code:	GA 02 MW 04

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695059
Batch Number:	GEO 402743
Lab Code:	GA MW 2-5

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695076
Batch Number:	GEO 402743
Lab Code:	GA MW2-6

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695064
Batch Number:	GEO 402743
Lab Code:	GA MW 2-7

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695057
Batch Number:	GEO 402743
Lab Code:	GA MW 3-5

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695072
Batch Number:	GEO 402743
Lab Code:	GA MW 3-6

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695051
Batch Number:	GEO 402743
Lab Code:	GA 03 MW 08

03 6-W 08

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695054
Batch Number:	GEO 402743
Lab Code:	GA MW4-1

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695055
Batch Number:	GEO 402743
Lab Code:	GA MW4-2

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695056
Batch Number:	GEO 402743
Lab Code:	GA MW4-4

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695070
Batch Number:	GEO 402743
Lab Code:	GA MW4-5

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695058
Batch Number:	GEO 402743
Lab Code:	GA MW4-6

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020595867
Batch Number:	GEO 402743
Lab Code:	GA 04 MW 07

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695022
Batch Number:	GEO 402743
Lab Code:	GA MW5-1

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695052
Batch Number:	GEO 402743
Lab Code:	GA MW5-2

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695031
Batch Number:	GEO 402743
Lab Code:	GA MW5-3

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695062
Batch Number:	GEO 402743
Lab Code:	GA MW5-4

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695061
Batch Number:	GEO 402743
Lab Code:	GA MW5-05

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695025
Batch Number:	GEO 402743
Lab Code:	GA MW5-6

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695065
Batch Number:	GEO 402743
Lab Code:	GA MW5-7

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695066
Batch Number:	GEO 402743
Lab Code:	GA MW5-8

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695044
Batch Number:	GEO 402743
Lab Code:	GA MW6-1

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695042
Batch Number:	GEO 402743
Lab Code:	GA MW6-2

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695040
Batch Number:	GEO 402743
Lab Code:	GA MW6-3

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695043
Batch Number:	GEO 402743
Lab Code:	GA MW6-4

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695039
Batch Number:	GEO 402743
Lab Code:	GA MW7-1

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695037
Batch Number:	GEO 402743
Lab Code:	GA MW7-2

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695047
Batch Number:	GEO 402743
Lab Code:	GA MW7-3

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695036
Batch Number:	GEO 402743
Lab Code:	GA MW7-4

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695038
Batch Number:	GEO 402743
Lab Code:	GA MW7-5

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695071
Batch Number:	GEO 402743
Lab Code:	GA MW10-1

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695028
Batch Number:	GEO 402743
Lab Code:	GA MW10-2

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695033
Batch Number:	GEO 402743
Lab Code:	GA MW 10-3

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695029
Batch Number:	GEO 402743
Lab Code:	GA MW10-4

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695079
Batch Number:	GEO 402743
Lab Code:	GA MW10-5

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695027
Batch Number:	GEO 402743
Lab Code:	GA MW10-7

10-6
GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695021
Batch Number:	GEO 402743
Lab Code:	GA MW10-6

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695017
Batch Number:	GEO 402743
Lab Code:	GA MW11-1

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695032
Batch Number:	GEO 402743
Lab Code:	GA MW11-2

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695026
Batch Number:	GEO 402743
Lab Code:	GA MW11-3

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020695024
Batch Number:	GEO 402743
Lab Code:	GA MW11-4

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020695023
Batch Number:	GEO 402743
Lab Code:	GA MW11-5

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020595861
Batch Number:	GEO 402743
Lab Code:	GA 13 MW 01

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020695060
Batch Number:	GEO 402743
Lab Code:	GA 13 MW 02

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020595862
Batch Number:	GEO 402743
Lab Code:	GA 13 MW 03

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020595863
Batch Number:	GEO 402743
Lab Code:	GA 13 MW 04

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020595860
Batch Number:	GEO 402743
Lab Code:	GA 13 MW 05

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020595871
Batch Number:	GEO 402743
Lab Code:	GA MW-1

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020595858
Batch Number:	GEO 402743
Lab Code:	GA MW16-01

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020595855
Batch Number:	GEO 402743
Lab Code:	GA MW16-02

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695049
Batch Number:	GEO 402743
Lab Code:	GA 16 MW 03

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695068
Batch Number:	GEO 402743
Lab Code:	GA 16 MW 04

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695046
Batch Number:	GEO 402743
Lab Code:	GA MW17-1

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695045
Batch Number:	GEO 402743
Lab Code:	GA MW17-3

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695030
Batch Number:	GEO 402743
Lab Code:	GA MW17-4

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695074
Batch Number:	GEO 402743
Lab Code:	GA MW17-05

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020695082
Batch Number:	GEO 402743
Lab Code:	GA MW19-1

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020695083
Batch Number:	GEO 402743
Lab Code:	GA MW 19-2

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020695081
Batch Number:	GEO 402743
Lab Code:	GA MW19-3

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020695069
Batch Number:	GEO 402743
Lab Code:	GA MW19-5

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020695080
Batch Number:	GEO 402743
Lab Code:	GA MW19-6

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020595870
Batch Number:	GEO 402743
Lab Code:	GA 19 MW 07

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020595873
Batch Number:	GEO 402743
Lab Code:	GA 23 MW 01

GEOGUARD
Dedicated To Ground Water Technology

Contaminant Free Certification

Pump Number:	020595869
Batch Number:	GEO 402743
Lab Code:	23 MW 02

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020595859
Batch Number:	GEO 402743
Lab Code:	GA 23 MW 03

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695075
Batch Number:	GEO 402743
Lab Code:	GA MW26-1

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695034
Batch Number:	GEO 402743
Lab Code:	GA MW26-02

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695035
Batch Number:	GEO 402743
Lab Code:	GA MW26-03

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020695041
Batch Number:	GEO 402743
Lab Code:	GA MW26-04

GEOGUARD
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Contaminant Free Certification

Pump Number:	020595872
Batch Number:	GEO 402743
Lab Code:	GA 26 MW 05

GEOGUARD
Dedicated To Ground Water Technology
Contaminant Free Certification

Pump Number:	020595868
Batch Number:	GEO 402743
Lab Code:	GA 26 MW 06

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Pump Number:	020595857
Batch Number:	GEO 402743
Lab Code:	GA MW29-01

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Contaminant Free Certification

Pump Number:	020695050
Batch Number:	GEO 402743
Lab Code:	GA 29 MW 02

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Contaminant Free Certification

Pump Number:	020595865
Batch Number:	GEO 402743
Lab Code:	GA BG MW 01

GEOGUARD
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Contaminant Free Certification

Pump Number:	020595864-BGMW 02
Batch Number:	GEO 402743
Lab Code:	GA

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Contaminant Free Certification

Pump Number:	020695078
Batch Number:	GEO 402743
Lab Code:	GA BGMW-03

GEOGUARD
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Contaminant Free Certification

Pump Number:	020695067
Batch Number:	GEO 402743
Lab Code:	GA BGMW-04

APPENDIX K.b.

MATERIAL SPECIFICATIONS

RECEIVED
MAR 5

Bid Proposal

Low Flow Pumping Systems
NWS Earle, Colts Neck, NJ

Prepared for: Halliburton NUS Corporation
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone: 412-921-7090

Attn: Mr. Shawn Scaff

Submitted by: GEOGUARD, Inc.
P.O. Box 149
536 Orient Street
Medina, NY 14103
Phone: 1-800-645-7654
Fax: 1-800-688-9870

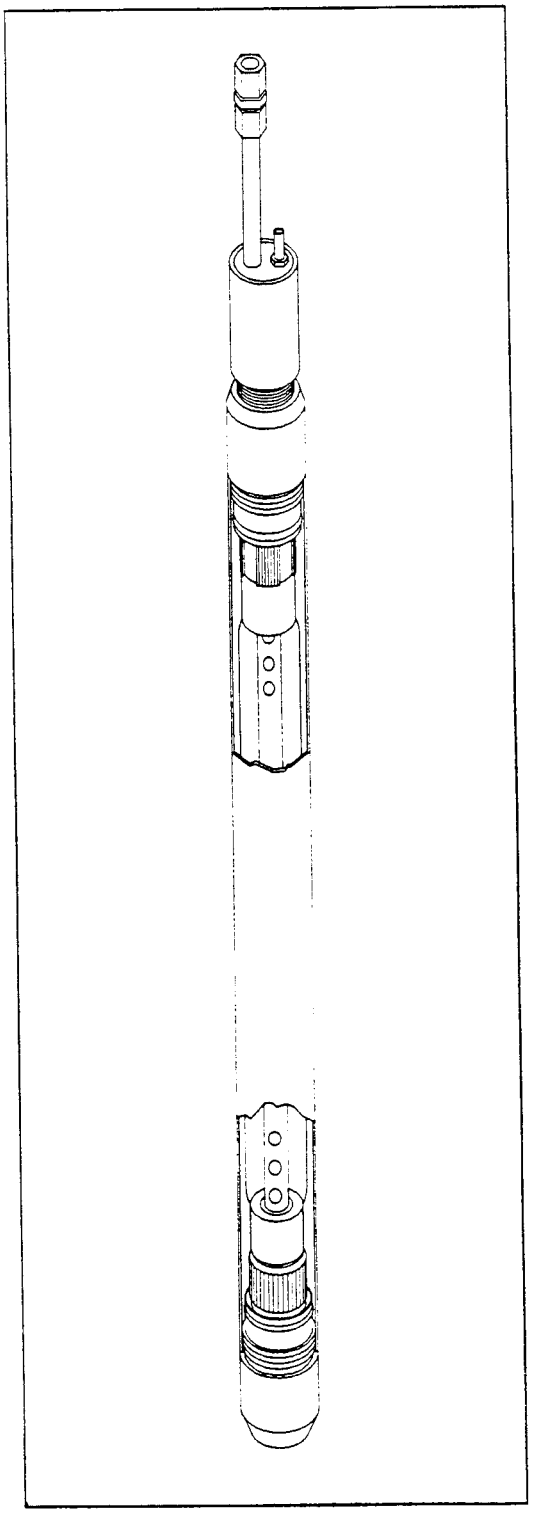
Local Representative: CP Equipment Sales
RD #1 Box 1285
Bangor, PA 18013
610-588-0047

MASTER-FLO
Ground Water Sampling Systems

5600 SERIES BLADDER PUMPS

Available in a wide range of sizes and capacities to meet virtually any pumping situation, GEOGUARD 5600 Series Bladder Pumps meet all EPA requirements for representative ground water monitoring in both portable and dedicated situations.

The smallest diameter pump will fit a 1.5 inch, or restricted, well casing. All models can be lengthened for improved flow rate and longer periods of low, continuous flow.



- Available in pump diameters for 1.5" (38.1 mm) and larger wells.
- Pumping rates up to 2.5 gpm (9.5 lpm) @ 25 ft. (7.62 m) in a 2" (51 mm) well...large air and water porting enables faster pump/fill cycles; larger bladder than conventional bladder pumps permits more volume pumped per cycle.
- EPA recommended materials including Type 316 Stainless Steel and Teflon®, PVC and Teflon®, or all Teflon®.
- Large water discharge porting (.375 inch) reduces pressure gradients between the bladder and discharge tubing, lessening the potential for orifice outgassing that can compromise dissolved gas and VOC samples.
- Factory sealed, field replaceable, Teflon® bladder cartridges slip into place, without tools or clamps. Lifetime guarantee on all dedicated components.
- Withstands dry pumping.
- Threaded pump intakes permit the use of intake drop tube extensions, booster pump applications, and other unique configurations.
- Type 316 Stainless Steel, .010 inch intake screens help protect bladders from sand.
- Contaminant-free certification - all pumps are cleaned, lab tested and individually sealed in polyethylene bags.

For applications assistance call 1-800-645-7654.

5600 SERIES BLADDER PUMPS

DESIGN SPECIFICATIONS

MODEL	MATERIAL	O.D. (in./mm.)	LENGTH (in./cm.)	WEIGHT (lbs./kg.)	CAPACITY (ml.)	LIFT (ft./m.)
5605	S.S./Teflon	1.38/35	43/109	5.0/2.3	400	400/121
5609	S.S./Teflon	1.38/35	30/76	3.5/1.6	225	400/121
5615	S.S./Teflon	1.66/42	43/109	6.8/3.1	550	400/121
5625	PVC/Teflon	1.66/42	43/109	3.2/1.5	400	400/121
5627	PVC/Teflon	1.66/42	78/198	6.0/2.7	800	400/121
5635	PVC/Teflon	1.90/48	43/109	3.7/1.7	550	400/121
5637	PVC/Teflon	1.90/48	78/198	7.0/3.2	1100	400/121
5645	Teflon	1.75/45	43/109	5.2/2.4	400	400/121

SUPPORT EQUIPMENT OPTIONS

- Models 5001 (electric), 5940 (pneumatic), or 55000 (electronic) Controllers.
- Models 5404 Oil-less Compressor, 5401 (compressor on 20" wheeled cart), or 5420 (compressor with 16" pneumatic wheels).

BONDED, TWIN TUBING OPTIONS

MODEL	MATERIAL	AIR TUBE I.D. x O.D.	WATER TUBE I.D. x O.D.
5916	Pure Teflon	.250 x .375	.375 x .500
5896	Polyethylene	.250 x .375	.375 x .500
5897	Teflon lined PE	.250 x .375	.375 x .500

ENGINEERING SPECIFICATIONS

1. The pump shall be a positive displacement bladder squeeze pump, where drive air does not contact the sample.
2. The pump shall permit water to enter the interior of the bladder through a bottom check valve and permit air to enter the annulus between the pump body and bladder through an upper air inlet/outlet.
3. The pump shall not fill by suction assist, or place a negative pressure on the sample.
4. All internal pump components shall be virgin Teflon®.
5. The pump shall incorporate a field replaceable, factory sealed and tested, Teflon bladder cartridge.
6. The pump shall withstand continuous operation at 200 psi (14 bars) without modification.
7. The pump shall be capable of dry pumping without damage.
8. The pump shall have minimum .375 water discharge porting, without restrictions, to eliminate dissolved gas loss due to orifice effects during sampling.
9. The pump shall have a threaded intake (3/4" female pipe thread) to permit use of a drop tube extension, booster pumps, and factory equipped, Type 316 Stainless Steel, .010" intake screen.
10. The pump shall be convertible to a bailer or gas drive pump.

Note: Teflon is a registered trademark of E.I. duPont.

GEOGUARD
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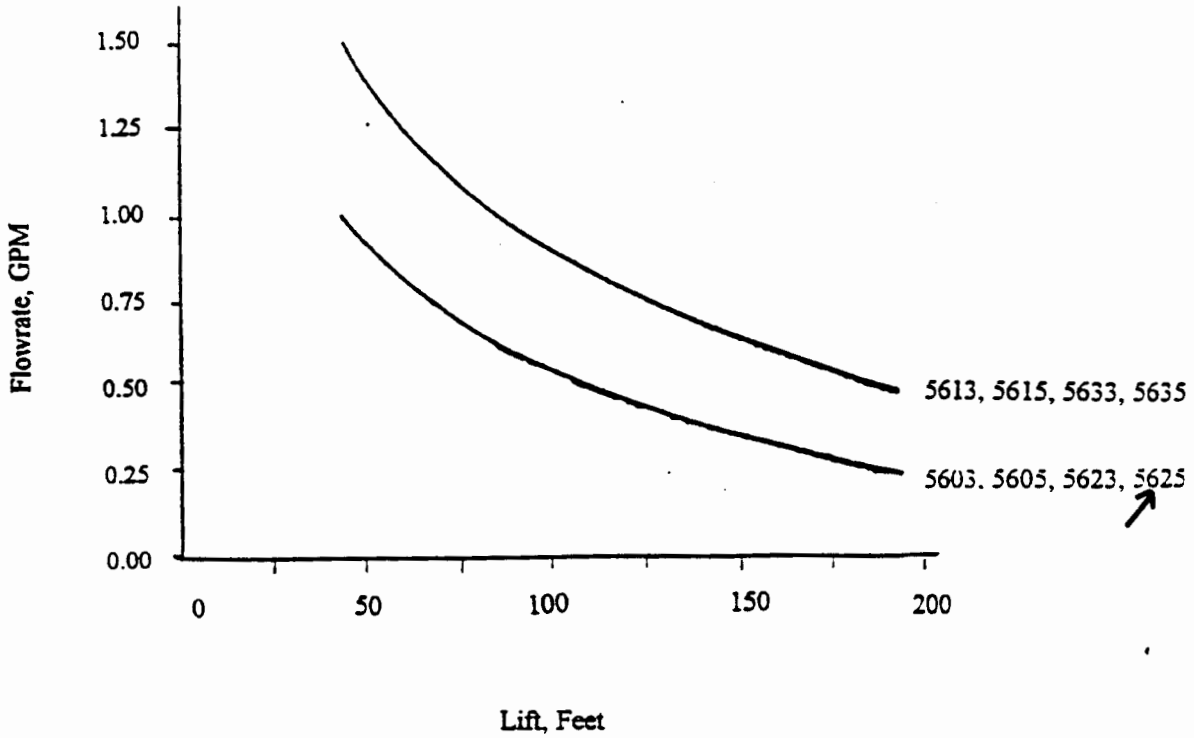
Performance Curve

40" Bladder Pump



Note: Performance of pneumatic pumps varies with lift, submergence, and compressed air source.

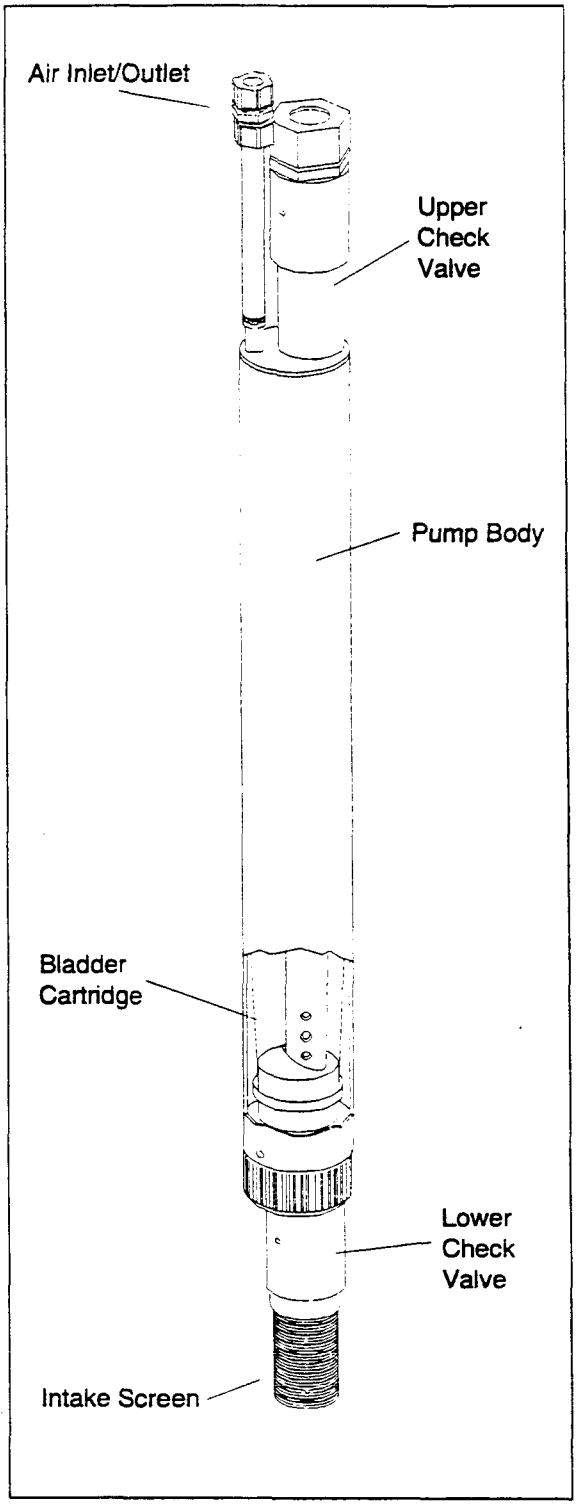
The above data is based on 30 feet of submergence using GEOGUARD Model 5001 Controller and Model 5404 Compressor delivering 100 p.s.i. at 2.55 CFM.

MASTER-FLO
Ground Water Sampling Systems

57000 SERIES BLADDER PUMPS

MASTER-FLO dedicated bladder pumps meet rigid U.S.E.P.A. (Nov 93) requirements for ground water monitoring, while offering the highest flow rates of any bladder pump of equivalent size. This enhanced performance results from an offset center tube and check valves which produce a straight water path. The .5 inch path is larger than the .375 inch of conventional bladder pumps. The larger bore and unrestricted flow path combine to produce higher flow rates for purging and low, consistent flows for sampling.

- Pump diameters for 2" (51 mm) and larger wells.
- Pumping rates up to 3 gpm (11.3 lpm) @ 45 ft. (13.7 m) in a 2" (51 mm) well...large air and water porting (.5 inch) enables faster pump/fill cycles; larger bladder than conventional bladder pumps permits more volume pumped per cycle. Flow rate can be reduced to less than 100 ml/min., as is recommended by the U.S.E.P.A. for sampling.
- EPA recommended materials including NSF rated PVC and Teflon®, or Type 316 Stainless Steel and Teflon®.
- Large water discharge porting reduces pressure gradients between the bladder and discharge tubing, lessening the potential for orifice outgassing that can compromise dissolved gas and VOC samples.
- Factory sealed, field replaceable, Teflon® bladder cartridges slip into place, without tools or clamps. Lifetime guarantee (When permanently installed).
- Withstands dry pumping.
- Easy installation by one person.
- Threaded pump intakes permit the use of intake drop tube extensions, booster pump applications, and other unique configurations.
- Type 316 Stainless Steel, .010 inch intake screens help protect bladders from sand.
- Contaminant free certification - all pumps are cleaned, lab tested and individually sealed in polyethylene bags.

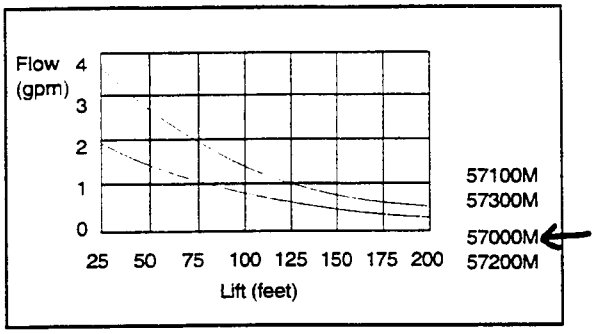


For applications assistance call 1-800-645-7654.

Note: Teflon is a registered trademark of E.I. duPont.

57000 SERIES BLADDER PUMPS

FLOW PERFORMANCE CURVES



Notes:

1. Flow based on air operating pressure of 125 psi, air displacement rate of 3.5 scfm, and 15 feet of submergence.
2. Pumps utilize thermally bonded twin tubing having an air tube of 1/4" I.D. and a water discharge tube of 1/2" I.D.
3. Flow at any depth based on specific tubing length and free discharge to atmosphere.

DESIGN SPECIFICATIONS

MODEL	MATERIAL	O.D. (in./mm.)	L (in./cm.)	WEIGHT (lbs./kg.)	CAPACITY (gal./L.)
*57000M	S.S./Teflon	1.66/42	44/112	4.6/2.09	0.14/0.55
57100M	S.S./Teflon	1.66/42	80/204	8.4/3.81	0.29/1.1
*57200M	PVC/Teflon	1.90/48	44/112	3.6/1.64	0.14/0.55
57300M	PVC/Teflon	1.90/48	80/204	6.3/2.86	0.29/1.1

*Models 57000M and 57200M available for use with 3/8" I.D. water discharge tubing. Flow will be slightly less than shown on curve. Specify as Model 57000 or 57200.

ENGINEERING SPECIFICATIONS

1. Pump Models 57000M/57100M shall have an O.D. of 1.66 inches (42 mm), with Models 57200M/57300M having an O.D. of 1.90 inches (48 mm), to permit use in 2" (51 mm) or larger wells.
2. The pump shall be a positive displacement bladder squeeze pump, whereby the drive air does not contact the sample.
3. The pump shall permit water to enter the interior of the bladder through a bottom check valve and air to enter the annulus between the pump body and bladder through an upper air inlet/outlet.
4. The pump shall not fill by suction assist or place a negative pressure on the sample.
5. The pump shall have a minimum 1/2" water discharge port, without restrictions, to eliminate dissolved gas loss due to orifice effects during sampling.
6. Models 57000M/57100M shall be constructed from electropolished, Type 316 Stainless Steel and Teflon®. Models 57200M/57300M shall be constructed from NSF rated PVC and Teflon.
7. All internal pump components shall be of Teflon.
8. The pump shall employ a field replaceable, Teflon, factory sealed and tested bladder cartridge, to be installed without tools.
9. The pump shall withstand continuous operation at 200 psi (14 bars) without modification.
10. The pump shall be capable of lifting from 450 feet (135 m) without modification.
11. The pump shall be capable of dry pumping without damage.
12. The pump shall be equipped with a threaded intake to permit the use of a drop tube extension, booster pumps, and factory equipped, Type 316 Stainless Steel, .010" intake screen.

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MASTER-FLO
Ground Water Sampling Systems

TUBING ASSEMBLY OPTIONS

GEOGUARD offers a variety of tubing options in either coaxial or bonded configurations. Material options of polyethylene, Teflon lined polyethylene, or pure Teflon® provide economy and chemical inertness. Coaxial tubing is utilized in well development and portable purging applications. Bonded tubing used with dedicated pumps eliminates the potential of interference with portable static water level measurement probes.

MODEL #	STYLE	MATERIAL	AIR TUBE I.D. X O.D. (IN/CM)	WATER TUBE I.D. X I.D. (IN/CM)	COMPATIBLE PUMP
5896	Bonded Twin	Polyethylene	.250 x .375/ 0.64 x 0.95	.375 x .500/ 0.95 x 1.27	5615 5635 57000 57200
5688	Bonded Twin	Polyethylene	.375 x .500/ 0.95 x 1.27	.625 x .750/ 1.59 x 1.91	5662 5952
5689	Bonded Twin	Polyethylene	.375 x .500/ 0.95 x 1.27	.375 x .500/ 0.95 x 1.27	5972 5973 5974 5975
5897	Bonded Twin	Teflon Lined Polyethylene	.250 x .375/ 0.64 x 0.95	.375 x .500/ 0.95 x 1.27	57000 5615 5635 57200 5625
5916	Bonded Twin	Pure Teflon	.250 x .375/ 0.64 x 0.95	.375 x .500/ 0.95 x 1.27	5645 57000
5090	Coaxial	Polyethylene	.625 x .750/ 1.59 x 1.91	.375 x .500/ 0.95 x 1.27	5602 5612 5622 5632
5170	Coaxial	Polyethylene	.625 x .875/ 1.59 x 2.22	.375 x .500/ 0.95 x 1.27	5612D 5632D
5822	Bonded Twin	Pure Teflon	.250 x .375/ 0.64 x 0.95	.500 x .625 1.27 x 1.59	57000M 57100M
5740	Bonded Twin	Teflon Lined Polyethylene	.250 x .375 0.64 x 0.95	.500 x .625 1.27 x 1.59	57000M 57100M 57200M 57300M
5741	Bonded Twin	Polyethylene	.250 x .375/ 0.64 x 0.95	.500 x .625/ 1.27 x 1.59	57000M 57100M 57200M 57300M
5878	Tri-Bond	Polyethylene	.375 x .500/ 0.95 x 1.27 *	.375 x .500/ 0.95 x 1.27	5634 56140
5879	Tri-Bond	Teflon Lined Polyethylene	.375 x .500/ 0.95 x 1.27 *	.375 x .500/ 0.95 x 1.27	5634 56140
5880	Tri-Bond	Pure Teflon	.375 x .500/ 0.95 x 1.27 *	.375 x .500/ 0.95 x 1.27	56140

Note: Teflon is a registered trademark of E.I. duPont.

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MASTER-FLOW
Ground Water Sampling Systems

DEDICATED WELLHEAD CLOSURE

Wellhead closures provide a necessary and convenient means of terminating dedicated tubing to the wellhead, supporting the pump, and housing the air water fittings.

All GEOGUARD Wellhead Closures Feature:

- Tough Type I PVC construction with stainless steel hardware.
- .875 - inch water level access port.
- 36 - inch water discharge tube extension (stores in the water level access port).
- All necessary fittings installed. The fittings that mount on the wellhead closure are included with the downwell component selection for each well (bladder pump, purge pump, packer, etc.).

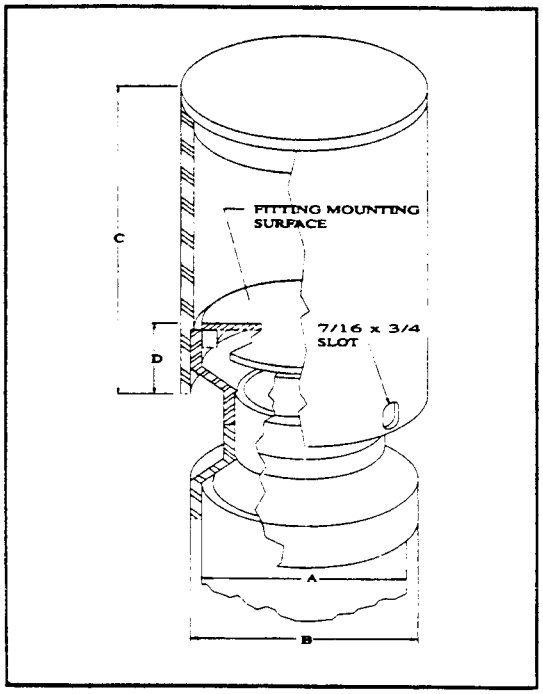
Three Standard Closure Styles Are Available:

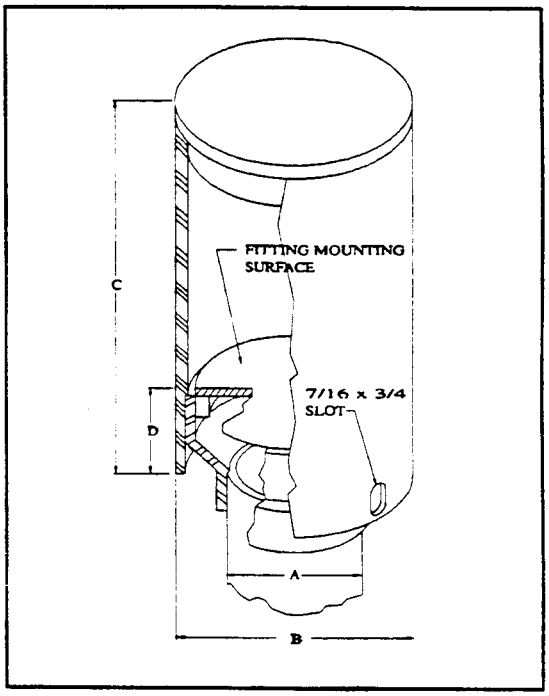
1. Bell Cap, lockable and non-lockable.
2. Flat Cap, non-lockable.
3. Indented, non-lockable.

Bell Cap with Lockable Cover

The bell cap is recommended for use on free standing wells (above grade, without protective casing) where it is desirable to secure the well with a locking cover.

MODEL#	WELL SIZE	STYLE	A	B	C	D
5424	1.5"	Lockable	1.90	2.20	9.00	2.75
5287	2"	Lockable	2.38	2.70	9.00	2.75
5425	3"	Lockable	3.50	5.87	13.76	5.50
5288	4"	Lockable	4.50	6.50	15.00	6.00
5426	6"	Lockable	6.62	7.25	17.00	8.5

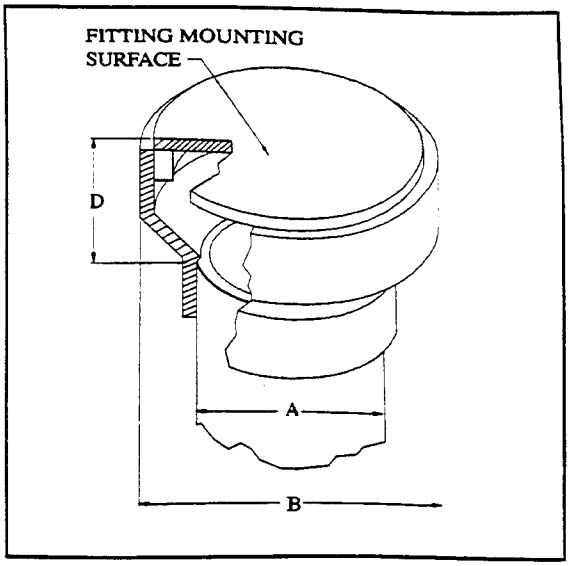




For application assistance call 1-800-645-7654.

Bell Cap, Non-lockable

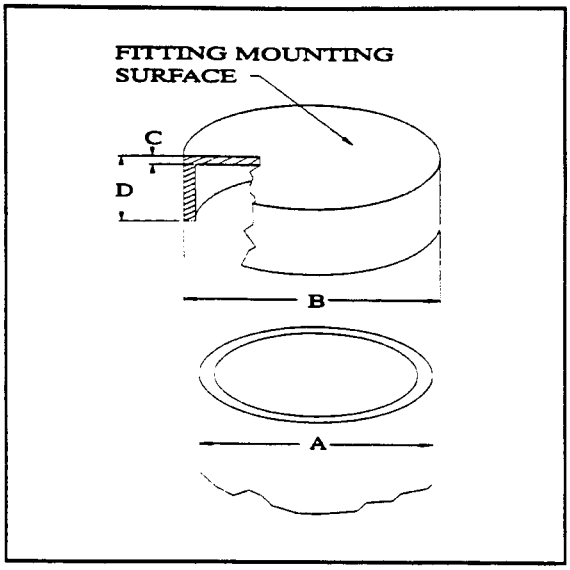
The non-lockable Bell Cap is available for 1.5 and 2-inch wells and is recommended when numerous fittings must be mounted to the closure plate. When using on the wells within a vault or protective casing, be sure that there is adequate vertical and diametral clearance for installation.



MODEL #	WELL SIZE	STYLE	A	B	C
5492	1.5"	Non-lockable Bell Cap	1.90	4.00	2.75
5493	2"	Non-lockable Bell Cap	2.30	4.00	2.75

Flat Cap, Non-lockable

This style closure is available for all size well casings (sizes larger than 4-inch may have a slightly domed top). It is recommended for use on wells inside protective casings or vaults where there is adequate clearance for the tube fittings between the top to the well casing and the lid of the protective casing.

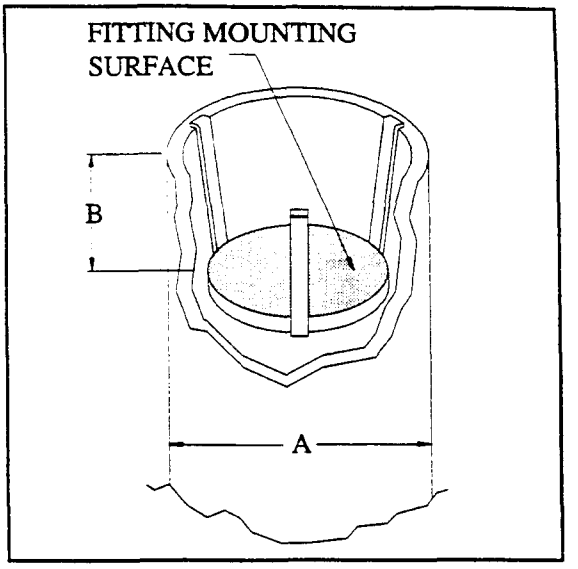


MODEL #	WELL SIZE	STYLE	A	B	C	D
5870	2"	Non-lockable Flat Cap	2.38	2.70	0.25	1.80
5494	3"	Non-lockable Flat Cap	3.50	4.00	0.25	1.85
5422	4"	Non-lockable Flat Cap	4.50	5.00	0.25	2.30
5442	6"	Non-lockable Flat Cap	6.62	7.25	0.25	3.35

Indented, Non-lockable

Indented closures are available for wells up to 6 inches. They are recommended for wells within vaults or protective casing where there is inadequate clearence for tube fittings between the top of the well casing and the lid of the protective casing.

MODEL#	WELL SIZE	STYLE	A	B
5830	2"	Indented	1.75	2.25
5830	3"	Indented	2.75	2.25
5329	4"	Indented	3.50	3.50
5329	5"	Indented	3.50	3.38
5329	6"	Indented	3.50	3.25



APPLICATION TIP:
Well Design Considerations For Dedicated Sampling Systems

The trend towards dedicated ground water sampling equipment is increasing. Many facilities, recognizing the technical and practical benefits, are specifying dedicated bladder squeeze pumps prior to the installation of the monitoring wells. GEOGUARD dedicated systems are designed to retrofit to existing monitoring wells, however, if the wells have not been drilled a satisfactory installation will result if the following is addressed during well design.

- If protective casings will be installed, specify that the well riser is centered within the protective casing. This will provide adequate diametral clearance for the dedicated wellhead closure body.
- Specify a steel protective casing that has a lockable cap that will provide at least three inches of clearance within the cap, above the protective casing. This will allow the dedicated wellhead closure body to be installed on the well riser such that the air and water fittings protrude above the casing for easy access.
- Specify a minimum inside diameter of four inches for the steel protective casing. This will allow room for a dedicated wellhead closure body of sufficient size to permit the convenient use of packers, auxiliary purge pumps or other devices that will speed the purge/sample activity. If a square protective casing is used, specify one that will accept a four-inch diameter wellhead closure body.
- Dedicated wellhead closures for subgrade wellhead terminations, well installed on flood plains or wells producing explosive or noxious gases, must be specially configured to prevent damage to the well or exposure of hazards to field personnel. These problems should be addressed during initial design rather than having costly re-configuration of the wellhead after installation. If your sampling program involves these or other special considerations, call 1-800-645-7654 for assistance.

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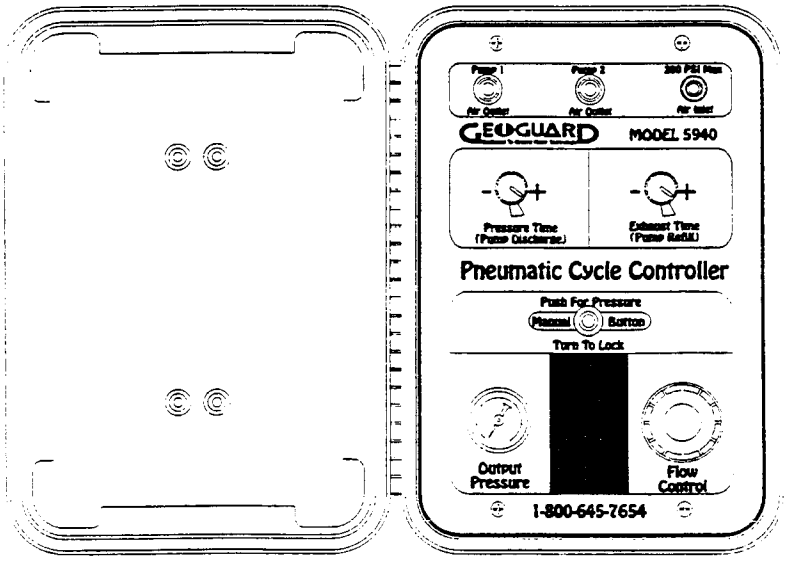
MASTER-FLO
Ground Water Sampling Systems

FULLY PNEUMATIC AUTOMATIC PUMP CYCLE CONTROLLER

GEOGUARD Pump Cycle Controllers manage the compressed air used to power pneumatic pumps. They are designed with large air paths so as not to restrict the air flow as it moves from the compressed air source to the pump.

- Fine tuning, single rotation timer adjustment provides optimum pump flow rate.
- Sensitive air flow control permits high purging rates and low (less than 100ml/min.) sample rates.
- 200 psi pressure capability allows lifts up to 450 feet (135 m).
- Quick exhaust valve "short circuits" exhausting air, permits the pump to fill faster for higher purging flow rates.
- Non-corroding, quick-connect hose attachments.
- Over pressure protection.
- Liquid dampened pressure gauge.
- Manual override bypasses the timers for manual operation (used for "cold weather blow outs", packer inflation, etc.)..
- Moisture trap/air filter prevents water and particulate matter from entering controller, tubing and pump.
- Enclosed in a rugged, environmentally sealed, shock resistant case.
- Doubling acting feature permits operation of two pumps. (Note: Requires additional air hose from controller to pump. Part number 50090.)



Design Specifications

Model#: 5940

Weight: 10 lbs.

Dimensions: 14.5" L x 10" D x 9" W

Timer Range: Fill = 1 to 180 seconds. Discharge = 1 to 60 seconds. Independently adjustable.

Pressure Capability: 200 psi.

Power Source: Compressed air.

Air Hose: .375" I.D. reinforced, industrial air hose. Compressed air source to controller hose length is 25 ft. and includes quick -connect fittings. Controller to pump hose length is 10 ft. and includes quick-exhaust valve and quick-connect fittings. (Optional lengths available upon request).

For applications assistance call 1-800-645-7654.

FULLY PNEUMATIC AUTOMATIC PUMP CYCLE CONTROLLER

ENGINEERING SPECIFICATIONS

1. The Model 5940 Controller shall be housed in a gasketed case with a continuous hinged top.

2. The controller shall be fully pneumatic, powered only by compressed air.

3. The controller shall be equipped with a flow rate control capable of reducing the pump flow to less than 100 ml/min. throughout the entire lift range.

4. The controller shall incorporate a panel mounted, liquid dampened pressure gauge.

5. The controller shall incorporate seperate fill and discharge timers that are independently adjustable.

6. The controller shall be capable of operating either one or two pumps. Two pump operation shall be accomplished by alternately pressurizing and venting each pump independently, from the controller panel, without the use of a manifold.

7. The controller shall be supplied with: 25 feet of 3/8" I.D., reinforced, industrial air hose with quick-connect fittings for use between the compressed air source and controller; and 10 feet of identical air hose with quick exhaust valve and quick-connect fittings for use between controller and pump tubing.

8. The controller shall be capable of cycling up to 200 psi (14 bars) without modification.

9. The controller shall be equipped with a pressure relief valve to serve as over pressure protection.

10. The controller shall be equipped with a mechanical manual override that bypasses the timers and provides for manual cycling of the compressed air.

11. The controller shall be equipped with a detachable external water trap/air filter.

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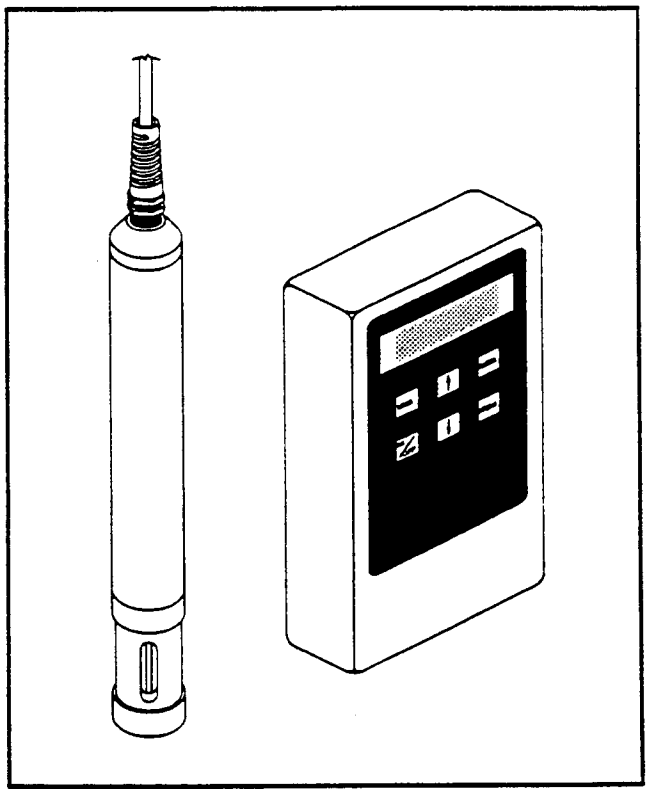
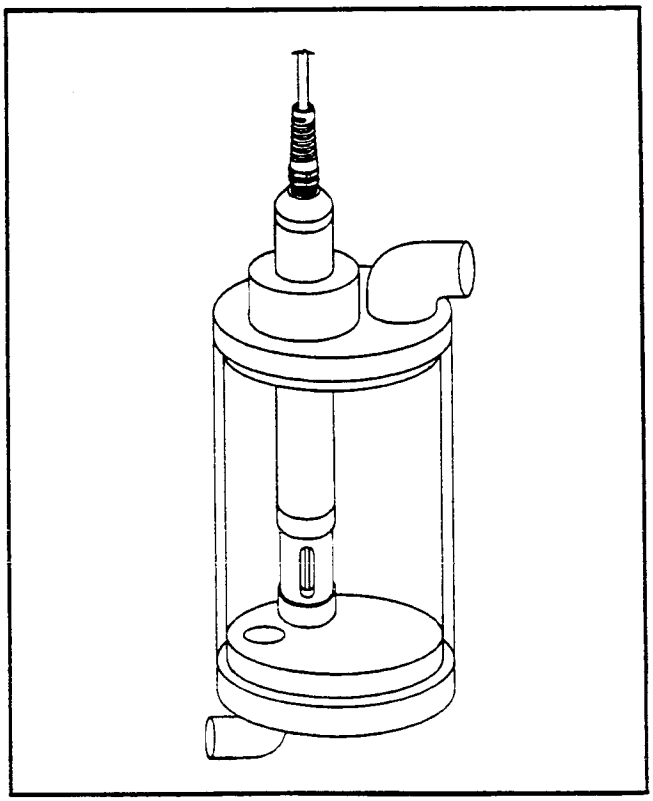
MASTER-FLO
Ground Water Sampling Systems

WATER ANALYZER

The Purge-Mate Water Analyzer simultaneously takes readings for pH/ORP Dissolved Oxygen, Conductivity/Total Dissolved Oxygen and Temperature. Accuracy in dissolved oxygen as well as the other analyte measurements are important in the overall picture of a ground water sampling program. To ensure accuracy, water must be analyzed on site to acquire the true characteristics of the water being sampled.



The Water Analyzer is a hand-held unit that operates on a 8-hour rechargeable battery, AC line voltage adapter or an optional automobile cigarette lighter adaptor. A splash-proof membrane keypad displays prompts and guides the user through operation and calibration steps. The Water Analyzer can display readings in all customary units and all their variations. The readings automatically and totally compensate for the effects of salinity, temperature, barometric pressure, as well as sensor field effects. An optional internal pressure transducer senses the barometric pressure, eliminating the need to manually read and enter compensation data.



- Automatically compensates.
- All inclusive nomenclature.
- 1 to 199 complete set of readings.
- RS232 package available for complete PC compatibility.
- Operates at up to 200 feet.
- Real-time clock and automatic data logging.
- Sample time intervals from one minute to one hour.

For applications assistance call 1-800-645-7654.

WATER ANALYZER

DESIGN SPECIFICATIONS

Model 51500	pH	ORP	Conductivity/TDS	DO	Temperature
Range:	1-13 pH	±500	10-99,990 µS/5-49,900 ppm (4 Ranges)	0-50ppm 0-120% Sat.	0-50°C 32-122°F
Resolution	0.01 pH	1	0.1% of range	0.1 ppm	0.1°
Accuracy:	0.02 pH	±2%	3% FS	2-5% FS(1)	1°C/1.8°F

OperatingTemperature:	0-50°C (non-condensing atmosphere)
StorageTemperature:	0-55°C (non-condensing atmoshpere)
Probe Dimensions:	12"L x 1.5" OD (30.5L x 3.8 OD cm)
Meter Dimensions:	7.5"l x 4.15"W x 1.5"D (19L x 10.5W x 3.8D cm)
Weight:	From 1 to 10 lbs (0.5 to 5 Kg, depending on cable length)

(1) Accuracy is 2% within 5°C of calibration temperature; 5% from 0-50°C

Flow-Through Cell Specifications

Purge Capacity	Volume	Dimensions	Weight
Up to 2 gpm (Normal Mode) 2 - 10 gpm (With Flow Diverter)	240 ml	18" x 14" x 8"	13 lbs.

GEOGUARD
Dedicated To Ground Water Technology
536 ORIENT STREET • P.O. BOX 149 • MEDINA, NEW YORK 14103 • 1-800-645-7654

GEOGUARD
Dedicated To Ground Water Technology
536 ORIENT STREET • P.O. BOX 149
MEDINA, NEW YORK 14103-0149

Statement of Service & Support

Warranty

GEOGUARD's unconditional warranty covers all downwell components, including bladder pumps, tubing, and well closures, purge packers and auxiliary purge pumps for the Lifetime of the project.

All standard support equipment, including cycle controllers and compressors, is warranted for a period of one year.

Loaner Program

In the unlikely event of controller failure in the field, upon notification, GEOGUARD will ship a loaner the same day as notified of the problem, for delivery the next day. The customer controller may then be returned to the factory for repair. Turn around time is one week, including an overnight test. The loaner controller may be retained by the customer until the repaired controller is returned.

24 Hour Service Hotline

GEOGUARD assures that by calling the factory 800 number, customer service assistance is always readily available. In addition to regular working hours, (Eastern time) a service technician is available via beeper, weekday after hours and weekends, 24 hours a day.

Replacement Parts

Replacement parts such as bladders, o-rings or check balls, etc. are shipped from the factory the same day as notification of our customer service department. The local manufacturer's representative will warehouse the same items upon request. Complete listings of replacement parts are provided in the User's Manuals accompanying each system shipment.

Field Assistance

All pumps are precleaned to meet EPA standards, sealed in polyurethane and laboratory certified to be free of contaminants. Tubing is precut to the exact length for each well as specified by the customer, attached at one end to the well closure, sealed in polyurethane and labeled with well identification. With two simple compression fitting connections, the equipment is ready to install in the well.

Each system when shipped, includes User's Manuals, providing complete instruction for installation and operation of the system. Field installation assistance by factory or local representative is readily available upon request.

1-800-645-7654 • (716) 798-5597 • FAX: (716) 798-0147

MASTER-FLO
Ground Water Sampling Systems

WARRANTY

Each GEOGUARD, Inc. ground water sampling product is warranted by GEOGUARD, Inc. to be free from defects in material and workmanship according to the following schedule.

Well dedicated Components (including Two-Stage Pumps, Bladder Pumps, Purge Pumps, Intake Screens, Packers, Tubing, Well Closures and associated fittings) will hold an unconditional lifetime warranty.

Portable Components will be unconditionally warranted for period of one year from the date of shipment.

This warranty is the sole and exclusive warranty as regards to the product sold to you by GEOGUARD, Inc. and there are no other warranties, expressed or implied; GEOGUARD, Inc. specifically disclaiming any such warranty. No representative or agent of GEOGUARD, Inc. except a corporate officer, is authorized to modify, enlarge or extend the above warranty and only a written instrument signed by a corporate officer specifically shall be effective to modify, enlarge or extend the same.

The goods are sold and accepted with the understanding and agreement that GEOGUARD, Inc.'s liability is limited to the price of the unit sold.

For repair assistance, call the GEOGUARD product service center at 1-800-645-7654.

GEOGUARD
Dedicated To Ground Water Technology
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APPENDIX L

WASTE DISPOSAL RECORDS

HAZARDOUS WASTE MANIFEST

Department of the Environment - Waste Management Administration
2500 Broening Highway Baltimore, MD 21224

Hazardous Waste Program

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form approved OMB No. 2050-0039 Expires 9/30/94

cc: LR NWC

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID NO. NJ0 170022172

Manifest Document No. 14638

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Dennis Swalwell
(908)866-2339
Naval Weapons Station Earle
201 Highway 34 South
Colts Neck, NJ 07722-5014

4. Generator's Phone ( )

5. Transporter 1 (Company Name)
Laidlaw Environmental Services (TS), Inc.

6. US EPA ID Number MDD 980554653

7. Transporter 2 (Company Name)

8. US EPA ID Number

9. Designated Facility Name and Site Address
Laidlaw Environmental Services (TS), Inc.
3527 Whiskey Bottom Road
Laurel, MD 20724

10. US EPA ID Number MDD 980554653

A. State Manifest Document Number MDC 0559052

B. State Generator's ID Number

C. State Transporter's ID HWH 0015
Vehicle Sticker Number 96A3037 DC

D. Transporter's Phone 301/953-9583

E. State Transporter's ID HWH
Vehicle Sticker Number A DC

F. Transporter's Phone

G. State Facility ID A207

H. Facility's Phone 301-953-9583

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit W/Vol	I. Waste No.
a. HM Hazardous waste, solid, n.o.s., 9, III X NA3077, (Benzene, Chromium)	3	DM	2100	P	D018 D007
b.					
c.					
d.					

J. Additional Description for Materials Listed Above

	HAZ CODE	Physical State	Specific Gravity	Percentage		HAZ CODE	Physical State	Specific Gravity	Percentage	
a.	E	S	1.1	100	%	c.				%
b.					%	d.				%

K. Handling Codes for Waste Listed Above
a. S c. b. d.

15. Special Handling Instructions and Additional Information EMERGENCY CONTACT - 1/800-535-5053 (Infotrac)
Line 11a NJ state waste code x 725

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and Maryland Statutes or Regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Dennis Swalwell Signature: [signature] Date: 02/01/96

TRANSPORTER

17. Transporter 1 (Acknowledgement of Receipt of Materials)
Printed/Typed Name: Jason S Anderson Signature: [signature] Date: 02/01/96

18. Transporter 2 (Acknowledgement of Receipt of Materials)
Printed/Typed Name: Signature: Date:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Joseph E Gerecke Signature: [signature] Date: 02/01/96

MDC 0559052

In of an emergency or spill, immediately call the National Response Center at (8 24-8802 and the MDE at (410) 631-3400. Nights and Holidays at (410) 974-3

EPA Form 8700-22 (10-91)
Previous editions are obsolete.

COPY 3 — FACILITY: DETACH & RETURN THIS COPY TO GENERATOR

LAIDLAW ENVIRONMENTAL SERVICES

Service Center

DEC 20

12/18/95

BROWN & ROOT ENVIRONMENTAL
993 OLD EAGLE SCHOOL RD.
SUITE 415
WAYNE, PA 19087-1710

Dear Sir/Madam,

Laidlaw Environmental Services (TS), Inc. is pleased to inform you that your waste stream(s) has/have been approved for disposal through our Laurel, Maryland service center. In accordance with 40 CFR 264.12, Laidlaw Environmental Services certifies that it has the requisite authorizations and permits for the materials described on the attached Material Profile Sheet(s), and hereby notifies you that it will accept such materials from you.

Laidlaw Environmental Services will transport and/or dispose of your waste in accordance with all State and Federal regulations.

Please retain this copy for your files if this material has been disposed.

If you wish to schedule removal of the waste or if you have any questions, please contact us.

Sincerely,

Laidlaw Enviromental Services (TS), Inc.

Enclosure

Laidlaw Environmental Services (TS), Inc.
3527 Whiskey Bottom Road Laurel, Maryland 20724
Wats 800.638.4440 Phone 301.953.9583 Fax 301.953.3486

Disposal Rate Form

Company Name: BROWN & ROOT ENVIRONMENTAL

Material	Laidlaw Profile #	Treatment Technology	Disposal Price Unit of Measure
SOIL CONTAMINATED WITH FUEL OIL	6NWC-001	MULTIPLE HEARTH INCINERATOR VI	375.00/55

These prices will remain valid for 30 days from the date of this letter.

NAME OF WASTE STREAM: Soil Contamination With Fuel Oil

MATERIAL PROFILE NO.:

[ ] New [ ] Amendment

A. GENERATOR INFORMATION

Generator Name: Naval Weapons Station Earle
Facility Address: 201 Highway 34 South
City/County: Colts Neck/Monmouth
State: New Jersey Zip Code: 07722-5014
USEPA ID#: NJ0170022172
State ID#:

Technical Contact: Mr. Dennis Swalwell
Telephone (908) 866-2339 EXT.
Fax (908) 866-1166
Billing Name: Brown & Root Environmental
Billing Address: 993 Old Eagle School Road, Suite 415
City: Wayne State: PA Zip Code: 19087-1710
Attention: Ms. Paige Schempp
Telephone (610) 971-0900 EXT.

B. DOT

Shipping Name: Hazardous Waste Solid, NOS
Hazard Class: 9
UN/NA No.: 3077 Packing Group: 3 RQ:

C. RCRA

RCRA Non Hazardous/Exempt? [X] Yes [ ] No Process Generating: Drill Cutting
State Waste Codes: ~~226~~ 725
EPA Waste Codes: D016, D007

D. ANNUAL REPORT CODES

SIC Code:
Source Code: A
Form Code: B
Origin Code:
System Type: M

E. OTHER COMPONENTS

	No	Yes	Total ppm
PCB's	[X]	[ ]	
Cyanides	[X]	[ ]	Analysis Results
Sulfides	[X]	[ ]	Attached
Pesticides	[X]	[ ]	
Phenolics	[X]	[ ]	
Dioxins	[X]	[ ]	
Halogens	[X]	[ ]	%

F. PHYSICAL CHARACTERISTICS AT 70° F

1. Infectious or Biological Waste? [ ] Yes [X] No
2. NRC Regulated Radioactive? [ ] Yes [X] No
3. Reactivity: [X] None [ ] Pyrophoric [ ] Cyanides [ ] Sulfides [ ] Water Reactive [ ] Shock Sensitive [ ] DOT Explosive [ ] Other

Weight
Density: lbs./gal. (US. liq.) lbs./cu. foot
Dry Weight: [ ] <1.0% [ ] 1-5% [ ] 5-20% [ ] 20-100%

pH: [ ] N/A [ ] 0-2 [X] 4.1-10 [ ] 12.1-14 [ ] 10.1-12.4 [ ] 12.5 Exact

Dermal Toxicity LD_{50} (Mg/Kg): [ ] <40 [ ] >200, ≤1000 [ ] >40, ≤200 [ ] >1000
4. Material poisonous by inhalation? [ ] Yes [X] No
Oral Toxicity LD_{50} (Mg/Kg): Solids: [ ] ≤5 [ ] >5, ≤50 [ ] >50, ≤200 [ ] >200; Liquids: [ ] >50, ≤200 [ ] >200

[ ] Gas (Cylinder) [X] Solid 100 %
[ ] Aerosol [ ] Sludges %
[ ] Lab-Pack [ ] Free Liquids %
100%

Flash Point (liquid only): [ ] <73°F (23°C) [ ] 73-140°F (23-60°C) [ ] 141-200°F (61-93°C) [ ] >200°F (93°C) [X] N/A
Boiling Point: [ ] <95°F (35°C) [ ] >95°F (35°C) [X] N/A
BTU/LB.

Layers: [X] Single Layered [ ] Bi-layered [ ] Multi-layered
Viscosity: [ ] Low [ ] Medium [X] High (Soil)
Odor: [ ] None [ ] Mild [ ] Strong Describe: Petroleum odor
Color/Appearance: Stained soil

5. Is this waste stored in vented drums? [ ] Yes [X] No
6. Is this waste putrescible? [ ] Yes [X] No
7. Is this waste polymerizable? [ ] Yes [X] No
8. Is waste stream subject to the National Emission Standards for Benzene Waste Operations (40 CFR 61 Subpart FF)? [ ] Yes [X] No
9. Is this waste regulated as an ozone depleting substance (40 CFR part 82)? [ ] Yes [X] No
10. Does this waste contain scrap metal pieces greater than 2 inches in size? [ ] Yes [X] No

H. PHYSICAL/CHEMICAL CONSTITUENTS

Soil Contaminated with Petroleum Compounds 100 %
100 %

(Attach All MSDS, Sample Analysis and Additional Info.)

G. METALS

[ ] NONE [ ] TCLP (MG/L) [X] TOTAL (PPM)

	Reg. Limit	Below	Above	Range
Arsenic	5 mg/L kg	[ ]	[ ]	7.8-203
Barium	100 mg/L kg	[ ]	[ ]	1.3-27
Cadmium	1 mg/L kg	[ ]	[ ]	0.31-1.3
Chromium	5 mg/L kg	[ ]	[ ]	90.9-158
Copper		[ ]	[ ]	1.2-2.3
Lead	5 mg/L kg	[ ]	[ ]	2.7-4.8
Mercury	0.2 mg/L kg	[ ]	[ ]	0.005-0.009
Nickel	134 mg/L kg	[ ]	[ ]	0.6-1.3
Selenium	1 mg/L kg	[ ]	[ ]	1.0
Silver	5 mg/L kg	[ ]	[ ]	NB
Zinc		[ ]	[ ]	3.7-7.0

Other: Typical results of analysis from soil boring samples (attached)

I. ANTICIPATED VOLUME

Qty.	Container	Qty.	Container
[ ]	5 gl. pail	[ ]	Cubic Yard Box*
[ ]	15 gl. carboy	[ ]	Super Sack*
[ ]	30 gl. drum	[ ]	Roll-off/Dump Trailer*
[X] 3	55 gl. drum	[ ]	Tanker*
[ ]	85 gl. drum	[ ]	Other

Per: [ ] 1 Time [ ] Week [ ] Month [ ] Year [ ] Other

(*) Is this waste regulated as a Marine Pollutant (49 CFR 171.8)? [ ] Yes [X] No

Generator's Certification:
I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of misrepresentation properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all materials described by this profile.

Generator's Authorized Signature: [signature] Date: 12/15/95

Laidlaw Environmental Services (TS), Inc.
3527 Whiskey Bottom Road
Laurel, Maryland 20724
(301) 953-9583

PROFILE ADDENDUM

Generator Name/Location Naval Weapons Station Earle, Colts Neck, New Jersey

Profile _____

Note: All waste codes must have a "Yes" or "No" circled (where appropriate), or the "Actual Value" filled in as a response on this form or it will not be fully complete.

CHARACTERISTICS OF HAZARDOUS WASTE: Indicate if this waste contains any of the following characteristics.

	(Circle One)	
D001 (characteristic of Ignitability as defined in 40 CFR 261.21)	Yes	(No)
D002 (characteristic of Corrosivity as defined in 40 CFR 261.22)	Yes	(No)
D003 (characteristic of Reactivity as defined in 40 CFR 261.23)	Yes	(No)

METALS: Indicate if this waste contains or exceeds the indicated characteristic of toxicity defined in 40 CFR 261.24 (Table 1).

Metal	Characteristic Level mg/l (ppm)		(Circle One)		Actual Value (total metals mg/kg by CLP SOW ILM02.1)
D004 (Arsenic)	>	5.0	Yes	No	7.8-20.3
D005 (Barium)	>	100.0	Yes	No	1.3-2.7
D006 (Cadmium)	>	1.0	Yes	No	0.81-1.3
D007 (Chromium)	>	5.0	Yes	No	90.9-156
D008 (Lead)	>	5.0	Yes	No	2.7-4.8
D009 (Mercury)	>	0.2	Yes	No	0.005-0.009
D010 (Selenium)	>	1.0	Yes	No	1.0
D011 (Silver)	>	5.0	Yes	No	ND

HERBICIDES AND PESTICIDES: Indicate if this waste contains or exceeds the indicated characteristic of toxicity defined in 40 CFR 261.24 (Table 1).

Herbicide/Pesticide	Characteristic Level mg/l (ppm)		(Circle One)		Actual Value
D012 Endrin (1,2,3,4,10,10 hexachloro-1,7,-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo, endo-5,8-dimethano-naphthalene.)	>	0.02	Yes	No	ND
D013 Lindane (1,2,3,4,5,6-hexa-chlorocyclohexane, gamma isomer.)	>	0.4	Yes	No	ND
D014 Methoxychlor (1,1,1-Trichloro-2,2-bis(p-methoxy-phenyl)ethane.)	>	10.0	Yes	No	ND
D015 Toxaphene ($C_{10}H_{10}Cl_8$ Technical chlorinated camphene, 67-69 percent chlorine.)	>	0.5	Yes	No	ND
D016 2,4-D (2,4-Dichloro-phenoxyacetic acid.)	>	10.0	Yes	No	ND
D017 2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic Acid.)	>	1.0	Yes	No	ND

ORGANICS (Volatiles and Semi-Volatiles): Indicate if this waste contains or exceeds the indicated characteristics of in CFR 261.24.

Organics	Characteristic Level mg/l (ppm)	(Circle One)		Actual Value (mg/kg)	(TCL Volatiles by CLP SOW OLM01.8)
D018 Benzene	0.5	Yes	No	10-1300	
D019 Carbon Tetrachloride	0.5	Yes	No	ND	
D020 Chlordane	0.03	Yes	No	ND	
D021 Chlorobenzene	100.0	Yes	No	ND	
D022 Chloroform	6.0	Yes	No	ND	
D023 o-Cresol	200.0	Yes	No	ND	
D024 m-Cresol	200.0	Yes	No	ND	
D025 p-Cresol	200.0	Yes	No	ND	
D026 Cresol	200.0	Yes	No	ND	
D027 1,4-Dichlorobenzene	7.5	Yes	No	ND	
D028 1,2-Dichloroethane	0.5	Yes	No	ND	
D029 1,1-Dichloroethylene	0.7	Yes	No	ND	
D030 2,4-Dinitrotoluene	0.13	Yes	No	ND	
D031 Heptachlor (and its hydroxide)	0.008	Yes	No	ND	
D032 Hexachlorobenzene	0.13	Yes	No	ND	
D033 Hexachlorobutadiene	0.5	Yes	No	ND	
D034 Hexachloroethane	3.0	Yes	No	ND	
D035 Methyl Ethyl Ketone	200.0	Yes	No	ND	
D036 Nitrobenzene	2.0	Yes	No	ND	
D037 Pentachlorophenol	100.0	Yes	No	ND	
D038 Pyridine	5.0	Yes	No	ND	
D039 Tetrachloroethylene	0.7	Yes	No	ND	
D040 Trichloroethylene	0.5	Yes	No	ND	
D041 2,4,5-Trichlorophenol	400.0	Yes	No	ND	
D042 2,4,6-Trichlorophenol	2.0	Yes	No	ND	
D043 Vinyl Chloride	0.2	Yes	No	ND	

ND = Not Detected

The submitted information is based on: Generator knowledge _____ or analytical data X. If analytical data, please supply copy of data.

GENERATOR CERTIFICATION:

( ) _____ I hereby certify that all information submitted in this and all attached documents contains true and accurate descriptions of this waste material, and all relevant information regarding known or suspected hazards in the possession of the generator has been disclosed. I understand that if this form is not fully complete (Under the requirements 40 CFR 262.11, 264.13, 265.13, and 268.7): then Laidlaw will be required to conduct analysis upon receipt and that I agree to the associated costs of sampling and analysis as part of the waste treatment contract.

Signature: Dennis Swalwell Date: 12/15/95

Print Name: Dennis Swalwell Title: Env. Prot. Spec.

THIS AMENDMENT IS REQUIRED FOR EACH PROFILE. YOUR ORIGINAL SIGNATURE IS REQUIRED.

REPLACEMENT APPENDIX M

Please remove the existing Appendix M from your Volume II Appendices and replace it with the following pages.

APPENDIX M
TOXICOLOGICAL PROFILES FOR ECOLOGICAL COPCs

The toxicological properties of all COPCs in all media from the Ecological Risk Assessment sections of this report are summarized below. Several different COPCs were generated from some individual classes of contaminants. Toxicity data were limited for some COPCs in individual classes, and/or the toxicities were similar for different COPCs in some classes. In these cases, generalized toxicity information is presented for the class, rather than presenting the toxicity information for individual COPCs in the class. This was done for PAHs, PCBs, and DDT analogs.

Aluminum

Although present in food in varying amounts, aluminum (Al) is not an essential element for mammals. The aluminum content of plants typically depends on the soil aluminum concentration and ranges from 10 to 30 mg/kg fresh weight; studies have indicated that this element stimulates the growth of several pasture plant species (Hackett, 1962). As summarized in Venugopal and Luckey (1978), aluminum is not readily absorbed through the skin and gastrointestinal absorption of ingested aluminum is poor due to the transformation of aluminum salts into insoluble aluminum phosphate. The lack of accumulation of aluminum in animals with age or of any increase in tissue levels of aluminum following fairly high dietary intake, suggests that mammals posses a homeostatic mechanism for this element. For most terrestrial organisms, aluminum compounds are generally not harmful and are considered to be toxicologically inert, except in cases of high experimental doses or prolonged inhalation (Venugopal and Luckey, 1978).

Data on the toxicity of aluminum to aquatic organisms is somewhat limited. USEPA (1988) stated that freshwater organisms should not be adversely affected if aluminum concentrations do not exceed 87 μg/L when pH is between 6.5 and 9.0. Some studies have shown that the acute toxicity of aluminum increases with pH, whereas other studies found the opposite to be true (USEPA, 1988). The occurrence of pH effects in fish depends on aluminum and calcium concentrations in the water. Laboratory studies have established that low pH is toxic to fish, that aluminum concentrations found in acidified waters (particularly inorganic monomeric aluminum) are toxic, and that calcium is ameliorative (Suter, 1993).

Sublethal effects were also reviewed by USEPA (1988). It was found that 169 μg Al/L at a pH of 6.5 to 6.6 caused a 24 percent reduction in the growth of young brook trout (*Salvelinus fontinalis*). Cleveland et al. (1991) determined that brook trout accumulated significantly higher aluminum residues at pH 5.3 than at pH 6.1 or pH 7.2. They also determined that elimination of aluminum during depuration was more rapid at pH 5.3 than at pH 6.1 or pH 7.2. Data reported in USEPA (1988) indicated this metal does not bioconcentrate; bioconcentration factors range from 50 to 231 for brook trout (geometric mean value = 82).

Antimony

Antimony is frequently associated with nonferrous ore deposits and is commonly encountered in industrial environments, including smelters. It is considered a nonessential metal and is easily taken up by plants if present in a soluble form (Kabata-Pendias and Pendias, 1992). Plants growing in soils contaminated by industrial emissions may be expected to contain elevated tissues concentrations of this metal. However, there are no reports of plant toxicity resulting from uptake of antimony (Kabata-Pendias and Pendias, 1992). Antimony has been shown to produce liver damage in rabbits at 5.5 mg/kg in diet (NRC, 1980).

Arsenic

Arsenic is a relatively common element; its industrial uses primarily center on the manufacture of pesticides, wood preservatives, and growth stimulants for plants and animals (USFWS, 1988a). The chemistry of arsenic in water is complex, and is a function of chemical, biological, and geochemical reactions that interact to control the concentration, oxidation state, and the form of arsenic in water (USEPA, 1984a). Arsenic exists in four oxidation states, both as inorganic and organic forms. Its bioavailability and toxicity are significantly influenced by the physical and chemical forms of arsenic tested, route of exposure, the dose, and species of animal tested (USFWS, 1988a). Inorganic forms are generally regarded as being more toxic than organic forms and trivalent forms are more toxic than pentavalent species (USFWS, 1988a; USEPA, 1984a). Tests conducted to date indicate that this contaminant does not readily bioconcentrate (USEPA, 1984a).

Arsenic is a constituent of most plants, but little is known about its biochemical role. In general, arsenic availability to plants is highest in coarse-textured soils having little colloidal material and little ion exchange capacity, and lowest in fine textured soils high in clay, organic material, iron, calcium, and phosphate (USFWS, 1988a). Reports suggest that plants absorb arsenic passively via the roots with water and that this metal is readily taken up by various plant species (Thoresby and Thornton, 1979). Apparently arsenic is translocated in plants since its concentration in grain also has been reported (Kabata-Pendias and Pendias, 1992). Except for locations where arsenic content is high, (e.g., around smelters) arsenic is distributed throughout the plant body in non-toxic amounts (USFWS, 1988a).

Median lethal dietary concentrations for wildlife range from 99.8 mg/kg in cowbirds (*Molothrus ater*) to > 5,000 mg/kg in mallards (*Anas platyrhynchos*) (NAS, 1977). Very little information exists regarding sublethal effects on birds. Chronic arsenic poisoning in mammals is rare, because detoxication and excretion are rapid. Chronic toxicity has been associated with reduced growth, weakness, dermatitis, liver damage and decreased resistance to infection. These effects have been recorded in various mammals at dietary levels of 5-50 mg/kg of diet (USFWS, 1988a).

Barium

The concentration of barium (Ba) in natural waters is controlled by the solubility of barite ($BaSO_4$), a fairly common mineral. Other factors influencing barium solubility in natural waters include metal oxides or hydroxides (Hem 1970). Sulfates also govern the solubility of barium in soil as do carbonates, and it is strongly adsorbed to clays. Although commonly reported in plant tissues, it is apparently a nonessential component (Kabata-Pendias and Pendias 1992). While barium is readily taken up by plants in acidic soil, few reports exist regarding its toxicity to plants. Chaundry et al. (1977) reported 1 to 2 percent barium (dry weight) in plants as highly toxic while 220 mg Ba/kg (ash-free dry weight) has been reported to be moderately toxic (Shacklette et al. 1978). Calcium, magnesium, and sulfur appear to act antagonistically with barium, and may serve to reduce its toxicity (Kabata-Pendias and Pendias 1992).

Beryllium

The major source of beryllium in the environment is the combustion of fossil fuels (Tepper 1972). Beryllium enters the waterways through weathering of rocks and soils, through atmospheric fallout, and through discharges from industrial and municipal operations (USEPA 1980a). Most common beryllium compounds are readily soluble in water. In aqueous solution, beryllium does not exist as actual Be^{+2} ions, but as hydrated complexes. Like a number of other metals, water hardness significantly affects the toxicity of this metal. Only a limited number of aquatic species have been tested but the results of these tests suggest that freshwater invertebrates exhibit similar sensitivities to this metal. Acute and chronic toxicities of beryllium to aquatic species occur as low as 130 and 5.3 μg/L, respectively (USEPA 1980a).

Cadmium

To date, no evidence exists to suggest that cadmium (Cd) is either biologically essential or beneficial (Venugopal and Luckey 1978; USFWS, 1985). Freshwater biota are particularly sensitive to this heavy metal; concentrations as low as 0.8 to 9.9 μg Cd/L produce lethality among insects, crustaceans, and fish (USFWS, 1985; USEPA, 1985a). This heavy metal does not bioconcentrate to an appreciable extent; bioconcentration data listed in USEPA (1985a) for freshwater species range from 3 (brook trout) to 4190 (caddisfly; *Hydropsyche betteni*) with a geometric mean value of 404.

Elemental cadmium (Cd) is insoluble in water, although its chloride and sulfate salts are freely soluble (USFWS, 1985). The availability of cadmium to aquatic biota from their immediate physical and chemical environs depends on numerous factors, including adsorption and desorption rates of cadmium from terrigenous materials, pH, Eh, chemical speciation, and many other modifiers. Adsorption and desorption processes are likely to be major factors in controlling the concentration of cadmium in natural waters and tend to counteract changes in the concentration of cadmium ions in solution (USFWS, 1985). Water hardness also alters the bioavailability of cadmium. Adsorption and desorption rates of cadmium are rapid on mud solids and particles of clay, silica, humic material, and other naturally occurring solids. It should be borne in mind that mobility and availability of cadmium, like most heavy metals, is a function of a large number of interrelated factors (e.g., CEC). Beyer et al. (1985) demonstrated that only a small portion of all metals measured in the soil become incorporated into plant foliage and suggested that most of the metal contamination detected in biota came from aerial deposition.

Compared to aquatic biota, mammals and birds are relatively less sensitive to cadmium exposure. Adult mallards fed a diet containing up to 200 mg Cd/kg survived and exhibited no loss in body weight, although egg production of laying hens was suppressed (White and Finely 1978). The lowest oral doses producing lethality among mammals were 250 and 150 mg Cd/kg body weight in rats and guinea pigs, respectively (USEPA 1985a).

Chlordane

Chlordane was used extensively until most uses were banned in 1983. Due to its long half-life and ability to concentrate in biological materials, it is still widely distributed in fish in the United States (USEPA, 1980b).

Like other organochlorine pesticides, chlordane bioaccumulates in biological materials. It is highly lipophilic and readily absorbed via all routes. Oxidative metabolism of chlordane results in the production of a number of metabolites, including oxychlordane, which is very persistent in body fat. Reductive dehalogenation of the chlordane forms free radicals hypothesized to contribute significantly to chlordane's toxicity (USEPA, March 1994).

Reduced fertility and survivability in mice and rats has occurred at chlordane doses of 25 and 16 mg/kg, respectively. These chronic effects may be associated with reduced binding of progesterone in the endometrium or with altered metabolism and circulating levels of steroid hormones (USEPA, March 1994). Reduced survival in sensitive bird species has been observed at 1.5 mg chlordane/kg diet, and after single oral doses of 14.1 mg chlordane/kg body weight (USFWS, 1990).

Chromium (VI)

Chromium VI generally does not exist in biological systems, as it is reduced rapidly to Chromium III. Chromium VI, however, is much more toxic to living systems than Chromium III. Several studies exists regarding the toxicity of Chromium VI in mammals. Mice given oral doses of 57, 120, and 234 mg CrVI/kg-day during early gestation experienced increased preimplantation and postimplantation losses, along with decreased litter size (Trivedi et al., 1989 as cited in ATSDR, 1993). A LOAEL of 57 mg/kg-day was reported for reproductive effects. A decrease in motor activity was seen in rats given oral doses of Chromium VI at 98 mg/kg-day for 28 days, and a NOAEL of 9.8 mg/kg-day was reported for

these effects (Diaz-Mayans et al., 1986). In addition, mice fed potassium dichromate at 4.6 mg/kg-day exhibited reduced sperm count after 7 weeks, and morphologically altered sperm at 9.1 mg/kg-day after 7 weeks (Zahid et al., 1990, as cited in ATSDR, 1993).

Since Diaz-Mayans et al. (1986) established a clear dose-response relationship, the NOAEL was chosen for derivation of a benchmark value.

Only one avian study exists for Chromium VI. Chickens were fed diets up to 100 ppm Chromium VI and no adverse effects on survival or growth were observed after 32 days, suggesting a NOAEL of 100 ppm (Rosomer et al. 1961).

A multitude of studies exist on the effects of Chromium VI on fish. Since the NAWQC value of 0.011 mg/L was the most conservative value, it was chosen as the value for forage, small, and large fish. For fish and terrestrial organisms, the data show that Chromium VI does not effectively bioaccumulate.

Cobalt

Cobalt is a relatively rare metal and one of the seven essential metals. Trace levels are essential in mammals for the production of red blood cells. Cobalt is produced primarily as a by-product of other metals, chiefly copper. Cobalt salts are generally well absorbed after oral ingestion. Despite this fact, increased exposure levels tend not to cause significant accumulation (Amdur et. al, 1991).

Plants are known to accumulate large quantities of cobalt and appear to have a mechanism of cobalt tolerance similar to that adopted by other metalliferous plant species. Symptoms of cobalt toxicity are seldom observed in nature, despite the wide range in plant tissue concentrations. Soil concentrations that may result in toxic effects to plants range from 20 to 50 mg/kg (Kabata-Pendias and Pendias, 1992).

Copper

Copper is an essential component of many enzymes and most animals have some ability to regulate its balance. Higher organisms typically employ cellular mechanisms to conserve copper when it is deficient and excrete it when body burdens increase. These copper regulatory mechanisms may successfully prevent severe abnormalities if neither periods of deficiency nor excess are extreme (Rand and Petrocelli, 1985).

The toxicity of copper to aquatic biota has been shown to be related primarily to the activity of the cupric ion (Cu^{+2}), and possibly to some of the hydroxy complexes. The cupric ion is highly reactive and forms moderate to strong complexes and subsequently precipitates with any inorganic and organic constituents of natural waters. The portion of copper present as a free cupric ion is generally low and may be less than 1% in eutrophic waters where complexation predominates. It appears that organic and inorganic copper complexes and precipitates are less toxic than free cupric ion, thus reducing the toxicity attributable to total copper. The chemistry of copper complicates the interpretation of its toxicity because the portion of free cupric ion present in solution is highly variable (Rand and Petrocelli, 1985). Like a number of other cation metals, both calcium hardness and carbonate alkalinity are also known to reduce the acute toxicity of copper; expression of Virginia water quality criteria allows adjustment for these water quality effects.

Data compiled by USEPA (1984b) indicated that both freshwater invertebrates and fish exhibit a wide range of sensitivities to acute exposures to copper; neither group appeared to be more sensitive than the other to copper. Embryos of the blue mussel and the Pacific oyster were the most sensitive saltwater species tested, with acute values of 5.8 and 7.8 μg/L, respectively. Acute values for saltwater fish ranged from 13.93 to 411.7 μg/L, with embryo-larval forms more sensitive than adults.

Cyanide

Hydrocyanic acid (HCN) is very reactive and occurs only rarely in nature. The cyanide ion (CN^-) is highly water soluble and readily forms complexes with a variety of metal ions, especially those of the transition series. Compounds containing cyanide are often associated with steel, petroleum, plastics, synthetic fibers, metal plating, and chemical industries (USEPA 1984c). The toxicity to aquatic organisms of most simple cyanides and metallocyanide complexes is due mostly to the presence of HCN as derived from ionization, dissociation, and photodecomposition of cyanide-containing compounds, although the cyanide ion is also toxic. Cyanide appears to be more toxic to fish than to most invertebrates, although *Daphnia pulex* is apparently as sensitive to cyanide as are most fish. Concentrations as low as 50 μg/L can be fatal to sensitive fish species while exposure to concentrations much above 200 μg/L result in lethality to almost all fish species (USEPA 1984c).
Cyanide is known to uncouple oxidative phosphorylation.

DDT and analogs

DDT has not been marketed in the United States since 1972, but is ubiquitous due to its widespread use in previous decades and its relatively long half-life. DDT's close structural analogs, DDE and DDD, are metabolites of DDT and have also been formulated as pesticides in the past (Hayes, 1982). Because of its persistent nature, coupled with its hydrophobic properties and solubility in lipids, DDT and its metabolites are concentrated from water by aquatic organisms at all trophic levels. It also readily enters the food web and is bioaccumulated by organisms at higher trophic levels (USEPA, 1980c).

DDT is intermediate in toxicity to fish in comparison to other chlorinated hydrocarbon pesticides. It is less toxic that aldrin, dieldrin, endrin and toxaphene, but more toxic than chlordane, lindane and methoxychlor (USEPA, 1980c). Invertebrates are, for the most part, more sensitive than fish species, but the range of species LC50s for macroinvertebrates (10,000) is much greater than that for fish (300). The least sensitive species listed in USEPA (1980c) was a stonefly (*Pteronarcys californica*) with a 96 h LC50 of 1.8 mg/L. Week-old crayfish were the most sensitive reported species (LC50 = 0.00018 mg/L) although 10-week old crayfish of the same species had an LC50 of 0.003 mg/L. USEPA (1980c) reported that of the species for which data were available, yellow perch was the most sensitive freshwater species tested (96 h LC50 of 0.6 μg/L) where as the least sensitive species was the goldfish (96 LC50 = 180 μg/L).

Bioconcentration factors from laboratory tests with DDT and saltwater organisms ranged from 1200 to 76300 for fish and shellfish, respectively (USEPA, 1980c).

Data for DDE indicate that long-term dietary dosage at 2.8 to 3.0 mg/kg DDE (wet weight) can have adverse effects on reproduction of mallards, black ducks, and screech owls. Species that feed on saltwater animals containing DDT and its metabolites have exhibited reductions in their reproductive capacity (Rand and Petrocelli, 1985). Anderson et al. (1975) studied the impacts of DDT in northern anchovies (a species with a high lipid content) on the reproductive success of brown pelicans. The concentrations of this contaminant steadily declined in anchovies over this 5-year study and pelican reproduction improved; the authors concluded that even the lowest concentrations detected in anchovies (0.15 mg/kg) and the subsequent 97 mg/kg concentration in pelican eggs was unacceptably high, because pelican eggshell thickness was still too low and pelican recruitment was still not high enough to sustain a stable population.

Endosulfan

Endosulfan is comprised of sterioisomers designated I and II which have similar toxicities (USEPA, 1993). Endosulfan has been found widely in food samples, absorbed through the GI tract and distributed throughout the body. Endosulfan is metabolized to lipophilic compounds and both parent and metabolites are found initially primarily in the kidney and liver and fatty tissue, with distribution to

other organs occurring over time. Endosulfan can induce microsomal enzyme activity. Based on laboratory studies, females may accumulate endosulfan more readily than males; this phenomenon may account for the higher toxicity seen in females (USEPA, 1994). The oral LD_{50} of endosulfan in three studies where mallards were dosed with endosulfan was 31.2, 33.0, and 45.0 mg/kg (Hudson et al., 1984).

Endrin

Endrin was widely used as a broad spectrum pesticide until its registration was cancelled in 1984. This chlorinated cyclodiene is highly toxic to humans; its long-term persistence and mammalian toxicity had been recognized at least as early as 1964 (USEPA, 1993). Like other organochlorine pesticides, endrin is lipophilic and bioaccumulates in lipid. Studies indicate that this pesticide can move across the placenta (USEPA, 1994). Avian oral LD_{50}s for endrin range from 1.06 mg/kg in sharp tailed grouse to 5.0 mg/kg in rock doves (Hudson et al., 1984).

Isophorone

Ecotoxicological data for isophorone is lacking. Isophorone is used as a solvent, in lacquers, and in pesticide manufacturing (Verschueren, 1983). The chemical has a sharp, peppermint like odor. Isophorone has been shown to be irritating to the eyes, nose, and throat of humans at 25 ppm (Verschueren, 1983).

Lead

As summarized in USFWS (1988b), research to date has determined that lead (Pb) is neither essential nor beneficial and that all measured effects are adverse. Invertebrates exhibit a wide range of sensitivities to lead, and the toxicity of lead to fish has been found to be greater in soft water than in hard water. Organolead compounds are typically more toxic than inorganic compounds, food chain biomagnification is generally negligible, and younger organisms tend to be more sensitive to lead exposure than older individuals (USFWS, 1988b). Reported bioconcentration factors range from 42 for brook trout to 1700 for a gastropod (*Lymnaea palustris*); the geometric mean value of data listed in USEPA (1985b) for freshwater species is 403. Studies summarized by USFWS (1988b) show that among sensitive species of birds, survival was reduced at doses of 50 to 75 mg Pb^{2+}/kg body weight or 28 mg organolead/kg body weight, reproduction was impaired at dietary levels of 50 mg Pb^{2+}/kg, and symptoms of toxicity (hyperactivity, reduced food consumption) were seen at doses as low as 2.8 mg organolead/kg body weight.

As with a number of other metals, hardness has a major effect on the bioavailability of lead, although the observed effect is probably due to the presence of one or more interrelated ions such as hydroxide, carbonate, calcium, or magnesium (USEPA, 1985b).

Plants readily accumulate lead from soils of low pH or low organic content (USFWS, 1988b). Lead seems to be tightly bound in most soils, and substantial amounts must accumulate before it affects growth of higher plants. There is no convincing evidence that any terrestrial vegetation is important in food chain biomagnification of lead (USFWS, 1988b; Kabata-Pendias and Pendias, 1992).

Manganese

Manganese (Mn) does not occur naturally as a metal but is found in various salts and minerals, frequently in association with iron compounds (USEPA, 1986). Manganese is a vital micronutrient for both plants and animals. McKee and Wolfe (1963) summarized the data concerning the toxicity of manganese to freshwater life. Manganese ions rarely occur in concentrations above 1 mg/L. The reported tolerance values for freshwater organisms range from 1.5 to >1000 mg Mn/L.

All plants require manganese; its most important functions in plants appear to be associated with oxidation-reduction reactions. Like that of many other soil constituents, the chemistry of manganese is relatively complex and closely related to the formation of iron hydroxides and redox reactions (Kabata-Pendias and Pendias, 1992). While toxicity of manganese to plants has been reported in acid soils (pH < 5.5) containing high concentrations of this metal, like iron, manganese toxicity is the function of a number of other environmental factors. Soil concentrations associated with plant toxicity range from 1500 to 3000 mg/kg (Kabata-Pendias and Pendias, 1992).

Methoxychlor

Methoxychlor was previously registered as an insecticide, used especially to control mosquito larvae and house-flies. Like other organochlorine pesticides, methoxychlor is environmentally persistent, bioaccumulates in tissue, and biomagnifies in the food chain.

The 96 hr LC_{50} for bluegill sunfish exposed to methoxychlor was 0.062 mg/l; the 96 hr LC_{50} for rainbow trout was 0.020 mg/l (Verschueren, 1983). LD_{50} values for mallards, sharp-tailed grouse, and California quail were all $> 2,000$ mg/kg (Hudson et al., 1984).

PAHs (Polycyclic Aromatic Hydrocarbons)

Polycyclic aromatic hydrocarbons (PAHs) are base/neutral organic compounds that have a fused ring structure of two or more benzene rings. Those PAHS with two to five rings are generally of greatest concern for environmental health. PAHS are ubiquitous in nature and usually occur as complex mixtures with other toxic chemicals. They are components of crude and refined petroleum products and of coal. They are also produced by the incomplete combustion of organic materials.

Major sources of PAHs found in marine and freshwaters include biosynthesis (restricted to anoxic sediments), spillage and seepage of fossil fuels, discharge of domestic and industrial wastes, atmospheric deposition, and runoff (Neff, 1985).

PAHs can accumulate in aquatic organisms from water, sediments, and food. BCFs of PAHs in fish and crustaceans have frequently been reported to be in the range of 100 to 2000 (USFWS, 1987). In general, bioconcentration was greater for the higher molecular weight PAHs than for lower molecular weight PAHs. Biotransformation by mixed function oxidase in the fish liver can result in the formation of carcinogenic and mutagenic intermediates, and exposure to PAHs has been linked to the development of tumors to fish (USFWS, 1987).

Sediment-associated PAHs can be accumulated by bottom dwelling invertebrates and fish (USFWS, 1987). For example, Great Lakes sediments containing elevated levels of PAHs were reported by Eadie et al. (1983) to be the source of the body burdens of the compounds in bottom-dwelling invertebrates. Varanasi et al. (1985) found that benzo[a]pyrene was accumulated in fish, amphipods crustaceans, shrimp, and clams when estuarine sediment was the source of the compound. Approximate tissue-to-sediment ratios were 0.6 to 1.2 for amphipods, 0.1 for clams, and 0.05 for fish and shrimp. Varanasi et al. (1985) ranked benzo[a]pyrene metabolism by aquatic organisms as follows: fish $>$ shrimp $>$ amphipods $>$ clams. Because of their limited ability to metabolize some PAHs, clams tend to readily bioaccumulate these compounds. For most other organisms, PAHS show little tendency to bioconcentrate, despite their high lipid solubility (Pucknat, 1981), probably because most PAHs are rapidly metabolized. Animals and microorganisms can metabolize PAHs to products that may ultimately experience complete degradation (USFWS, 1987).

Physical and chemical characteristics of polycyclic aromatics (PAHs) generally vary with molecular weight. Of major environmental concern are mobile PAHs that range in molecular weight from 128.16 to 300.36. Higher molecular weight PAHs are relatively immobile because their large molecular volumes and their extremely low volatility and solubility. The lower molecular weight, un-substituted PAH

compounds, containing 2 to 3 rings, can be acutely toxic to some organisms, whereas the higher molecular weight (4 to 7 ring) aromatics generally are not (USFWS, 1987).

PAHs may be adsorbed or assimilated by plant leaves before entering the animal food chain, although some adsorbed PAHs may be washed off by rain, chemically oxidized to other products or returned to the soil as plants decay (USFWS, 1987). PAHS assimilated by vegetation may be translocated, metabolized, and possibly photodegraded within the plant. In some plants growing within highly contaminated areas, assimilation may exceed metabolism and degradation, resulting in an accumulation in the plant tissues (Edwards, 1983).

Plant uptake rates are governed, in part, by PAH concentration, PAH water solubility, soil type, and PAH physicochemical state (vapor or particulate). Lower molecular weight PAHs are absorbed more readily than are higher molecular weight PAHs. Phytotoxic effects are rare; however the data base on this subject is small (USFWS, 1987).

The degradation of most PAHs is not completely understood. Those in soils may be assimilated by plants, degraded by soil organisms, or accumulated to relatively high levels in soil. Wang and Bartha (1990) studied the persistence and toxicity of three types of fuels (jet fuel, heating oil, and diesel fuel) in soils. The results of their study indicated that of the three fuels tested, jet fuel exhibited the least amount of environmental persistence and toxicity to soil microbes and seedlings. Soil concentrations jet fuel hydrocarbons decreased from 75 mg/g to approximately 5 mg/g in twenty weeks with no treatment. The concentration of easily metabolized aliphatics (C_{12} to C_{22}) in each fuel was correlated with its degradation rate. Of the three fuels tested, jet fuel was comprised of the greatest portion of aliphatics (Wang and Bartha, 1990).

Because of their complex chemical composition, the toxicity of PAHs is variable and not well understood (NAS, 1985). In addition, research has demonstrated that different organisms and different life stages for a given species can vary widely in sensitivity to PAHs (USFWS, 1987; NAS, 1985; Neff and Anderson, 1981). However, it is generally agreed that in aquatic ecosystems, the toxicity of PAHs is correlated with water solubility (Neff and Anderson, 1981) and molecular weight, with high molecular weight PAHs exhibiting low acute toxicity (due to low water solubility) (USFWS, 1987). In all but a few cases, PAH concentrations that are acutely toxic to aquatic organisms are several orders of magnitude higher than concentrations found in even the most heavily polluted waters. Sediment from polluted areas, however, may contain PAHs in concentrations approaching those similar to those which are acutely toxic, but their limited bioavailability would probably render them substantially less toxic than PAHs in solution (USFWS, 1987).

Patton and Drieter (1980) fed mallards a diet that contained 4000 mg PAHs/kg (primarily naphthalenes, naphthenes, and phenanthrene) for 7 months. No mortality or visible signs of toxicity were noted but both liver weight and hepatic blood flow were significantly greater than that of the controls. However, the authors concluded that these modifications in the liver did not represent an adverse effect and that adult mallards could tolerate long-term exposures to relatively high concentrations of PAHs. Mammalian toxicity data are limited for PAHs but the ability of some PAHs to induce tumor formation is well documented (USFWS, 1987). Bioaccumulated PAHs with a four-ring structure or less are rapidly metabolized. Therefore, long term partitioning into biota is not considered a significant fate process (USFWS, 1987).

PCBs (Aroclors)

Polychlorinated biphenyls (PCBs) are a mixture of chlorinated biphenyl chemicals which occur individually as 209 congeners, comprised of various chlorine substitution patterns. PCBs are closely related to many chlorinated hydrocarbon pesticides (e.g, DDT, dieldrin, and aldrin) in their chemical, physical, and toxicological properties and in their widespread occurrence in the aquatic environment (Nimmo, 1985). Mixtures of PCBs were marketed under the trade name Aroclor, with a numeric

designation that indicated their chlorine content. Although production and use was banned in 1979, the chemical group is extremely persistent in the environment and bioaccumulates through the foodchain. There is evidence that the most potent, dioxin-like PCB congeners are preferentially accumulated in higher organisms. Additional research indicates that there is evidence that PCB risks increase with increased chlorination because more highly chlorinated PCBs are retained more efficiently in fatty tissues (USEPA, March 1994). The non-ortho-substituted coplanar PCB congeners, and some of the mono-ortho-substituted congeners, have been shown to exhibit dioxin-like effects. There is increasing evidence that many of the toxic effects of PCBs result from alterations in hormonal function. Consequently, the aggregate toxicity of a PCB mixture may increase as it moves up the foodchain (USEPA, 1993).

The three effects of PCB exposure on terrestrial wildlife are mortality, decreased reproductive success, and behavioral modifications (USEPA, 1993). Mink (*Mustela vison*) appear to be among the most sensitive species to the toxic effects of PCBs (Gillette et al., 1987). Single oral doses of PCBs administered to mink have produced LD_{50} values of 750 mg/kg for Aroclor 1221 and 4000 mg/kg for Aroclor 1254 (Aulerich and Ringer, 1977; Ringer, 1983). The primary chronic effect documented as a result of dietary exposure to PCBs has been decreased reproductive success, as evidenced by reduced whelping rates, fetal death, and reduced growth among the young. Based on a review of available data, USEPA determined that 30 μg/kg/d represented an NOEL value for reproductive effects of Aroclor 1254 (USEPA, 1993).

Birds have been shown to be more resistant than mammalian species to the acute effects of PCBs. PCB doses greater than 200 ppm in the diet (10 mg/kg body weight) caused some mortality among northern bobwhite (*Colinus virginians*), mallards (*Anas plythynchos*), and ring-necked pheasants (*Phasianus colchicus*). PCBs provided to these birds at dietary concentrations of 1500 ppm (100 mg/kg body weight) caused extensive mortality (USFWS, 1986a). Exposure to PCBs resulted in some mortality among all the avian species tested, with lethal concentrations depending on the length of exposure and the particular PCB mixture. For all avian species, PCB residue concentrations of at least 310 mg/kg fresh weight in the brain were associated with an increased likelihood of death from PCB poisoning (USFWS, 1986a). An evaluation of the results of various toxicity studies performed on a number of bird species led USEPA (1993) to conclude that 0.18 mg/kg/body weight represented an appropriate NOEL for avian wildlife.

Phenol

As summarized in USEPA (1980d), phenol is predominantly used as an intermediate in a wide variety of chemical processes including production of epoxy and phenolic resins, pharmaceutical, pesticides, dyes, and numerous industrially-important acids. The phenol molecule easily substitutes in the environment to form compounds such as halophenols, which may be more toxic than the parent compound. The acute toxicity of phenols to aquatic organisms has been characterized but information on chronic toxicity is limited. Acute toxicity of phenol to freshwater species has been expressed over 2 to 3 orders of magnitude. Test results have indicated that cladocerans are the most sensitive invertebrate species examined (*Daphnia pulex* LC50 = 5000 μg/l) while rainbow trout are among the most sensitive fish species tested (LC50 = 5020 μg/l). Bioconcentration factors range from 1.2 to 2.3 for goldfish (*Carassius auratus*), indicating that phenol is not likely to bioconcentrate or biomagnify (USEPA, 1980d).

Selenium

Selenium (Se) is the most strongly enriched element in coal, being present as an organoselenium compound, a chelated species, or an adsorbed element. On combustion of coal, the sulfur dioxide formed reduces the selenium to elemental Se (USFWS, 1986b). Selenium is an element that is required in trace amounts by some organisms. While considered to be an essential element for plants and

animals, Se is toxic at higher concentrations (Masscheleyn and Patrick, 1993).

Selenium biogeochemistry is complex and governed by many factors. The solubility of minerals containing Se, the complexing ability of solid and soluble ligands, microbiologically mediated oxidation-reduction reactions, methylation, and volatilization are all potential processes controlling Se concentration, mobility, and toxicity in both the aquatic and sedimentary environment (Masscheleyn and Patrick, 1993). The quantification of Se species present at the sediment-water interface and the extent of species transformations are critical to understanding Se biogeochemical behavior and its biotic and abiotic reactivity. According to Masscheleyn and Patrick (1993), redox potential and pH are the most important parameters determining chemical speciation and stability of Se in aquatic systems. Its chemistry resembles that of sulfur (S). Selenium, like S, can exist in four different oxidation states: selenide (Se -II), elemental selenium (Se0), selenite (Se IV) and selenate (Se VI).

It has been suggested that selenite is more toxic than selenate, particularly to early life stages and that these effects are most pronounced at elevated temperatures. Also, Se salts may be converted to methylated forms by microorganisms, and these forms are readily accumulated by freshwater vertebrates (USEPA, 1986). Se is readily taken up and transferred in the aquatic food chain. The high availability and intrinsic toxicity of Se oxyanions to aquatic organisms, plants, and wildlife make Se a harmful trace element. At high concentrations, detoxification by means of the formation of volatile metallothien and subsequent excretion become increasingly important (Masscheleyn and Patrick, 1993).

Selenium metabolism and degradation is significantly modified by interaction with heavy metals, agricultural chemicals, microorganisms, and a variety of physicochemical factors. Results of laboratory studies and field investigations with fish, mammals, and birds have led to the general agreement that elevated concentrations of Se in diet or water are associated with reproductive abnormalities, including congenital malformations, selective bioaccumulation by the organisms and growth retardation. These signs have been observed in birds fed diets containing Se at concentrations as low as 5 ppm (USFWS, 1986).

Accumulation of Se by aquatic organisms is highly variable. In short-term tests, exposures to concentrations ranging from 0.015 to 3.3 μg Se/l, resulted in biological concentration factors of 460 for the mosquito fish (*Gambusia* sp.) to 32,000 for a freshwater gastropod (Nassos et al., 1980). Selenium accumulation is modified by water temperature, age of the organism, organ or tissue specificity, mode of administration, and other factors (USEPA, 1986).

In a lake in North Carolina receiving selenium (as flyash waste from a coal-fired power station), reproduction of green sunfish (*Lepomis cyanellus*) failed and the population declined markedly. In these fish, Se levels were elevated in liver and other tissues; kidney, heart, liver, and gills exhibited altered histopathology and blood chemistry. It is probable that Se uptake by plankton [containing 41-97 parts per million (ppm) dry weight] from the lake water [9-12 parts per billion (ppb)] introduced Se into the foodchain where it ultimately reached levels in fish through biomagnification (Cumbie and van Horn, 1978).

Silver

Numerous studies have indicated that free soluble silver (Ag) is among the most toxic metals to freshwater organisms. In most natural waters, the monovalent form of silver is of greatest concern. Silver may exist as a simple hydrated monovalent ion, or it may exist in various degrees of association with inorganic ions such as sulfate, bicarbonate, or nitrate (USEPA 1980e). Silver is more toxic in soft water than in hard water (USEPA 1980e). The sorption of silver by manganese dioxide, various ferric compounds, and clay minerals, and its subsequent partitioning by the sediment layer is strongly pH-dependent (Dyck 1968). Olcott (1950) administered 0.1% silver nitrate to rats in drinking water for 218 days. Upon necropsy, advanced pigmentation and ventricular hypertrophy were observed,

although the hypertrophy was not attributed to silver toxicity.

Silver exhibits a limited ability to bioconcentrate. Bioconcentration factors for freshwater species reported by USEPA (1980e) ranged from < 1 for bluegill sunfish (*Lepomis macrochirus*) to 240 for a mayfly (*Ephemeralla grandis)* with a geometric mean bioconcentration factor of 57. Based on studies of rats, chickens, and turkeys, the maximum tolerable level for silver in animal food is 100 mg/kg (NRC, 1980).

Thallium

Thallium (Th) is considered highly toxic. It was used medicinally to induce alopecia in cases of ringworm of the scalp, sometimes with deleterious side effects. Acute ingestion by laboratory animals induced gastroenteritis, neuropathy, and renal and liver damage, while chronic ingestion causes alopecia (Kazanntzis, 1986). Rats treated with thallium compounds for 90 days experienced liver damage (USEPA, March 1994). Several thallic compounds (thallic oxide, thallium acetate, thallium carbonate, thallium chloride, thallium nitrate, and thallium sulfate) were designated as weight-of-evidence Group D compounds; not classifiable as carcinogenic to humans. A chronic reference dose of 0.07 ug/kg/day has been established for thallic oxide (USEPA, March 1994).

Vanadium

Vanadium (V) is an ubiquitous element, frequently associated with petroleum refining and products. It is also used in the hardening of steel, production of pigments, and the manufacture of insecticides. It is common in many foods, particularly milk, cereals, and vegetables. While the majority of vanadium encountered in mammals is stored in fatty tissue, bone and teeth contribute to the body burden (Amdur et al. 1991). It has been postulated that homeostatic processes exist for this element in that normal tissue levels can be maintained in the face of excessive uptake. The toxic action of vanadium in mammals is largely confined to the respiratory tract. Acute vanadium poisoning via ingestion is characterized by effects on the nervous system, hemorrhage, and respiratory distress (Amdur et al. 1991). No reports exist regarding vanadium phytoxicity under field conditions. However, experimental greenhouse studies have indicated that concentrations of 140 mg/kg in the soil and 0.5 mg/kg in the nutrient solution may be toxic to plants (Kabata-Pendias and Pendias 1992).

Xylene

Xylene is used in petroleum distillation, coal tar distillation, and used extensively in the organic chemical industry. The chemical is relatively volatile, with a characteristic sweet odor. Xylene is found in the environment in ortho, meta, and para forms.

Bacteria are known to aggressively metabolize xylene. The 96 hour LC50 for shrimp (*Crangon francisorum*) was 1.3 ppm (Verschueren, 1983). A 96 hour LC50 of 13.5 mg/l was observed for rainbow trout (Verschueren, 1983). A bioconcentration factor of 23.6 was observed in the eel (*Anguilla japonica*). Humans has been observed to exhibit symptoms of illness after inhalation of xylene at 1000 ppm (Verschueren, 1983).

Zinc

Zinc is the fourth most widely used metal in the world and its major uses are for galvanizing steel, producing alloys, and as an ingredient in paints and rubber. Zinc occurs in many forms in natural waters and sediment. At pH 6.0, the dominant forms of dissolved zinc are the free ion (98 percent) and zinc sulfate, whereas at pH 9.0, the dominant forms are the mono-hydroxide ion (78 percent), zinc carbonate (16 percent), and the free ion (6 percent). Like many other cationic metals, the concentration of dissolved zinc is a function of both water hardness and pH (USEPA, 1987).

This ubiquitous trace metal is essential for normal cell differentiation and growth in both plants and animals (Rand and Petrocelli, 1985). Although zinc is an essential micronutrient for all living organisms, acute values for freshwater invertebrates range from 32 to 40,930 μg/L and those for fish range from 66 to 40,900 μg/L. Chronic values for invertebrates have been reported at concentrations as low as 46.7 μg/L while exposure of fish to 36.4 μg/L has resulted in chronic toxicity. Acute and chronic toxicity of this metal is a function of water hardness (USEPA, 1987). Zinc toxicity in terrestrial animals is not well established. Experimental animals have been given zinc at 100 times the dietary requirements without perceived effects (Goyer et al., 1979).

The important factors controlling the mobility of zinc in soils are very similar to those listed for copper but zinc appears to occur in more readily soluble forms. zinc is considered to be readily soluble relative to other heavy metals in soils. Soluble forms of zinc are readily available to plants and the uptake of zinc has been reported to be linear with concentration in the nutrient solution and in soils. The rate of zinc absorption differs greatly among both plant species and growth media. Roots often contain much more zinc than do tops, particularly if the plants are grown in zinc-rich soils (Kabata-Pendias and Pendias, 1992).

Other COPCs

No suitable ecotoxicological information was available for 2-Butanone or 4-Methyl-2-Pentanone.

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