03.10-12/15/87-00694

ESE

AN R&H COMPANY

ENVIRONMENTAL SCIENCE AND ENGINEERING, INC.

December 15, 1987
ESE No. 87541

Commander
Naval Facilities Engineering Command
Atlantic Division
Code 114, ATTN: Jerry Wallmeyer
Norfolk, Virginia 23511-6278

RE: Round 2 Confirmation Study at NSGA Sabana Seca and NAVSTA Roosevelt Roads
(Contract No. N62470-85-C-7972)

Dear Jerry:

Enclosed is the Monthly Progress Report for the period of November 13, 1987 through December 11, 1987, and the analytical data for the two potable water wells at NSGA Sabana Seca (7PW01 and 7PW02). As shown, no pesticides were detected in either of the two ground water samples collected from the potable wells.

Please do not hesitate to call me if you have any questions concerning the Progress Report or the enclosed data.

Sincerely,

Russ Bowen

Russell V. Bowen, PE
Project Manager

RVB:rs
cc: Lou Bilello, ESE
Lisa Bare, ESE
Donna Baggett, ESE

MONTHLY PROGRESS REPORT
PERIOD 11/13/87 THROUGH 12/11/87

U.S. NAVAL COMPLEX, PUERTO RICO
CONFIRMATION STUDY

WORK ACCOMPLISHED

1. Finalized Work/Safety Plans for NAVSTA Roosevelt Roads and NSGA Sabana Seca, and submitted Plans to EIC.

2. Installed the two replacement monitor wells (R7GW03 and R7GW04) at Site 7, NAVSTA Roosevelt Roads, and one monitor wells at Site 6 (6GW01), NSGA Sabana Seca. Developed and sampled wells R7GW03 and 6GW01.

3. Completed collection of all environmental samples at NAVSTA Roosevelt Roads and NSGA Sabana Seca, with the exception of the ground water sample from replacement well R7GW04 at Site 7, Station Landfill at NAVSTA Roosevelt Roads (see "PROBLEMS ENCOUNTERED" below).

4. Continued laboratory analysis of samples. Forwarded analytical data for surface water, sediment, and ground water samples collected from Site 6, Former Pest Control Shop at NSGA Sabana Seca, to EIC.

5. Grouted damaged well R7GW03 at Site 7, NAVSTA Roosevelt Roads.

6. Replaced concrete pad, protective posts, and protective casing at monitor well 12GW06. Repaired concrete pad at well 12GW05.

7. Completed surveying of all monitor wells at NAVSTA Roosevelt Roads.

PROBLEMS ENCOUNTERED

The water bearing zone encountered during the installation of replacement well R7GW04 at Site 7, Station Landfill at NAVSTA Roosevelt Roads, was not productive enough to allow adequate development and sampling of the well during the last several days of the field investigation.

PERCENTAGE OF WORK COMPLETED

Approximately 70 percent.

PLANS FOR FOLLOWING MONTH

1. Complete planning and preparation for the additional 25 soil borings at Site 12, Tow Way Road Fuel Farm at NAVSTA Roosevelt Roads.

2. Continue laboratory analysis of samples.

CONFIRMATION OF ANY CLARIFICATIONS OR TECHNICAL GUIDANCE

Development and sampling of replacement well R7GW04 at Site 7, Station Landfill, will be re-attempted during the next phase of the field investigation.

PROJECT NUMBER 87488 0000
FIELD GROUP SSPR7W

PROJECT NAME PUERTO RICO - NSGA SABANA SECA
PROJECT MANAGER RUSS BOWEN
LAB COORDINATOR LISA BARE

SAMPLE ID/#

PARAMETERS	UNITS	STORET # METHOD	7PW01 SSPR7W 1	7PW02 SSPR7W 2
DATE			11/03/87	11/03/87
TIME			08:55	09:30
WATER TEMP		10		
	C	0		
PH,FIELD		400		
	STD UNITS	0		
SP.COND.,FIELD@25C		94		
	UMHOS/CM	0		
BENZENE		34030	<1.0	<1.0
	UG/L	GMS		
BROMODICHLOROMETHANE		32101	<2.2	<2.2
	UG/L	GMS		
BROMOFORM		32104	9.0	<4.7
	UG/L	GMS		
BROMOMETHANE		34413	<5.8	<5.8
	UG/L	GMS		
CARBON TETRACHLORIDE		32102	<2.8	<2.8
	UG/L	GMS		
CHLOROBENZENE		34301	<6.0	<6.0
	UG/L	GMS		
CHLOROETHANE		34311	<8.2	<8.2
	UG/L	GMS		
2-CHLOROETHYLVINYL		34576	<15	<15
ETHER	UG/L	GMS		
CHLOROFORM		32106	<1.6	<1.6
	UG/L	GMS		
CHLOROMETHANE		34418	<4.3	<4.3
	UG/L	GMS		
DIBROMOCHLOROMETHANE		32105	5.0	<3.1
	UG/L	GMS		
,1-DICHLOROETHANE		34496	<4.7	<4.7
	UG/L	GMS		

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PARAMETERS	UNITS	STORET # METHOD	7PW01 SSPR7W 1	7PW02 SSPR7W 2
DATE			11/03/87	11/03/87
TIME			08:55	09:30
,2-DICHLOROETHANE	UG/L	34531 GMS	<2.8	<2.8
,1-DICHLOROETHYLENE	UG/L	34501 GMS	<2.8	<2.8
TRANS-1,2-DICHLORO ETHENE	UG/L	34546 GMS	<1.6	<1.6
,2-DICHLOROPROPANE	UG/L	34541 GMS	<6.0	<6.0
CIS-1,3-DICHLORO PROPENE	UG/L	34704 GMS	<5.0	<5.0
TRANS-1,3-DICHLORO PROPENE	UG/L	34699 GMS	<6.4	<6.4
ETHYLBENZENE	UG/L	34371 GMS	<7.2	<7.2
METHYLENE CHLORIDE	UG/L	34423 GMS	<50	<50
,1,2,2-TETRACHLORO ETHANE	UG/L	34516 GMS	<4.1	<4.1
TETRACHLOROETHENE	UG/L	34475 GMS	<3.0	<3.0
TOLUENE	UG/L	34010 GMS	<6.0	<6.0
,1,1-TRICHL'ETHANE	UG/L	34506 GMS	<3.8	<3.8
,1,2-TRICHL'ETHANE	UG/L	34511 GMS	<5.0	<5.0
TRICHLOROETHENE	UG/L	39180 GMS	<1.0	<1.0
TRICHLOROFLUORO-METHANE	UG/L	34488 GMS	<3.2	<3.2

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SAMPLE ID/#

ARAMETERS	UNITS	STORET # METHOD	7PW01 SSPR7W 1	7PW02 SSPR7W 2
ATE			11/03/87	11/03/87
IME			08:55	09:30
INYL CHLORIDE	UG/L	39175 GMS	<1.0	<1.0
CENAPHTHENE	UG/L	34205 GMS	EX11/10	EX11/10
CENAPHTHYLENE	UG/L	34200 GMS	EX11/10	EX11/10
NTHRACENE	UG/L	34220 GMS	EX11/10	EX11/10
ENZIDINE	UG/L	39120 GMS	EX11/10	EX11/10
ENZO(A)ANTHRACENE	UG/L	34526 GMS	EX11/10	EX11/10
ENZO(B)FLUORANTHENE	UG/L	34230 GMS	EX11/10	EX11/10
ENZO(K)FLUORANTHENE	UG/L	34242 GMS	EX11/10	EX11/10
ENZO(A)PYRENE	UG/L	34247 GMS	EX11/10	EX11/10
ENZO(GHI)PERYLENE	UG/L	34521 GMS	EX11/10	EX11/10
UTYLBENZYLPHTHALATE	UG/L	34292 GMS	EX11/10	EX11/10
IS(2-CHLOROETHYL) ETHER	UG/L	34273 GMS	EX11/10	EX11/10
IS(2-CHLOROETHOXY) METHANE	UG/L	34278 GMS	EX11/10	EX11/10
IS(2-ETHYLHEXYL) PHTHALATE	UG/L	39100 GMS	EX11/10	EX11/10
IS(2-CHL'ISOPROPYL) ETHER	UG/L	34283 GMS	EX11/10	EX11/10

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PARAMETERS	UNITS	STORET # METHOD	7PW01 SSPR7W 1	7PW02 SSPR7W 2
DATE			11/03/87	11/03/87
TIME			08:55	09:30
4-BROMOPHENYLPHENYL ETHER	UG/L	34636 GMS	EX11/10	EX11/10
2-CHLORONAPHTHALENE	UG/L	34581 GMS	EX11/10	EX11/10
2-CHLOROPHENOL	UG/L	34586 GMS	EX11/10	EX11/10
4-CHLORO-3-METHYL PHENOL	UG/L	34452 GMS	EX11/10	EX11/10
4-CHLOROPHENYLPHENYL ETHER	UG/L	34641 GMS	EX11/10	EX11/10
CHRYSENE	UG/L	34320 GMS	EX11/10	EX11/10
DIBEN'(A,H)ANTH'CENE	UG/L	34556 GMS	EX11/10	EX11/10
DI-N-BUTYLPHTHALATE	UG/L	39110 GMS	EX11/10	EX11/10
1,3,DICHLOROBENZENE	UG/L	34566 GMS	EX11/10	EX11/10
1,2-DICHLOROBENZENE	UG/L	34536 GMS	EX11/10	EX11/10
1,4-DICHLOROBENZENE	UG/L	34571 GMS	EX11/10	EX11/10
3,3'-DICHL'BENZIDINE	UG/L	34631 GMS	EX11/10	EX11/10
2,4-DICHLOROPHENOL	UG/L	34601 GMS	EX11/10	EX11/10
DIETHYLPHTHALATE	UG/L	34336 GMS	EX11/10	EX11/10
2,4-DIMETHYLPHENOL	UG/L	34606 GMS	EX11/10	EX11/10

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ATE			11/03/87	11/03/87
IME			08:55	09:30
IMETHYLPTHALATE	UG/L	34341 GMS	EX11/10	EX11/10
,4-DINITROPHENOL	UG/L	34616 GMS	EX11/10	EX11/10
,4-DINITROTOLUENE	UG/L	34611 GMS	EX11/10	EX11/10
,6-DINITROTOLUENE	UG/L	34626 GMS	EX11/10	EX11/10
I-N-OCTYLPHTHALATE	UG/L	34596 GMS	EX11/10	EX11/10
LUORANTHENE	UG/L	34376 GMS	EX11/10	EX11/10
LUORENE	UG/L	34381 GMS	EX11/10	EX11/10
EXACHLOROBENZENE	UG/L	39700 GMS	EX11/10	EX11/10
EXACHLOROBUTADIENE	UG/L	34391 GMS	EX11/10	EX11/10
EXACHLOROCYCLOPENTA IENE	UG/L	34386 GMS	EX11/10	EX11/10
EXACHLOROETHANE	UG/L	34396 GMS	EX11/10	EX11/10
NDENO(1,2,3-CD) YRENE	UG/L	34403 GMS	EX11/10	EX11/10
SOPHORONE	UG/L	34408 GMS	EX11/10	EX11/10
-METHYL-4,6-DINITRO HENOL	UG/L	34657 GMS	EX11/10	EX11/10
APHTHALENE	UG/L	34696 GMS	EX11/10	EX11/10

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PARAMETERS	UNITS	STORET # METHOD	7PW01 SSPR7W 1	7PW02 SSPR7W 2
DATE			11/03/87	11/03/87
TIME			08:55	09:30
ITROBENZENE	UG/L	34447 GMS	EX11/10	EX11/10
-NITROPHENOL	UG/L	34591 GMS	EX11/10	EX11/10
-NITROPHENOL	UG/L	34646 GMS	EX11/10	EX11/10
-NITROSODIMET'AMINE	UG/L	34438 GMS	EX11/10	EX11/10
-NITROSODI-N-PROPYL MINE	UG/L	34428 GMS	EX11/10	EX11/10
-NITROSODIPHE'AMINE	UG/L	34433 GMS	EX11/10	EX11/10
ENTACHLOROPHENOL	UG/L	39032 GMS	EX11/10	EX11/10
HENANTHRENE	UG/L	34461 GMS	EX11/10	EX11/10
HENOL	UG/L	34694 GMS	EX11/10	EX11/10
YRENE	UG/L	34469 GMS	EX11/10	EX11/10
,2,4-TRICH'BENZENE	UG/L	34551 GMS	EX11/10	EX11/10
,4,6-TRICHL'PHENOL	UG/L	34621 GMS	EX11/10	EX11/10
LDRIN	UG/L	39330 EC	<0.005	<0.005
HC,A	UG/L	39337 EC	<0.005	<0.005
HC,B	UG/L	39338 EC	<0.005	<0.005

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DATE			11/03/87	11/03/87
TIME			08:55	09:30
BHC,D	UG/L	34259 EC	<0.005	<0.005
BHC,G(LINDANE)	UG/L	39340 EC	<0.005	<0.005
CHLORDANE	UG/L	39350 EC	<0.006	<0.006
DDD,PP'	UG/L	39310 EC	<0.012	<0.012
DDE,PP'	UG/L	39320 EC	<0.005	<0.005
DDT,PP'	UG/L	39300 EC	<0.012	<0.012
DIELDRIN	UG/L	39380 EC	<0.005	<0.005
ENDOSULFAN,A	UG/L	34361 EC	<0.005	<0.005
ENDOSULFAN,B	UG/L	34356 EC	<0.012	<0.012
ENDOSULFAN SULFATE	UG/L	34351 EC	<0.012	<0.012
ENDRIN	UG/L	39390 EC	<0.005	<0.005
ENDRIN ALDEHYDE	UG/L	34366 EC	<0.012	<0.012
HEPTACHLOR	UG/L	39410 EC	<0.005	<0.005
HEPTACHLOR EPOXIDE	UG/L	39420 EC	<0.005	<0.005
TOXAPHENE	UG/L	39400 EC	<0.600	<0.600

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PARAMETERS	UNITS	STORET # METHOD	SAMPLE ID/# 7PW01 SSPR7W 1	7PW02 SSPR7W 2
DATE			11/03/87	11/03/87
TIME			08:55	09:30
PCB-1016	UG/L	34671 EC	<0.121	<0.121
PCB-1221	UG/L	39488 EC	<0.121	<0.121
PCB-1232	UG/L	39492 EC	<0.121	<0.121
PCB-1242	UG/L	39496 EC	<0.121	<0.121
PCB 1248	UG/L	39500 EC	<0.121	<0.121
PCB-1254	UG/L	39504 EC	<0.121	<0.121
PCB-1260	UG/L	39508 EC	<0.121	<0.121
ANTIMONY,TOTAL	UG/L	1097 ICAP	<21.0	<21.0
ARSENIC,TOTAL	UG/L	1002 GFAA	<1.6	<1.6
BERYLLIUM, TOTAL	UG/L	1012 ICAP	<1.0	<1.0
CADMIUM,TOTAL	UG/L	1027 ICAP	<2.4	<2.4
CHROMIUM,TOTAL	UG/L	1034 ICAP	3.9	4.2
COPPER,TOTAL	UG/L	1042 ICAP	43.3	<2.8
LEAD,TOTAL	UG/L	1051 ICAP	<20.0	<20.0
MERCURY,TOTAL	UG/L	71900 CVAA	<0.2	<0.2

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PARAMETERS	UNITS	STORET # METHOD	7PW01 SSPR7W 1	7PW02 SSPR7W 2
DATE			11/03/87	11/03/87
TIME			08:55	09:30
NICKEL,TOTAL	UG/L	1067 ICAP	<8.6	<8.6
SELENIUM,TOTAL	UG/L	1147 GFAA		
SILVER,TOTAL	UG/L	1077 ICAP	<3.6	<3.6
THALLIUM,TOTAL	UG/L	1059 GFAA	<3.4	<3.4
ZINC,TOTAL	UG/L	1092 ICAP	<1.8	<1.8
PHENOLS	UG/L	32730 I	<1	<1