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Seep and Sediment Data Package
for
Round 7

Portsmouth Naval Shipyard
Kittery, Maine

Northern Division
Naval Facilities Engineering Command
Contract Number N62472-90-D-1298
Contract Task Order 0232

April 1997

Brown & Root Environmental
A Division of Halliburton NUS Corporation

SEEP AND SEDIMENT DATA PACKAGE
FOR
ROUND 7

PORTSMOUTH NAVAL SHIPYARD
KITTERY, MAINE

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
Northern Division
Environmental Branch Code 18
Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop #82
Lester, Pennsylvania 19113-2090

Submitted by:
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CONTRACT NUMBER N62472-90-D-1298
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1.0 INTRODUCTION

This data package for the Portsmouth Naval Shipyard (PNS) in Kittery Maine, has been prepared for the Northern Division (NORTHDIV) Naval Facilities Engineering Command (NAVFAC) by Brown & Root Environmental (B&R Environmental) under the Comprehensive Long-Term Environmental Action Navy (CLEAN), Contract Number N62472-90 D-1298, Contract Task Order (CTO) 232.

The data provided within this data package were collected as part of a seep and sediment sampling event established for PNS to evaluate the onshore and offshore contaminant migration patterns as well as to facilitate the implementation of a cost effective, long-term monitoring program for various sites of concern, if it should be necessary. The data provided within this package were collected during the most recent sampling event (Round 7) in December 1996, at the PNS. A total of 14 seep and 13 sediment samples were collected from locations defined in the Technical Memorandum on Seep Sampling (B&R Environmental, November, 1996).

The information contained within this data package consists of the following:

- Data summary tables for all of the seep and sediment samples collected.
- Analytical data tables showing the results for all seep and sediment samples collected.
- Chain of Custody Records for all seep and sediment samples.
- Sample log sheets for all seep and sediment samples.
- Tag Maps showing the results of all positive detections in seep and sediment samples presented as follows:
  - Plate 1 - Operable Unit 3 - Jamaica Island Landfill (Clark's Cove)
  - Plate 2 - Operable Unit 3 - Jamaica Island Landfill (Backchannel)
  - Plate 3 - Backchannel (Topeka Pier Area)

SEEP AND SEDIMENT SAMPLE DATA SUMMARIES

PORTSMOUTH NAVAL SHIPYARD
SUMMARY OF SEEP RESULTS

Parameter	Frequency of Detection	Range (Min-Max)	Average of Positive Detections	Average of All Values (1)	Location of Maximum Positive Detection
SEMIVOLATILES (ng/L)					
1-METHYLNAPHTHALENE	2/16	40.9-46.7	43.8	11.7	CC-1004.5
1-METHYLPHENANTHRENE	9/16	1.1-31.1	7.8	5.9	BC-1005
2,3,5-TRIMETYLNAPHTHALENE	4/16	0.6-27.2	10	6	CC-1004.5
2,6-DIMETHYLNAPHTHALENE	5/16	0.8-31.2	10	6	CC-1004.5
2-METHYLNAPHTHALENE	6/16	1.1-13.7	8.6	12	SP-1003
ACENAPHTHENE	12/16	0.2-793	70	50	CC-1004.5
ACENAPHTHYLENE	15/16	0.2-13.6	2	2	CC-1004.5
ANTHRACENE	9/16	2.8-59.9	13	7.7	CC-1004.5
BENZO(A)ANTHRACENE	1/16	22.4	22.4	12.7	CC-1004.5
BENZO(A)PYRENE	15/16	0.2-33.5	6	6	CC-1004.5
BENZO(BJK)FLUORANTHENE	10/16	8.1-79.4	20	17	CC-1004.5
BENZO(E)PYRENE	10/16	3.4-34.6	10	7.1	CC-1004.5
BENZO(G,H,I)PERYLENE	11/16	0.7-24.7	7	7	CC-1004.5
BIPHENYL	1/16	26.2	26.2	3.45	CC-1004.5
CHRYSENE	14/16	1.1-45.9	9.3	8.9	CC-1004.5
DIBENZO(A,H)ANTHRACENE	2/16	5.9-8.5	7.2	11	SP-1001
FLUORANTHENE	15/16	1.7-154	21	20	CC-1004.5
FLUORENE	9/16	0.6-142	20	10	CC-1004.5
INDENO(1,2,3-CD)PYRENE	11/16	0.3-23.5	7	8	CC-1004.5
NAPHTHALENE	4/16	11.6-209	61.9	18.1	BC-1006
PERYLENE	10/16	1.1-12.1	3.8	3.0	CC-1004.5
PHENANTHRENE	1/16	59.4	59.4	9.69	CC-1004.5
PYRENE	16/16	0.7-101	20	20	CC-1004.5
SUM OF HIGH MOLECULAR WEIGHT PAHs	16/16	0.9-362	50	50	CC-1004.5
SUM OF LOW MOLECULAR WEIGHT PAHs	16/16	0-1090	100	100	CC-1004.5
SUM OF TOTAL PAHs	16/16	1.2-1760	200	200	CC-1004.5
PESTICIDES/PCBs (ng/L)					
2,2',3,3',4,4',5,5',6,6'-DECACHLOROBIPHENYL	13/16	0.1-0.6	0.2	0.5	CC-1004.5
2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL	10/16	0.5-2.5	0.9	1	CC-1004.5
2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL	2/16	0.2-2	1	1	BC-1017
2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL	9/16	0.1-14.1	2	2	BC-1017
2,2',3,3',4,4'-HEXACHLOROBIPHENYL	12/16	0.1-2	0.3	0.8	BC-1017
2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL	1/16	9.5	9.5	2	BC-1017
2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL	2/16	0.6-2.6	2	2	BC-1017
2,2',3,4,4',5'-HEXACHLOROBIPHENYL	2/16	2.8-25.4	14	2.6	BC-1017
2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL	4/16	0.6-26.1	7	3	BC-1017
2,2',3,5-TETRACHLOROBIPHENYL	1/16	2.9	2.9	2.7	CC-1011
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	6/16	0.6-25.3	5	3	BC-1017
2,2',4,5,5'-PENTACHLOROBIPHENYL	1/16	7	7	3	BC-1017
2,2',4,6-TETRACHLOROBIPHENYL	1/16	1.6	1.6	0.90	CC-1011
2,2',5,5'-TETRACHLOROBIPHENYL	1/16	3.3	3.3	1.7	CC-1011
2,2',5-TRICHLOROBIPHENYL	1/16	5.6	5.6	1.3	CC-1011
2,3',4,4',5-PENTACHLOROBIPHENYL	3/16	0.8-25.1	9	3	BC-1017
2,3,3',4,4'-PENTACHLOROBIPHENYL	2/16	2-2.2	2	1	BC-1016
2,4'-DDE	3/16	0.2-0.7	0.4	1	CC-1004.5
2,4'-DDT	5/16	0.6-4.1	2	2	CC-1004.5
2,4,4'-TRICHLOROBIPHENYL	1/16	6.3	6.3	1.6	CC-1011
2,4,5-TRICHLOROBIPHENYL	5/16	0.1	0.1	0.9	BC-1005-1012,-1017,-1018, SP-1003
3,3',4,4',5-PENTACHLOROBIPHENYL	1/16	4.2	4.2	2.0	BC-1017
4,4'-DDD	3/16	2.9-408	140	28	CC-1004.5
4,4'-DDE	5/16	0.1-11.1	4	2	CC-1004.5
4,4'-DDT	4/16	1.7-19	10	3.8	SP-1001
ALPHA-CHLORDANE	14/16	0.1-5.8	0.6	0.8	SP-1001
HEPTACHLOR	7/16	0.1-0.6	0.3	1	CC-1004.4
HEPTACHLOR EPOXIDE	4/16	0.1-0.3	0.2	1	BC-1006, SP-1002
MIREX	1/16	0.1-0.1	0.1	0.6	CC-1004.3
SUM OF PCBS	16/16	0.2-294	30	30	BC-1017
SUM OF THE 24 CHLOROBIPHENYLS	16/16	0.1-147	10	10	BC-1017
TRANS-NONACHLOR	1/16	1.5	1.5	1.5	SP-1001
METALS, TOTAL (µg/L)					
ALUMINUM	16/16	5-315.7	90	90	CC-1004.3
ARSENIC	3/16	6.2-11.7	8.7	3.6	BC-1017
COPPER	12/16	3.5-18.9	9.4	7.4	BC-1020
IRON	16/16	20.4-732	210	210	CC-1004.3
LEAD	2/16	2.9-5.4	4.2	1.8	SP-1003
MANGANESE	16/16	2.3-142	25	25	BC-1006
NICKEL	12/12	8.1-47.3	20	20	BC-1018
ZINC	16/16	3-413	100	100	CC-1004.3

(1) For non-detected results, a value of one-half the detection limit is used to calculate averages.

PORTSMOUTH NAVAL SHIPYARD
SUMMARY OF SEEP RESULTS

Parameter	Frequency of Detection	Range (Min-Max)	Average of Positive Detections	Average of All Values (1)	Location of Maximum Positive Detection
METALS, FILTERED (µg/L)					
ALUMINUM	13/16	3.4-39.9	15	13	SP-1003
ARSENIC	4/16	6.1-9.7	8.2	3.9	BC-1017
CADMIUM	9/16	0.2-2.1	0.8	0.5	SP-1003
COPPER	10/16	2.9-19.1	9.7	6.5	SP-1001
IRON	11/16	3.5-143.8	51	35	CC-1004.3
LEAD	1/16	9.2-9.2	9.2	1.9	BC-1005
MANGANESE	16/16	2.8-144	24	24	BC-1006
NICKEL	11/11	6.8-43.6	17	17	BC-1018
ZINC	16/16	6.8-243	69	69	CC-1004.3
MISCELLANEOUS PARAMETERS (mg/L)					
BIOLOGICAL OXYGEN DEMAND	16/16	30	30	30	ALL
BROMIDE	14/16	9-40	30	30	BC-1012
CARBONATE ALKALINITY	16/16	72-230	130	130	CC-1004.5
CHLORIDE	16/16	130-15000	9510	9510	BC-1020
NITRATE, AS NITROGEN	16/16	0.1-1.2	0.4	0.4	SP-1001
PH	16/16	7.3-8.3	7.7	7.7	CC-1004.5
SULFATE	16/16	14-1700	1200	1200	BC-1017,-1020
TOTAL DISSOLVED SOLIDS	16/16	300-27000	16500	16500	BC-1020
TOTAL ORGANIC CARBON	16/16	1.4-8.1	2.4	2.4	CC-1004.5
TOTAL SUSPENDED SOLIDS	16/16	11-44	28	28	CC-1011

(1) For non-detected results, a value of one-half the detection limit is used to calculate averages.

PORTSMOUTH NAVAL SHIPYARD
SUMMARY OF SEDIMENT RESULTS

Parameter	Frequency of Detection	Range (Min-Max)	Average of Positive Detections	Average of All Values (1)	Location of Maximum Positive Detection
SEMIVOLATILES (µg/kg)					
1-METHYLNAPHTHALENE	14/15	4.8-56.4	21	20	BC-1016
1-METHYLPHENANTHRENE	15/15	6.3-99.3	38	38	BC-1012
2,3,5-TRIMETYLNAPHTHALENE	13/15	1.7-22	7.0	6.4	BC-1012
2,6-DIMETHYLNAPHTHALENE	13/15	3.5-41.3	19	17	BC-1016
2-METHYLNAPHTHALENE	14/15	6.3-79.7	25	24	BC-1016
ACENAPHTHENE	15/15	1.4-49	19	19	BC-1012
ACENAPHTHYLENE	15/15	2.3-98.2	42	42	BC-1012
ANTHRACENE	15/15	7.7-276	140	140	BC-1016
BENZO(A)ANTHRACENE	15/15	13.1-795	332	332	BC-1016
BENZO(A)PYRENE	15/15	20.1-753	332	332	BC-1012
BENZO(BJK)FLUORANTHENE	15/15	43.9-1400	637	637	BC-1016
BENZO(E)PYRENE	15/15	23.8-532	251	251	BC-1016
BENZO(G,H,I)PERYLENE	15/15	16.1-407	180	180	BC-1016
BIPHENYL	10/15	4-16.5	8	7	BC-1016
CHRYSENE	15/15	14.8-717	362	362	BC-1012
DIBENZO(A,H)ANTHRACENE	14/15	15.3-133	58.0	54.2	BC-1016
FLUORANTHENE	15/15	39.5-1190	581	581	BC-1018
FLUORENE	14/15	4-54.3	20	20	BC-1012
INDENO(1,2,3-CD)PYRENE	15/15	15.5-437	187	187	BC-1016
NAPHTHALENE	15/15	2.8-95.5	30	30	BC-1016
PERYLENE	15/15	8.4-210	100	100	BC-1016
PHENANTHRENE	15/15	20.2-756	321	321	BC-1012
PYRENE	15/15	30.8-1260	555	555	BC-1012
SUM OF HIGH MOLECULAR WEIGHT PAHs	15/15	118-4580	2140	2140	BC-1016
SUM OF LOW MOLECULAR WEIGHT PAHs	15/15	34.5-1200	562	562	BC-1016
SUM OF TOTAL PAHs	15/15	267-8950	4260	4260	BC-1016
PESTICIDES/PCBs (µg/kg)					
2,2',3,3',4,4',5,5',6,6'-DECACHLOROBIPHENYL	15/15	0.1-6.3	2	2	BC-1016
2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL	15/15	0.4-10.7	4	4	BC-1016
2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL	12/15	0.1-8.3	2	2	BC-1017
2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL	10/15	0.7-45.6	10	10	BC-1017
2,2',3,3',4,4'-HEXACHLOROBIPHENYL	14/15	0.2-13.9	3	3	BC-1017
2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL	15/15	0.1-3.3	1	1	BC-1017
2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL	15/15	0.3-36.7	99	9	BC-1017
2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL	15/15	0.1-12.6	2	2	BC-1017
2,2',3,4,4',5'-HEXACHLOROBIPHENYL	15/15	0.7-98.6	20	20	BC-1017
2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL	15/15	0.3-92.1	20	20	BC-1017
2,2',3,4,5'-PENTACHLOROBIPHENYL	15/15	0.2-4.7	2	2	BC-1017
2,2',3,5-TETRACHLOROBIPHENYL	15/15	0.1-1	0.5	0.5	CC-1004.3
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	15/15	0.5-93.4	20	20	BC-1017
2,2',4,5,5'-PENTACHLOROBIPHENYL	15/15	0.4-26.2	6	6	BC-1017
2,2',4,6-TETRACHLOROBIPHENYL	13/15	0.1-0.5	0.3	0.3	BC-1018
2,2',5,5'-TETRACHLOROBIPHENYL	11/15	0.6-3.1	2	1	BC-1016, BC-1017
2,2',5-TRICHLOROBIPHENYL	11/15	0.1-0.6	0.3	0.3	BC-1020
2,3',4,4',5-PENTACHLOROBIPHENYL	15/15	0.3-13.6	4	4	BC-1017
2,3',4,4'-TETRACHLOROBIPHENYL	3/15	0.5-1.5	0.9	0.4	BC-1005
2,3,3',4,4'-PENTACHLOROBIPHENYL	11/15	0.1-4.5	1	1	BC-1016
2,4'-DDE	7/15	0.1-0.9	0.4	0.4	CC-1004.5
2,4'-DDT	14/15	0.2-37.5	6	6	CC-1004.5
2,4'-DICHLOROBIPHENYL	15/15	0.1-1.7	0.5	0.5	BC-1018
2,4,4'-TRICHLOROBIPHENYL	15/15	0.1-1	0.5	0.5	CC-1011
2,4,5-TRICHLOROBIPHENYL	2/15	0.1	0.1	0.3	BC-1017, CC-1004.3
3,3',4,4',5-PENTACHLOROBIPHENYL	12/15	0.2-33.7	6	5	BC-1017
4,4'-DDD	15/15	3.7-267	63	63	CC-1004.5
4,4'-DDE	15/15	1.9-38.3	10	10	CC-1004.5
4,4'-DDT	14/15	2.1-166	35	33	CC-1004.5
ALPHA-CHLORDANE	12/15	0.1-16.6	2	2	SP-1001
GAMMA-BHC (LINDANE)	1/15	0.6	0.6	0.3	BC-1018
HEPTACHLOR	8/15	0.1-6	2	1	BC-1018
HEPTACHLOR EPOXIDE	1/15	0.5	0.5	0.3	SP-1001
HEXACHLOROBENZENE	13/15	0.1-0.5	0.2	0.2	BC-1018,-1018,-1020
MIREX	7/15	0.1-6.7	2	1	BC-1017
SUM OF PCBS	15/15	9-1000	200	200	BC-1017
SUM OF THE 24 CHLOROBIPHENYLS	15/15	4.5-501	110	110	BC-1017
TRANS-NONACHLOR	15/15	0.1-5.4	0.9	0.9	SP-1001
METALS (mg/kg)					
ALUMINUM	15/15	18851.8-42364.3	30372.5	30372.5	BC-1018
ARSENIC	15/15	4.5-17.9	9.8	9.8	BC-1020
CADMIUM	15/15	0.05-0.84	0.352	0.352	BC-1016
CHROMIUM	15/15	90-259	150	150	CC-1004.5
COPPER	15/15	15.9-460.8	145.02667	145.02667	BC-1020
IRON	15/15	19735.6-78925.4	33159.0	33159.0	CC-1004.5
LEAD	15/15	31.8-238.5	99.40667	99.40667	BC-1005
MANGANESE	15/15	247.3-684.4	469.7	469.7	BC-1020
MERCURY	15/15	0.065-2.975	0.554	0.554	BC-1016
NICKEL	15/15	18.3-97.6	41.5	41.5	CC-1004.5
SILVER	9/15	0.19-2.12	0.59	0.38	BC-1016
ZINC	15/15	215.3-1089	472.4800	472.4800	CC-1004.5
AVS/SIMULTANEOUSLY EXTRACTED METALS (mg/kg)					
CADMIUM	15/15	0.03018-0.55211	0.25007	0.25007	BC-1005
COPPER	5/15	79.51456-147.5	105.6	37.9	BC-1020
LEAD	11/15	42.62136-191.4647	80.76218	60.57868	BC-1005
ZINC	13/15	57.60563-507.6944	187.5347	164.0059	CC-1004.5

(1) For non-detected results, a value of one-half the detection limit is used to calculate averages.

ANALYTICAL DATA TABLES

SEEP SAMPLE DATA TABLES

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER: SAMPLE DATE: LOCATION: FIELD DUPLICATE OF:	BC-1005-SP-1296 12/12/96 BC-1005	BC-1005-SP-1296-F 12/11/96 BC-1005	BC-1006-SP-1296 12/12/96 BC-1006	BC-1006-SP-1296-F 12/11/96 BC-1006	BC-1012-SP-1296 12/12/96 BC-1012	BC-1012-SP-1296-F 12/11/96 BC-1012	BC-1016-SP-1296 12/16/96 BC-1016
SEMIVOLATILES (ng/L)							
1-METHYLNAPHTHALENE	14.1 U		40.9		14.1 U		14.1 U
2,3,5-TRIMETYLNAPHTHALENE	9.9 U		9.9 U		9.9 U		9.9 U
2,6-DIMETHYLNAPHTHALENE	6.4 U		4.2 J		6.4 U		6.4 U
2-METHYLNAPHTHALENE	29.4 U		12.9 J		29.4 U		1.1 J
ACENAPHTHENE	0.4 J		57.8		1.4 J		0.7 J
ACENAPHTHYLENE	0.8 J		4		1.6 J		0.5 J
ANTHRACENE	5.7		22.4		6.5		2.9
BENZO(A)ANTHRACENE	24.1 U		24.1 U		24.1 U		24.1 U
BENZO(A)PYRENE	7.8		7.1 U		5.2 J		0.7 J
BENZO(BJK)FLUORANTHENE	10.8 J		13.6 U		11.8 J		13.6 U
BENZO(E)PYRENE	4.7		4.3 U		5.2		4.3 U
BENZO(G,H,I)PERYLENE	3.3 J		8.2 U		4.6 J		0.7 J
BIPHENYL	3.1 U		14.3 U		3.1 U		3.1 U
CHRYSENE	7.1 J		12.3 U		7.8 J		1.1 J
DIBENZO(A,H)ANTHRACENE	23 U		23 U		23 U		23 U
FLUORANTHENE	20.5		7.9 J		21.2		2.2 J
FLUORENE	0.8 J		14.8		0.8 J		0.6 J
HEXACHLOROBENZENE	1.8 U		1.8 U		1.8 U		1.8 U
INDENO(1,2,3-CD)PYRENE	3.3 J		18.4 U		0.3 J		1 J
MIREX	1.2 U		1.2 U		1.2 U		1.2 U
NAPHTHALENE	6.8 U		209		6.8 U		6.8 U
PERYLENE	2.2 J		3.3 U		1.1 J		3.3 U
PHENANTHRENE	25.6 U		11.9 U		11.8 U		10.3 U
PHENANTHRENE, 1-METHYL-	31.1		7.1 U		2 J		7.1 U
PYRENE	20.8		11.9		16.5		2 J
SUM OF HIGH MOLECULAR WEIGHT PAHs	56.2		19.7		50.7		6
SUM OF LOW MOLECULAR WEIGHT PAHs	7.7		321		10.3		5.8
SUM OF TOTAL PAHs	119		386		108		13.5
TRANS-NONACHLOR	3 U		3 U		3 U		3 U

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	BC-1005-SP-1296	BC-1005-SP-1296-F	BC-1006-SP-1296	BC-1006-SP-1296-F	BC-1012-SP-1296	BC-1012-SP-1296-F	BC-1016-SP-1296
SAMPLE DATE:	12/12/96	12/11/96	12/12/96	12/11/96	12/12/96	12/11/96	12/16/96
LOCATION:	BC-1005	BC-1005	BC-1006	BC-1006	BC-1012	BC-1012	BC-1016
FIELD DUPLICATE OF:							
PESTICIDES/PCBs (ng/L)							
2,2',3,3',4,4',5,5',6,6'-DECACHLOROBIPHENYL	0.2 J		3.6 U		0.2 J		0.2 J
2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL	0.6 J		2.9 U		0.5 J		2.9 U
2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL	3 U		3 U		3 U		3 U
2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL	0.3 J		2.7 U		2.7 U		2.7 U
2,2',3,3',4,4'-HEXACHLOROBIPHENYL	0.3 J		4.2 U		0.1 J		4.2 U
2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL	2.3 U		2.3 U		2.3 U		2.3 U
2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL	3.1 U		3.1 U		3.1 U		3.1 U
2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL	3 U		3 U		3 U		3 U
2,2',3,4,4',5'-HEXACHLOROBIPHENYL	1.8 U		1.8 U		1.8 U		1.8 U
2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL	2.3 U		0.7 J		2.3 U		2.3 U
2,2',3,4,5'-PENTACHLOROBIPHENYL	3.2 U		3.2 U		3.2 U		3.2 U
2,2',3,5-TETRACHLOROBIPHENYL	5.4 U		5.4 U		5.4 U		5.4 U
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	0.7 J		2.3 U		2.3 U		2.3 U
2,2',4,5,5'-PENTACHLOROBIPHENYL	5.1 U		5.1 U		5.1 U		5.1 U
2,2',4,6-TETRACHLOROBIPHENYL	1.7 U		1.7 U		1.7 U		1.7 U
2,2',5,5'-TETRACHLOROBIPHENYL	3.1 U		3.1 U		3.1 U		3.1 U
2,2',5-TRICHLOROBIPHENYL	2.1 U		2.1 U		2.1 U		2.1 U
2,3',4,4',5-PENTACHLOROBIPHENYL	2.1 U		2.1 U		2.1 U		2.1 U
2,3',4,4'-TETRACHLOROBIPHENYL	7.3 U		7.3 U		7.3 U		7.3 U
2,3,3',4,4'-PENTACHLOROBIPHENYL	2.2 U		2.2 U		2.2 U		2.2 J
2,4'-DDE	3.2 U		3.2 U		3.2 U		3.2 U
2,4'-DDT	3 U		3 U		3 U		3 U
2,4'-DICHLOROBIPHENYL	3.7 U		3.7 U		3.7 U		3.7 U
2,4,4'-TRICHLOROBIPHENYL	2.6 U		2.6 U		2.6 U		2.6 U
2,4,5-TRICHLOROBIPHENYL	0.1 J		2.5 U		0.1 J		2.5 U
3,3',4,4',5-PENTACHLOROBIPHENYL	3.6 U		3.6 U		3.6 U		3.6 U
4,4'-DDD	3 U		2.9		3 U		3 U
4,4'-DDE	2.3 U		2.3 U		2.3 U		2.3 U

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	BC-1005-SP-1296	BC-1005-SP-1296-F	BC-1006-SP-1296	BC-1006-SP-1296-F	BC-1012-SP-1296	BC-1012-SP-1296-F	BC-1016-SP-1296
SAMPLE DATE:	12/12/96	12/11/96	12/12/96	12/11/96	12/12/96	12/11/96	12/16/96
LOCATION:	BC-1005	BC-1005	BC-1006	BC-1006	BC-1012	BC-1012	BC-1016
FIELD DUPLICATE OF:							
PESTICIDES/PCBs (ng/L)							
4,4'-DDT	3 U		1.7 J		3 U		3 U
ALDRIN	3.2 U		3.2 U		3.2 U		3.2 U
ALPHA-CHLORDANE	0.2 J		0.2 J		0.2 J		3 U
GAMMA-BHC (LINDANE)	3 U		3 U		3 U		3 U
HEPTACHLOR	3 U		3 U		3 U		3 U
HEPTACHLOR EPOXIDE	3 U		0.3 J		3 U		3 U
SUM OF PCBS	4.4		1.4		7.1		0.4
SUM OF THE 24 CHLOROBIPHENYLS	2.2		0.7		0.9		0.2
METALS (µg/L)							
ALUMINUM	10 J	3 UJ	19.2 J	3.4 J	50.3 J	8.7 J	5 J
ARSENIC	5 UJ	6.1 J	8.2 J	5 U	5 UJ	5 U	5 UJ
CADMIUM	0.2 UJ	0.2 J	0.2 UJ	0.2 UJ	0.2 UJ	0.8 J	0.2 UJ
CHROMIUM	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
COPPER	18.7	17.7	2.5 U	2.5 U	3.7	2.9	18.8
CYANIDE	5 U		5 U		5 U		5 U
IRON	58.4 J	5	104 J	58.9	50.4 J	3 U	67.5 J
LEAD	2.9 UJ	9.2 J	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ
MANGANESE	18.9	20.2	142	144	7.8	6.9	4.6
MERCURY	0.42 UJ	0.42 UJ	0.42 UJ	0.42 UJ	0.42 UJ	0.42 UJ	0.42 UJ
NICKEL	39 J	42.3 J	9.3 J	8 UR	11 J	10 J	9.3 J
SILVER	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ZINC	86 J	196 J	3 J	12.2 J	169 J	40.8 J	129 J
MISCELLANEOUS PARAMETERS (mg/L)							
BIOLOGICAL OXYGEN DEMAND	30		30		30		30
BROMIDE	22		13		40		33
CARBONATE ALKALINITY	180		220		110		100
CHLORIDE	9600		5400		14000		12000
NITRATE, AS NITROGEN	0.5		0.1		0.28		0.36
PH	7.4		7.4		7.6		7.3

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	BC-1005-SP-1296	BC-1005-SP-1296-F	BC-1006-SP-1296	BC-1006-SP-1296-F	BC-1012-SP-1296	BC-1012-SP-1296-F	BC-1016-SP-1296
SAMPLE DATE:	12/12/96	12/11/96	12/12/96	12/11/96	12/12/96	12/11/96	12/16/96
LOCATION:	BC-1005	BC-1005	BC-1006	BC-1006	BC-1012	BC-1012	BC-1016
FIELD DUPLICATE OF:							
MISCELLANEOUS PARAMETERS (mg/L)							
SULFATE	1200		690		1600		1300
TOTAL DISSOLVED SOLIDS	17000		9000		24000		23000
TOTAL ORGANIC CARBON	2.2		3.4		1.4		1.8
TOTAL SUSPENDED SOLIDS	20		11		27		31

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	BC-1016-SP-1296-F	BC-1017-SP-1296	BC-1017-SP-1296-F	BC-1018-SP-1296	BC-1018-SP-1296-F	SPFD-121196	SPFD-121196-F
SAMPLE DATE:	12/13/96	12/16/96	12/13/96	12/12/96	12/11/96	12/12/97	12/11/96
LOCATION:	BC-1016	BC-1017	BC-1017	BC-1018	BC-1018	BC-1018	BC-1018
FIELD DUPLICATE OF:						BC-1018-SP-1296	BC-1018-SP-1296-F
SEMIVOLATILES (ng/L)							
1-METHYLNAPHTHALENE		14.1 U		14.1 U		14.1 U	
2,3,5-TRIMETYLNAPHTHALENE		9.9 U		9.9 U		9.9 U	
2,6-DIMETHYLNAPHTHALENE		6.4 U		6.4 U		6.4 U	
2-METHYLNAPHTHALENE		29.4 U		29.4 U		29.4 U	
ACENAPHTHENE		0.5 J		0.2 J		6 U	
ACENAPHTHYLENE		0.8 J		0.2 J		0.2 J	
ANTHRACENE		2.8		1.6 U		1.6 U	
BENZO(A)ANTHRACENE		24.1 U		24.1 U		24.1 U	
BENZO(A)PYRENE		3.3 J		0.7 J		0.3 J	
BENZO(BJK)FLUORANTHENE		8.1 J		13.6 U		13.6 U	
BENZO(E)PYRENE		3.4 J		4.3 U		4.3 U	
BENZO(G,H,I)PERYLENE		3.4 J		8.2 U		8.2 U	
BIPHENYL		3.1 U		3.1 U		3.1 U	
CHRYSENE		4.9 J		1.3 J		1.2 J	
DIBENZO(A,H)ANTHRACENE		23 U		23 U		23 U	
FLUORANTHENE		7.8 J		2.9 J		1.7 J	
FLUORENE		12.3 U		12.3 U		12.3 U	
HEXACHLOROBENZENE		1.8 U		1.8 U		1.8 U	
INDENO(1,2,3-CD)PYRENE		3.2 J		18.4 U		18.4 U	
MIREX		1.2 U		1.2 U		1.2 U	
NAPHTHALENE		6.8 U		6.8 U		6.8 U	
PERYLENE		1.4 J		3.3 U		3.3 U	
PHENANTHRENE		10.3 U		10.3 U		10.3 U	
PHENANTHRENE, 1-METHYL-		1.1 J		7.1 U		7.1 U	
PYRENE		6.6 J		2.6 J		1.5 J	
SUM OF HIGH MOLECULAR WEIGHT PAHs		22.6		7.5		4.7	
SUM OF LOW MOLECULAR WEIGHT PAHs		4.1		0.4		0.2	
SUM OF TOTAL PAHs		47.3		7.9		4.9	
TRANS-NONACHLOR		3 U		3 U		3 U	

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	BC-1016-SP-1296-F	BC-1017-SP-1296	BC-1017-SP-1296-F	BC-1018-SP-1296	BC-1018-SP-1296-F	SPFD-121196	SPFD-121196-F
SAMPLE DATE:	12/13/96	12/16/96	12/13/96	12/12/96	12/11/96	12/12/97	12/11/96
LOCATION:	BC-1016	BC-1017	BC-1017	BC-1018	BC-1018	BC-1018	BC-1018
FIELD DUPLICATE OF:						BC-1018-SP-1296	BC-1018-SP-1296-F
PESTICIDES/PCBs (ng/L)							
2,2',3,3',4,4',5,5',6,6'-DECACHLOROBIPHENYL		0.3 J		0.1 J		0.1 J	
2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL		1.4 J		2.9 U		2.9 U	
2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL		2 J		3 U		3 U	
2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL		14.1		2.7 U		2.7 U	
2,2',3,3',4,4'-HEXACHLOROBIPHENYL		2 J		0.1 J		4.2 U	
2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL		2.3 U		2.3 U		2.3 U	
2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL		9.5		3.1 U		3.1 U	
2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL		2.6 J		3 U		3 U	
2,2',3,4,4',5'-HEXACHLOROBIPHENYL		25.4		1.8 U		1.8 U	
2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL		26.1		2.3 U		2.3 U	
2,2',3,4,5'-PENTACHLOROBIPHENYL		3.2 U		3.2 U		3.2 U	
2,2',3,5-TETRACHLOROBIPHENYL		5.4 U		5.4 U		5.4 U	
2,2',4,4',5,5'-HEXACHLOROBIPHENYL		25.3		2.3 U		2.3 U	
2,2',4,5,5'-PENTACHLOROBIPHENYL		7		5.1 U		5.2 U	
2,2',4,6-TETRACHLOROBIPHENYL		1.7 U		1.7 U		1.7 U	
2,2',5,5'-TETRACHLOROBIPHENYL		3.1 U		3.1 U		3.1 U	
2,2',5-TRICHLOROBIPHENYL		2.1 U		2.1 U		2.1 U	
2,3',4,4',5-PENTACHLOROBIPHENYL		25.1 J		2.1 U		2.1 U	
2,3',4,4'-TETRACHLOROBIPHENYL		7.3 U		7.3 U		7.3 U	
2,3,3',4,4'-PENTACHLOROBIPHENYL		2 J		2.2 U		2.2 U	
2,4'-DDE		3.2 U		3.2 U		3.2 U	
2,4'-DDT		3 U		3 U		3 U	
2,4'-DICHLOROBIPHENYL		3.7 U		3.7 U		3.7 U	
2,4,4'-TRICHLOROBIPHENYL		2.6 U		2.6 U		2.6 U	
2,4,5-TRICHLOROBIPHENYL		0.1 J		0.1 J		2.5 U	
3,3',4,4',5-PENTACHLOROBIPHENYL		4.2 J		3.6 U		3.6 U	
4,4'-DDD		3 U		3 U		3 U	
4,4'-DDE		2.3 U		2.3 U		0.1 J	

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	BC-1016-SP-1296-F	BC-1017-SP-1296	BC-1017-SP-1296-F	BC-1018-SP-1296	BC-1018-SP-1296-F	SPFD-121196	SPFD-121196-F
SAMPLE DATE:	12/13/96	12/16/96	12/13/96	12/12/96	12/11/96	12/12/97	12/11/96
LOCATION:	BC-1016	BC-1017	BC-1017	BC-1018	BC-1018	BC-1018	BC-1018
FIELD DUPLICATE OF:						BC-1018-SP-1296	BC-1018-SP-1296-F
PESTICIDES/PCBs (ng/L)							
4,4'-DDT		3 U		3 U		3 U	
ALDRIN		3.2 U		3.2 U		3.2 U	
ALPHA-CHLORDANE		0.1 J		0.1 J		0.1 J	
GAMMA-BHC (LINDANE)		3 U		3 U		3 U	
HEPTACHLOR		3 U		0.2 J		3 U	
HEPTACHLOR EPOXIDE		0.1 J		3 U		3 U	
SUM OF PCBS		294		0.6		0.2	
SUM OF THE 24 CHLOROBIPHENYLS		147		0.3		0.1	
METALS (µg/L)							
ALUMINUM	19.1 J	59.2 J	14.5 J	7.8 J	3 UJ	124.5 J	10.6 J
ARSENIC	5 U	11.7 J	9.7 J	5 UJ	5 U	5 UJ	5 U
CADMIUM	1 J	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.5 J
CHROMIUM	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
COPPER	16.4	4.3	2.5 U	5.4	5	4.6	4.8
CYANIDE		5 U		5 U		5 U	
IRON	3 U	411 J	38.2	20.4 J	3 U	48 J	3.5
LEAD	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ
MANGANESE	6	26.9	29	3.2	2.8	2.3	3.3
MERCURY	0.42 UJ	0.42 UJ	0.42 UJ	0.42 UJ	0.42 UJ	0.42 UJ	0.42 UJ
NICKEL	11.4 J	8 UR	8 UR	47.3 J	43.6 J	36.4 J	14.6 J
SILVER	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ZINC	133 J	95 J	32.8 J	36.2 J	34.2 J	111 J	95 J
MISCELLANEOUS PARAMETERS (mg/L)							
BIOLOGICAL OXYGEN DEMAND		30		30		30	
BROMIDE		37		34		36	
CARBONATE ALKALINITY		110		120		120	
CHLORIDE		12000		11000		12000	
NITRATE, AS NITROGEN		0.21		0.48		0.46	
PH		7.8		7.5		7.4	

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	BC-1016-SP-1296-F	BC-1017-SP-1296	BC-1017-SP-1296-F	BC-1018-SP-1296	BC-1018-SP-1296-F	SPFD-121196	SPFD-121196-F
SAMPLE DATE:	12/13/96	12/16/96	12/13/96	12/12/96	12/11/96	12/12/97	12/11/96
LOCATION:	BC-1016	BC-1017	BC-1017	BC-1018	BC-1018	BC-1018	BC-1018
FIELD DUPLICATE OF:						BC-1018-SP-1296	BC-1018-SP-1296-F
MISCELLANEOUS PARAMETERS (mg/L)							
SULFATE		1700		1400		1500	
TOTAL DISSOLVED SOLIDS		17000		24000		23000	
TOTAL ORGANIC CARBON		1.6		1.5		1.5	
TOTAL SUSPENDED SOLIDS		24		42		36	

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	BC-1020-SP-1296	BC-1020-SP-1296-F	CC-1004.3-SP-129	CC-1004.3-SP-1296	CC-1004.3-SP-1296-F	CC-1004.4-SP-129	CC-1004.4-SP-1296
SAMPLE DATE:	12/12/96	12/11/96	12/12/96	12/13/96	12/12/96	12/12/96	12/13/96
LOCATION:	BC-1020	BC-1020	CC-1004.3	CC-1004.3	CC-1004.3	CC-1004.4	CC-1004.4
FIELD DUPLICATE OF:							
SEMIVOLATILES (ng/L)							
1-METHYLNAPHTHALENE	14.1 U			14.1 U			14.1 U
2,3,5-TRIMETYLNAPHTHALENE	9.9 U			0.6 J			9.9 U
2,6-DIMETHYLNAPHTHALENE	6.4 U			0.8 J			6.4 U
2-METHYLNAPHTHALENE	29.4 U			29.4 U			29.4 U
ACENAPHTHENE	6 U			1.6 J			6 U
ACENAPHTHYLENE	0.3 J			2 J			2.3 J
ANTHRACENE	2.5 U			4.8			8.7
BENZO(A)ANTHRACENE	24.1 U			24.1 U			24.1 U
BENZO(A)PYRENE	0.2 J			7.9			6.1 J
BENZO(BJK)FLUORANTHENE	13.6 U			18.7			15.1
BENZO(E)PYRENE	4.3 U			7.1			5.7
BENZO(G,H,I)PERYLENE	8.2 U			6.1 J			5 J
BIPHENYL	3.1 U			3.1 U			3.1 U
CHRYSENE	12.3 U			10.4 J			7.5 J
DIBENZO(A,H)ANTHRACENE	23 U			23 U			23 U
FLUORANTHENE	10.5 U			20.6			8.4 J
FLUORENE	12.3 U			2 J			12.3 U
HEXACHLOROBENZENE	1.8 U			1.8 U			1.8 U
INDENO(1,2,3-CD)PYRENE	18.4 U			5.4 J			4.6 J
MIREX	1.2 U			0.1 J			1.2 U
NAPHTHALENE	6.8 U			6.8 U			6.8 U
PERYLENE	3.3 U			3.1 J			2.5 J
PHENANTHRENE	10.3 U			15.7 U			10.3 U
PHENANTHRENE, 1-METHYL-	7.1 U			4.2 J			3 J
PYRENE	0.7 J			16			7.6 J
SUM OF HIGH MOLECULAR WEIGHT PAHs	0.9			54.9			29.6
SUM OF LOW MOLECULAR WEIGHT PAHs	0.3			10.4			11
SUM OF TOTAL PAHs	1.2			111.3			76.5
TRANS-NONACHLOR	3 U			3 U			3 U

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	BC-1020-SP-1296	BC-1020-SP-1296-F	CC-1004.3-SP-129	CC-1004.3-SP-1296	CC-1004.3-SP-1296-F	CC-1004.4-SP-129	CC-1004.4-SP-1296
SAMPLE DATE:	12/12/96	12/11/96	12/12/96	12/13/96	12/12/96	12/12/96	12/13/96
LOCATION:	BC-1020	BC-1020	CC-1004.3	CC-1004.3	CC-1004.3	CC-1004.4	CC-1004.4
FIELD DUPLICATE OF:							
PESTICIDES/PCBs (ng/L)							
2,2',3,3',4,4',5,5',6,6'-DECACHLOROBIPHENYL	0.1 J			0.2 J			0.1 J
2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL	0.8 J			0.5 J			0.8 J
2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL	3 U			3 U			3 U
2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL	2.7 U			0.1 J			0.2 J
2,2',3,3',4,4'-HEXACHLOROBIPHENYL	0.1 J			0.1 J			0.1 J
2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL	2.3 U			2.3 U			2.3 U
2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL	3.1 U			3.1 U			3.1 U
2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL	3 U			3 U			0.6 J
2,2',3,4,4',5'-HEXACHLOROBIPHENYL	1.8 U			1.8 U			1.8 U
2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL	2.3 U			2.3 U			0.6 J
2,2',3,4,5'-PENTACHLOROBIPHENYL	3.2 U			3.2 U			3.2 U
2,2',3,5-TETRACHLOROBIPHENYL	5.4 U			5.4 U			5.4 U
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	2.3 U			2.3 U			0.8 J
2,2',4,5,5'-PENTACHLOROBIPHENYL	5.1 U			5.1 U			5.1 U
2,2',4,6-TETRACHLOROBIPHENYL	1.7 U			1.7 U			1.7 U
2,2',5,5'-TETRACHLOROBIPHENYL	3.1 U			3.1 U			3.1 U
2,2',5-TRICHLOROBIPHENYL	2.1 U			2.1 U			2.1 U
2,3',4,4',5-PENTACHLOROBIPHENYL	2.1 U			2.1 U			2.1 U
2,3',4,4'-TETRACHLOROBIPHENYL	7.3 U			7.3 U			7.3 U
2,3,3',4,4'-PENTACHLOROBIPHENYL	2.2 U			2.2 U			2.2 U
2,4'-DDE	3.2 U			3.2 U			3.2 U
2,4'-DDT	3 U			3 U			2.7 J
2,4'-DICHLOROBIPHENYL	3.7 U			3.7 U			3.7 U
2,4,4'-TRICHLOROBIPHENYL	2.6 U			2.6 U			2.6 U
2,4,5-TRICHLOROBIPHENYL	2.5 U			2.5 U			2.5 U
3,3',4,4',5-PENTACHLOROBIPHENYL	3.6 U			3.6 U			3.6 U
4,4'-DDD	3 U			3 U			3 U
4,4'-DDE	2.3 U			2.3 U			2.3 U

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	BC-1020-SP-1296	BC-1020-SP-1296-F	CC-1004.3-SP-129	CC-1004.3-SP-1296	CC-1004.3-SP-1296-F	CC-1004.4-SP-129	CC-1004.4-SP-1296
SAMPLE DATE:	12/12/96	12/11/96	12/12/96	12/13/96	12/12/96	12/12/96	12/13/96
LOCATION:	BC-1020	BC-1020	CC-1004.3	CC-1004.3	CC-1004.3	CC-1004.4	CC-1004.4
FIELD DUPLICATE OF:							
PESTICIDES/PCBs (ng/L)							
4,4'-DDT	3 U			3 U			3 U
ALDRIN	3.2 U			3.2 U			3.2 U
ALPHA-CHLORDANE	0.1 J			0.1 J			0.1 J
GAMMA-BHC (LINDANE)	3 U			3 U			3 U
HEPTACHLOR	0.2 J			3 U			0.6 J
HEPTACHLOR EPOXIDE	3 U			3 U			3 U
SUM OF PCBS	2			1.8			3.2
SUM OF THE 24 CHLOROBIPHENYLS	1			0.9			3.2
METALS (µg/L)							
ALUMINUM	16.2 J	3.5 J		315.7 J	17.3 J		107 J
ARSENIC	5 UJ	5 U		5 UJ	5 U		5 UJ
CADMIUM	0.2 UJ	0.4 J		0.2 UJ	0.5 J		0.2 UJ
CHROMIUM	0.8 U	0.8 U		0.8 U	0.8 U		0.8 U
COPPER	18.9	16.3		3.5	2.5 U		4.2
CYANIDE	5 U		5 U			5 U	
IRON	29 J	3 U		732 J	143.8		177 J
LEAD	2.9 UJ	2.9 UJ		2.9 UJ	2.9 UJ		2.9 UJ
MANGANESE	9.8	10.5		29.5	28.5		13.7
MERCURY	0.42 UJ	0.42 UJ		0.42 UJ	0.42 UJ		0.42 UJ
NICKEL	20.8 J	25.8 J		14.4 J	8 J		15 J
SILVER	0.5 U	0.5 U		0.5 U	0.5 U		0.5 U
ZINC	119 J	115 J		413 J	243 J		12.2 J
MISCELLANEOUS PARAMETERS (mg/L)							
BIOLOGICAL OXYGEN DEMAND	30		30			30	
BROMIDE	36		38			36	
CARBONATE ALKALINITY	110		140			130	
CHLORIDE	15000		12000			12000	
NITRATE, AS NITROGEN	0.24		0.29			0.3	
PH	7.6		7.5			7.9	

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	BC-1020-SP-1296	BC-1020-SP-1296-F	CC-1004.3-SP-129	CC-1004.3-SP-1296	CC-1004.3-SP-1296-F	CC-1004.4-SP-129	CC-1004.4-SP-1296
SAMPLE DATE:	12/12/96	12/11/96	12/12/96	12/13/96	12/12/96	12/12/96	12/13/96
LOCATION:	BC-1020	BC-1020	CC-1004.3	CC-1004.3	CC-1004.3	CC-1004.4	CC-1004.4
FIELD DUPLICATE OF:							
MISCELLANEOUS PARAMETERS (mg/L)							
SULFATE	1700		1500			1400	
TOTAL DISSOLVED SOLIDS	27000		16000			15000	
TOTAL ORGANIC CARBON	1.4		1.4			2.1	
TOTAL SUSPENDED SOLIDS	28		32			31	

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	CC-1004.4-SP-1296-F	CC-1004.5-SP-12	CC-1004.5-SP-1296	CC-1004.5-SP-1296-F	CC-1011-SP-1296	CC-1011-SP-1296-F	SP-1001-SP-1296
SAMPLE DATE:	12/12/96	12/13/96	12/16/96	12/13/96	12/13/96	12/12/96	12/13/96
LOCATION:	CC-1004.4	CC-1004.5	CC-1004.5	CC-1004.5	CC-1011	CC-1011	SP-1001
FIELD DUPLICATE OF:							
SEMIVOLATILES (ng/L)							
1-METHYLNAPHTHALENE			46.7		14.1 U		14.1 U
2,3,5-TRIMETYLNAPHTHALENE			27.2		9.9 U		9.9 U
2,6-DIMETHYLNAPHTHALENE			31.2		6.4 U		6.4 U
2-METHYLNAPHTHALENE			4.8 J		6.2 J		29.4 U
ACENAPHTHENE			793		1.5 J		6 U
ACENAPHTHYLENE			13.6		2.7 J		3.4 U
ANTHRACENE			59.9		2.5 U		1.6 U
BENZO(A)ANTHRACENE			22.4 J		24.1 U		24.1 U
BENZO(A)PYRENE			33.5		6.1 J		7.8
BENZO(BJK)FLUORANTHENE			79.4		11.4 J		22.2
BENZO(E)PYRENE			34.6		6.1		14.1
BENZO(G,H,I)PERYLENE			24.7		7.3 J		15.5
BIPHENYL			26.2		3.1 U		3.1 U
CHRYSENE			45.9		5 J		6.5 J
DIBENZO(A,H)ANTHRACENE			5.9 J		23 U		8.5 J
FLUORANTHENE			154		7.6 J		4.9 J
FLUORENE			142		0.8 J		12.3 U
HEXACHLOROBENZENE			1.8 U		1.8 U		1.8 U
INDENO(1,2,3-CD)PYRENE			23.5		5.9 J		14.6 J
MIREX			1.2 U		1.2 U		1.2 U
NAPHTHALENE			15		11.6		6.8 U
PERYLENE			12.1		2 J		8.1
PHENANTHRENE			59.4		10.3 U		10.3 U
PHENANTHRENE, 1-METHYL-			8.4		1.1 J		7.1 U
PYRENE			101		11		4.1 J
SUM OF HIGH MOLECULAR WEIGHT PAHs			362		29.7		31.8
SUM OF LOW MOLECULAR WEIGHT PAHs			1090		22.8		0
SUM OF TOTAL PAHs			1760		86.3		106.3
TRANS-NONACHLOR			3 U		3 U		1.5 J

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	CC-1004.4-SP-1296-F	CC-1004.5-SP-12	CC-1004.5-SP-1296	CC-1004.5-SP-1296-F	CC-1011-SP-1296	CC-1011-SP-1296-F	SP-1001-SP-1296
SAMPLE DATE:	12/12/96	12/13/96	12/16/96	12/13/96	12/13/96	12/12/96	12/13/96
LOCATION:	CC-1004.4	CC-1004.5	CC-1004.5	CC-1004.5	CC-1011	CC-1011	SP-1001
FIELD DUPLICATE OF:							
PESTICIDES/PCBs (ng/L)							
2,2',3,3',4,4',5,5',6,6'-DECACHLOROBIPHENYL			0.6		0.2 J		0.2 J
2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL			2.5		0.5 J		2.9 U
2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL			0.2 J		3 U		3 U
2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL			1 J		0.2 J		0.1 J
2,2',3,3',4,4'-HEXACHLOROBIPHENYL			0.5 J		0.2 J		0.1 J
2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL			2.3 U		2.3 U		2.3 U
2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL			3.1 U		3.1 U		3.1 U
2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL			3 U		3 U		3 U
2,2',3,4,4',5'-HEXACHLOROBIPHENYL			2.8		1.8 U		1.8 U
2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL			2.2 J		2.3 U		2.3 U
2,2',3,4,5'-PENTACHLOROBIPHENYL			3.2 U		3.2 U		3.2 U
2,2',3,5-TETRACHLOROBIPHENYL			5.4 U		2.9 J		5.4 U
2,2',4,4',5,5'-HEXACHLOROBIPHENYL			2.6		0.7 J		2.3 U
2,2',4,5,5'-PENTACHLOROBIPHENYL			5.1 U		5.1 U		5.1 U
2,2',4,6-TETRACHLOROBIPHENYL			1.7 U		1.6 J		1.7 U
2,2',5,5'-TETRACHLOROBIPHENYL			3.1 U		3.3		3.1 U
2,2',5-TRICHLOROBIPHENYL			2.1 U		5.6		2.1 U
2,3',4,4',5-PENTACHLOROBIPHENYL			0.8 J		0.9 J		2.1 U
2,3',4,4'-TETRACHLOROBIPHENYL			7.3 U		7.3 U		7.3 U
2,3,3',4,4'-PENTACHLOROBIPHENYL			2.2 U		2.2 U		2.2 U
2,4'-DDE			0.7 J		3.2 U		0.3 J
2,4'-DDT			4.1		3 U		2 J
2,4'-DICHLOROBIPHENYL			3.7 U		3.7 U		3.7 U
2,4,4'-TRICHLOROBIPHENYL			2.6 U		6.3		2.6 U
2,4,5-TRICHLOROBIPHENYL			2.5 U		2.5 U		2.5 U
3,3',4,4',5-PENTACHLOROBIPHENYL			3.6 U		3.6 U		3.6 U
4,4'-DDD			408		3 U		19.8
4,4'-DDE			11.1		2.3 U		4.6

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	CC-1004.4-SP-1296-F	CC-1004.5-SP-12	CC-1004.5-SP-1296	CC-1004.5-SP-1296-F	CC-1011-SP-1296	CC-1011-SP-1296-F	SP-1001-SP-1296
SAMPLE DATE:	12/12/96	12/13/96	12/16/96	12/13/96	12/13/96	12/12/96	12/13/96
LOCATION:	CC-1004.4	CC-1004.5	CC-1004.5	CC-1004.5	CC-1011	CC-1011	SP-1001
FIELD DUPLICATE OF:							
PESTICIDES/PCBs (ng/L)							
4,4'-DDT			17		3 U		19
ALDRIN			3.2 U		3.2 U		3.2 U
ALPHA-CHLORDANE			1 J		3 U		5.8
GAMMA-BHC (LINDANE)			3 U		3 U		3 U
HEPTACHLOR			0.1 J		0.3 J		0.4 J
HEPTACHLOR EPOXIDE			3 U		3 U		0.1 J
SUM OF PCBS			26		53.2		0.8
SUM OF THE 24 CHLOROBIPHENYLS			13		26.6		0.4
METALS (µg/L)							
ALUMINUM	5.1 J		131.3 J	25 J	93.3 J	18.6 J	97.6 J
ARSENIC	5 U		6.2 J	5 U	5 UJ	8.3 J	5 UJ
CADMIUM	0.2 UJ		0.2 UJ	0.2 UJ	0.2 UJ	1.2 J	0.2 UJ
CHROMIUM	0.8 U		0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
COPPER	2.5 U		14.3	4.7	2.5 U	2.5 U	2.5 U
CYANIDE		5 U			5 U		5 U
IRON	3.9		292 J	52.5	111.2 J	15.6	414 J
LEAD	2.9 UJ		2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ
MANGANESE	3.1		49.5	51.5	6.6	8.3	19
MERCURY	0.42 UJ		0.42 UJ	0.42 UJ	0.42 UJ	0.42 UJ	0.42 UJ
NICKEL	10.3 J		16.2 J	6.8 J	8 UR	8 UR	8 UR
SILVER	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ZINC	12.3 J		22.4 J	6.8 J	13.5 J	8.7 J	21.4 J
MISCELLANEOUS PARAMETERS (mg/L)							
BIOLOGICAL OXYGEN DEMAND		30			30		30
BROMIDE		9			34		34
CARBONATE ALKALINITY		230			110		120
CHLORIDE		2900			11000		12000
NITRATE, AS NITROGEN		0.29			0.4		1.2
PH		8.3			7.7		7.7

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	CC-1004.4-SP-1296-F	CC-1004.5-SP-12	CC-1004.5-SP-1296	CC-1004.5-SP-1296-F	CC-1011-SP-1296	CC-1011-SP-1296-F	SP-1001-SP-1296
SAMPLE DATE:	12/12/96	12/13/96	12/16/96	12/13/96	12/13/96	12/12/96	12/13/96
LOCATION:	CC-1004.4	CC-1004.5	CC-1004.5	CC-1004.5	CC-1011	CC-1011	SP-1001
FIELD DUPLICATE OF:							
MISCELLANEOUS PARAMETERS (mg/L)							
SULFATE		430			1400		1400
TOTAL DISSOLVED SOLIDS		6700			21000		24000
TOTAL ORGANIC CARBON		8.1			1.5		1.8
TOTAL SUSPENDED SOLIDS		23			44		42

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	SP-1001-SP-1296-F	SP-1002-SP-1296	SP-1002-SP-1296-F	SP-1003-SP-1296	SP-1003-SP-1296-F	SPFD-121296	SPFD-121296-F
SAMPLE DATE:	12/12/96	12/16/96	12/13/96	12/13/96	12/12/96	12/13/96	12/12/96
LOCATION:	SP-1001	SP-1002	SP-1002	SP-1003	SP-1003	SP-1003	SP-1003
FIELD DUPLICATE OF:						SP-1003-SP-1296	SP-1003-SP-1296-F
SEMIVOLATILES (ng/L)							
1-METHYLNAPHTHALENE		14.1 U		15.8 U		14.6 U	
2,3,5-TRIMETYLNAPHTHALENE		9.9 U		7 J		6.9 J	
2,6-DIMETHYLNAPHTHALENE		6.4 U		11.4		11.6	
2-METHYLNAPHTHALENE		29.4 U		13.7 J		12.6 J	
ACENAPHTHENE		0.6 J		3.1 J		2.9 J	
ACENAPHTHYLENE		0.5 J		1.4 J		1.1 J	
ANTHRACENE		1.6 U		3.3		1.7 U	
BENZO(A)ANTHRACENE		24.1 U		24.1 U		24.1 U	
BENZO(A)PYRENE		0.8 J		9.1		6.2 J	
BENZO(BJK)FLUORANTHENE		13.6 U		30		18.2	
BENZO(E)PYRENE		4.3 U		12		8.8	
BENZO(G,H,I)PERYLENE		8.2 U		7.2 J		7.2 J	
BIPHENYL		3.1 U		3.4 U		3.1 U	
CHRYSENE		1.7 J		15.2		15	
DIBENZO(A,H)ANTHRACENE		23 U		23 U		23 U	
FLUORANTHENE		2.1 J		40.6		18	
FLUORENE		12.3 U		3.9 J		3.6 J	
HEXACHLOROBENZENE		1.8 U		1.8 U		1.8 U	
INDENO(1,2,3-CD)PYRENE		18.4 U		6.4 J		6.2 J	
MIREX		1.2 U		1.2 U		1.2 U	
NAPHTHALENE		6.8 U		11.8		9.3 U	
PERYLENE		3.3 U		3.1 J		2.2 J	
PHENANTHRENE		10.3 U		13.3 U		20.2 U	
PHENANTHRENE, 1-METHYL-		7.1 U		3.1 J		15.8	
PYRENE		1.9 J		28.6		21.8	
SUM OF HIGH MOLECULAR WEIGHT PAHs		6.5		93.5		61	
SUM OF LOW MOLECULAR WEIGHT PAHs		1.1		28.2		20.2	
SUM OF TOTAL PAHs		7.6		249		158.1	
TRANS-NONACHLOR		3 U		3 U		3 U	

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	SP-1001-SP-1296-F	SP-1002-SP-1296	SP-1002-SP-1296-F	SP-1003-SP-1296	SP-1003-SP-1296-F	SPFD-121296	SPFD-121296-F
SAMPLE DATE:	12/12/96	12/16/96	12/13/96	12/13/96	12/12/96	12/13/96	12/12/96
LOCATION:	SP-1001	SP-1002	SP-1002	SP-1003	SP-1003	SP-1003	SP-1003
FIELD DUPLICATE OF:						SP-1003-SP-1296	SP-1003-SP-1296-F
PESTICIDES/PCBs (ng/L)							
2,2',3,3',4,4',5,5',6,6'-DECACHLOROBIPHENYL		3.6 U		0.2 J		3.6 U	
2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL		2.9 U		0.6 J		0.7 J	
2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL		3 U		3 U		3 U	
2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL		0.5 J		0.1 J		2.7 U	
2,2',3,3',4,4'-HEXACHLOROBIPHENYL		4.2 U		0.1 J		0.1 J	
2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL		2.3 U		2.3 U		2.3 U	
2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL		3.1 U		3.1 U		3.1 U	
2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL		3 U		3 U		3 U	
2,2',3,4,4',5'-HEXACHLOROBIPHENYL		1.8 U		1.8 U		1.8 U	
2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL		2.3 U		2.3 U		2.3 U	
2,2',3,4,5'-PENTACHLOROBIPHENYL		3.2 U		3.2 U		3.2 U	
2,2',3,5-TETRACHLOROBIPHENYL		5.4 U		5.4 U		5.4 U	
2,2',4,4',5,5'-HEXACHLOROBIPHENYL		2.3 U		0.6 J		2.3 U	
2,2',4,5,5'-PENTACHLOROBIPHENYL		5.1 U		5.1 U		5.2 U	
2,2',4,6-TETRACHLOROBIPHENYL		1.7 U		1.7 U		1.7 U	
2,2',5,5'-TETRACHLOROBIPHENYL		3.1 U		3.1 U		3.1 U	
2,2',5-TRICHLOROBIPHENYL		2.1 U		2.1 U		2.1 U	
2,3',4,4',5-PENTACHLOROBIPHENYL		2.1 U		2.1 U		2.1 U	
2,3',4,4'-TETRACHLOROBIPHENYL		7.3 U		7.3 U		7.3 U	
2,3,3',4,4'-PENTACHLOROBIPHENYL		2.2 U		2.2 U		2.2 U	
2,4'-DDE		0.2 J		3.2 U		3.2 U	
2,4'-DDT		0.9 J		0.6 J		3 U	
2,4'-DICHLOROBIPHENYL		3.7 U		3.7 U		3.7 U	
2,4,4'-TRICHLOROBIPHENYL		2.6 U		2.6 U		2.6 U	
2,4,5-TRICHLOROBIPHENYL		2.5 U		0.1 J		2.5 U	
3,3',4,4',5-PENTACHLOROBIPHENYL		3.6 U		3.6 U		3.6 U	
4,4'-DDD		3 U		3 U		3 U	
4,4'-DDE		2.3 U		2 J		1.6 J	

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	SP-1001-SP-1296-F	SP-1002-SP-1296	SP-1002-SP-1296-F	SP-1003-SP-1296	SP-1003-SP-1296-F	SPFD-121296	SPFD-121296-F
SAMPLE DATE:	12/12/96	12/16/96	12/13/96	12/13/96	12/12/96	12/13/96	12/12/96
LOCATION:	SP-1001	SP-1002	SP-1002	SP-1003	SP-1003	SP-1003	SP-1003
FIELD DUPLICATE OF:						SP-1003-SP-1296	SP-1003-SP-1296-F
PESTICIDES/PCBs (ng/L)							
4,4'-DDT		3 U		4.8		3 U	
ALDRIN		3.2 U		3.2 U		3.2 U	
ALPHA-CHLORDANE		0.9 J		0.2 J		0.2 J	
GAMMA-BHC (LINDANE)		3 U		3 U		3 U	
HEPTACHLOR		0.2 J		3 U		3 U	
HEPTACHLOR EPOXIDE		0.3 J		3 U		3 U	
SUM OF PCBS		1		14		1.6	
SUM OF THE 24 CHLOROBIPHENYLS		0.5		7		0.8	
METALS (µg/L)							
ALUMINUM	3 UJ	118.5 J	18.2 J	126.1 J	14.8 J	94.3 J	39.9 J
ARSENIC	5 U	5 UJ	5 U	5 UJ	8.7 J	5 UJ	5 U
CADMIUM	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	2.1 J	0.2 UJ	0.3 J
CHROMIUM	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
COPPER	19.1	2.5 U	2.5 U	8.2	4.8	8.4	4.9
CYANIDE		5 U		5 U		5 U	
IRON	24.3	268.5 J	3 U	259 J	97	323.5 J	115.4
LEAD	2.9 UJ	2.9 UJ	2.9 UJ	5.4 J	2.9 UJ	2.9 J	2.9 UJ
MANGANESE	15.9	14.1	2.9	28.8	23.5	25.3	22.4
MERCURY	0.42 UJ	0.42 UJ	0.42 UJ	0.42 UJ	0.42 UJ	0.42 UJ	0.42 UJ
NICKEL	8 UR	8 UR	8 UR	10.2 J	11.5 J	8.1 J	6.9 J
SILVER	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ZINC	11.4 J	14.4 J	11.4 J	129 J	41.6 J	95 J	107 J
MISCELLANEOUS PARAMETERS (mg/L)							
BIOLOGICAL OXYGEN DEMAND		30		30		30	
BROMIDE		37		1 U		1 U	
CARBONATE ALKALINITY		120		72		73	
CHLORIDE		11000		130		130	
NITRATE, AS NITROGEN		0.77		0.25		0.26	
PH		7.4		8		7.9	

PORTSMOUTH NAVAL SHIPYARD
SEEP MONITORING

SAMPLE NUMBER:	SP-1001-SP-1296-F	SP-1002-SP-1296	SP-1002-SP-1296-F	SP-1003-SP-1296	SP-1003-SP-1296-F	SPFD-121296	SPFD-121296-F
SAMPLE DATE:	12/12/96	12/16/96	12/13/96	12/13/96	12/12/96	12/13/96	12/12/96
LOCATION:	SP-1001	SP-1002	SP-1002	SP-1003	SP-1003	SP-1003	SP-1003
FIELD DUPLICATE OF:						SP-1003-SP-1296	SP-1003-SP-1296-F
MISCELLANEOUS PARAMETERS (mg/L)							
SULFATE		1500		14		14	
TOTAL DISSOLVED SOLIDS		17000		300		310	
TOTAL ORGANIC CARBON		1.7		3.7		3.5	
TOTAL SUSPENDED SOLIDS		33		12		14	

SEDIMENT SAMPLE DATA TABLES

PORTSMOUTH NAVAL SHIPYARD
SEDIMENT MONITORING

SAMPLE NUMBER:	BC-1005-SD-1296	BC-1006-SD-1296	BC-1012-SD-1296	BC-1016-SD-1296	BC-1017-SD-1296	BC-1018-SD-1296	SDFD-121196
SAMPLE DATE:	12/24/96	12/24/96	01/15/97	12/24/96	01/15/97	01/15/97	01/15/97
LOCATION:	BC-1005	BC-1006	BC-1012	BC-1016	BC-1017	BC-1018	BC-1018
FIELD DUPLICATE OF:							BC-1018-SD-1296
SEMIVOLATILES (µg/kg)							
1-METHYLNAPHTHALENE	25.6	10.9	30	56.4	25.9	26.6	27.1
2,3,5-TRIMETYLNAPHTHALENE	8	4.5 J	22	11.3	5.6	7.4	7
2,6-DIMETHYLNAPHTHALENE	23.9	10.3	31.4	41.3	21.3	20.3	28.1
2-METHYLNAPHTHALENE	23.7	15.5	31.8	79.7	29.5	29.3	29
ACENAPHTHENE	23.1	7.1 J	49	42.3	24.8	32.5	31.5
ACENAPHTHYLENE	77.2	41.5	98.2	82.7	61.3	66.7	61.2
ANTHRACENE	216	105	252	276	196	222	210
BENZO(A)ANTHRACENE	510 J	279 J	764	795 J	432	415 J	400
BENZO(A)PYRENE	537	252	753	713	535	548	447
BENZO(BJK)FLUORANTHENE	974	450	1070	1400	997	1190	909
BENZO(E)PYRENE	386	179	497	532	377	418	365
BENZO(G,H,I)PERYLENE	294	134	300 J	407	289 J	323	307 J
BIPHENYL	8.1	6.4 U	8.8	16.5	7	6.4	7.6
CHRYSENE	503 J	306 J	717	662 J	419	534 J	400
DIBENZO(A,H)ANTHRACENE	84.4	36.6	90 J	133	88.4 J	84.8	91.1 J
FLUORANTHENE	744	386	1110	1140	739	1190	837
FLUORENE	20.8	11.5	54.3	42.7	31.3	38.6	32.5
HEXACHLOROBENZENE	0.1 J	0.1 J	0.2 J	0.1 J	0.1 J	0.5	0.5
INDENO(1,2,3-CD)PYRENE	307	143	288	437	298	329	306
MIREX	0.1 J	0.6 U	0.2 J	2.7	6.7 J	2.7 J	2 J
NAPHTHALENE	43	23.3	44.1	95.5	35.8	32.6	32.4
PERYLENE	187	69.4	172	210	200	163	144
PHENANTHRENE	350	170	756	583	400	681	538
PHENANTHRENE, 1-METHYL-	70.7	32	99.3	54.4	38.3	58.9	47.4
PYRENE	797	425	1260	1140	740	938	740
SUM OF HIGH MOLECULAR WEIGHT PAHs	3180	1680	4080	4580	2950	3240	2920
SUM OF LOW MOLECULAR WEIGHT PAHs	754	374	1060	1200	779	888	935
SUM OF TOTAL PAHs	6210	3096	8500	8950	5990	7360	6000
TRANS-NONACHLOR	1.3	0.2 J	0.3 J	0.5 J	0.7 J	0.8	0.9

PORTSMOUTH NAVAL SHIPYARD
SEDIMENT MONITORING

SAMPLE NUMBER:	BC-1005-SD-1296	BC-1006-SD-1296	BC-1012-SD-1296	BC-1016-SD-1296	BC-1017-SD-1296	BC-1018-SD-1296	SDFD-121196
SAMPLE DATE:	12/24/96	12/24/96	01/15/97	12/24/96	01/15/97	01/15/97	01/15/97
LOCATION:	BC-1005	BC-1006	BC-1012	BC-1016	BC-1017	BC-1018	BC-1018
FIELD DUPLICATE OF:							BC-1018-SD-1296
PESTICIDES/PCBs (µg/kg)							
2,2',3,3',4,4',5,5',6,6'-DECACHLOROBIPHENYL	1.4	0.7	2.3	6.3	2.6	3.4	2.4
2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL	2.8	0.8	0.8	10.7	8.8	9.9	7
2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL	0.5 J	0.2 J	0.2 J	3.9	8.3	5.3	4.2
2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL	2.5	0.7	0.5 U	12.5	45.6	23.8	18.6
2,2',3,3',4,4'-HEXACHLOROBIPHENYL	2.1	0.6	0.5	5.7	13.9	7.5	0.4 U
2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL	0.6	0.2 J	0.4 J	2	3.3	2.7	2.1
2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL	3.5	1.1	1	16	36.7	23.4	19.9
2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL	1.3	0.4 J	0.4 J	4	12.6	5.4	5.2
2,2',3,4,4',5'-HEXACHLOROBIPHENYL	11	3.2	3.2	32.4	98.6	50.3	46.4
2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL	5.2	1.5	1	34.9	92.1	58.1	46.3
2,2',3,4,5'-PENTACHLOROBIPHENYL	1.6	0.4 J	0.3 J	3.3	4.7	1.8	2.4
2,2',3,5-TETRACHLOROBIPHENYL	0.7	0.2 J	0.2 J	0.7	0.9	0.4 J	0.6
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	8.9	2.8	2.1	31.5	93.4	50.5	47.2
2,2',4,5,5'-PENTACHLOROBIPHENYL	4.6	1.3	0.8	10.6	26.2	11.2	12.6
2,2',4,6-TETRACHLOROBIPHENYL	0.4 J	0.1 J	0.3 J	0.2 J	0.4 J	0.4 J	0.5
2,2',5,5'-TETRACHLOROBIPHENYL	1.6	0.7 U	0.6 J	3.1	3.1	2	2.2
2,2',5-TRICHLOROBIPHENYL	0.4 J	0.1 J	0.7 U	0.2 J	0.3 J	0.7 U	0.5 J
2,3',4,4',5-PENTACHLOROBIPHENYL	5.4	1.4	1.3	7.9	13.6	3.8	5.3
2,3',4,4'-TETRACHLOROBIPHENYL	1.5	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2,3,3',4,4'-PENTACHLOROBIPHENYL	2.7	0.5 J	0.4 J	4.5	0.6 U	0.6 U	0.6 U
2,4'-DDE	0.3 J	0.8 U	0.1 J	0.8 U	0.8 U	0.4 J	0.4 J
2,4'-DDT	1	0.2 J	1.3	2	1 U	2.6	17.6
2,4'-DICHLOROBIPHENYL	0.5	0.2 J	0.6	0.3 J	0.8	1.1	1.7
2,4,4'-TRICHLOROBIPHENYL	0.8	0.2 J	0.5 J	0.5 J	0.9	0.7 J	0.9
2,4,5-TRICHLOROBIPHENYL	0.7 U	0.7 U	0.7 U	0.7 U	0.1 J	0.7 U	0.7 U
3,3',4,4',5-PENTACHLOROBIPHENYL	2.1	1.1	0.5 U	7.9	33.7	8.5	0.5 U
4,4'-DDD	36.9	5 J	5.4	104	11.2	99	174
4,4'-DDE	18.4	1.9	5	14	5.8	7.9	17.2

PORTSMOUTH NAVAL SHIPYARD
SEDIMENT MONITORING

SAMPLE NUMBER:	BC-1005-SD-1296	BC-1006-SD-1296	BC-1012-SD-1296	BC-1016-SD-1296	BC-1017-SD-1296	BC-1018-SD-1296	SDFD-121196
SAMPLE DATE:	12/24/96	12/24/96	01/15/97	12/24/96	01/15/97	01/15/97	01/15/97
LOCATION:	BC-1005	BC-1006	BC-1012	BC-1016	BC-1017	BC-1018	BC-1018
FIELD DUPLICATE OF:							BC-1018-SD-1296
PESTICIDES/PCBs (µg/kg)							
4,4'-DDT	7.2	2.1	6.7	17.6	24.8	23.5	104
ALDRIN	0.7 U	0.7 UJ	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
ALPHA-CHLORDANE	1.9	0.2 J	0.5 J	0.8 U	0.8 U	0.7 J	0.8 U
GAMMA-BHC (LINDANE)	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 J
HEPTACHLOR	0.5 U	0.5 UJ	0.3 J	0.5 U	4.2 J	3.9 J	6 J
HEPTACHLOR EPOXIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SUM OF PCBS	125	36.4	35	398	1000	540	452
SUM OF THE 24 CHLOROBIPHENYLS	62	18.2	17	199	501	270	226
METALS (mg/kg)							
ALUMINUM	33865.6		37383.3	28591.9	34437.1	42364.3	41803.2
ARSENIC	13.3		8.5	13.9	9.6	10.2	13
CADMIUM	0.8		0.3	0.84	0.45	0.42	0.39
CHROMIUM	233.3		126.2	208.8	192.2	109.3	176.3
COPPER	132.5 J		33.1 J	457.5 J	222.6 J	18.8 J	242.5 J
IRON	35971.4		23281.2	31667.1	33480.9	34680.6	35082.6
LEAD	238.5		50.2	194.1	67.7	94.3	103.4
MANGANESE	500.3 J		405.6 J	379.3 J	535.1 J	487 J	464.9 J
MERCURY	1.57		0.249	2.975	0.496	0.473	0.637
NICKEL	30.5 J		18.3 J	80.1 J	36.8 J	34.1 J	37.6 J
SILVER	0.71		0.19	2.12	0.42	0.36	0.56
ZINC	376.2		316.4	715.9	506.9	469.4	473.3
AVS/SIMULTANEOUSLY EXTRACTED METALS (mg/kg)							
CADMIUM(SEM)	0.55211		0.31333	0.41071	0.33684	0.25243	0.34021
COPPER(SEM)	12.14085 U		11.66667 U	114.64286 J	9.82456 U	79.51456 J	103.45361 J
LEAD(SEM)	191.46479 J		43.33333 J	102.85714 J	48.73684 J	81.2945 J	94.69072 J
NICKEL(SEM)	5.94366 U		6.66667 U	33.57143 U	12.63158 U	14.20712 U	21.03093 U
ZINC(SEM)	117.77465		67.3	389.39732	289.33333	140.67961	195.97938

PORTSMOUTH NAVAL SHIPYARD
SEDIMENT MONITORING

SAMPLE NUMBER:	BC-10006-SD-1296(1)	BC-1020-SD-1296	CC-1004.3-SD-1296	CC-1004.5-SD-1296	CC-1011-SD-1296	SP-1001-SD-1296	SP-1002-SD-1296
SAMPLE DATE:	12/11/96	12/24/96	01/03/97	01/22/97	01/03/97	01/03/97	01/15/97
LOCATION:	BC-10006	BC-1020	CC-1004.3	CC-1004.5	CC-1011	SP-1001	SP-1002
FIELD DUPLICATE OF:							
SEMIVOLATILES (µg/kg)							
1-METHYLNAPHTHALENE		26.9	8.2		4.8 J	7.4	7.1 U
2,3,5-TRIMETYLNAPHTHALENE		8.5	4.8 U		1.8 J	1.7 J	4.8 U
2,6-DIMETHYLNAPHTHALENE		21.7	8.6 U		7.3 J	3.5 J	8.6 U
2-METHYLNAPHTHALENE		34.1	6.4		6.3	9.4	3.6 U
ACENAPHTHENE		21.4	5.3 J		6.2 J	2.4 J	1.4 J
ACENAPHTHYLENE		55.7	5.5		15.5	8.6	2.3 J
ANTHRACENE		190	33.9		45.3	34.2	7.7 J
BENZO(A)ANTHRACENE		540 J	50 J		103	118 J	13.1 J
BENZO(A)PYRENE		449	45.3		120	84.4	20.1
BENZO(BJK)FLUORANTHENE		924	102		239	163	43.9
BENZO(E)PYRENE		359	72.7		90.1	76.4	23.8
BENZO(G,H,I)PERYLENE		248	45		65.2 J	49.3	16.1
BIPHENYL		14.2	6.4 U		6.4 U	6.4 U	6.4 U
CHRYSENE		671 J	48.9 J		116	113 J	14.8 J
DIBENZO(A,H)ANTHRACENE		78.8	17.2		19.4 J	15.3	2.8 U
FLUORANTHENE		974	109		179	284	39.5
FLUORENE		30.3	4 J		6.7 J	5.8 J	7 U
HEXACHLOROBENZENE		0.5	0.2 J	0.1 J	0.4 U	0.1 J	0.1 J
INDENO(1,2,3-CD)PYRENE		267	39		68.2	48.9	15.5
MIREX		0.6 U	0.6 U	1.4 J	0.6 U	0.6 U	0.6 U
NAPHTHALENE		38.9	13.9		8.1	11.4	2.8 J
PERYLENE		159	21.8		42.4	31.6	8.4
PHENANTHRENE		410	87		109	112	20.2
PHENANTHRENE, 1-METHYL-		71.8	11.3		14.6	12.1	6.3
PYRENE		831	108		175	233	30.8
SUM OF HIGH MOLECULAR WEIGHT PAHs		3540	378		712	848	118
SUM OF LOW MOLECULAR WEIGHT PAHs		781	156		198	184	34.5
SUM OF TOTAL PAHs		6420	834		1438	1430	267
TRANS-NONACHLOR		0.4 J	0.3 J	1.4	0.1 J	5.4	0.2 J

PORTSMOUTH NAVAL SHIPYARD
SEDIMENT MONITORING

SAMPLE NUMBER:	BC-10006-SD-1296(1)	BC-1020-SD-1296	CC-1004.3-SD-1296	CC-1004.5-SD-1296	CC-1011-SD-1296	SP-1001-SD-1296	SP-1002-SD-1296
SAMPLE DATE:	12/11/96	12/24/96	01/03/97	01/22/97	01/03/97	01/03/97	01/15/97
LOCATION:	BC-10006	BC-1020	CC-1004.3	CC-1004.5	CC-1011	SP-1001	SP-1002
FIELD DUPLICATE OF:							
PESTICIDES/PCBs (µg/kg)							
2,2',3,3',4,4',5,5',6,6'-DECACHLOROBIPHENYL		2	1.6	1.5	0.3 J	0.1 J	0.2 J
2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL		6	7.8	7.1	0.8	0.4 J	0.4 J
2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL		4.1	0.6 U	1.5	0.1 J	0.2 J	0.6 U
2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL		19	1.3	6.6	0.5 U	0.5 U	0.5 U
2,2',3,3',4,4'-HEXACHLOROBIPHENYL		3.2	1.6	2.3	0.4 J	0.7	0.2 J
2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL		1.9	1.1	0.9	0.1 J	0.1 J	0.1 J
2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL		16.3	2.9	7	0.5	0.8	0.3 J
2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL		3.4	0.9	1.9	0.2 J	0.7	0.1 J
2,2',3,4,4',5'-HEXACHLOROBIPHENYL		30.3	6.9	15.6	1.8	2.2	0.7
2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL		42	2.9	15.8	0.6	0.9	0.3 J
2,2',3,4,5'-PENTACHLOROBIPHENYL		1.2	2.4	2	0.3 J	0.4 J	0.2 J
2,2',3,5-TETRACHLOROBIPHENYL		0.5	1	0.9	0.5 J	0.2 J	0.1 J
2,2',4,4',5,5'-HEXACHLOROBIPHENYL		30.7	7.6	14.6	1.3	1.7	0.5
2,2',4,5,5'-PENTACHLOROBIPHENYL		5.2	5.1	5.9	0.9	1	0.4 J
2,2',4,6-TETRACHLOROBIPHENYL		0.2 J	0.4 J	0.4 J	0.3 J	0.1 J	0.5 U
2,2',5,5'-TETRACHLOROBIPHENYL		1.5	2.5	1.6	0.6 J	0.7 U	0.7 U
2,2',5-TRICHLOROBIPHENYL		0.6 J	0.4 J	0.4 J	0.5 J	0.7 U	0.7 U
2,3',4,4',5-PENTACHLOROBIPHENYL		3.4	5.1	4.6	1.1	1.1	0.3 J
2,3',4,4'-TETRACHLOROBIPHENYL		0.5 U	0.5 U	0.5 U	0.7	0.5 U	0.5 U
2,3,3',4,4'-PENTACHLOROBIPHENYL		0.6 U	2.3	1.9	0.5 J	0.4 J	0.1 J
2,4'-DDE		0.8 U	0.8 U	0.9	0.8 U	0.5 J	0.2 J
2,4'-DDT		0.8 J	1.4	37.5	0.5 J	17.2	5.2
2,4'-DICHLOROBIPHENYL		0.4	0.4	0.4	0.3 J	0.6	0.2 J
2,4,4'-TRICHLOROBIPHENYL		0.4 J	0.7 J	0.7	1	0.1 J	0.1 J
2,4,5-TRICHLOROBIPHENYL		0.7 U	0.1 J	0.7 U	0.7 U	0.7 U	0.7 U
3,3',4,4',5-PENTACHLOROBIPHENYL		7.5	1.8	3.7	0.3 J	0.2 J	0.3 J
4,4'-DDD		12.3	4.2	267	3.7	169.9	6.5
4,4'-DDE		3.8	2.1	38.3	2.8	14.3	6.7

PORTSMOUTH NAVAL SHIPYARD
SEDIMENT MONITORING

SAMPLE NUMBER:	BC-10006-SD-1296(1)	BC-1020-SD-1296	CC-1004.3-SD-1296	CC-1004.5-SD-1296	CC-1011-SD-1296	SP-1001-SD-1296	SP-1002-SD-1296
SAMPLE DATE:	12/11/96	12/24/96	01/03/97	01/22/97	01/03/97	01/03/97	01/15/97
LOCATION:	BC-10006	BC-1020	CC-1004.3	CC-1004.5	CC-1011	SP-1001	SP-1002
FIELD DUPLICATE OF:							
PESTICIDES/PCBs (µg/kg)							
4,4'-DDT		0.6 U	8.6	166	2.7	65.5	45.1
ALDRIN		0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
ALPHA-CHLORDANE		0.6 J	0.5 J	2.6	0.1 J	16.6	0.5 J
GAMMA-BHC (LINDANE)		0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
HEPTACHLOR		0.5 U	0.1 J	0.3 J	0.1 J	0.5 U	0.1 J
HEPTACHLOR EPOXIDE		0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	0.5 U
SUM OF PCBS		360	114	195	26	24	9
SUM OF THE 24 CHLOROBIPHENYLS		180	57	97	13	12	4.5
METALS (mg/kg)							
ALUMINUM	39199.5	30412.6	22953.1	23740.5	23397.3	30220.2	26750
ARSENIC	10.7	17.9	4.5	7.2	6.2	5.4	6.5
CADMIUM	0.32	0.61	0.17	0.19	0.2	0.09	0.05
CHROMIUM	138.1	170	106.5	259	113.6	95.8	90
COPPER	43.3 J	460.8 J	110.9 J	280.7 J	20.3 J	15.9 J	26 J
IRON	26984.9	58088.6	22685.5	78925.4	22695.9	25742.9	19735.6
LEAD	51.7	137.7	76.9	218	31.8	31.8	32.8
MANGANESE	489.5 J	684.4 J	674.3 J	651 J	463.9 J	513.8 J	247.3 J
MERCURY	0.474	0.493	0.07	0.284	0.101	0.065	0.225
NICKEL	28.8 J	78.7 J	30.2 J	97.6 J	19.7 J	34.2 J	27.9 J
SILVER	0.13 U	0.48	0.19	0.31	0.13 U	0.13 U	0.13 U
ZINC	298.3	804.1	514	1089	273.8	215.3	218.8
AVS/SIMULTANEOUSLY EXTRACTED METALS (mg/kg)							
CADMIUM(SEM)	0.2589	0.39535	0.09814	0.10278	0.13361	0.09607	0.03018
COPPER(SEM)	18.9644 U	147.5 J	32.85956 U	83.13889 J	7.78706 U	30.41485 U	8.67203 U
LEAD(SEM)	42.62136 J	81.97674 J	26.15905 U	67.16667 J	16.49269 U	22.07424 U	16.45875 U
NICKEL(SEM)	12.68608 U	20.87209 U	13.67174 U	19.56944 U	3.73695 U	6.20087 U	6.51911 U
ZINC(SEM)	73.6246	248.37209	137.90186	507.69444	38.24635 U	50.30568 U	57.60563

PORTSMOUTH NAVAL SHIPYARD
SEDIMENT MONITORING

SAMPLE NUMBER:	SP-1003-SD-1296	SDFD-121296	SP-1004.5-SD-1296				
SAMPLE DATE:	01/03/97	01/03/97	01/03/97				
LOCATION:	SP-1003	SP-1003	SP-1004.5				
FIELD DUPLICATE OF:		SP-1003-SD-1296					
SEMIVOLATILES (µg/kg)							
1-METHYLNAPHTHALENE	12.8	10	17.9				
2,3,5-TRIMETYLNAPHTHALENE	4.3 J	4.1 J	4.3 J				
2,6-DIMETHYLNAPHTHALENE	12.4	12.2	9.2				
2-METHYLNAPHTHALENE	19.3	18.1	19.4 J				
ACENAPHTHENE	3.3 J	6.8 J	27.2				
ACENAPHTHYLENE	13	7.2	37.8				
ANTHRACENE	47.4	49.2	145				
BENZO(A)ANTHRACENE	107	134	323 J				
BENZO(A)PYRENE	101	111	261				
BENZO(BJK)FLUORANTHENE	235	256	607				
BENZO(E)PYRENE	94.8	90.4	210				
BENZO(G,H,I)PERYLENE	58 J	56 J	129				
BIPHENYL	5.2 J	4 J	6.3				
CHRYSENE	169	404	347 J				
DIBENZO(A,H)ANTHRACENE	17.1 J	18.8 J	36.4				
FLUORANTHENE	185	240	558				
FLUORENE	6.2 J	8.5	26.4				
HEXACHLOROBENZENE	0.4 U	0.1 J					
INDENO(1,2,3-CD)PYRENE	58	60.9	146				
MIREX	0.6 U	0.6 U					
NAPHTHALENE	14.2	15.7	31.6				
PERYLENE	40.4	34.3	75.3				
PHENANTHRENE	82.6	157	352				
PHENANTHRENE, 1-METHYL-	16.4	13.8	29.5				
PYRENE	173	196	543				
SUM OF HIGH MOLECULAR WEIGHT PAHs	752	1100	2070				
SUM OF LOW MOLECULAR WEIGHT PAHs	186	263	640				
SUM OF TOTAL PAHs	1480	1910	3940				
TRANS-NONACHLOR	0.2 J	0.2 J					

PORTSMOUTH NAVAL SHIPYARD
SEDIMENT MONITORING

SAMPLE NUMBER:	SP-1003-SD-1296	SDFD-121296	SP-1004.5-SD-1296				
SAMPLE DATE:	01/03/97	01/03/97	01/03/97				
LOCATION:	SP-1003	SP-1003	SP-1004.5				
FIELD DUPLICATE OF:		SP-1003-SD-1296					
PESTICIDES/PCBs (µg/kg)							
2,2',3,3',4,4',5,5',6,6'-DECACHLOROBIPHENYL	0.3 J	0.2 J					
2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL	1.2	0.7					
2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL	0.1 J	0.6 U					
2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL	0.9	0.5 U					
2,2',3,3',4,4'-HEXACHLOROBIPHENYL	1	0.6					
2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL	0.3 J	0.1 J					
2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL	0.8	0.5					
2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL	0.3 J	0.2 J					
2,2',3,4,4',5'-HEXACHLOROBIPHENYL	3.1	2.5					
2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL	1.3	0.8					
2,2',3,4,5'-PENTACHLOROBIPHENYL	0.8	0.7					
2,2',3,5-TETRACHLOROBIPHENYL	0.3 J	0.2 J					
2,2',4,4',5,5'-HEXACHLOROBIPHENYL	2.1	1.5					
2,2',4,5,5'-PENTACHLOROBIPHENYL	1.7	1.4					
2,2',4,6-TETRACHLOROBIPHENYL	0.1 J	0.5 U					
2,2',5,5'-TETRACHLOROBIPHENYL	0.7 J	0.7 U					
2,2',5-TRICHLOROBIPHENYL	0.1 J	0.1 J					
2,3',4,4',5-PENTACHLOROBIPHENYL	2	1.6					
2,3',4,4'-TETRACHLOROBIPHENYL	0.5 U	0.5 U					
2,3,3',4,4'-PENTACHLOROBIPHENYL	0.8	0.6					
2,4'-DDE	0.8 U	0.8 U					
2,4'-DDT	1.2	1.2					
2,4'-DICHLOROBIPHENYL	0.2 J	0.1 J					
2,4,4'-TRICHLOROBIPHENYL	0.2 J	0.1 J					
2,4,5-TRICHLOROBIPHENYL	0.7 U	0.7 U					
3,3',4,4',5-PENTACHLOROBIPHENYL	0.3 J	0.5 U					
4,4'-DDD	43.4						
4,4'-DDE	4.3	3.6					

PORTSMOUTH NAVAL SHIPYARD
SEDIMENT MONITORING

SAMPLE NUMBER:	SP-1003-SD-1296	SDFD-121296	SP-1004.5-SD-1296				
SAMPLE DATE:	01/03/97	01/03/97	01/03/97				
LOCATION:	SP-1003	SP-1003	SP-1004.5				
FIELD DUPLICATE OF:		SP-1003-SD-1296					
PESTICIDES/PCBs (µg/kg)							
4,4'-DDT	12.2	7.7					
ALDRIN	0.7 U	0.7 U					
ALPHA-CHLORDANE	0.5 J	0.2 J					
GAMMA-BHC (LINDANE)	0.6 U	0.6 U					
HEPTACHLOR	0.5 U	0.5 U					
HEPTACHLOR EPOXIDE	0.5 U	0.5 U					
SUM OF PCBS	36.4	23.8					
SUM OF THE 24 CHLOROBIPHENYLS	18.2	11.9					
METALS (mg/kg)							
ALUMINUM	21616.6	18851.8					
ARSENIC	11.9	8.6					
CADMIUM	0.22	0.23					
CHROMIUM	93.2	105.5					
COPPER	52.3 J	58.2 J					
IRON	23859.7	24502.5					
LEAD	76.3	85.9					
MANGANESE	294.5 J	254.6 J					
MERCURY	0.105	0.099					
NICKEL	26.7 J	41.7 J					
SILVER	0.13 U	0.13 U					
ZINC	446.5	369.3					
AVS/SIMULTANEOUSLY EXTRACTED METALS (mg/kg)							
CADMIUM(SEM)	0.20208	0.22826					
COPPER(SEM)	13.54167 U	12.88043 U					
LEAD(SEM)	61.0625 J	73.17935 J					
NICKEL(SEM)	5.58333 U	7.77174 U					
ZINC(SEM)	92.125	120.16304					

CHAIN OF CUSTODY RECORDS
SEEP AND SEDIMENT SAMPLES

Katahdin ANALYTICAL SERVICES

340 County Road No. 5
P.O. Box 720
Westbrook, ME 04098
Tel: (207) 874-2400

CHAIN of CUSTODY

Katahdin # 121196

* PLEASE PRINT IN PEN

Client: Brown & Root Environmental
Contact: Mark Perry
Phone #: (412) 921-7090
Fax #: (412) 921-6045
Address: 661 Anderson Dr VII
City: Pittsburgh
State: PA
Zip Code: 15220
P.O. #:
Proj. Name/No.:
Bill (if different than above):
Address:
Sample (Print/Sign): Tim Evans / Timothy [illegible]
Copies To:

LAB USE ONLY
WORK ORDER #:
KATAHDIN PROJECT MANAGER
REMARKS:
SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT
AIRBILL NO:
TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date/Time coll'd	Matrix	Filt. Y/N	No. of Cntrs.	TOC	BOD	CN	TDS, TSS	Br/Cl	pH, alkalinity, Cl, SO4, NO3	pH, CN			
	SDFD-121196	12/11/96 / 0000	SD	N	1	* TE	*	* TE	*	* TE	*	1			
	SPFD-121196	/ 0000	Aq	N	6	1	1	1	1	1	1				
*	BC-1006-SP-1296	/ 1650	Aq	N	18	3	3	3	3	3	3				
*	BC-1006-SD-1296	/ 1630	SD	N	3							3			
	BC-1020-SD-1296	/ 1730	SD	N	1							1			
	BC-1020-SP-1296	/ 1730	Aq	N	6	1	1	1	1	1	1				
	BC-1005-SD-1296	/ 1730	SD	N	1							1			
	BC-1005-SP-1296	/ 1735	Aq	N	6	1	1	1	1	1	1				
	BC-1018-SP-1296	/ 1807	Aq	N	6	1	1	1	1	1	1				
	BC-1018-SD-1296	/ 1735	SD	N	1							1			
	BC-1012-SD-1296	/ 1755	SD	N	1							1			
	BC-1012-SP-1296	/ 1800	Aq	N	6	1	1	1	1	1	1				
	SDRB-121196	/ 1949	Aq	N	6	1	1	1	1	1	1				
	SDFB-121196	/ 2025	Aq	N	6	1	1	1	1	1	1				
		/													
		/													

COMMENTS
SD = sediment
Aq = Aqueous ~~(Seep)~~ TE
* Do MS / MSD

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Tim Evans	12/12/96 0705	Tim Kowalski			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

Brown & Root Environmental
661 Andersen Dr III
Pittsburgh PA 15220

CHAIN OF CUSTODY RECORD

TO: URI
Page 1 of 1

PROJECT NO.: 6515
SITE NAME: PNSY

SAMPLERS (SIGNATURE): Tim Evans, Timothy S2, Jon Wakeman, Tirosahn Taylor, J. Pillion

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	4L Amber TCL PAHs + Pest/PCB	1L PE Total TAL Metals	1L PE Dissolved TAL Metals	8 oz Mason Jar TCL PAHs + Pest/PCB	8 oz WM TAL Metals, TOC, Grain Size, Avs/SEM		REMARKS
Field Duplicate	12/11/96	0000		✓	SDFD-121196	2	X TE	X	X	1	1		
↓		0000		✓	SPFD-121196	3	1	1	1				
Back Channel		1636		✓	~~SD~~ BC-1006-SD-1296	~~X~~ ~~X~~ 6				3	3		MS / MSD
		1650		✓	BC-1006-SP-1296	9 ~~X~~ TE	3	3	3				Do MS / MSD
		1729		✓	BC-1020-SD-1296	2				1	1		
		1736		✓	BC-1020-SP-1296	3	1	1	1				
		1730		✓	BC-1005-SD-1296	2				1	1		
		1735		✓	BC-1005-SP-1296	3	1	1	1				
		1807			BC-1018-SP-1296	3	1	1	1				
		1755			BC-1018-SD-1296	2				1	1		
		1755			BC-1012-SD-1296	2				1	1		
↓		1800			BC-1012-SP-1296	3	1	1	1				
Rinsate Blank		1449			SDRB-121196	2	1	1					
Field Blank		2025			SDFB-121196	2	1	1					

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
Timothy S2	12/12/96 1018	[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:	REMARKS: COC # URI-121196	

Order No. 70440 (0693)

Katahdin ANALYTICAL SERVICES

340 County Road No. 5
P.O. Box 720
Westbrook, ME 04098
Tel: (207) 874-2400

CHAIN of CUSTODY

Katahdin # 121766

* PLEASE PRINT IN PEN

Client: Brown & Root Environmental
Contact: Mark Perry 412 921-7090
Phone #: 412 921-4041
Fax #:
Address: 601 Anderson Dr VII
City: Pittsburgh
State: PA
Zip Code: 15220
P.O. #:
Proj. Name/No.:
Bill (if different than above):
Address:
Sample (Print/Sign):
Copies To:

LAB USE ONLY
WORK ORDER #:
KATAHDIN PROJECT MANAGER
REMARKS:
SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT
AIRBILL NO:
TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date/Time coll'd	Matrix	Filt. Y/N	No. of Cntrs.	(1 Liter / H_2SO_4) TPH	(1L PE / None) SO_4	(1L PE / NaOH) CN	(1L PE / None) TDS, TSS	(1L PE / None) Bromide	(1L PE / None) pH, alkalinity, Cl, SO_4, No$_3$	(1L PE / None) pH + CN			
	SDFD-121266	12/12/96 / 0000	SD		1							1			
	SPFD-121266	/ 0000	AQ		6	1	1	1	1	1	1				
	SP-1003-SD-1296	/ 1720	SD		1							1			
	SP-1003-SP-1296	/ 1730	AQ		6	1	1	1	1	1	1				
	SP-1001-SD-1296	/ 1735	SD		1							1			
	SP-1001-SP-1296	/ 1745	AQ		6	1	1	1	1	1	1				
	CC-10044-SP-1296	/ 1530	AQ		6	1	1	1	1	1	1	*			
	CC-10043-SD-1296	/ 1525	SD		~~X~~1	*	*	*	*	*	*	1			
	CC-10043-SP-1296	/ 1535	AQ		6	1	1	1	1	1	1	*			
	CC-1011-SD-1296	/ 1555	SD		1	*	*	*				1			
	CC-1011-SP-1296	/ 1524	AQ		6	1	1	1	1	1	1				
	~~CC-1001-SP-1296~~	12/12/96 /													
	~~CC-1043-SP-1296~~	/													
		/													
		/													
		/													

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
Janet Pillon	12/13/96 0735	Lowell Howard			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

Brown & Root Environmental
661 Andersen Dr VII
Pittsburgh PA 15220

CHAIN OF CUSTODY RECORD

PROJECT NO.: 6515

SITE NAME: PNSY

SAMPLERS (SIGNATURE): Geoff Dilo, [illegible] Thomas S. Kjelkerud, Terry Boyle, [illegible]

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	4L Amber TCL PAH Pest/PCB	1L PE Total TAL Metals	1L PE Dissolved TAL Metals	8 oz Glass Jar TCL PAH+Pest/PCB	8 oz PE TAL Metals TOC	Grain Size / ATS	REMARKS
Field Duplicate	12/12/96	0000		✓	SDFD-121296	2				1	1		
↓		0000		✓	SPFD-121296	3	1	1	1				
Sullivan Point		1720		✓	SP-1003-SD-1296	2				1	1		
		1730		✓	SP-1003-SP-1296	3	1	1	1				
		1735		✓	SP-1001-SD-1296	2				1	1		
↓		1745		✓	SP-1001-SP-1296	2	1	1					
Clarks Cove		~~1830~~ 1825		✓	CC-1004.4-SP-1296	2	1	1					
		~~1830~~ 1825		✓	CC-1004.3-SD-1296	2				1	1		
		~~1830~~ 1830		✓	CC-1004.3-SP-1296	3	1	1	1				
		1955		✓	CC-1011-SD-1296	2				1	1		
↓	↓	1420		✓	CC-1011-SP-1296	3	1	1	1				

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
Thomas S. Kjelkerud	12/12/96 1230	[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:	REMARKS:	

REMARKS: URI # 121296

Order No. 70440 (0693)

Katahdin
ANALYTICAL SERVICES

340 County Road No. 5
P.O. Box 720
Westbrook, ME 04098
Tel: (207) 874-2400

CHAIN of CUSTODY

Katahdin # 121396

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Page ___ of ___

Client: Brown & Root Environmental
Contact: Mark Berg
Phone #: (412) 921-7090
Fax #: (412) 921-7090
Address: 301 Alameda Dr VII
City: Pittsburgh
State: PA
Zip Code: 15205
P.O. #:
Proj. Name/No.: PNSY CTO232
Bill (if different than above):
Address:
Sample (Print/Sign): K Jarkut
Copies To:

LAB USE ONLY
WORK ORDER #:
KATAHDIN PROJECT MANAGER
REMARKS:
SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT
AIRBILL NO:
TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date/Time coll'd	Matrix	Filt. Y/N	No. of Cntrs.	TPC	Pb	Cr	TDS/TSS	Ba	Cl	NO3	pH		
	MC-1004.5-SD-1296	12/12/96 / 0615	SD	N	1								1		
	MC-1004.5-SP-1296	/ 0630	AQ	Y	6	1	1	1	1	1	1				
	PC-1017-SD-1296	/ 0620	SD	N	1								1		
	PC-1017-SP-1296	/ 0625	AQ	Y	6	1	1	1	1	1	1				
	BC-1016-SD-1296	/ 0630	SD	N	1								1		
	BC-1016-SP-1296	/ 0635	AQ	Y	6	1	1	1	1	1	1				
	SP-1002-SD ~~0650~~ 1296	/ 0650	SD	N	1								1		
	SP-1002-SP ~~0725~~ 1296	/ 0725	AQ	Y	6	1	1	1	1	1	1				
	SDRB-121396	/ 0850	AQ	N	6	1	1	1	1	1	1				
		/													
		/													
		/													
		/													
		/													
		/													
		/													

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
K. Jarkut	12/14/96 0900				
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

Brown & Root Environmental
661 Andersen Dr VII
Pittsburgh PA 15205

CHAIN OF CUSTODY RECORD

PROJECT NO.: 6515

SITE NAME: PNSY

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	4l Amber TCL PAH + Pest/PCB	1L PE Total TAL Metals	1L PE Dissolved TAL Metals	8oz mason Jar TCL PAH + Pest/PCB	8oz PE TAL Metals	Grav. Size, TOC, AVS	REMARKS
Clarks Cove	12/12/96	1745		✓	CC-1001-SP-1296	1			1				
↓	↓	1830		✓	CC-1004.4-SP-1296	1			1				
Clarks Cove	12/13/96	0815		✓	CC-1004.5-SD-1296	2				1	1		
		0830		✓	CC-1004.5-SP-1296	3	1	1	1				
Bagh Channel		0820		✓	BC-1017-SD-1296	2				1	1		
		0825		✓	BC-1017-SP-1296	3	1	1	1				
		0830		✓	BC-1016-SD-1296	2				1	1		
↓		0835		✓	BC-1016-SP-1296	3	1	1	1				
Sullivans Point		0856		✓	SP-1002-SD-1296	2				1	1		
↓		0725		✓	SP-1002-SP-1296	3	1	1	1				
Ambient Blank		0815		✓	SPAB-121396	1	1						
Rinsate Blank		0850		✓	SDRB-121396	2	1	1					

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
[signature]	12/13/96 1630	FedEx (AB# 2 38 38 US 211)			
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: COC # UKI #121396	

Order No. 70440 (0693)

SAMPLE LOG SHEETS

SEEP SAMPLE LOG SHEETS

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Seep
[ ] QA Sample Type:

Sample ID No.: SP-~~1002~~ 1001 SP-1296
Sample Location: SP-1002
Sampled By: TE / ~~KT~~ JP
C.O.C. No.: Katahdin

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Date: 12-12-96 Time: 17:45 Depth: surface Method: Transfer Cup / Direct Fill	Clear	7.62	31.6	6.0	6.2	9.29	1.90	200

SAMPLE COLLECTION INFORMATION

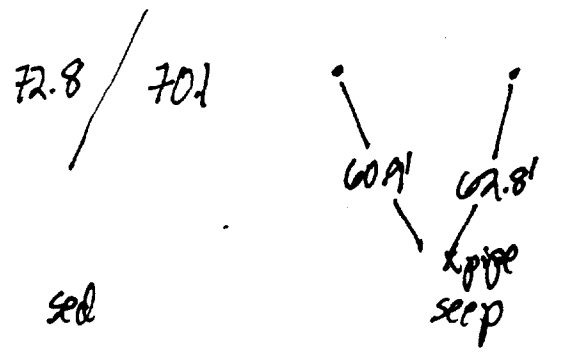
Analysis	Preservative	Container Requirements	(Lab)	Collected
TCLPAHS + Pest / PCBs	CH_2Cl_2	1 x 4L Amber	(URI)	✓
TOTAL TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
DISSOLVED TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
TOC	H_2SO_4	1 x 125mL Amber	(Katahdin)	✓
BOD	—	1 x 1L PE		✓
CN	$NaOH$	1 x 1L PE		✓
Bromide	—	1 x 1L PE		✓
TDS, TSS	—	1 x 1L PE		✓
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE		✓

OBSERVATIONS / NOTES

• drive pt @ location

Low Tide @ 1823 hrs

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): [signature] ~~Kathleen~~ Janet Pillion

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Seep
[ ] QA Sample Type:

Sample ID No.: SP-1002-SP-1296
Sample Location: Sullivan Point 1002
Sampled By: TE/KJ/JW/GD
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Date: 12/13/96 Time: 0725 Depth: Surface Method: Peristaltic Pump	clear	7.60	32.5	5.5	-1	12.2	1.94	131

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	(Lab)	Collected
TCLPAHs + Pest / PCBs	CH_2Cl_2	1 x 4L Amber	(URI)	✓
TOTAL TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
DISSOLVED TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
TOC	H_2SO_4	1 x 125mL Amber	(Katahdin)	✓
BOD	—	1 x 1L PE		✓
CN	NaOH	1 x 1L PE		✓
Bromide	—	1 x 1L PE		✓
TDS, TSS	—	1 x 1L PE		✓
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE		✓

OBSERVATIONS / NOTES

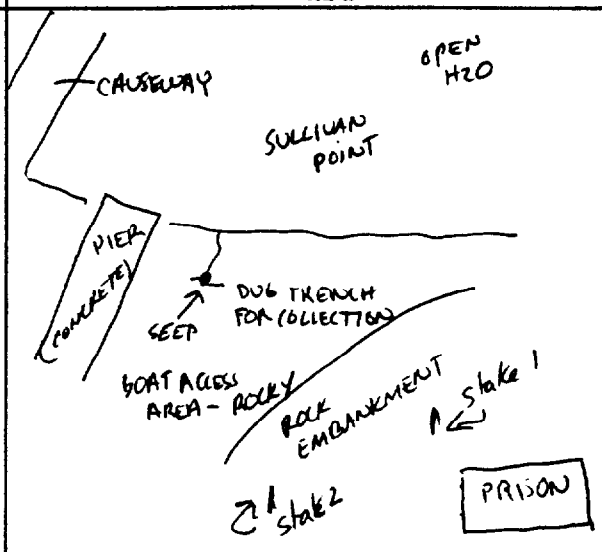
- No flow rate determinable
- 6-12 inches in width (seep)
- rockweed
-
- Stake 1 to seep 82.6'
  Stake 2 " 59.7'

~~Stake 2 to~~

- sample from trench pool

low tide @ 0635 hrs

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:
	—

Signature(s): K Jackson
Thott SE

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Seep
[ ] QA Sample Type:

Sample ID No.: SP-1003 - SP-1296
Sample Location: 1003
Sampled By: KJ / JSW
C.O.C. No.: Katahdin 121296
URI 121296

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

Date: 12/12/96 Time: 1730 Depth: Surface Method: Direct Fill	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
	clear	7.19	0.482	5.3	2	13.57	.01	165

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements (Lab)	Collected
TCLPAHS + Pest / PCBs	CH_2Cl_2	1 x 4L Amber (URI)	✓
TOTAL TAL METALS	HNO_3	1 x 1L PE (URI)	✓
DISSOLVED TAL METALS	HNO_3	1 x 1L PE (URI)	✓
TOC	H_2SO_4	1 x 125mL Amber (Katahdin)	✓
BOD	—	1 x 1L PE	✓
CN	NaOH	1 x 1L PE	✓
Bromide	—	1 x 1L PE	✓
TDS, TSS	—	1 x 1L PE	✓
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE	✓

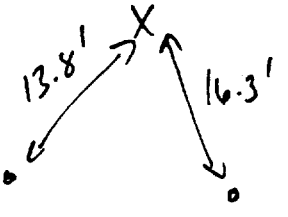
OBSERVATIONS / NOTES

Low Tide @ 1823 hrs
Blue mussels, seaweed
Rip rap / Boulders

Horiba U-10
ORP (hand-held) } meters

MAP

Distances from Stakes



Circle if Applicable:

MS/MSD	Duplicate ID No.: SPFD-121296
—	

Signature(s): K Jalkut

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: seep
[ ] QA Sample Type:

Sample ID No.: CC-1004-SP-1296
Sample Location: Clarks Cove
Sampled By: TE/KS
C.O.C. No.: NA

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA

Date: 12/13/96	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Time:								
Depth:								
Method:								

SAMPLE COLLECTION INFORMATION

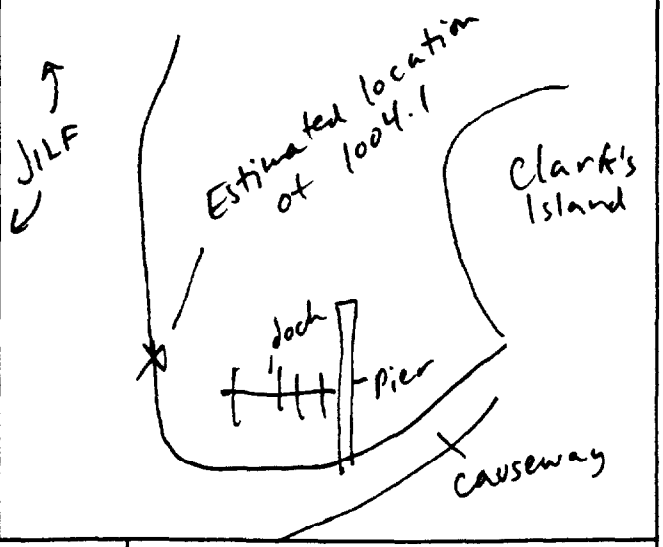
Analysis	Preservative	Container Requirements	(Lab)	Collected
TCLPAHs + Pest / PCBs	CH_2Cl_2	1 x 4L Amber	(URI)	
TOTAL TAL METALS	HNO_3	1 x 1L PE	(URI)	
DISSOLVED TAL METALS	HNO_3	1 x 1L PE	(URI)	
TOC	H_2SO_4	1 x 125mL Amber	(Katahdin)	
BOD	—	1 x 1L PE		
CN	$NaOH$	1 x 1L PE		
Bromide	—	1 x 1L PE		
TDS, TSS	—	1 x 1L PE		
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE		

OBSERVATIONS / NOTES

- unable to locate seep
- No sample collected

Low tide @ 1914

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Tw[illegible]

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Seep
[ ] QA Sample Type:

Sample ID No.: CC-1004-SP-1296
Sample Location: 1004.4
Sampled By: JW / TE
C.O.C. No.: Katahdin 121296
URI 121296

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Date: 12-12-96 Time: 18:35 Depth: surface Method: Direct Fill	clear	7.58	32.2	6.6	1	9.0	1.94	142

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	(Lab)	Collected
TCLPAH's + Pest / PCB's	CH_2Cl_2	1 x 4L Amber	(URI)	✓
TOTAL TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
DISSOLVED TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
TOC	H_2SO_4	1 x 125mL Amber	(Katahdin)	✓
BOD	—	1 x 1L PE		✓
CN	NaOH	1 x 1L PE		✓
Bromide	—	1 x 1L PE		✓
TDS, TSS	—	1 x 1L PE		✓
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE		✓

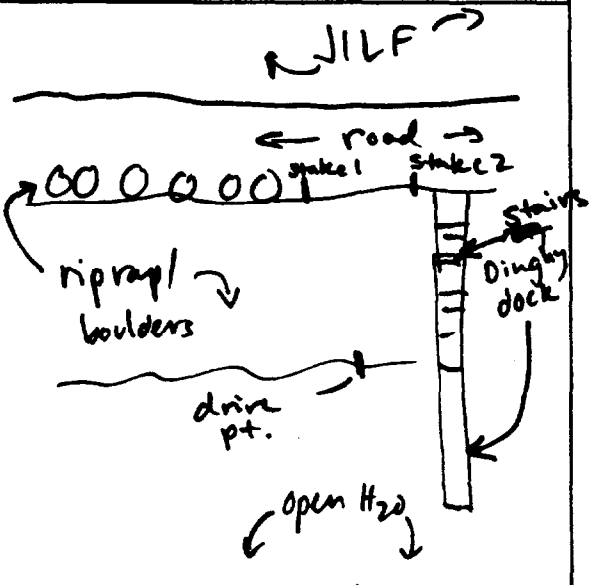
OBSERVATIONS / NOTES

- Sample from drive pt.
- sampled instead of 1004

Distance to
stake 1 44.8'
Stake 2 47.2'

Low Tide @ 18:23

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Timothy Sh

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Seep
[ ] QA Sample Type:

Sample ID No.: CC-1004.5-SP-1296
Sample Location: Clarks Cove 1004.5
Sampled By: KJ
C.O.C. No.: Katahdin 121396
VR1 121396

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

Date: 12/13/96	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Time: 0630								
Depth: Surface Seep	Light yellow	8.25	10.1	5.5	55	6.91	0.54	148
Method: Peristaltic								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	(Lab)	Collected
TCLPAHs + Pest / PCBs	CH_2Cl_2	1 x 4L Amber	(URI)	✓
TOTAL TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
DISSOLVED TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
TOC	H_2SO_4	1 x 125mL Amber	(Katahdin)	✓
BOD	—	1 x 1L PE		✓
CN	NaOH	1 x 1L PE		✓
Bromide	—	1 x 1L PE		✓
TDS, TSS	—	1 x 1L PE		✓
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE		✓

OBSERVATIONS / NOTES

- Flow rate can't be determined
- 6 to 12 in wide trench

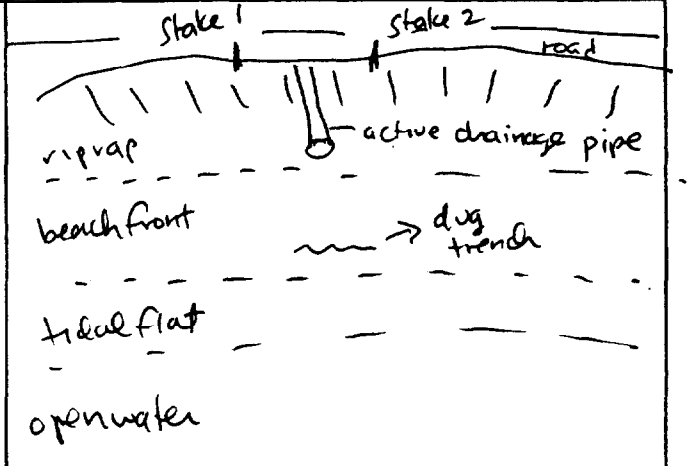
Stake 1 to seep - ~~502~~' 55.9'

Stake 2 to seep - ~~55.9~~' 50.2

- Flow is fairly clear to light yellow

Low Tide @ 0635

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:
	—

Signature(s): K Jackut

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Seep
[ ] QA Sample Type:

Sample ID No.: BC-1005-SP-1296
Sample Location: 1005
Sampled By: Rogalin / Dicenso / Jallkat
C.O.C. No.: Katahdin 121196
URI 121196

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Date: 12/11/96 Time: 1735 Depth: — Method: Direct Fill	clear	7.28	24.9	7.1	0	12.68	1.46	152

SAMPLE COLLECTION INFORMATION

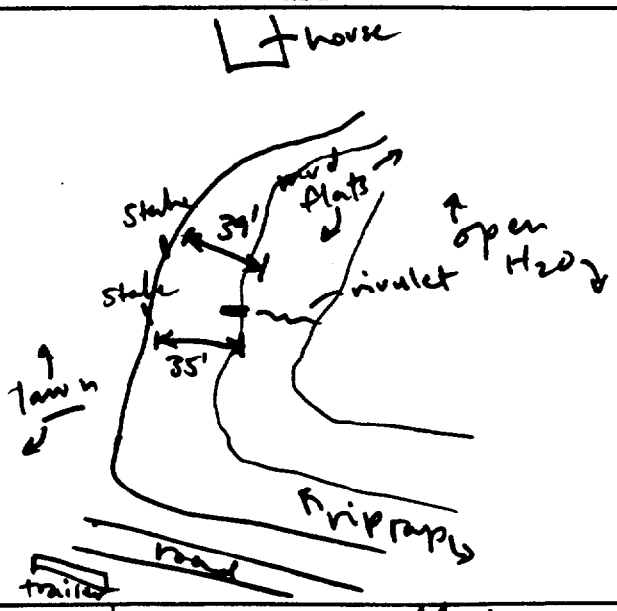
Analysis	Preservative	Container Requirements	(Lab)	Collected
TCLPAHs + Pest / PCBs	CH_2Cl_2	1 x 4L Amber	(URI)	✓
TOTAL TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
DISSOLVED TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
TOC	H_2SO_4	1 x 125mL Amber	(Katahdin)	✓
BOD	—	1 x 1L PE		✓
CN	NaOH	1 x 1L PE		✓
Bromide	—	1 x 1L PE		✓
TDS, TSS	—	1 x 1L PE		✓
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE		✓

OBSERVATIONS / NOTES

- width of seep 12"
- Flow rate = 900mL / 7sec (avg rate 3x)
- riprap above pipe

Low Tide @ 1735 hrs

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): K Jallkat

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: DSNY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Seep
[ ] QA Sample Type:

Sample ID No.: BC-1006-SP-1296
Sample Location: Back Channel
Sampled By: KJ/ JW
C.O.C. No.: URI # 12196
Katahdin # 12196

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Date: 12-11-96 Time: 1650 Depth: Surface Method: Direct Fill	clear	7.19	15.5	9.6	2	3.45	.88	not measured

SAMPLE COLLECTION INFORMATION

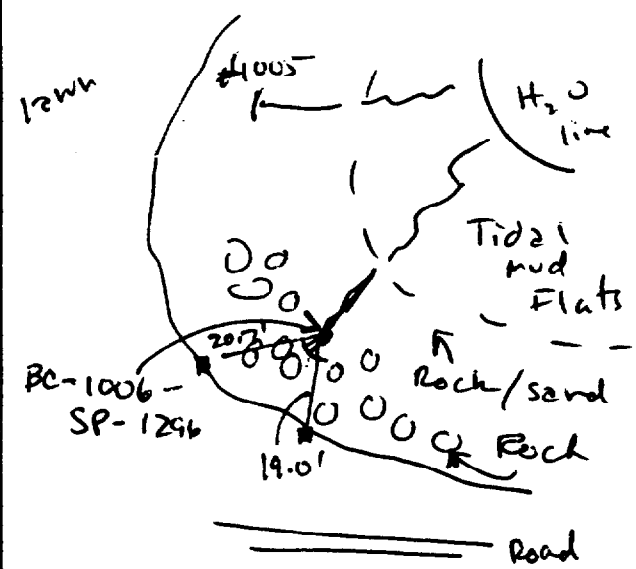
Analysis	Preservative	Container Requirements	Lab	Collected
✓ TCL PAHs + Pest / PCBs	Meth. Chloride	1x 4L Amber	(URI)	✓✓
✓ Total TAL Metals	HNO_3	1x 1L PE	URI	✓✓
✓ Dissolved TAL Metals	HNO_3	1x 1L PE	URI	✓✓
✓ TDS, TSS	—	1x 1L PE	Katahdin	✓✓
✓ Bromide	—	1x 1L PE		✓
✓ TOC	H_2SO_4	1x 125 mL		✓
✓ pH, alkalinity, SO_4, NO_3, Cl	—	1x 1L PE		✓✓
✓ BOD	—	1x 1L PE		✓
✓ CN	NaOH	1x 1L PE		✓

OBSERVATIONS / NOTES

- 3' wide, <1-2" deep
- periwinkle snails
  Seaweed (Fucus sp.)
  Rock weed
- riprap boulders @ seep outflow
- Steady flow (approx 1-5 gpm)

low tide @ 1535
(p cloudy, 38-40°F)

MAP



Circle if Applicable:
MS/MSD
Triple Volume
Duplicate ID No.:

Signature(s):

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Seep
[ ] QA Sample Type:

Sample ID No.: BC-1007-SP-1296
Sample Location: 1007
Sampled By:
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Date: 12/11/96								
Time: 1630								
Depth:								
Method:								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	(Lab)	Collected
TCLPAHS + Pest / PCB[5]		1 x 4L Amber	(URI)	
TOTAL TAL METALS	HNO_3	1 x 1L PE	(URI)	
DISSOLVED TAL METALS	HNO_3	1 x 1L PE	(URI)	
TOC	H_2SO_4	1 x 125mL Amber	(Katahdin)	
BOD	—	1 x 1L PE		
CN	NaOH	1 x 1L PE		
Bromide	—	1 x 1L PE		
TDS, TSS	—	1 x 1L PE		
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE		

OBSERVATIONS / NOTES

- Unable to locate seep

MAP

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): [illegible]

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Seep
[ ] QA Sample Type:

Sample ID No.: BC-1008-SP-1296
Sample Location: 100 X
Sampled By:
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA

Date: 12/11/96	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Time:								
Depth:								
Method:								

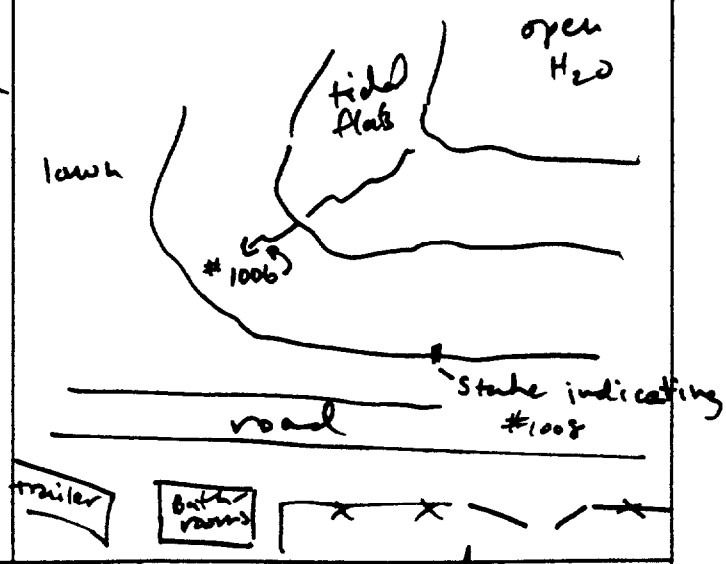
SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	(Lab)	Collected
TCLPAHS + Pest / PCBs		1 x 4L Amber	(URI)	
TOTAL TAL METALS	HNO_3	1 x 1L PE	(URI)	
DISSOLVED TAL METALS	HNO_3	1 x 1L PE	(URI)	
TOC	H_2SO_4	1 x 125mL Amber	(Katahdin)	
BOD	—	1 x 1L PE		
CN	NaOH	1 x 1L PE		
Bromide	—	1 x 1L PE		
TDS, TSS	—	1 x 1L PE		
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE		

OBSERVATIONS / NOTES

No seep flow - not sampled

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:
	—

Signature(s): Thall/SE

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: See P
[ ] QA Sample Type:

Sample ID No.: CC-1011-SP-1296
Sample Location: Clarks Cove
Sampled By: TE / JW
C.O.C. No.: Katahdin 121296
URI 121296

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

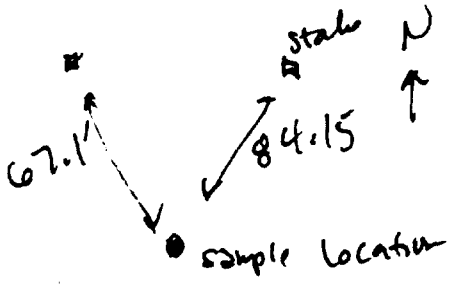
	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Date: 12-12-96 Time: 1928 Depth: surface Method: Peristaltic Pump	Clear	7.76	31.2	4.6	-2	12.14	1.85	122

SAMPLE COLLECTION INFORMATION

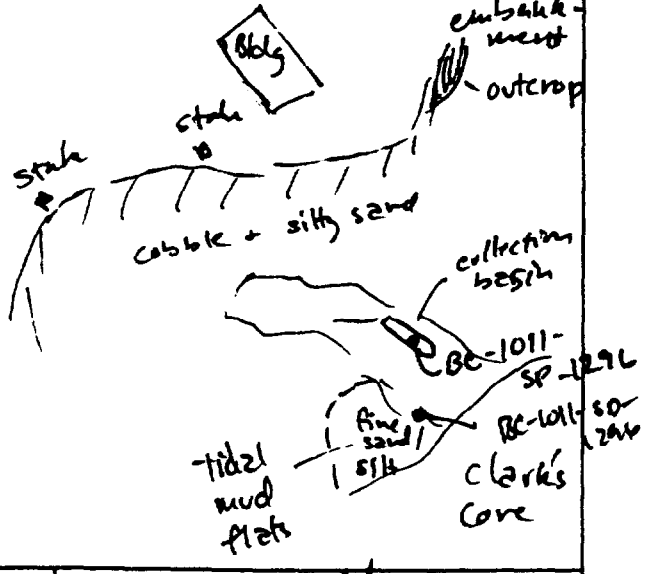
Analysis	Preservative	Container Requirements (Lab)	Collected
TCLPAHs + Pest / PCBs	CH_2Cl_2	1 x 4L Amber (URI)	✓
TOTAL TAL METALS	HNO_3	1 x 1L PE (URI)	✓
DISSOLVED TAL METALS	HNO_3	1 x 1L PE (URI)	✓
TOC	H_2SO_4	1 x 125mL Amber (Katahdin)	✓
BOD	—	1 x 1L PE	✓
CN	NaOH	1 x 1L PE	✓
Bromide	—	1 x 1L PE	✓
TDS, TSS	—	1 x 1L PE	✓
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE	✓

OBSERVATIONS / NOTES

- gastropods
- low tide @ 1823



MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): [illegible]

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Seep
[ ] QA Sample Type:

Sample ID No.: BC-1012-SP-1296
Sample Location: 1012
Sampled By: Rajaha / DiGrisio
C.O.C. No.: Katahdin 121196
URI 121196

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Date: 12/11/96 Time: 1800 Depth: — Method: Direct Fill	clear	7.55	34.8	5.4	1	13.00	2.09	143

SAMPLE COLLECTION INFORMATION

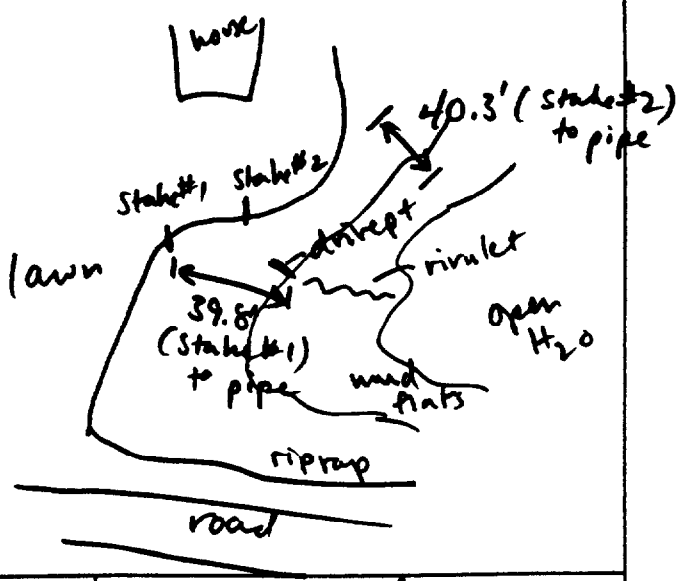
Analysis	Preservative	Container Requirements	(Lab)	Collected
TCLPAHS + Pest / PCBs	CH_2Cl_2	1 x 4L Amber	(URI)	✓
TOTAL TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
DISSOLVED TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
TOC	H_2SO_4	1 x 125mL Amber	(Katahdin)	✓
BOD	—	1 x 1L PE		✓
CN	NaOH	1 x 1L PE		✓
Bromide	—	1 x 1L PE		✓
TDS, TSS	—	1 x 1L PE		✓
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE		✓

OBSERVATIONS / NOTES

- Drive pt. installed
- seep approx 2" wide
- flow ≈ 500ml/min
- riprap above pipe

Low Tide @ 1735 hrs

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): K Jalhut

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Seep
[ ] QA Sample Type:

Sample ID No.: BC-1016-SP-1296
Sample Location: 1016
Sampled By: JP / TR
C.O.C. No.: Katahdin 121396
URI 121396

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Date: 12-13-96 Time: 0635 Depth: Method:	clear	7.17	30.9	7.2	-2	12.1	1.87	117

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	(Lab)	Collected
TCLPAHs + Pest / PCBs	CH_2Cl_2	1 x 4L Amber	(URI)	✓
TOTAL TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
DISSOLVED TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
TOC	H_2SO_4	1 x 125mL Amber	(Katahdin)	✓
BOD	—	1 x 1L PE		✓
CN	NaOH	1 x 1L PE		✓
Bromide	—	1 x 1L PE		✓
TDS, TSS	—	1 x 1L PE		✓
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE		✓

OBSERVATIONS / NOTES

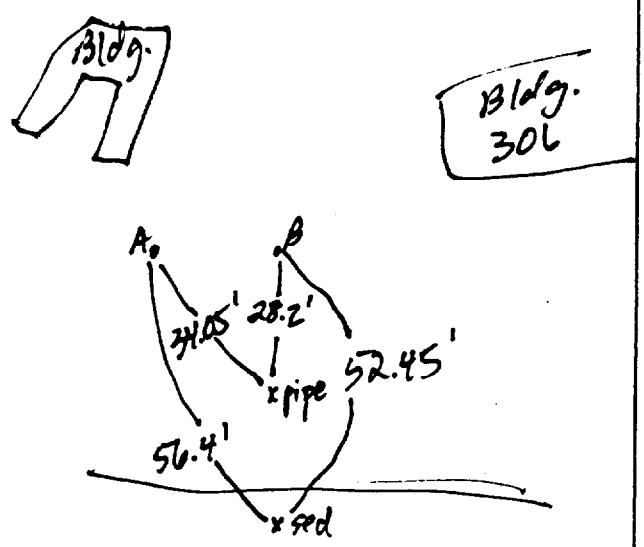
Flow
5,250 ml/min (8sec/700ml)

Horiba + DKP meter

(sampled instead of 1014)

Low Tide @ 0635 hrs

MAP



Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s): Janet Pillion

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Seep
[ ] QA Sample Type:

Sample ID No.: BC-1017-SP-1296
Sample Location: 1017
Sampled By: JW/TR
C.O.C. No.: Katahdin 121396
VRI 121396

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Date: 12-13-96 Time: 0625 Depth: Surface Method: Direct Fill	Clear	8.24	35.0	6.0	-2	10.90	2.11	125

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	(Lab)	Collected
TCLPAH's + Pest / PCB's	CH_2Cl_2	1 x 4L Amber	(URI)	✓
TOTAL TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
DISSOLVED TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
TOC	H_2SO_4	1 x 125mL Amber	(Katahdin)	✓
BOD	—	1 x 1L PE		✓
CN	$NaOH$	1 x 1L PE		✓
Bromide	—	1 x 1L PE		✓
TDS, TSS	—	1 x 1L PE		✓
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE		✓

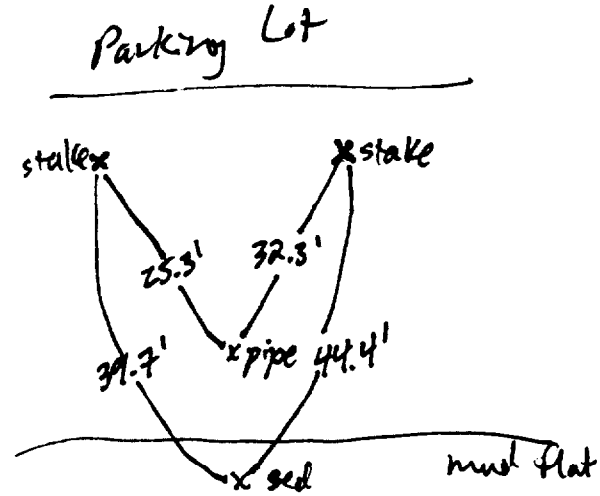
OBSERVATIONS / NOTES

16:15 Ambient Air bottle vented
flow rate 300 ml/min.

Bldg 306

Low Tide @ 0635

MAP



Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6513

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Seep
[ ] QA Sample Type:

Sample ID No.: BC-1015-SP-1296
Sample Location: Back Channel
Sampled By: JP
C.O.C. No.: Katahdin 121196
URI 121196

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

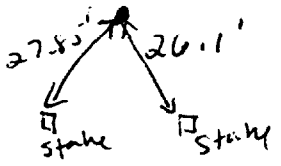
Date: 12-11-96 / Time: 1807 / Depth: Surface / Method: Direct Fill	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
	clear	7.68	33.1	7.1	0	10.32	2.01	137

SAMPLE COLLECTION INFORMATION

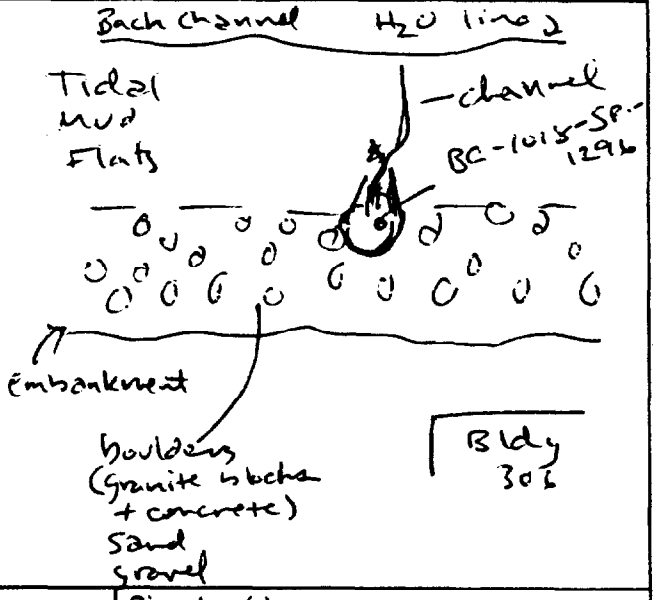
Analysis	Preservative	Container Requirements	Lab	Collected
TCL PAHs + Pest/PCBs	Methylene chloride	1x 8 oz Amber	URI	✓
Total TAL Metals	HNO_3	1x 1L PE	URI	✓
Dissolved TAL Metals	HNO_3	1x 1L PE	URI	✓
TDS, TSS	—	1x 1L PE	Katahdin	✓
TOC	H_2SO_4	1x 125 mL Amber		✓
CN	NaOH	1x 1L PE		✓
Bromide	—	1x 1L PE		✓
pH alkalinity, Cl, SO_4, NO_3	—	1x 1L PE		✓
BOD	—	1x 1L PE		✓

OBSERVATIONS / NOTES

- artesian flow (>10 gpm)
- flow to flats approx 6-7' wide <2" deep
- few periwinkle snails
  seaweed (Fucus sp.) @ seep



MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.: SPFO-121196	Signature(s):

Page___ of ___

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[X] Other: Seep
[ ] QA Sample Type:

Sample ID No.: BC-1024-SP-1296
Sample Location: Back Channel
Sampled By: JP / GD
C.O.C. No.: Katahdin 121196
URI 121196

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

Date: 12-11-96 / Time: TE ~~1536~~ 1736	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Depth: Surface / Method: Direct Fill	clear	7.76	38.5	6.0	0	13.22 ~~13.2~~ TE	2.34	141

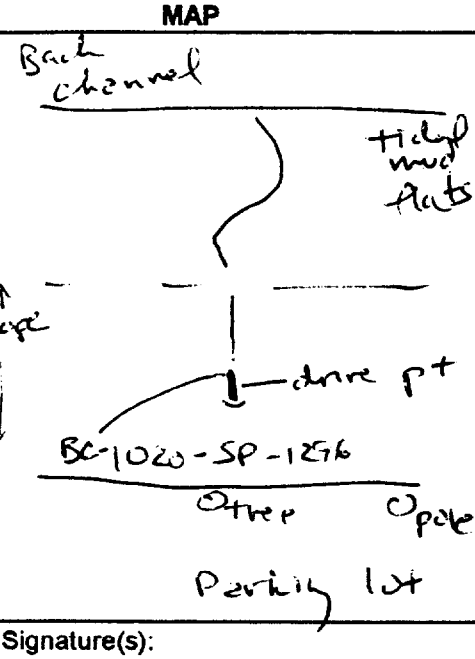
SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Lab	Collected
TCL PAHs + Pest / PCBs	methylene chloride	1 x ~~80 oz~~ PE Amber	URI	✓
Total Metals (TAL)	HNO_3	1 x 1L PE	URI	✓
Dissolved Metals (TAL)	HNO_3	1 x 1L PE	URI	✓
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE	Katahdin	✓
TOC	H_2SO_4	1x125 mL Amber		✓
BOD	—	1 x 1L PE		✓
CN	NaOH	1 x 1L PE		✓
TDS, TSS	—	1 x 1L PE		✓
Bromide	—	1 x 1L PE		✓

OBSERVATIONS / NOTES

- Collect from drive point
- few periwinkles + mussel seaweed (Fucus sp.) fresh meat
- 620 mL / 3 sec flow from drive pt.

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SEDIMENT SAMPLE LOG SHEETS

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[X] Other: Scoop
[ ] QA Sample Type:

Sample ID No.: SP-1001 - SD-1296
Sample Location: 1001
Sampled By: TE / ~~KS~~ JP
C.O.C. No.: Katahdin 141296
URI 121296

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 12-12-96			
Time: 17:35	0-4"		F-M sand Tr shell
Method: Stainless Trowel			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION

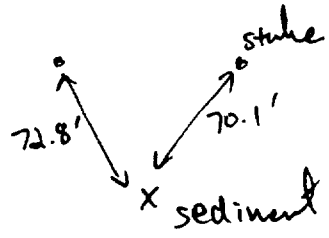
Analysis	Container Requirements	Collected	Other
			(Lab)
TCL PAHs + Pest / PCBs	1 x 8 oz glass	✓	(URI)
TAL metals, TOC, grain size,			
AVS	1 x 8 oz PE	✓	(URI)
CN + pH	1 x 8 oz PE	✓	(Katahdin)

OBSERVATIONS / NOTES

- metamorphic cobbles, mussels, few snails, eel grass @ shoreline
- water plants (maroon)
- 10-12 ft wide seep area

Low tide @ 1823 hrs

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): [illegible] ~~[illegible]~~ Janet Pillion

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 10515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: SP-1002-SD-1296
Sample Location: Sullivans Pt.
Sampled By: TE/KJ/JW/GD
C.O.C. No.: Katahdin 121394
U21 121396

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 12-13-96			
Time: 0656	0-2"	Tan	M. Sand, Tr Shell
Method: Stainless Trowel			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION

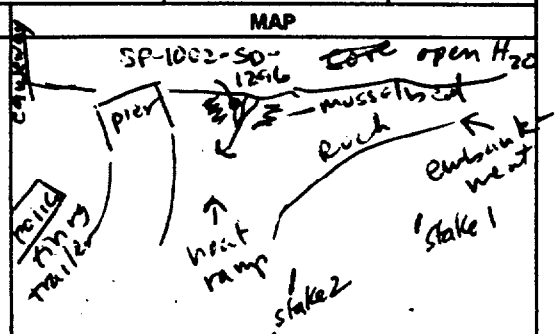
Analysis	Container Requirements	Collected	Other (Lab)
TCL PAHs + Pest/PCBs	1 x 8 oz glass	✓	URI
TAL Metals, TOC, grain size, AVS	1 x 8 oz PE	✓	URI
CN + pH	1 x 8 oz PE	✓	Katahdin

OBSERVATIONS / NOTES

- Rock weed (wrack?)
- Mussel bed to East & west of flow
- Stake 1 to sed - 90.6', Stake 2 to sed - 72.0'

Low tide @ 0635 hrs

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): [illegible]

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: SP-1003-SD-1296
Sample Location: 1003
Sampled By: KJ / JSW
C.O.C. No.: Katahdin 121296
URI 121296

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 12/12/96			
Time: 1720	0-6"	Black	F-C Sand w/ Tr Silt + gravel
Method: Stainless trowel			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION

Analysis	Container Requirements	Collected	Other
			(Lab)
TCL PAHs + Pest / PCBs	1 x 8 oz glass	✓	(URI)
TAL Metals, TOC, grain size,		✓	
AVS	1 x 8 oz PE		(URI)
CN + pH	1 x 8 oz PE	✓	(Katahdin)

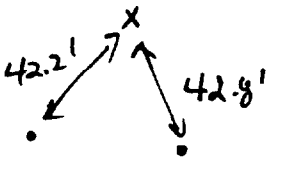
OBSERVATIONS / NOTES

Blue mussels, seaweed
Riprap / Boulders

Low tide @ 1823 hrs

MAP

Distance from Stakes



Circle if Applicable:

MS/MSD

Duplicate ID No.: SDFD-121296

Signature(s): K Jalkut

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: CE-100R1-SD-1296
Sample Location: Clarks Cove
Sampled By: TE / ES
C.O.C. No.: NA

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

Date: 12/13/96	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: —			
Method: —			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

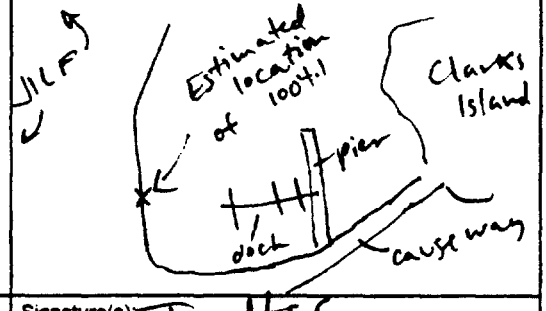
SAMPLE COLLECTION INFORMATION

Analysis	Container Requirements	Collected	Other
			(Lab)
TCL PAHs + Pest / PCBs	1 x 8 oz glass		(URI)
TAL metals, TOC, grain size,			
AVS	1 x 8 oz PE		(URI)
CN + pH	1 x 8 oz PE		(Katahdin)

OBSERVATIONS / NOTES

- Unable to locate ~~sample~~ seep
- No sample collected
- Light mist/rain, 38-40°F
- Low tide @ 1914

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Thomas S

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: CC-1004.4 -SD-1296
Sample Location: 1004.4
Sampled By: TC
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

Date: 12-12-96	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION

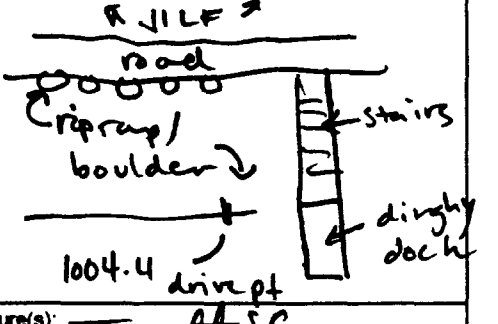
Analysis	Container Requirements	Collected	Other
			(Lab)
TCL PAHs + Pest / PCBs	1 x 8 oz glass		(URI)
TAL metals, TOC, grain size,			
AVS	1 x 8 oz PE		(URI)
CN + pH	1 x 8 oz PE		(Katahdin)

OBSERVATIONS / NOTES

- No sediment collected because none present (gravel to boulders only)

Low Tide @ 18:23

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Timothy SC

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: CC-1004.5-SD-1296
Sample Location: Clark's Cove
Sampled By: Tim Evans
C.O.C. No.: Katahdin 121396
URI 121396

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 12/13/96			
Time: 0615			Fine - Med Sand
Method: Trowel			
Monitor Reading (ppm): N/R			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
				Measurements
Method:				Stake 1 to sediment - 68.0'
				Stake 2 to sediment - 63.0'
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION

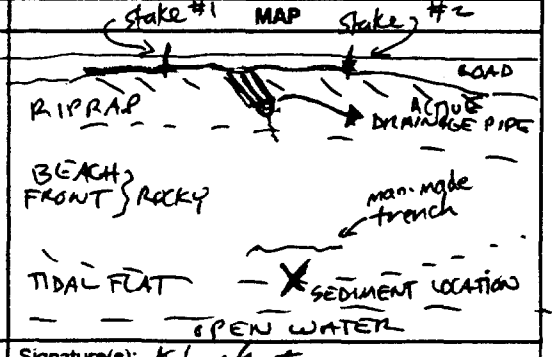
Analysis	Container Requirements	Collected	Other
			(Lab)
TCL PAHs + Pest/PCBs	1 x 8 oz glass	✓	(URI)
TAL metals, TOC, grain size,			
AVS	1 x 8 oz PE	✓	(URI)
CN + pH	1 x 8 oz PE	✓	(Katahdin)

OBSERVATIONS / NOTES

- fine to med sand
- trace shell material
- 0-0.5 in - brown coloration
- 0.5" & deeper - gray coloration
- abundant blue mussels
- low tide @ 0635
- no drive pt installed - dug trench to capture seep water

- ~~active flow~~ existing drain pipe in direct area of "seep"

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): K Jackut

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: BC-1005-SD-1296
Sample Location: 1005
Sampled By: Rojahn / Jalkut / Dicenso
C.O.C. No.: Katahdin 121196
URI 121196

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 12-11-96			
Time: 1730	surface	Brn to Black	silt to organic silt
Method: Stainless Trowel			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION

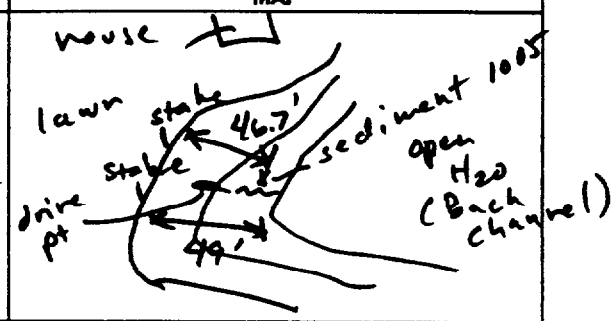
Analysis	Container Requirements	Collected	Other
			(Lab)
TCL PAHs + Pest / PCBs	1 x 8 oz glass	✓	(URI)
TAL Metals, TOC, grain size,			
AVS	1 x 8 oz PE	✓	(URI)
CN + pH	1 x 8 oz PE	✓	(Katahdin)

OBSERVATIONS / NOTES

- Biota: Blue mussels, periwinkles, Fucus sp (seaweed)
- leaf litter, organic odor

Low Tide @ 1735 hrs

MAP



Circle If Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): K Jalkut

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: BC-1006-SD-1296
Sample Location: Back Channel
Sampled By: GD / JP
C.O.C. No.: URI# 121196
Katahdin # 12196

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 12-11-96			
Time: 1636	0-6"	Brn to Gray	~~Fine Sand~~ Silty Sand
Method: Stainless Trowel			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

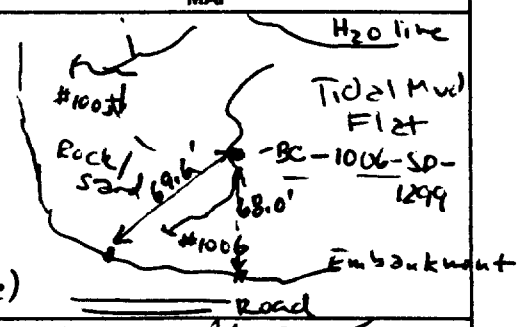
SAMPLE COLLECTION INFORMATION

Analysis	Container Requirements	Collected	Other
TCL PAHs + Pest / PCBs	1 x 8 oz glass (URI)	✓	
TAL Metals, TOC, grain size, SEM/AVS	1 x 8 oz PE (URI)	✓	
CN + pH	1 x 8 oz ~~glass~~ PE (Katahdin)	✓ ✓	

OBSERVATIONS / NOTES

- Seep #1006
- Channel: Fine gravel, shell, fine sand
- Side / Flats: Silty Sand & Mud
- Biota: Blue Mussels, seaweed
- collected from side of channel (1½ ft wide)

MAP



Circle if Applicable:
MS/MSD
Triple Volume

Duplicate ID No.:

Signature(s): [signature]

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: BC-1007-SD-1296
Sample Location: 1007
Sampled By:
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 12/11/96			
Time: 1630			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION

Analysis	Container Requirements	Collected	Other
			(Lab)
TCL PAHs + Pest/PCBs	1 x 8 oz glass		(URI)
TAL metals, TOC, grain size,			
AVS	1 x 8 oz PE		(URI)
CN + pH	1 x 8 oz PE		(Katahdin)

OBSERVATIONS / NOTES

- Unable to locate seep & associated sediment location

MAP

Circle if Applicable:

MS/MSD	Duplicate ID No.:
	—

Signature(s): Thomas S

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: BC-100Y-SD-1296
Sample Location: 100Y
Sampled By:
C.O.C. No.:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

Date:	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time:			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION

Analysis	Container Requirements	Collected	Other
			(Lab)
TCL PAHs + Pest / PCBs	1 x 8 oz glass		(URI)
TAL Metals, TOC, grain size,			
AVS	1 x 8 oz PE		(URI)
CN + pH	1 x 8 oz PE		(Katahdin)

OBSERVATIONS / NOTES

Not sampled - no ~~associated~~ flow in associated seep

MAP

Circle If Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Timothy J S

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: CC-1011-SD-1296
Sample Location: Clerks Cove
Sampled By: TE/JW
C.O.C. No.: Katahdin 121296
URI 121296

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 12-12-96			
Time: 1955	0-4"	lgm gray	silty fine-medium sand
Method: Stainless Trowel			
Monitor Reading (ppm): –			

COMPOSITE SAMPLE DATA

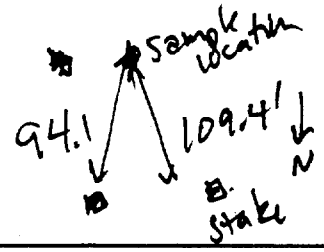
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
		~~TE-4"~~	~~lgm gray~~	~~silty fine-medium sand~~
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION

Analysis	Container Requirements	Collected	Other
			(Lab)
TCL PAHs + Pest/PCBs	1 x 8 oz glass	✓	(URI)
TAL metals, TOC, grain size,			
AVS	1 x 8 oz PE	✓	(URI)
CN + pH	1 x 8 oz PE	✓	(Katahdin)

OBSERVATIONS / NOTES

- 1 cm to REDOX discontinuity
- some mussels
  rock weed



MAP

See map on CC-1011-SP-1296 sample log sheet

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Timothy SC

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: BC-1012-SD-1296
Sample Location: 1012
Sampled By: Rogahn / DiCenso
C.O.C. No.: Katahdin 121196
URI 121196

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 12/11/96			
Time: 1755	Surface	Brn to Blk	Fgr Silt w/ Abs. organics
Method: Stainless Trowel			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

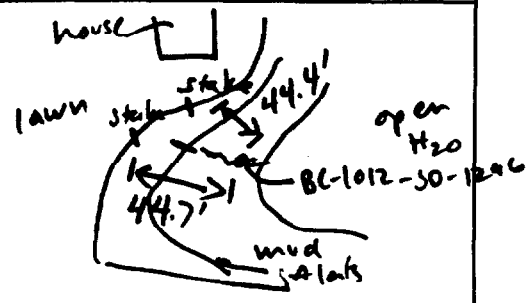
SAMPLE COLLECTION INFORMATION

Analysis	Container Requirements	Collected	Other
			(Lab)
TCL PAHs + Pest / PCBs	1 x 8 oz glass	✓	(URI)
TAL metals, TOC, grain size,			
AVS	1 x 8 oz PE	✓	(URI)
CN + pH	1 x 8 oz PE	✓	(Katahdin)

OBSERVATIONS / NOTES

- blue mussels, periwinkles, Fucus sp grass (seaweed)
- organic odor

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): K Jalbert

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: BC-1016-SD-1296
Sample Location: 1016
Sampled By: TR / JP
C.O.C. No.: Katahdin 121396
URI 121396

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 12-13-96			
Time: 0630	0-4"	Black	M-C Sand Tr silt
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION

Analysis	Container Requirements	Collected	Other
			(Lab)
TCL PAHs + Pest / PCBs	1 x 8 oz glass	✓	(URI)
TAL metals, TOC, grain size,			
AVS	1 x 8 oz PE	✓	(URI)
CN + pH	1 x 8 oz PE	✓	(Katahdin)

OBSERVATIONS / NOTES

· mussels + snails

(sampled instead of 1014)

Low Tide @ 0635 hrs

MAP

See SW log sheet for BC-1016

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Terry Rojahn
Janet Pillin

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[ ] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: BC-1017-SD-1296
Sample Location: 1017
Sampled By: TR
C.O.C. No.: Katahdin 121396
URI 121396

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

Date: 12-13-96	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 0620		Black	Silty sand (Fine)
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION

Analysis	Container Requirements	Collected	Other
			(Lab)
TCL PAHs + Pest / PCBs	1 x 8 oz glass	✓	(URI)
TAL Metals, TOC, grain size,			
AVS	1 x 8 oz PE	✓	(URI)
CN + pH	1 x 8 oz PE	✓	(Katahdin)

OBSERVATIONS / NOTES

- numerous mussels

Low Tide @ 0635 hrs

MAP

See map for SW BC-1017

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: BC-1018-SD-1216
Sample Location: Back Channel
Sampled By: GD
C.O.C. No.: URI # 121196
Katahdin # 121196

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 12-11-96			
Time: 1755	0-4"	Brn/gray	Silty Find Sand
Method: Stainless Trowel			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION

Analysis	Container Requirements	Collected	Other (Lab)
CN + pH	1 x 8 oz PE	✓	Katahdin
TAL Metals, SEM/AVS, TOC,			
grain size, TOC	1 x 8 oz PE	✓	URI
TCL PAHs + Pest/PCBs	1 x 8 oz glass	✓	URI

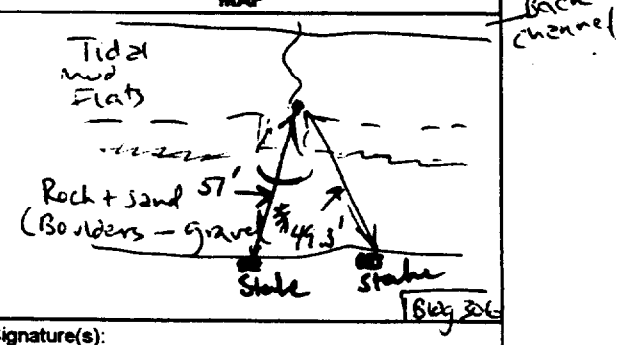
OBSERVATIONS / NOTES

- abundant mussels
  seaweed (Fucus sp.)
  few periwinkles snails
- channel: few gravel pebbles, shell, fine sand
  flats: silty sand ~~+ wood~~ TE

channel width 4 feet

p cloudy 30-40°F low tide 1735

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.: ~~GD~~ TE SDFD-121196

Signature(s):

SOIL / SEDIMENT SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Surface Soil
[ ] Subsurface Soil
[X] Sediment
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: BC-1020-SD-1296
Sample Location: Back Channel
Sampled By: GD
C.O.C. No.: Katahdin 121196
URI 121196

Type of Sample:
[X] Low Concentration
[ ] High Concentration

GRAB SAMPLE DATA

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 12-11-96			
Time: 1729	0 - 4"	Brn to Gray	Silty fine sand, shell, fine gravel
Method: Stainless Trowel			
Monitor Reading (ppm): —			

COMPOSITE SAMPLE DATA

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION

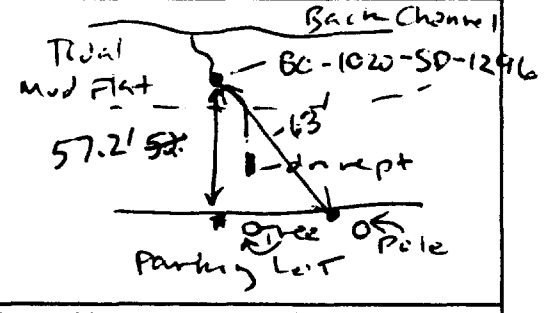
Analysis	Container Requirements	Collected	Other
			Lab
TCL PAHs + Pest/PCBs	1 x 8 oz. glass	✓	URI
TAL metals, TOC, grain size, AVS	1 x 8 oz. PE	✓	URI
CN + pH	1 x 8 oz PE	✓	Katahdin

OBSERVATIONS / NOTES

- collected from side of inlet
- Channel width ~ 1'
- mud flat = silty fine sand, mud

low tide @ ~~1753~~ 1735
pcloudy, 38-40°F

MAP



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SEEP AND SEDIMENT QA/QC SAMPLE LOG SHEETS

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[ ] Other:
[X] QA Sample Type: Field Blank

Sample ID No.: SDFB-121196 ~~SD-1096~~
Sample Location: PNSY
Sampled By: TE
C.O.C. No.: URI 121196
Katahdin 121196

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Date: 12/11/96								
Time: 2025								
Depth: —								
Method: Direct Fill								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	(Lab)	Collected
TCLPAHs + Pest / PCBs	CH_2Cl_2	1 x 4L Amber	(URI)	✓
TOTAL TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
DISSOLVED TAL METALS	HNO_3	1 x 1L PE	(URI)	X
TOC	H_2SO_4	1 x 125mL Amber	(Katahdin)	✓
BOD	—	1 x 1L PE		✓
CN	NaOH	1 x 1L PE		✓
Bromide	—	1 x 1L PE		✓
TDS, TSS	—	1 x 1L PE		✓
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE		✓

OBSERVATIONS / NOTES

~~DI H_2O (HPLC)~~ TE

HPLC H_2O

MAP

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Timothy Ge

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[ ] Other:
[X] QA Sample Type: Rinsate Blank

Sample ID No.: SDRB-121196
Sample Location: PNSY
Sampled By: JE
C.O.C. No.: URI-121196
Katahdin-121196

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Date: 12-11-96								
Time: 1949								
Depth: —								
Method: Direct Fill								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Lab	Collected
TCL Pest/PCBs + PAHs	Methylene Chloride	1x4L Amber	URI	✓
Total TAL Metals	HNO_3	1 x 1L PE	URI	✓
TOC	H_2SO_4	1 x 125mL Amber	Katahdin	✓
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE		✓
Bromide	—	1 x 1L PE		✓
TSS, TDS	—	1 x 1L PE		✓
BOD	—	1 x 1L PE		✓
CN	NaOH	1 x 1L PE		✓

OBSERVATIONS / NOTES

Equipment Rinsate Blank
- Stainless Steel Trowel

MAP

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): T Mott / JE

SEDIMENT

~~SURFACE WATER~~ SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[ ] Other:
[X] QA Sample Type: Equipment Rinsate Blank

Sample ID No.: SDRB-121396 ~~SP-1296~~
Sample Location: PNSY
Sampled By: TR
C.O.C. No.: Katahdin 121396
UKI 121396

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Date: 12-13-96								
Time: 0850								
Depth: —								
Method: Direct Fill	clear							

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	(Lab)	Collected
TCLPAHS + Pest / PCBs	CH_2Cl_2	1 x 4L Amber	(URI)	✓
TOTAL TAL METALS	HNO_3	1 x 1L PE	(URI)	✓
DISSOLVED TAL METALS	HNO_3	1 x 1L PE	(URI)	X
TOC	H_2SO_4	1 x 125mL Amber	(Katahdin)	✓
BOD	—	1 x 1L PE		✓
CN	NaOH	1 x 1L PE		✓
Bromide	—	1 x 1L PE		✓
TDS, TSS	—	1 x 1L PE		✓
pH, alkalinity, Cl, SO_4, NO_3	—	1 x 1L PE		✓

OBSERVATIONS / NOTES

Equipment Rinsate Blank - Stainless Steel Trowel

MAP

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Trent SE

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: PNSY
Project No.: 6515

[ ] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[ ] Other:
[X] QA Sample Type: Ambient Blank

Sample ID No.: SPAB-121396
Sample Location: 1017
Sampled By: TR
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA

	Color	pH	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	Salinity %	Eh mV
Date: 12-13-96								
Time: 0615								
Depth: –								
Method: Direct								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
TCL PAHs + Pest/PCB	CH_2Cl_2	1 x 4L Amber	✓

OBSERVATIONS / NOTES

- Ambient Blank
- Expose to atmosphere @ 1017

MAP

Circle if Applicable:

MS/MSD

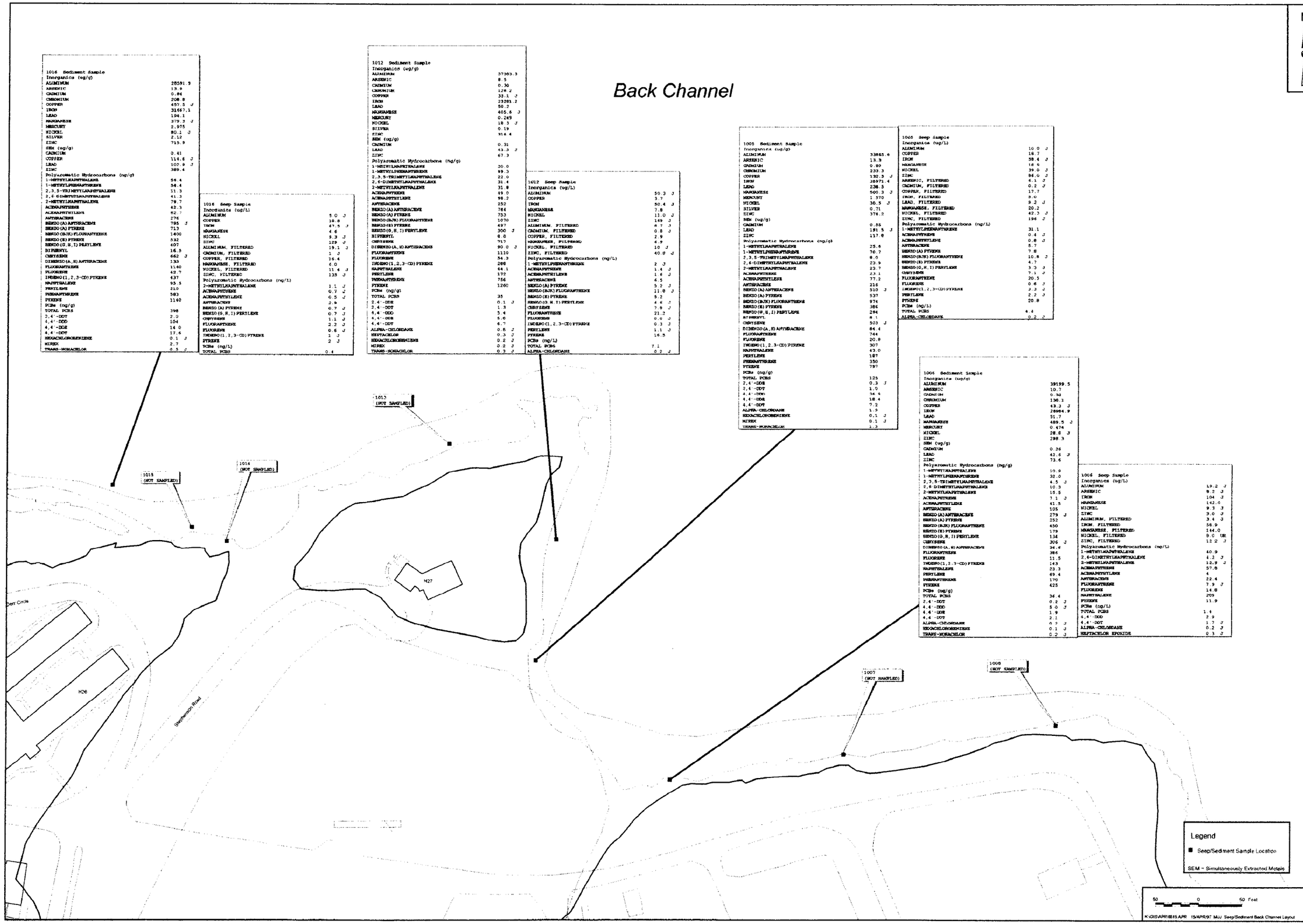
Duplicate ID No.:

Signature(s): [illegible]

Jamaica Island
Clark's Cove
Clark's Island
Bridges Street
1003 Sediment Sample
1003 Seep Sample
1003 (Dup) Seep Sample
1003 (Dup) Sediment Sample
1004.3 Sediment Sample
1004.3 Seep Sample
1004.4
(NO SEDIMENT SAMPLE WAS COLLECTED)
1004.4 Seep Sample
1004.5 Seep Sample
1004.5 Sediment Sample
1004.6
(NOT SAMPLED)
1004.7
(NOT SAMPLED)
1010
(NOT SAMPLED)
1011 Sediment Sample
1011 Seep Sample
1009
(NOT SAMPLED)
1004.2
(NOT SAMPLED)
1004.1
(NOT SAMPLED)
1001 Sediment Sample
1001 Seep Sample
1002 Sediment Sample
1002 Seep Sample
Legend
Seep/Sediment Sample Location
SEM = Simultaneously Extracted Metals
100 0 100 Feet
K:\GIS\APR\6515.APR 15/APR/97 MJJ Seep/Sediment Clark's Cove Layout
N
NORTHERN DIVISION
POSITIVE DETECTIONS IN SEEP/SEDIMENT SAMPLES - ROUND 7
CLARK'S COVE AREA (OU3)
PORTSMOUTH NAVAL SHIPYARD
KITTERY MAINE
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
REV
DESCRIPTION
PREP
BY
DATE
APPRVD
OFFICER IN CHARGE
D
PLATE 1

0538F01X

Back Channel



1016 Sediment Sample
Inorganics (ug/g)

ALUMINUM	28591.9
ARSENIC	19.9
CADMIUM	0.84
CHROMIUM	208.8
COPPER	457.5 J
IRON	31667.1
LEAD	194.1
MANGANESE	379.3 J
MERCURY	2.975
NICKEL	80.1 J
SILVER	2.12
ZINC	715.9
SEM (ug/g)	
CADMIUM	0.41
COPPER	114.6 J
LEAD	100.9 J
ZINC	389.4
Polyaromatic Hydrocarbons (ng/g)	
1-METHYLNAPHTHALENE	56.4
1-METHYLPHENANTHRENE	54.4
2,3,5-TRIMETHYLNAPHTHALENE	11.3
2,6-DIMETHYLNAPHTHALENE	41.3
2-METHYLNAPHTHALENE	79.7
ACENAPHTHENE	42.3
ACENAPHTHYLENE	82.7
ANTHRACENE	276
BENZO(A)ANTHRACENE	795 J
BENZO(A)PYRENE	713
BENZO(B/K)FLUORANTHENE	1400
BENZO(E)PYRENE	532
BENZO(G,H,I)PERYLENE	407
BIPHENYL	16.5
CHRYSENE	662 J
DIBENZO(A,H)ANTHRACENE	133
FLUORANTHENE	1140
FLUORENE	42.7
INDENO(1,2,3-CD)PYRENE	437
NAPHTHALENE	95.5
PERYLENE	210
PHENANTHRENE	583
PYRENE	1140
PCBs (ng/g)	
TOTAL PCBS	398
2,4'-DDT	2.0
4,4'-DDD	104
4,4'-DDE	14.0
4,4'-DDT	17.6
HEXACHLOROBENZENE	0.1 J
MIREX	2.7
TRANS-NONACHLOR	0.5 J

1016 Seep Sample
Inorganics (ug/L)

ALUMINUM	5.0 J
COPPER	18.8
IRON	47.5 J
MANGANESE	4.6
NICKEL	8.3 J
ZINC	129 J
ALUMINUM, FILTERED	19.1 J
CADMIUM, FILTERED	1 J
COPPER, FILTERED	16.4
MANGANESE, FILTERED	6.0
NICKEL, FILTERED	11.4 J
ZINC, FILTERED	135 J
Polyaromatic Hydrocarbons (ng/L)	
2-METHYLNAPHTHALENE	1.1 J
ACENAPHTHENE	0.7 J
ACENAPHTHYLENE	0.5 J
ANTHRACENE	2.8
BENZO(A)PYRENE	0.7 J
BENZO(G,H,I)PERYLENE	0.7 J
CHRYSENE	1.1 J
FLUORANTHENE	2.2 J
FLUORENE	0.6 J
INDENO(1,2,3-CD)PYRENE	1 J
PYRENE	2 J
PCBs (ng/L)	
TOTAL PCBS	0.4

1012 Sediment Sample
Inorganics (ug/g)

ALUMINUM	37563.3
ARSENIC	8.5
CADMIUM	0.30
CHROMIUM	128.2
COPPER	33.1 J
IRON	23281.2
LEAD	50.2
MANGANESE	405.6 J
MERCURY	0.249
NICKEL	18.3 J
SILVER	0.19
ZINC	314.4
SEM (ug/g)	
CADMIUM	0.31
LEAD	43.3 J
ZINC	67.3
Polyaromatic Hydrocarbons (ng/g)	
1-METHYLNAPHTHALENE	20.0
1-METHYLPHENANTHRENE	49.3
2,3,5-TRIMETHYLNAPHTHALENE	22.0
2,6-DIMETHYLNAPHTHALENE	31.4
2-METHYLNAPHTHALENE	31.8
ACENAPHTHENE	49.0
ACENAPHTHYLENE	98.2
ANTHRACENE	252
BENZO(A)ANTHRACENE	764
BENZO(A)PYRENE	753
BENZO(B/K)FLUORANTHENE	1070
BENZO(E)PYRENE	497
BENZO(G,H,I)PERYLENE	300 J
BIPHENYL	8.8
CHRYSENE	717
DIBENZO(A,H)ANTHRACENE	90.0 J
FLUORANTHENE	1110
FLUORENE	34.3
INDENO(1,2,3-CD)PYRENE	288
NAPHTHALENE	44.1
PERYLENE	172
PHENANTHRENE	756
PYRENE	1260
PCBs (ng/g)	
TOTAL PCBS	35
2,4'-DDE	0.1 J
2,4'-DDT	1.3
4,4'-DDD	5.4
4,4'-DDE	5.0
4,4'-DDT	6.7
ALPHA-CHLORDANE	0.6 J
HEPTACLOR	0.3 J
HEXACHLOROBENZENE	0.2 J
MIREX	0.2 J
TRANS-NONACHLOR	0.3 J

1012 Seep Sample
Inorganics (ug/L)

ALUMINUM	50.3 J
COPPER	3.7
IRON	50.4 J
MANGANESE	7.8
NICKEL	11.0 J
ZINC	149 J
ALUMINUM, FILTERED	8.7 J
CADMIUM, FILTERED	0.8 J
COPPER, FILTERED	2.9
MANGANESE, FILTERED	6.9
NICKEL, FILTERED	10 J
ZINC, FILTERED	40.8 J
Polyaromatic Hydrocarbons (ng/L)	
1-METHYLPHENANTHRENE	2 J
ACENAPHTHENE	1.4 J
ACENAPHTHYLENE	1.6 J
ANTHRACENE	4.5
BENZO(A)PYRENE	5.2 J
BENZO(B/K)FLUORANTHENE	11.0 J
BENZO(E)PYRENE	5.2
BENZO(G,H,I)PERYLENE	4.6 J
CHRYSENE	7.9 J
FLUORANTHENE	21.2
FLUORENE	0.9 J
INDENO(1,2,3-CD)PYRENE	0.3 J
PERYLENE	1.1 J
PYRENE	16.5
PCBs (ng/L)	
TOTAL PCBS	7.1
ALPHA-CHLORDANE	0.2 J

1005 Sediment Sample
Inorganics (ug/g)

ALUMINUM	33863.6
ARSENIC	13.9
CADMIUM	0.80
CHROMIUM	233.3
COPPER	132.5 J
IRON	35971.4
LEAD	238.5
MANGANESE	500.3 J
MERCURY	1.370
NICKEL	30.5 J
SILVER	0.71
ZINC	376.2
SEM (ug/g)	
CADMIUM	0.55
LEAD	181.5 J
ZINC	117.8
Polyaromatic Hydrocarbons (ng/g)	
1-METHYLNAPHTHALENE	25.6
1-METHYLPHENANTHRENE	70.7
2,3,5-TRIMETHYLNAPHTHALENE	8.5
2,6-DIMETHYLNAPHTHALENE	23.9
2-METHYLNAPHTHALENE	23.7
ACENAPHTHENE	23.1
ACENAPHTHYLENE	77.2
ANTHRACENE	216
BENZO(A)ANTHRACENE	510 J
BENZO(A)PYRENE	537
BENZO(B/K)FLUORANTHENE	974
BENZO(E)PYRENE	386
BENZO(G,H,I)PERYLENE	294
BIPHENYL	8.1
CHRYSENE	503 J
DIBENZO(A,H)ANTHRACENE	84.4
FLUORANTHENE	744
FLUORENE	20.8
INDENO(1,2,3-CD)PYRENE	307
NAPHTHALENE	43.0
PERYLENE	187
PHENANTHRENE	350
PYRENE	797
PCBs (ng/g)	
TOTAL PCBS	125
2,4'-DDE	0.3 J
2,4'-DDT	1.0
4,4'-DDD	16.4
4,4'-DDE	18.4
4,4'-DDT	7.2
ALPHA-CHLORDANE	1.9
HEXACHLOROBENZENE	0.1 J
MIREX	0.1 J
TRANS-NONACHLOR	1.3

1005 Seep Sample
Inorganics (ug/L)

ALUMINUM	10.0 J
COPPER	18.7
IRON	38.4 J
MANGANESE	18.6
NICKEL	39.0 J
ZINC	86.0 J
ARSENIC, FILTERED	6.1 J
CADMIUM, FILTERED	0.2 J
COPPER, FILTERED	17.7
IRON, FILTERED	3.0
NICKEL, FILTERED	30.5 J
LEAD, FILTERED	9.2 J
MANGANESE, FILTERED	20.2
NICKEL, FILTERED	42.3 J
ZINC, FILTERED	196 J
Polyaromatic Hydrocarbons (ng/L)	
1-METHYLPHENANTHRENE	31.1
ACENAPHTHENE	0.4 J
ACENAPHTHYLENE	0.8 J
ANTHRACENE	5.7
BENZO(A)PYRENE	7.8
BENZO(B/K)FLUORANTHENE	10.8 J
BENZO(E)PYRENE	4.7
BENZO(G,H,I)PERYLENE	3.3 J
CHRYSENE	7.1 J
FLUORANTHENE	20.5
FLUORENE	0.6 J
INDENO(1,2,3-CD)PYRENE	2.3 J
PERYLENE	2.2 J
PYRENE	20.8
PCBs (ng/L)	
TOTAL PCBS	4.4
ALPHA-CHLORDANE	0.2 J

1006 Sediment Sample
Inorganics (ug/g)

ALUMINUM	39199.5
ARSENIC	10.7
CADMIUM	0.30
CHROMIUM	136.1
COPPER	43.3 J
IRON	28984.9
LEAD	51.7
MANGANESE	489.5 J
MERCURY	0.474
NICKEL	28.8 J
ZINC	298.3
SEM (ug/g)	
CADMIUM	0.26
LEAD	42.6 J
ZINC	73.6
Polyaromatic Hydrocarbons (ng/g)	
1-METHYLNAPHTHALENE	10.9
1-METHYLPHENANTHRENE	32.0
2,3,5-TRIMETHYLNAPHTHALENE	4.5 J
2,6-DIMETHYLNAPHTHALENE	10.3
2-METHYLNAPHTHALENE	15.5
ACENAPHTHENE	7.1 J
ACENAPHTHYLENE	41.5
ANTHRACENE	105
BENZO(A)ANTHRACENE	279 J
BENZO(A)PYRENE	252
BENZO(B/K)FLUORANTHENE	450
BENZO(E)PYRENE	179
BENZO(G,H,I)PERYLENE	134
CHRYSENE	306 J
DIBENZO(A,H)ANTHRACENE	34.4
FLUORANTHENE	386
FLUORENE	11.5
INDENO(1,2,3-CD)PYRENE	143
NAPHTHALENE	23.3
PERYLENE	69.4
PHENANTHRENE	170
PYRENE	425
PCBs (ng/g)	
TOTAL PCBS	36.4
2,4'-DDT	0.2 J
4,4'-DDD	5.0 J
4,4'-DDE	1.9
4,4'-DDT	2.1
ALPHA-CHLORDANE	0.9 J
HEXACHLOROBENZENE	0.1 J
TRANS-NONACHLOR	0.2 J

1006 Seep Sample
Inorganics (ug/L)

ALUMINUM	19.2 J
ARSENIC	9.2 J
IRON	104 J
MANGANESE	142.0
NICKEL	9.3 J
ZINC	3.0 J
ALUMINUM, FILTERED	3.4 J
IRON, FILTERED	56.9
MANGANESE, FILTERED	144.0
NICKEL, FILTERED	8.0 UR
ZINC, FILTERED	13.2 J
Polyaromatic Hydrocarbons (ng/L)	
1-METHYLNAPHTHALENE	40.9
2,6-DIMETHYLNAPHTHALENE	4.2 J
2-METHYLNAPHTHALENE	12.9 J
ACENAPHTHENE	57.8
ACENAPHTHYLENE	4
ANTHRACENE	22.4
FLUORANTHENE	7.9 J
FLUORENE	14.8
NAPHTHALENE	209
PYRENE	11.9
PCBs (ng/L)	
TOTAL PCBS	1.4
4,4'-DDD	2.9
4,4'-DDT	1.7 J
ALPHA-CHLORDANE	0.2 J
HEPTACHLOR EPOXIDE	0.3 J

REV	DESCRIPTION	PREP BY	DATE	APPRVD

DRAWN BY: DR
CHK: E.K.
DATE: 4/16/97
SUBMITTED BY:
APPROVED:
FOR:
DM:
OFFICER IN CHARGE
APPROVED

Brown & Root Environmental

NAVAL FACILITIES ENGINEERING COMMAND
PWD KITTERY PA

NORTHERN DIVISION

FOSITIVE DETECTIONS IN SEEP/SEDIMENT SAMPLES - ROUND 7
IR PROGRAM SITE 15 - BACK CHANNEL
PORTSMOUTH NAVAL SHIPYARD
KITTERY MAINE

DEPARTMENT OF THE NAVY
NAVAL BASE

NORTHDIV FOR COMMANDER,NAVFAC

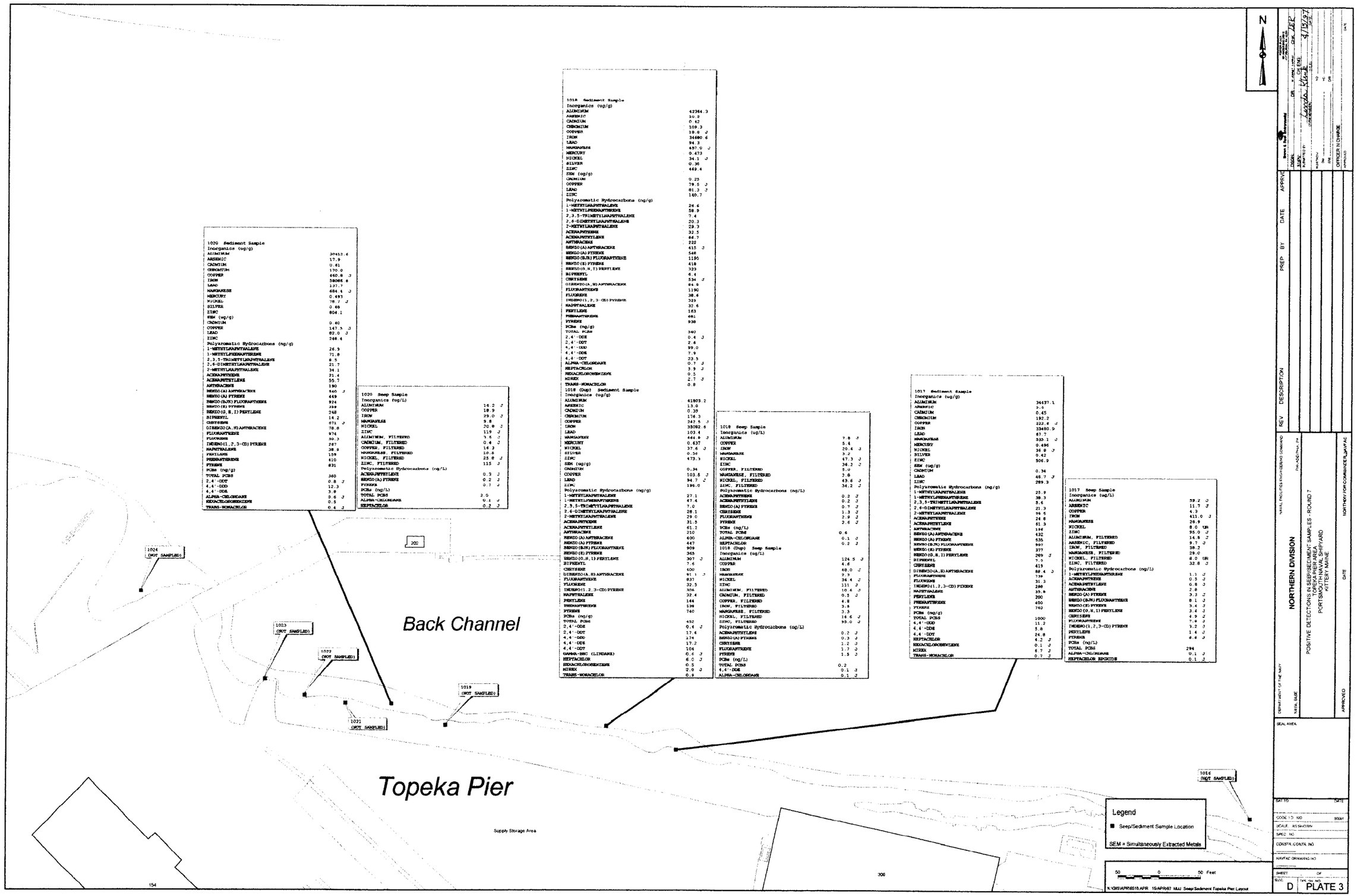
DATE

APPROVED

REAL AREA

SAT TO: DATE
CODE I.D. NO. 8001
SCALE AS SHOWN
SPEC. NO.
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
SHEET OF
SIZE D DR. SH. NO. PLATE 2

0538 F02X



1020 Sediment Sample

Inorganics (ug/g)

ALUMINUM	30412.6
ARSENIC	17.9
CADMIUM	0.61
CHROMIUM	170.0
COPPER	460.8 J
IRON	58086.6
LEAD	137.7
MANGANESE	684.4 J
MERCURY	0.493
NICKEL	78.7 J
SILVER	0.46
ZINC	804.1
SEM (ug/g)	
CADMIUM	0.40
COPPER	147.5 J
LEAD	82.0 J
ZINC	248.4

Polyaromatic Hydrocarbons (ng/g)

1-METHYLNAPHTHALENE	26.9
1-METHYLPHENANTHRENE	71.8
2,3,5-TRIMETHYLNAPHTHALENE	8.5
2,6-DIMETHYLNAPHTHALENE	21.7
2-METHYLNAPHTHALENE	34.1
ACENAPHTHENE	71.4
ACENAPHTHYLENE	55.7
ANTHRACENE	190
BENZO(A)ANTHRACENE	540 J
BENZO(A)PYRENE	449
BENZO(B,K)FLUORANTHENE	924
BENZO(E)PYRENE	289
BENZO(G,H,I)PERYLENE	248
BIPHENYL	14.2
CHRYSENE	671 J
DIBENZO(A,H)ANTHRACENE	78.8
FLUORANTHENE	974
FLUORENE	30.3
INDENO(1,2,3-CD)PYRENE	287
NAPHTHALENE	38.9
PERYLENE	159
PHENANTHRENE	410
PYRENE	831
PCBs (ng/g)	
TOTAL PCBS	360
2,4'-DDT	0.8 J
4,4'-DDD	12.3
4,4'-DDE	3.8
ALPHA-CHLORDANE	0.6 J
HEXACHLOROBENZENE	0.5
TRANS-NONACHLOR	0.4 J

1020 Seep Sample

Inorganics (ug/L)

ALUMINUM	16.2 J
COPPER	18.9
IRON	29.0 J
MANGANESE	9.8
NICKEL	20.8 J
ZINC	119 J
ALUMINUM, FILTERED	3.5 J
CADMIUM, FILTERED	0.4 J
COPPER, FILTERED	16.3
MANGANESE, FILTERED	10.8
NICKEL, FILTERED	25.8 J
ZINC, FILTERED	115 J

Polyaromatic Hydrocarbons (ng/L)

ACENAPHTHYLENE	0.3 J
BENZO(A)PYRENE	0.2 J
PYRENE	0.7 J
PCBs (ng/L)	
TOTAL PCBS	2.0
ALPHA-CHLORDANE	0.1 J
HEPTACHLOR	0.2 J

1018 Sediment Sample

Inorganics (ug/g)

ALUMINUM	42364.3
ARSENIC	10.8
CADMIUM	0.42
CHROMIUM	109.3
COPPER	19.0 J
IRON	34680.6
LEAD	94.3
MANGANESE	457.0 J
MERCURY	0.473
NICKEL	34.1 J
SILVER	0.36
ZINC	469.4
SEM (ug/g)	
CADMIUM	0.25
COPPER	78.6 J
LEAD	81.3 J
ZINC	140.7

Polyaromatic Hydrocarbons (ng/g)

1-METHYLNAPHTHALENE	26.6
1-METHYLPHENANTHRENE	58.9
2,3,5-TRIMETHYLNAPHTHALENE	7.4
2,6-DIMETHYLNAPHTHALENE	20.3
2-METHYLNAPHTHALENE	29.3
ACENAPHTHENE	32.5
ACENAPHTHYLENE	66.7
ANTHRACENE	222
BENZO(A)ANTHRACENE	415 J
BENZO(A)PYRENE	548
BENZO(B,K)FLUORANTHENE	1190
BENZO(E)PYRENE	418
BENZO(G,H,I)PERYLENE	323
BIPHENYL	6.4
CHRYSENE	534 J
DIBENZO(A,H)ANTHRACENE	84.6
FLUORANTHENE	1190
FLUORENE	38.6
INDENO(1,2,3-CD)PYRENE	329
NAPHTHALENE	32.6
PERYLENE	163
PHENANTHRENE	681
PYRENE	938
PCBs (ng/g)	
TOTAL PCBS	340
2,4'-DDE	0.4 J
2,4'-DDT	2.6
4,4'-DDD	99.0
4,4'-DDE	7.9
4,4'-DDT	23.5
ALPHA-CHLORDANE	0.7 J
HEPTACHLOR	3.9 J
HEXACHLOROBENZENE	0.5
MIREX	2.7 J
TRANS-NONACHLOR	0.8

1018 (Dup) Sediment Sample

Inorganics (ug/g)

ALUMINUM	41803.2
ARSENIC	13.0
CADMIUM	0.39
CHROMIUM	176.3
COPPER	242.5 J
IRON	38092.6
LEAD	103.4
MANGANESE	444.9 J
MERCURY	0.637
NICKEL	37.6 J
SILVER	0.56
ZINC	473.3
SEM (ug/g)	
CADMIUM	0.34
COPPER	103.5 J
LEAD	94.7 J
ZINC	196.0

Polyaromatic Hydrocarbons (ng/g)

1-METHYLNAPHTHALENE	27.1
1-METHYLPHENANTHRENE	47.4
2,3,5-TRIMETYLNAPHTHALENE	7.0
2,6-DIMETHYLNAPHTHALENE	28.1
2-METHYLNAPHTHALENE	29.0
ACENAPHTHENE	31.5
ACENAPHTHYLENE	61.2
ANTHRACENE	210
BENZO(A)ANTHRACENE	400
BENZO(A)PYRENE	447
BENZO(B,K)FLUORANTHENE	909
BENZO(E)PYRENE	365
BENZO(G,H,I)PERYLENE	307 J
BIPHENYL	7.6
CHRYSENE	400
DIBENZO(A,H)ANTHRACENE	91.1 J
FLUORANTHENE	837
FLUORENE	32.5
INDENO(1,2,3-CD)PYRENE	306
NAPHTHALENE	32.4
PERYLENE	144
PHENANTHRENE	539
PYRENE	740
PCBs (ng/g)	
TOTAL PCBS	452
2,4'-DDE	0.4 J
2,4'-DDT	17.4
4,4'-DDD	174
4,4'-DDE	17.2
4,4'-DDT	104
GAMMA-BHC (LINDANE)	0.6 J
HEPTACHLOR	6.0 J
HEXACHLOROBENZENE	0.5
MIREX	2.0 J
TRANS-NONACHLOR	0.8

1018 Seep Sample

Inorganics (ug/L)

ALUMINUM	7.8 J
COPPER	5.4
IRON	20.4 J
MANGANESE	3.2
NICKEL	47.3 J
ZINC	36.2 J
COPPER, FILTERED	5.0
MANGANESE, FILTERED	2.8
NICKEL, FILTERED	43.6 J
ZINC, FILTERED	34.2 J

Polyaromatic Hydrocarbons (ng/L)

ACENAPHTHENE	0.2 J
ACENAPHTHYLENE	0.2 J
BENZO(A)PYRENE	0.7 J
CHRYSENE	1.3 J
FLUORANTHENE	2.9 J
PYRENE	2.6 J
PCBs (ng/L)	
TOTAL PCBS	0.6
ALPHA-CHLORDANE	0.1 J
HEPTACHLOR	0.2 J

1018 (Dup) Seep Sample

Inorganics (ug/L)

ALUMINUM	124.5 J
COPPER	4.6
IRON	48.0 J
MANGANESE	9.9
NICKEL	36.4 J
ZINC	111 J
ALUMINUM, FILTERED	10.6 J
CADMIUM, FILTERED	0.5 J
COPPER, FILTERED	4.8
IRON, FILTERED	3.8
MANGANESE, FILTERED	3.3
NICKEL, FILTERED	14.6 J
ZINC, FILTERED	95.0 J

Polyaromatic Hydrocarbons (ng/L)

ACENAPHTHYLENE	0.2 J
BENZO(A)PYRENE	0.3 J
CHRYSENE	1.2 J
FLUORANTHENE	1.7 J
PYRENE	1.5 J
PCBs (ng/L)	
TOTAL PCBS	0.2
4,4'-DDE	0.1 J
ALPHA-CHLORDANE	0.1 J

1017 Sediment Sample

Inorganics (ug/g)

ALUMINUM	34437.1
ARSENIC	9.6
CADMIUM	0.45
CHROMIUM	192.2
COPPER	222.6 J
IRON	33480.9
LEAD	81.7
MANGANESE	533.1 J
MERCURY	0.496
NICKEL	36.8 J
SILVER	0.42
ZINC	506.9
SEM (ug/g)	
CADMIUM	0.34
LEAD	48.7 J
ZINC	289.3

Polyaromatic Hydrocarbons (ng/g)

1-METHYLNAPHTHALENE	25.9
1-METHYLPHENANTHRENE	38.3
2,3,5-TRIMETHYLNAPHTHALENE	8.6
2,6-DIMETHYLNAPHTHALENE	21.3
2-METHYLNAPHTHALENE	26.5
ACENAPHTHENE	24.6
ACENAPHTHYLENE	61.3
ANTHRACENE	194
BENZO(A)ANTHRACENE	432
BENZO(A)PYRENE	535
BENZO(B,K)FLUORANTHENE	967
BENZO(E)PYRENE	377
BENZO(G,H,I)PERYLENE	289 J
BIPHENYL	7.3
CHRYSENE	419
DIBENZO(A,H)ANTHRACENE	88.4 J
FLUORANTHENE	739
FLUORENE	31.3
INDENO(1,2,3-CD)PYRENE	298
NAPHTHALENE	35.8
PERYLENE	200
PHENANTHRENE	400
PYRENE	740
PCBs (ng/g)	
TOTAL PCBS	1000
4,4'-DDD	11.2
4,4'-DDE	5.8
4,4'-DDT	24.8
HEPTACHLOR	4.2 J
HEXACHLOROBENZENE	0.1 J
MIREX	6.7 J
TRANS-NONACHLOR	0.7 J

1017 Seep Sample

Inorganics (ug/L)

ALUMINUM	34437.1
ARSENIC	9.6
CADMIUM	0.45
CHROMIUM	192.2
COPPER	222.6 J
IRON	33480.9
LEAD	81.7
MANGANESE	533.1 J
MERCURY	0.496
NICKEL	36.8 J
SILVER	0.42
ZINC	506.9
SEM (ug/g)	
CADMIUM	0.34
LEAD	48.7 J
ZINC	289.3

Polyaromatic Hydrocarbons (ng/g)

1-METHYLNAPHTHALENE	25.9
1-METHYLPHENANTHRENE	38.3
2,3,5-TRIMETHYLNAPHTHALENE	8.6
2,6-DIMETHYLNAPHTHALENE	21.3
2-METHYLNAPHTHALENE	26.5
ACENAPHTHENE	24.6
ACENAPHTHYLENE	61.3
ANTHRACENE	194
BENZO(A)ANTHRACENE	432
BENZO(A)PYRENE	535
BENZO(B,K)FLUORANTHENE	967
BENZO(E)PYRENE	377
BENZO(G,H,I)PERYLENE	289 J
BIPHENYL	7.3
CHRYSENE	419
DIBENZO(A,H)ANTHRACENE	88.4 J
FLUORANTHENE	739
FLUORENE	31.3
INDENO(1,2,3-CD)PYRENE	298
NAPHTHALENE	35.8
PERYLENE	200
PHENANTHRENE	400
PYRENE	740
PCBs (ng/g)	
TOTAL PCBS	1000
4,4'-DDD	11.2
4,4'-DDE	5.8
4,4'-DDT	24.8
HEPTACHLOR	4.2 J
HEXACHLOROBENZENE	0.1 J
MIREX	6.7 J
TRANS-NONACHLOR	0.7 J

ALUMINUM	59.2 J
ARSENIC	11.7 J
COPPER	4.3
IRON	411.0 J
MANGANESE	28.9
NICKEL	8.0 UR
ZINC	95.0 J
ALUMINUM, FILTERED	14.5 J
ARSENIC, FILTERED	9.7 J
IRON, FILTERED	38.2
MANGANESE, FILTERED	29.0
NICKEL, FILTERED	8.0 UR
ZINC, FILTERED	32.8 J

Polyaromatic Hydrocarbons (ng/L)

1-METHYLPHENANTHRENE	1.1 J
ACENAPHTHENE	0.5 J
ACENAPHTHYLENE	0.8 J
ANTHRACENE	2.8
BENZO(A)PYRENE	3.3 J
BENZO(B,K)FLUORANTHENE	8.1 J
BENZO(E)PYRENE	3.4 J
BENZO(G,H,I)PERYLENE	3.4 J
CHRYSENE	4.9 J
FLUORANTHENE	7.9 J
INDENO(1,2,3-CD)PYRENE	3.2 J
PERYLENE	1.4 J
PYRENE	6.6 J
PCBs (ng/L)	
TOTAL PCBS	294
ALPHA-CHLORDANE	0.1 J
HEPTACHLOR EPOXIDE	0.1 J

REV	DESCRIPTION	PREP BY	DATE	APPRVD

NAVAL FACILITIES ENGINEERING COMMAND
FYA-1997/Phase 2A

DEPARTMENT OF THE NAVY
NAVAL BASE
NORTHERN DIVISION

POSITIVE DETECTIONS IN SEEP/SEDIMENT SAMPLES - ROUND 7
TOPEKA PIER AREA
PORTSMOUTH NAVAL SHIPYARD
KITTERY MAINE

APPROVED
DATE
NORTHDIV FOR COMMANDER, NAVFAC

SEAL AREA

SAT/10 DATE
COOR. I.D. NO. 50061
SCALE: AS SHOWN
SPEC. NO.
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
SHEET OF
SIZE D TPK. DW. NO. PLATE 3

0538F03X