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C-NAVY-09-04-1757W

September 29, 2004

Project Number N5152

Mr. Curtis Frye
Remedial Project Manager
EFA Northeast, Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop 82
Lester, Pennsylvania 19113

Reference: CLEAN Contract No. N62467-94-D-0888
Contract Task Order No. 0842

Subject: Results of Field Sampling Effort – May and July 2004
Coddington Cove Rubble Fill Area, SA-04
Naval Station Newport, Newport, Rhode Island

Dear Mr. Frye:

Enclosed for your information, you will find four copies of the results of the sampling effort performed at the site referenced above during May and July 2004. This sampling effort was intended to be an accelerated "first look" at this site, being conducted to help prioritize work at NAVSTA sites. Sampling and analysis was conducted in accordance with the *Technical Memorandum, Record Review and Field Sampling Plan for the Coddington Cove Rubble Fill Area* (TtNUS, May 2004). The following items are provided as attachments:

- Summary tables of groundwater, soil, and QA/QC analytical results. Soil and groundwater concentrations are compared to EPA Region 9 PRGs for residential soil and MCLs, respectively.
- A map showing test pit and surface soil sampling locations,
- Field Modification Record detailing why additional sampling was necessary, and
- Data validation memoranda, with results for all parameters measured.

A review of the groundwater analytical results indicates some elevated levels of arsenic and lead. It should be noted, however that these samples were collected by dipping a sample jar into the water accumulated in the test pits, and were not filtered. It is therefore likely that the levels of arsenic and lead could be due to the presence of suspended particles in the sample. Two volatile organic compounds (VOCs), tetrachloroethene and 112-trichloro-122trifluoroethane, were detected at trace concentrations in TP02 located adjacent to Coddington Highway. No other organic compounds were detected in the groundwater samples collected.

Soil analytical results indicate presence of VOCs detected at low concentrations. None of the VOC concentrations exceed Region 9 PRGs. Semivolatile organic compounds (SVOCs) were also detected in soil. Polynuclear aromatic hydrocarbons (PAHs) were detected at concentrations above Region 9 PRGs for residential soil. The highest PAH concentrations were found in surface soil samples SS03 and SS04, which were collected from the wetland area on the eastern portion of the site immediately downgradient of a large paved area adjacent to building 47. Runoff from this paved area and from stormwater drainage to this wetland has likely transported PAHs to surface soils in this portion of the site. A sample

from test pit 7 from 2 feet to 4 feet below ground surface also showed some slightly elevated concentrations of PAHs. Large pieces of asphalt, noted on the test pit log, are likely to be contributing to the presence of PAHs in this location. Pesticides were detected in some of the surface soil and test pit samples, however, concentrations were low. Only the dieldrin concentration in surface soil sample SS-01 exceeded the Region 9 PRG. PCBs were detected at low concentrations in samples collected throughout the property. Analysis of samples from test pit 7 indicated Aroclor-1260 at concentrations slightly higher than the Region 9 PRG. Gasoline range organics (GRO) were only detected in one sample at approximately 10 feet below ground surface at test pit 5. The diesel range organics (DRO) from the same sample were comparatively low. The highest DRO concentrations were found in surface soil samples SS03 and SS04, affected by stormwater drainage.

Metals were detected in soils throughout the site however, only concentrations of arsenic, iron and manganese were higher than their respective Region 9 PRGs. Iron was detected in most samples at concentrations only slightly higher than the Region 9 PRG, while manganese was only found at concentrations higher than the Region 9 PRG in two surface soil samples. Arsenic concentrations exceeded the Region 9 PRG of 0.39 milligrams per kilogram (mg/kg) in every sample. Concentrations ranged from 4.1 mg/kg to 17.7 mg/kg with a median concentration of 9.4 mg/kg. Elevated iron and manganese concentrations could be due to the presence of extensive rubble fill debris found throughout the site including concrete, asphalt metal, slate, wood, brush, and ash. Refer to the *Technical Memorandum, Record Review and Field Sampling Plan for Coddington Cove Rubble Fill Area, Naval Station Newport*, TtNUS May 2004, for additional site background information. Elevated arsenic concentrations in soils at this site are consistent with those found at other sites throughout Naval Station Newport.

As noted by the distribution list below, this document has been provided to the IR Program group for their information as well. Although it is provided as a "Draft", we do not anticipate a technical review or comments at this time.

If you have any questions regarding this material, please do not hesitate to contact myself or Deb Chisholm, here in this office.

Very truly yours,

Stephen S. Parker, LSP
Project Manager

SSP/rp

Attachment

c: K. Keckler, USEPA (w/attach. - 3)
P. Kulpa, RIDEM (w/attach. - 4)
C. Mueller, NAVSTA (w/attach. - 2)
J. Stump, Gannett Fleming (w/attach. - 2)
Public Repositories c/o C. Mueller, NAVSTA (w/attach. – 3)
NAVSTA RAB, c/o C. Mueller, NAVSTA (w/attach. – 4 CD ROM)
J. Trepanowski/G. Glenn, TtNUS (w/o attach.)
D. Chisholm, TtNUS (w/attach. – 1)
File N5152-3.2 (w/o attach.); File N5152-8.0 (w/attach.)

ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
GROUNDWATER FROM TEST PITS
CODDINGTON COVE RUBBLE FILL AREA
NEWPORT, RHODE ISLAND

Sample Number		CCRF-GW-TP01		CCRF-GW-TP02		CCRF-GW-TP03		CCRF-GW-TP04		CCRF-A-DP01		CCRF-GW-TP05		CCRF-GW-TP08	
Sample Location		TP01		TP02		TP03		TP04		TP04		TP05		TP08	
Date Sampled		5/18/2004		5/18/2004		5/19/2004		5/19/2004		5/19/2004		5/19/2004		5/20/2004	
QC Identifier	MCL	None		None		None		Field Dup. CCRF-GW-TP04		Field Dup CCRF-GW-TP04		None		None	
Volatile Organic Analysis (UG/L)															
1,1,2-Trichloro-1,2,2-trifluoroethane		5	U	11		5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	5	5	U	2	J	5	U	5	U	5	U	5	U	5	U
TAL Metal Analysis (UG/L)															
Aluminum		26200		10800		15600		11000		13200		16000		41100	
Arsenic	10	40.9		15.3		15.0		17.3		18.9		36.4		36.9	
Barium	2000	102	J	58 6	J	49 1	J	60 2	J	64 5	J	85 8	J	183	J
Calcium		41300		40100		83000		67300		67100		35800		123000	
Chromium	100	30 3		13 6		13 5		0 40	U	0 40	U	5 9		34 8	
Cobalt		23 0		15 7		30 3		14 7		15 6		26 2		46 6	
Copper	1300	58 9	U	34 9	U	39 7	U	15 4	U	16 0	U	38 0	U	124	
Iron		54600		26700		33800		62300		64200		83100		82800	
Lead	15	23.4		13 8		76.0		21.6		26.7		38.9		291	
Magnesium		18800		14900		12300		14000		14300		13400		18100	
Manganese		948		446		2220		5680		5640		5140		3980	
Mercury	2	0 13	U	0 14	U	0 14	U	0 13	U	0 13	U	0 14	U	0 35	
Nickel		53 6	J	28 6	J	29 2	J	0 53	UJ	2 7	UJ	15 2	J	60 2	J
Potassium		2550		1950		4660		2380		2520		2110		5760	
Selenium	50	6 8		4 0	U	4 0	U	4 0	U	4.0	U	5 2		4 0	U
Sodium		90600		89500		17700		16800		17100		32600		15700	
Vanadium		33 9	J	14 7	UJ	21 0	J	19 7	J	22.6	J	26 6	J	71 0	J
Zinc		118		87 5		96 0		37 8		39 2		68 0		284	

Black Background - Criteria Exceeded, U - Not detected, UJ - Detection limit approximate, J - Quantitation approximate,
R - Rejected, NA - Not Analyzed, * - From dilution analysis

ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
SURFACE SOIL AND TEST PIT SOIL SAMPLES
CODDINGTON COVE RUBBLE FILL AREA
NEWPORT, RHODE ISLAND

Sample Number		CCRF-S-SS01-0001		CCRF-S-SS02-0001		CCRF-S-SS03-0001		CCRF-S-SS04-0001		CCRF-S-SS05-0001		CCRF-S-SS06-0001		CCRF-S-TP01-0010		CCRF-S-TP02-0010		CCRF-S-DP01		CCRF-S-TP03-0010		CCRF-S-TP04-0010	
Sample Location		SS01		SS02		SS03		SS04		SS05		SS06		TP01		TP02		TP03		TP03		TP04	
Date Sampled		7/28/2004		7/28/2004		7/28/2004		7/28/2004		7/28/2004		7/28/2004		5/18/2004		5/18/2004		5/19/2004		5/19/2004		5/19/2004	
Interval		0 0-1 0		0 0-1 0		0 0-1 0		0 0-1 0		0 0-1 0		0 0-1 0		0 0-8 0		0 0-1 0		0 0-0 0		0 0-10 0		0 0-10 0	
QC Identifier	Region 9 PRG - Residential Soil_2002	None		Field Dup CCRF-S-SS02-0001		None		None		None		None		None		None		Field Dup CCRF-S-TP03-0010		Field Dup CCRF-S-TP03-0010		None	
Volatile Organic Analysis (UG/KG)																							
1,4-Dichlorobenzene	3400	40	UJ	23	UJ	15	UJ	11	UJ	8	UJ	4	J	6	U	11	U	7	U	9	U	8	U
Acetone	1600000	1100	JEB	1800	JEB	29	JEB	30	JEB	40	JEB	130	JEB	6	U	11	U	19	JEB	14	EB	35	EB
Benzene	600	19	J	23	U	15	U	11	UJ	8	U	16	U	6	U	11	U	7	U	9	U	8	U
Chlorobenzene	150000	40	UJ	23	UJ	15	UJ	2	J	3	J	5	J	6	U	11	U	7	U	9	U	8	U
Chloroform	3600	40	U	23	U	15	U	11	UJ	8	U	16	U	6	U	11	U	7	U	9	U	8	U
Ethylbenzene	8900	12	J	23	UJ	15	UJ	11	UJ	8	U	16	UJ	6	U	11	U	7	U	9	U	8	U
Methylene Chloride	9100	10	J	23	U	15	U	2	J	8	U	16	U	6	U	11	U	10	UJ	10	U	11	U
Tetrachloroethene	1500	40	UJ	23	UJ	15	UJ	11	UJ	8	U	16	UJ	6	U	21		7	U	9	U	8	U
Semivolatile Organic Analysis (UG/KG)																							
Acenaphthene	3700000	690	U	700	UJ	81	J	600	UJ	510	U	540	U	370	U	440	U	490	U	530	U	440	U
Acenaphthylene	56000	680	U	700	UJ	78	J	160	J	510	U	530	U	370	U	440	U	480	U	520	U	430	U
Anthracene	22000000	680	U	700	UJ	270	J	260	J	510	U	530	U	370	U	440	U	480	U	520	U	430	U
Benzaldehyde	6100000	160	JEB	700	UJ	480	UJ	120	JEB	73	JEB	170	JEB	370	UJ	440	UJ	480	UJ	520	UJ	430	UJ
Benzo(a)anthracene	620	81	J	700	UJ	910		1400		510	U	180	J	370	U	140	J	480	UJ	150	J	130	J
Benzo(a)pyrene	62	92	J	700	UJ	900		1700		510	U	190	J	370	U	99	J	480	U	98	J	84	J
Benzo(b)fluoranthene	620	120	J	700	UJ	1200		2400		60	J	290	J	370	U	110	J	480	U	140	J	120	J
Benzo(g,h,i)perylene	2300000	94	J	700	UJ	670		1400		510	U	160	J	370	U	440	U	480	U	520	U	430	U
Benzo(k)fluoranthene	6200	680	U	700	UJ	560		1400		510	U	140	J	370	U	58	J	480	U	54	J	430	U
bis(2-Ethylhexyl)phthalate	35000	680	U	700	UJ	700		2300		510	U	530	U	370	U	440	U	520	U	520	U	430	U
Butylbenzylphthalate	12000000	680	U	700	UJ	480	U	150	J	510	U	530	U	370	U	440	U	480	U	520	U	430	U
Carbazole	24000	680	U	700	UJ	170	J	190	J	510	U	530	U	370	U	440	U	480	U	520	U	430	U
Chrysene	62000	130	J	700	UJ	1300		2300		56	J	260	J	370	U	220	J	480	U	280	J	180	J
Dibenzo(a,h)anthracene	62	680	U	700	UJ	150	J	360	J	510	U	530	U	370	U	440	U	480	U	520	U	430	U
Di-n-octylphthalate	2400000	680	U	700	UJ	480	U	130	J	510	U	530	U	370	UJ	440	UJ	480	UJ	520	UJ	430	UJ
Fluoranthene	2300000	150	J	700	UJ	2100		3300		74	J	360	J	370	U	220	J	230	J	240	J	220	J
Fluorene	2700000	680	U	700	UJ	96	J	72	J	510	U	530	U	370	U	440	U	480	U	520	U	430	U
Indeno(1,2,3-cd)pyrene	620	680	U	700	UJ	570		1200		510	U	130	J	370	U	440	U	480	U	520	U	430	U
Phenanthrene	22000000	75	J	700	UJ	1100		1200		510	U	190	J	370	U	170	J	480	U	130	J	150	J
Pyrene	2300000	140	J	700	UJ	1600		2800		76	J	380	J	38	J	270	J	320	J	400	J	260	J
Pesticide Analysis (UG/KG)																							
4,4'-DDD	2400	6 8	U	7 0	U	4 6	U	15	J	5 0	U	11		3 7	U	4 4	U	4 8	U	5 2	U	4 3	U
4,4'-DDE	1700	6 8	U	7 0	U	4 6	U	6 0	U	5 0	U	5 3	U	3 7	U	20		6 0		7 1		4 3	U
4,4'-DDT	1700	7 6		7 0	U	4 6	U	5 8	J	5 0	U	5 3	U	3 7	U	10		4 8	U	5 2	U	6 8	
Aldrin	29	24		3 6	U	2 4	U	11	J	2 6	U	2 7	U	1 9	U	2 2	U	2 5	U	2 7	U	2 2	U
alpha-Chlordane	1600	3 5	U	3 6	U	2 4	U	3 1	UJ	2 6	U	2 7	U	1 9	U	2 2	U	2 5	U	2 7	U	2 2	U
Dieldrin	30	50		23		4 6	U	6 0	U	5 0	U	5 3	U	3 7	U	4 4	U	4 8	U	5 2	U	4 3	U
Endrin Aldehyde	18000	6 8	U	7 0	U	4 6	U	6 0	UJ	5 0	U	5 3	U	3 7	U	7 3		4 8	U	5 2	U	4 3	U
gamma-Chlordane	1600	3 5	U	3 6	U	2 4	U	3 1	UJ	2 6	U	2 7	U	1 9	U	2 2	U	2 5	U	2 7	U	2 2	U
Methoxychlor	310000	35	U	36	U	24	U	31	U	26	U	27	U	19		22	U	25	UJ	98	J	22	U
PCB Analysis (UG/KG)																							
Aroclor-1016	3900	68	U	70	U	46	U	60	UJ	50	U	57	U	37	U	44	J	48	U	52	U	43	U
Aroclor-1254	220	68	U	70	U	66		120		50	U	57	U	37	U	44	U	48	U	52	U	43	U
Aroclor-1260	220	68	U	70	U	46	U	60	UJ	50	U	57	U	37	U	210	J	48	U	52	U	91	
Gasoline Range Organic Analysis (UG/KG)																							
Gasoline Range Organics		100	UJ	100	UJ	72	UJ	87	UJ	78	UJ	160	UJ	2500	U	4900	U	4200		4500	U	3700	U
Diesel Range Organic Analysis (MG/KG)																							
Diesel Range Organics		47		75		670		730		18	U	63		13	U	240		27		33		41	
TAL Metal Analysis (MG/KG)																							
Aluminum	76000	14500		14100		4490		11500		12700		19600		11400		55400		12400		15700		12000	
Antimony	31	0 95	UJ	1 5	UJ	0 26	UJ	0 42	UJ		R	0 56	UJ	0 15	UJ	3 2	J	0 21	UJ	0 23	UJ	0 19	UJ
Arsenic	0 39	10 5	J	9 8	J	4.1	J	16 4	J	8.9	J	16.0	J	14.8	J	6 2	J	8.1	J	11.7	J	6.9	J
Barium	5400	48 1	J	65 6	J	19 9	J	64 3	J	42 5	J	76 6	J	22 5	J	391		36 9		43 5		26 0	

Black Background - Criteria Exceeded, U - Not detected, UJ - Detection limit approximate, J - Quantitation approximate,
R - Rejected, NA - Not Analyzed, * - From dilution analysis

ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
SURFACE SOIL AND TEST PIT SOIL SAMPLES
CODDINGTON COVE RUBBLE FILL AREA
NEWPORT, RHODE ISLAND

Sample Number		CCRF-S-SS01-0001		CCRF-S-SS02-0001		CCRF-S-SS03-0001		CCRF-S-SS04-0001		CCRF-S-SS05-0001		CCRF-S-SS06-0001		CCRF-S-TP01-0010		CCRF-S-TP02-0010		CCRF-S-DP01		CCRF-S-TP03-0010		CCRF-S-TP04-0010	
Sample Location		SS01		SS02		SS03		SS04		SS05		SS06		TP01		TP02		TP03		TP03		TP04	
Date Sampled		7/28/2004		7/28/2004		7/28/2004		7/28/2004		7/28/2004		7/28/2004		5/18/2004		5/18/2004		5/19/2004		5/19/2004		5/19/2004	
Interval		0 0-1 0		0 0-1 0		0 0-1 0		0 0-1 0		0 0-1 0		0 0-1 0		0 0-8 0		0 0-1 0		0 0-0 0		0 0-10 0		0 0-10 0	
QC Identifier	Region 9 PRG - Residential Soil_2002	None		Field Dup CCRF-S-SS02-0001		None		None		None		None		None		None		Field Dup CCRF-S-TP03-0010		Field Dup CCRF-S-TP03-0010		None	
Beryllium	150	1 1	J	1 1	J	0 62	J	0 97	J	1 0	J	1 5	J	0 49		0 61		0 67		0 83		0 65	
Cadmium	37	0 72	J	0 77	J	0 48	J	1 1	J	0 53	J	1 2	J	0 0097	UJ	1 3	J	0 014	UJ	0 015	UJ	0 013	UJ
Calcium		3540		4200		1430		2330		1390		3320		1820		3400		1610		1990		2110	
Chromium	210	13 9	J	10 8	J	25 4		23 3	J	14 3	J	17 9	J	15 1		31 4		13 5		16 3		12 3	
Cobalt	900	9 0	J	8 5	J	4 5	J	10 7	J	7 6	J	11 1	J	13 8	J	8 5	J	8 3	J	9 7	J	9 3	J
Copper	3100	22 7	J	28 9	J	37 6	J	74 6	J	19 1	J	49 0	J	23 6	J	716		28 9	J	31 8	J	20 7	J
Iron	23000	27500		25000		10900		30000		23300		37300		33300		18900		24100		29000		25500	
Lead	750	147	J	118	J	30 7	J	137	J	73 6	J	160	J	17 4	J	199		83 1		80 0	J	26 6	J
Magnesium		2770	J	2320	J	2970	J	3270	J	2220	J	4190	J	3670		1700		2340		2830		2720	
Manganese	1800	781	J	1890	J	231	J	364	J	415	J	2310	J	489		331		298		340		407	
Mercury	23	0 12		0 17		0 051		0 23		0 074		0 20		0 019	J	0 10	J	0 099	J	0 19	J	0 045	J
Nickel	1600	16 0	J	16 9	J	12 9	J	22 7	J	14 7	J	24 6	J	22 6	J	31 5	J	14 7	J	19 1	J	16 8	J
Potassium		350	J	280	J	348	J	529	J	224	J	524	J	482	J	461	J	319	J	430	J	297	J
Selenium	390	2 2	J	2 4	J	0 96	J	0 35	J	1 9	J	3 6	J	2 1		1 2		2 3		2 8		2 0	
Silver	390	0 19	UJ	0 19	UJ	0 14	UJ	0 15	UJ	0 15	UJ	0 30	UJ	0 097	U	57 9		0 14	U	0 15	U	0 13	U
Sodium		207	J		R		R	221	J		R	273	J		R	786	J		R		R		R
Vanadium	550	37 3	J	42 2	J	14 8	J	31 6	J	32 2	J	55 1	J	18 3		26 4		27 5		41 0		18 8	
Zinc	23000	234	J	629	J	81 8	J	248	J	119	J	177	J	62 3		4040		62 0		77 2		57 0	

Black Background - Criteria Exceeded, U - Not detected, UJ - Detection limit approximate, J - Quantitation approximate,
R - Rejected, NA - Not Analyzed, * - From dilution analysis

ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
SURFACE SOIL AND TEST PIT SOIL SAMPLES
CODDINGTON COVE RUBBLE FILL AREA
NEWPORT, RHODE ISLAND

Sample Number		CCRF-S-TP05-0010		CCRF-S-TP06-0608		CCRF-S-TP07-0204		CCRF-S-TP07-0608		CCRF-S-TP08-0204		CCRF-S-TP09-0204		CCRF-S-TP09-1112		CCRF-S-TP-DP02		CCRF-S-TP06-0204		CCRF-S-TP10-0204		CCRF-S-TP10-0406	
Sample Location		TP05		TP06		TP07		TP07		TP08		TP09		TP09		TP10		TP10		TP10		TP10	
Date Sampled		5/19/2004		5/19/2004		5/20/2004		5/20/2004		5/20/2004		5/20/2004		5/20/2004		5/20/2004		5/19/2004		5/20/2004		5/20/2004	
Interval		0 0-10 0		6 0-8 0		2 0-4 0		6 0-8 0		2 0-4 0		2 0-4 0		11 0-12 0		0 0-0 0		2 0-4 0		2 0-4 0		4 0-6 0	
QC Identifier	Region 9 PRG - Residential Soil_2002	None		None		None		None		None		None		None		Field Dup CCRF-S-TP10-0406		None		None		Field Dup CCRF-S-TP10-0406	
Volatile Organic Analysis (UG/KG)																							
1,4-Dichlorobenzene	3400	6	U	4	U	4	U	4	U	4	U	5	U	4	U	5	U	5	U	4	U	5	U
Acetone	1600000	28	JEB	12	EB	6	JEB	14	JEB	7	JEB	6	JEB	16	EB	8	JEB	1600	*JEB	8	JEB	2900	*JEB
Benzene	600	6	U	4	U	4	U	4	U	4	U	5	U	4	U	5	U	5	U	4	U	5	U
Chlorobenzene	150000	6	U	4	U	4	U	4	U	4	U	5	U	4	U	5	U	5	U	4	U	5	U
Chloroform	3600	6	U	4	U	4	U	4	U	4	U	1	J	4	U	1	J	5	U	0 9	J	1	J
Ethylbenzene	8900	6	U	4	U	4	U	4	U	4	U	5	U	4	U	5	U	5	U	4	U	5	U
Methylene Chloride	9100	8	UJ	8	U	4	UJ	5	UJ	5	UJ	9	UJ	6	U	8	UJ	17	UJ	4	UJ	8	UJ
Tetrachloroethene	1500	6	U	4	U	4	U	4	U	4	U	5	U	4	U	5	U	5	U	4	U	5	U
Semivolatile Organic Analysis (UG/KG)																							
Acenaphthene	3700000	440	U	380	U	59	J	56	J	360	U	380	U	380	U	390	U	380	U	370	U	390	U
Acenaphthylene	56000	430	U	380	U	85	J	360	U	360	U	380	U	380	U	380	U	380	U	360	U	390	U
Anthracene	22000000	430	U	380	U	170	J	130	J	360	U	380	U	380	U	120	J	38	J	360	U	390	U
Benzaldehyde	6100000	430	UJ	380	UJ	360	UJ	360	UJ	360	UJ	380	UJ	380	UJ	380	UJ	380	UJ	360	UJ	390	UJ
Benzo(a)anthracene	620	430	U	380	U	670		430		84	J	380	U	380	U	110	J	200	J	360	UJ	99	J
Benzo(a)pyrene	62	430	U	380	U	600		370		59	J	380	U	380	UJ	60	J	160	J	47	J	54	J
Benzo(b)fluoranthene	620	430	U	380	U	730		440		65	J	380	U	380	UJ	83	J	200	J	55	J	68	J
Benzo(g,h,i)perylene	2300000	430	U	380	U	400		240	J	360	U	380	U	380	U	380	U	120	J	360	U	390	U
Benzo(k)fluoranthene	6200	430	U	380	U	300	J	190	J	360	U	380	U	380	U	380	U	88	J	360	U	390	U
bis(2-Ethylhexyl)phthalate	35000	430	U	380	U	360	U	360	U	360	U	380	U	380	U	380	U	380	U	360	UJ	390	UJ
Butylbenzylphthalate	12000000	430	U	380	U	360	U	360	U	360	U	380	U	380	U	380	U	380	U	360	UJ	390	UJ
Carbazole	24000	430	U	380	U	91	J	360	U	360	U	380	U	380	U	84	J	380	U	360	U	390	U
Chrysene	62000	430	U	380	U	1100		700		150	J	380	U	380	U	180	J	340	J	360	UJ	140	J
Dibenzo(a,h)anthracene	62	430	U	380	U	120	J	360	U	360	U	380	U	380	U	380	U	380	U	360	U	390	U
Di-n-octylphthalate	2400000	430	UJ	380	UJ	360	UJ	360	UJ	360	UJ	380	UJ	380	UJ	380	UJ	380	UJ	360	UJ	390	UJ
Fluoranthene	2300000	430	U	380	U	1000		830		110	J	380	U	380	U	220	J	250	J	360	U	160	J
Fluorene	2700000	430	U	380	U	49	J	56	J	360	U	380	U	380	UJ	380	U	380	U	360	U	390	U
Indeno(1,2,3-cd)pyrene	620	430	U	380	U	320	J	220	J	360	U	380	U	380	UJ	380	U	95	J	360	U	390	U
Phenanthrene	22000000	430	U	380	U	670		560		88	J	380	U	380	UJ	150	J	120	J	360	U	120	J
Pyrene	2300000	430	U	48	J	1200	J	820	J	190	J	380	UJ	380	UJ	250	J	370	J	360	UJ	200	J
Pesticide Analysis (UG/KG)																							
4,4'-DDD	2400	4 3	U	3 7	U	3 7	U	4 2		3 6	U	3 8	U	3 8	U	3 8	U	18		3 7	U	3 9	U
4,4'-DDE	1700	4 3	U	3 7	U	11		8 3		14		3 8	U	3 8	U	3 8	U	41		3 7	U	3 9	U
4,4'-DDT	1700	4 3	U	3 7	U	4 2		6 9		37		7 4		3 8	U	3 8	UJ	42		5 6		14	J
Aldrin	29	2 2	U	1 9	U	1 9	U	1 9	U	1 8	U	1 9	U	1 9	U	2 0	U	1 9	U	1 9	U	2 0	U
alpha-Chlordane	1600	2 2	U	1 9	U	1 9	U	2 8		2 3		1 9	U	1 9	U	2 0	U	4 5		1 9	U	2 0	U
Dieldrin	30	4 3	U	3 7	U	3 7	U	3 6	U	3 6	U	3 8	U	3 8	U	3 8	U	3 8	U	3 7	U	3 9	U
Endrin Aldehyde	18000	4 3	U	3 7	U	18		8 2		3 6	U	3 8	U	3 8	U	3 8	U	3 8	U	3 7	U	3 9	U
gamma-Chlordane	1600	2 2	U	1 9	U	5 7		1 9		2 2		1 9	U	1 9	U	2 0	U	4 5		1 9	U	2 0	U
Methoxychlor	310000	22	U	19	U	19	U	19	U	18	U	19	U	19	U	20	U	19	U	19	U	20	U
PCB Analysis (UG/KG)																							
Aroclor-1016	3900	43	U	37	U	37	U	36	U	36	U	38	U	38	U	38	U	38	U	37	U	39	U
Aroclor-1254	220	43	U	37	U	37	U	36	U	36	U	38	U	38	U	38	U	38	U	37	U	39	U
Aroclor-1260	220	43	U	37	U	520		300		36	U	38	U	38	U	38	U	160		37	U	39	U
Gasoline Range Organic Analysis (UG/KG)																							
Gasoline Range Organics		4000		2000	U	2000	U	2100	U	2600	U	2300	U	2500	U	2500	U	3500	U	2200	U	2200	U
Diesel Range Organic Analysis (MG/KG)																							
Diesel Range Organics		15		220		210		160		35		22		14	U	28	J	150		51		68	J
TAL Metal Analysis (MG/KG)																							
Aluminum	76000	12600		14800		9830		8410		8300		10700		10400		13100		10800		11200		11800	
Antimony	31	0 19	UJ	0 16	UJ	0 16	UJ	0 16	UJ	0 14	UJ	4 5	J	0 15	UJ	0 17	UJ	0 17	UJ	0 16	UJ	0 17	UJ
Arsenic	0 39	9.2	J	9.1	J	17.7	J	9 9	J	6.9	J	6 4	J	6.7	J	9.6	J	10 2	J	11.6	J	9.2	J
Barium	5400	25 9		12 8	J	30 6		22 4		16 8	J	19 7	J	18 9	J	27 5		23 2		22 1	J	23 7	J

Black Background - Criteria Exceeded, U - Not detected, UJ - Detection limit approximate, J - Quantitation approximate,
R - Rejected, NA - Not Analyzed, * - From dilution analysis

ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
SURFACE SOIL AND TEST PIT SOIL SAMPLES
CODDINGTON COVE RUBBLE FILL AREA
NEWPORT, RHODE ISLAND

Sample Number		CCRF-S-TP05-0010		CCRF-S-TP06-0608		CCRF-S-TP07-0204		CCRF-S-TP07-0608		CCRF-S-TP08-0204		CCRF-S-TP09-0204		CCRF-S-TP09-1112		CCRF-S-TP-DP02		CCRF-S-TP06-0204		CCRF-S-TP10-0204		CCRF-S-TP10-0406	
Sample Location		TP05		TP06		TP07		TP07		TP08		TP09		TP09		TP10		TP10		TP10		TP10	
Date Sampled		5/19/2004		5/19/2004		5/20/2004		5/20/2004		5/20/2004		5/20/2004		5/20/2004		5/20/2004		5/19/2004		5/20/2004		5/20/2004	
Interval		0 0-10 0		6 0-8 0		2 0-4 0		6 0-8 0		2 0-4 0		2 0-4 0		11 0-12 0		0 0-0 0		2 0-4 0		2 0-4 0		4 0-6 0	
QC Identifier	Region 9 PRG - Residential Soil_2002	None		None		None		None		None		None		None		Field Dup CCRF-S-TP10-0406		None		None		Field Dup CCRF-S-TP10-0406	
Beryllium	150	0 80		0 48		0 47		0 45		0 47		0 52		0 51		0 67		0 59		0 55		0 57	
Cadmium	37	0 013	UJ	0 011	UJ	2 6	J	0 41	J	0 0095	UJ	0 010	UJ	0 010	UJ	0 011	UJ	0 011	UJ	0 011	UJ	0 011	UJ
Calcium		955		1740		2400		3460		1200		1620		558		1500		2880		2100		1290	
Chromium	210	12 4		18 0		17 6		11 1		8 6		16 7		12 9		12 5		11 2		12 6		12 3	
Cobalt	900	9 3	J	16 1	J	17 2	J	10 3	J	7 1	J	12 9	J	6 7	J	9 8	J	9 0	J	10 5	J	10 1	J
Copper	3100	14 2	J	32 3	J	80 5	J	33 0	J	16 1	J	27 4	J	16 2	J	15 7	J	21 6	J	20 2	J	18 2	J
Iron	23000	21700		39800		24500		19600		18000		29800		21300		24700		20600		29200		25500	
Lead	750	16 6	J	32 8	J	55 7	J	44 0	J	34 9	J	33 9	J	9 3	J	30 9	J	20 5	J	26 8	J	31 1	J
Magnesium		2400		5140		3180		2490		2080		3210		2980		2740		3090		3040		3000	
Manganese	1800	277		612		313		262		274		410		232		462		289		403		392	
Mercury	23	0 047	J	0 032	J	0 077	J	0 052	J	0 046	J	0 066	J	0 022	J	0 072	J	0 070	J	0 051	J	0 045	J
Nickel	1600	14 0	J	28 6	J	21 7	J	14 0	J	13 2	J	22 9	J	13 8	J	17 5	J	14 1	J	17 6	J	18 1	J
Potassium		312	J	320	J	445	J	410	J	306	J	271	J	297	J	274	J	429	J	285	J	276	J
Selenium	390	2 0		2 5		1 4		1 4		1 3		1 9		1 8		2 3		2 2		2 5		2 0	
Silver	390	0 13	U	0 11	U	0 10	U	0 11	U	0 095	U	0 10	U	0 10	U	0 11	U	0 11	U	0 11	U	0 11	U
Sodium			R		R		R		R		R		R		R		R		R		R		R
Vanadium	550	21 6		18 1		21 7		15 7		14 7		16 5		21 1		20 2		16 8		18 7		20 0	
Zinc	23000	40 3		64 0		112		81 4		53 3		84 0		39 0		57 4		52 3		56 3		56 9	

Black Background - Criteria Exceeded, U - Not detected, UJ - Detection limit approximate, J - Quantitation approximate,
R - Rejected, NA - Not Analyzed, * - From dilution analysis

ANALYTICAL RESULTS - DETECTED COMPOUNDS ONLY
QA/QC SAMPLES
CODDINGTON COVE RUBBLE FILL AREA
NEWPORT, RHODE ISLAND

Sample Number		CCRF-A-SS03-0001-RB01		CCRF-A-DIUF		CCRF-A-TB01		CCRF-A-TB02		CCRF-A-TB03		CCRF-A-TB04		CCRF-A-TP10-0406-RB01	
Sample Location		Blank		Blank		Blank		Blank		Blank		Blank		TP01	
Date Sampled		7/28/2004		5/20/2004		5/18/2004		5/19/2004		5/20/2004		7/28/2004		5/20/2004	
QC Identifier	MCL	Rinsate Blank		Source Blank		Trip Blank		Trip Blank		Trip Blank		Trip Blank		Rinsate Blank	
Volatile Organic Analysis (UG/L)															
2-Butanone		5	U	3	J	5	U	5	U	5	U	5	U	5	U
Acetone		30	J	10	J	5	U	5	U	2	J	5	UJ	14	J
Semivolatile Organic Analysis (UG/L)															
Benzaldehyde		2	J	10	UJ		NA		NA		NA		NA	10	UJ
bis(2-Ethylhexyl)phthalate	6	2	J	18			NA		NA		NA		NA	22	
Phenol		10	U	3	J		NA		NA		NA		NA	2	J
TAL Metal Analysis (UG/L)															
Calcium		107	J	74 0	U		NA		NA		NA		NA	114	UJ
Lead	15	2 0	U	2 2	J		NA		NA		NA		NA	2 0	U

Black Background - Criteria Exceeded, U - Not detected, UJ - Detection limit approximate, J - Quantitation approximate,
R - Rejected, NA - Not Analyzed, * - From dilution analysis

Frye, Curtis A. CIV ENGFLDACT NORTHEAST EV23/CF

From: Keckler.Kymberlee@epamail.epa.gov
Sent: Friday, July 01, 2005 8:41 AM
To: Frye, Curtis A. CIV ENGFLDACT NORTHEAST EV23/CF; paul.kulpa@dem.ri.gov; Mueller, Cornelia A CIV N8N, Env Off
Subject: Responses to Comments from the USEPA on the Letter Report for the Coddington Cove Rubble Fill Area

Responses are adequate. In most cases, the responses provide clarification of sampling activity or answers to questions posed in the comments. The responses do not commit to change the report. This is appropriate provided the information will be incorporated into the Study Area Screening Evaluation. EPA will not be sending a formal letter on this.

Kymberlee Keckler, Chemical Engineer
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