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NWS EARLE
5090.3a

SI REPORT

SITE 8

Naval Weapons Station Earle

Colts Neck, NJ

October 1991

Prepared by

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SECTION 1

INTRODUCTION

1.1 PURPOSE OF THE REPORT

As part of the ongoing investigations at the Naval Weapons Station Earle, Roy F Weston, Inc. (WESTON) has been requested by the U.S. Navy to conduct a Site Investigation (SI) of Site-8, the Dunnage Lumber Landfill, located at the waterfront area to determine if subsurface contamination is present.

Site 8 is one of 16 sites identified in the Site Investigation Work Plan, September 1991, prepared by WESTON. Site 8 was investigated independently, under a separate work plan which was approved by EPA Region II and NJDEP in July 1991. The investigation at Site-8 has been structured to expedite a decision on the remedial requirements of the site. The Navy plans to construct a paved long-term parking lot on the site by Spring 1992 for use by shipboard personnel.

This report discusses the site characteristics, and documents the results of the field investigation, sampling, and analysis that was conducted in August 1991.

1.2 SITE BACKGROUND

1.2.1 Site Description (SITE 8: LANDFILL EAST OF S-186)

Site 8 is located at the waterfront area, and is situated northeast of Normandy Road adjacent to Building S-186 (see Figure 1). The site, approximately 1 acre in size, is an open area which is bisected by two fenced-in empoundments. The empoundments are presently used as secured staging areas for building lumber and an old mobile home.

The site exhibits a relatively flat topography, with elevations on the order of 60 to 80 feet above mean sea level and gently slopes to the north and north-west. It is partially vegetated by grass, and aside from the surrounding tree line no trees or shrubs exist on the site.

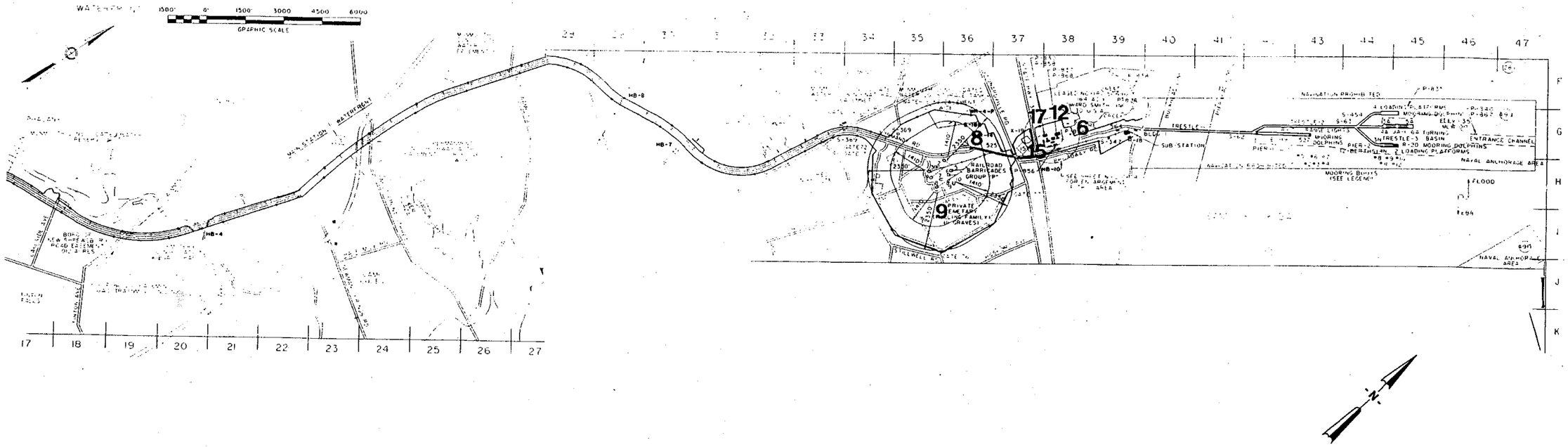

FIGURE 1 MAP SHOWING SITE LOCATIONS-WATERFRONT AREA NWS EARLE, COLTS NECK, NJ

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1.2.2 Site History

Site 8 was used from 1943 to 1972 for dunnage lumber disposal. Dunnage is lumber that is used to segregate a ship's cargo in order to prevent damage to the cargo while in transit. It provides ventilation, inhibits moisture, and keep the cargo from chafing or shifting during transit.

Dunnage was removed from the ships, stacked, and then burned at Site-8. The ashes were spread and covered with soil. This practice was discontinued in 1972, when the dunnage was discarded into dumpsters and taken off site for disposal. The quantity of wastes disposed of is not known, but estimates of total dunnage quantities of 900 to 1,500 cubic yards per year indicate that approximately 20,000 to 30,000 cubic yards of material (pre-burned material) were dumped at this site.

1.2.3 Previous Investigations

Fred C. Hart and Associates, Inc., prepared an IAS that provides some limited information concerning the site. The report states that although the material disposed within the landfill was "typically" untreated lumber, the possibility exists of the disposal of lumber treated with pentachlorophenol or arsenic, two common wood preservatives.

Following the IAS, the NJDEP conducted an HNu/OVA survey in association with a RCRA site inspection. No elevated readings were obtained. The IAS concludes that the materials at the site were inert and, therefore, not a threat to public health or the environment. The NJDEP RCRA site inspection writeup recommended no further action on this site.

SECTION 2

STUDY AREA INVESTIGATION

2.1 INVESTIGATIVE APPROACH

The first task to be accomplished was to identify the exact location of Site 8. Once this was established, work was planned to evaluate the quality of the soil using test pits to excavate selected areas. Samples were collected from these pits and submitted for analysis. Further investigative activities at the site were contingent on the results of the soil analysis.

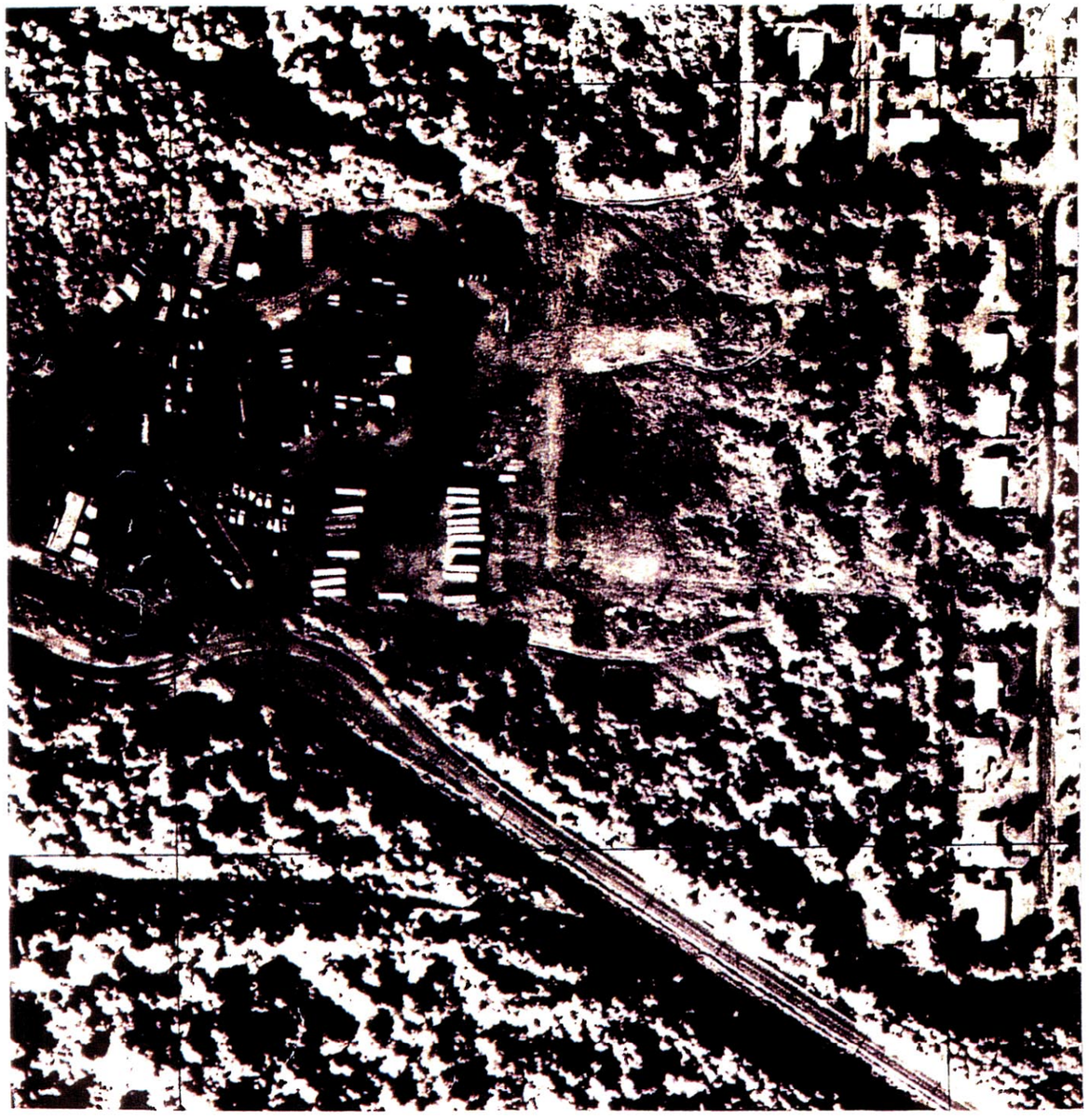
2.2 SITE LOCATION AND SURFACE FEATURES MAPPING

No plan view of the site was provided in the existing IAS, and the rough coordinates given do not pinpoint the location of the disposal site. During a site visit by Technical Review Committee (TRC) members in June 1989, the exact perimeter of the disposal site could not be identified.

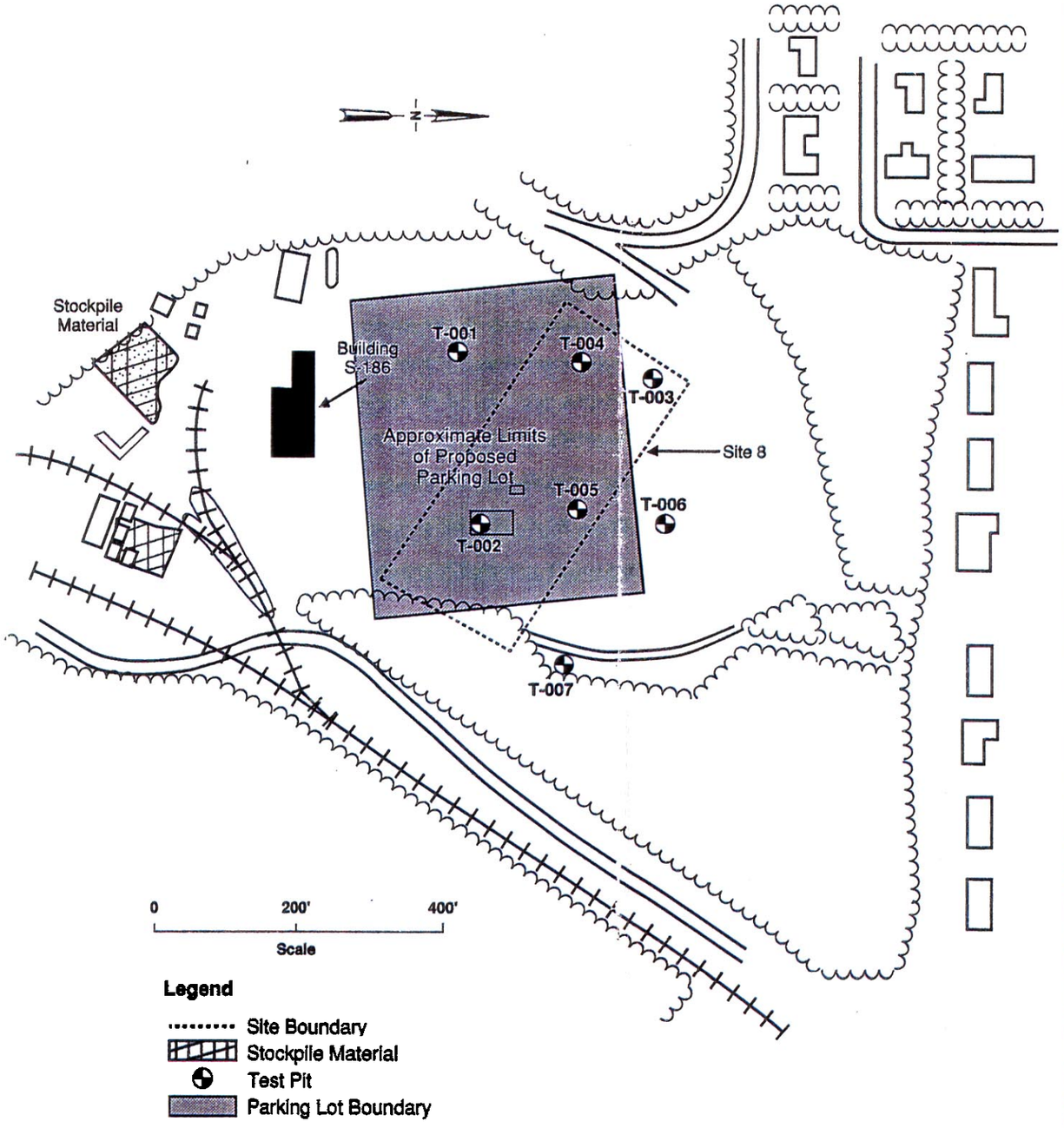
Examination of a 1971 historical aerial photographs by WESTON revealed stacked lumber and ground scars behind and to the east of Building S-186, during the time that dunnage was disposed of on site. This area (Figure 1) is taken to be the location of Site 8.

2.3 FIELD ACTIVITIES

Seven test pits were excavated by backhoe to inspect subsurface conditions and obtain samples for analysis. Four of the test pits, T002, T003, T004 and T005, were located within the boundary of Site 8 as established by the aerial photograph review. (Figure 2). T001 was located about 80 feet south and slightly upslope of the site to establish background conditions; T006 and T007 were located north and slightly downslope of the site.



1977 aerial photograph showing Site 8 - Dunnage Disposal Landfill northeast of building S-186. Weathering effects and re-establishing vegetation evident in previously disturbed areas.



M402-6110

FIGURE 2 AERIAL PHOTOGRAPH ANALYSIS SHOWING SURFICIAL CHARACTERISTICS AND LOCATIONS OF TEST PITS AT SITE 8
NWS EARLE, COLTS NECK, NJ

The test pits were excavated to an average depth of 6 feet. The soil stratigraphy was described and logged in a field notebook noting observations such as color, content, texture, moisture, depth to groundwater and odor or staining, if present. Photographs were taken of each test pit. Typical photographs (T-001 and T-003) are presented in Appendix A. One sample was collected from each of six test pits (T001, T002, T004, T005, T006 and T007) and submitted for analysis.

2.4 CONTAMINANT SOURCE IDENTIFICATION

Target Compound List contaminants typically are not associated with untreated lumber. However since the IAS reported that some of the dunnage may have been treated with pentachlorophenol and arsenic, these substances, along with petroleum hydrocarbons (that may have been associated with the burning) were identified as possible contaminants of concern. The full analyte suite included TCL, TAL and total petroleum hydrocarbons (TPH). The sample of burned residue collected from T004 was also analyzed for (Toxic Compound Leaching Parameters) TCLP to establish characteristics for waste disposal, if necessary. Analytical data is presented in Appendix B.

SECTION 3

PHYSICAL CHARACTERISTICS OF THE STUDY AREA

The subsurface soil profile at Site 8 as observed in the test pits is fairly consistent. A shallow (0-.75 ft) layer of fill (sand and gravel) overlies an orange-brown layer of silty sand which is found up to depths of 5 feet. This sand overlies a green-brown or red-brown sand which grades downward into a gray sandy silt.

No staining or elevated Hnu readings were recorded from the test pits. T004 contained a well-defined layer of burned material, including cinders, coal pieces and deteriorated wood found at .75 to 1.5 ft.

SECTION 4

NATURE AND EXTENT OF CONTAMINATION

Samples were collected at different depths to provide broad analytical coverage of the subsurface. Samples were collected at the following depths:

TEST PIT ID	DEPTH OF SAMPLE
T001	0-0.9 FT
T002	3.0-4.0 FT
T004	0.75-1.5 FT
T005	4.0-5.0 FT
T006	1.5-2.0 FT
T007	5.0-6.0 FT

Of the TCL volatile compounds that were analyzed in the soil samples only methylene chloride, acetone and chloroform were detected. Methylene chloride and acetone are common laboratory contaminants and each was detected in the laboratory blanks that were analyzed with the Site 8 samples. Chloroform was present below the detection limit in the sample collected from T001.

Several semivolatile compounds were present below the detection limit in samples collected from T001 and T004. These compounds were phenanthrene, fluoranthene, pyrene, benzoanthracene, chrysene and the benzo fluoranthenes. These compounds are commonly associated with coal tar and creosote-type material and may represent the residue of decayed or burnt lumber. Bis (2-ethylhexyl) phthalate, which was present in many of the samples below the detection limit, is a compound associated with the plastics in sampling equipment. Naphthalene was present in concentrations below the quantifiable detection limit in the sample collected from T004.

Petroleum hydrocarbon concentrations in the samples ranged from 5.8 mg/kg in the sample collected from T005, to 86 mg/kg in the sample collected from T001.

No PCBs or pesticides were detected in any of the samples.

The leachate sample analyzed from the T004 sample contained no detectable concentrations of organic compounds. The leachate contained barium at concentrations of .77 mg/l and cadmium at levels of 0.024 mg/l. The concentration of cadmium is below that established by RCRA for restriction of land disposal wastes. Barium is not a RCRA regulated metal.

Several priority pollutant metals were present in low levels in the soil samples: arsenic, chromium, copper, lead and zinc. The analytical results for these metals are tabulated below in milligrams per kilogram of sample (mg/kg):

Sample ID	Arsenic	Chromium	Copper	Lead	Zinc
T001	8.4	14.3	8.9	8.3	37.3
T002	2.1u	15.7	5.4u	5.4	23.9
T004	5.3	13.5	9.0	8.4	24.9
T004 dup	4.6	13.5	10.0	18.5	23.8
T005	2.3	9.0	4.9u	4.1	12.8
T006	3.8	9.6	4.9u	3.1	12.4
T007	3.1	11.0	5.2u	4.1	17.2

u" indicates not present at reporting limit shown.

SECTION 5

SUMMARY AND CONCLUSIONS

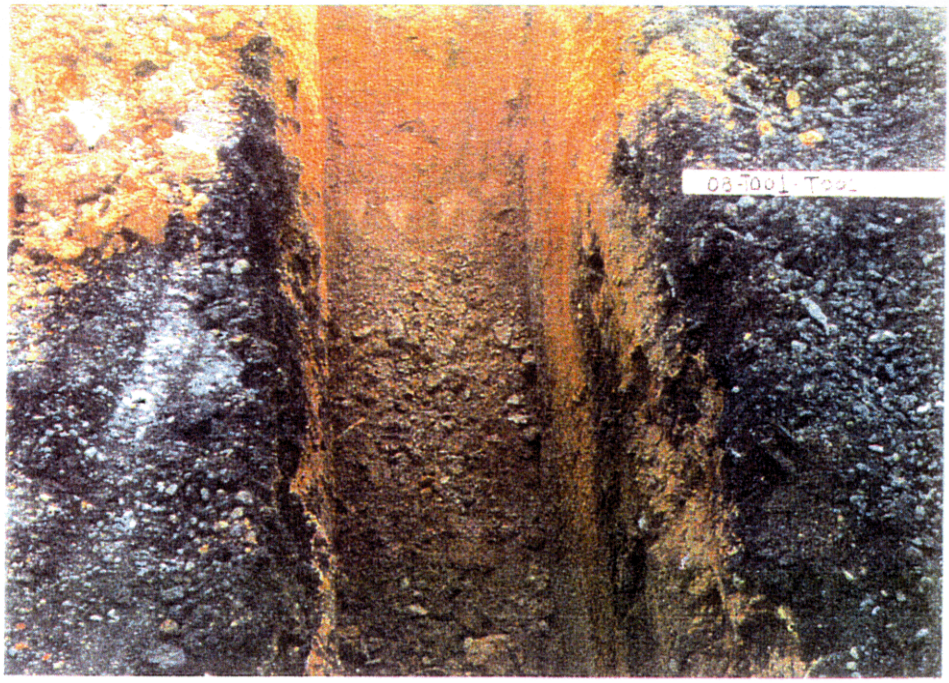
The results from the organic analyses indicate that certain organic compounds probably associated with the ash residue from the lumber burning are present in the soil beneath Site 8. These are found in trace amounts, i.e, below the quantifiable detection limits.

Certain priority pollutant metals were also present above the reporting limit. T001, a background sampling point upslope of the site, contains similar, if not higher, concentrations of these metals.

The test pit investigation adequately characterized the subsurface conditions at the site, exhibiting a relatively homogeneous matrix of silty sand with occasional inclusions of ash residue in the upper 18 inches of soil. Analytical results of the soils and ash residue samples indicate no significant levels of contaminants at the site. Summary of data for the inorganic elements found in the soils samples of this investigations were compared with those reported in a study "Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States", by H.T. Shacklette and J.C. Boerngen. In comparison the concentrations of inorganic elements found at Site 8 fall well within the range of natural elemental concentrations cited in that study. In conclusion, the data demonstrate that no further investigations are necessary and no remedial action is required at Site 8.

APPENDIX A

Photographs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APPENDIX B

Analytical Data and QA/QC Evaluation Results

Roy F. Weston, Inc. - Lionville Laboratory
Volatiles by GC/MS, HSL List

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Report Date: 09/23/91 14:52 Page: 1a

	Cust ID:	08-T001-S001	08-T001-S001	08-T002-S001	08-T002-S001	08-T004-S001	08-T004-S001
Sample Information	RFW#:	001	001	002	002	003	003
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	0.980
	Units:	ug/Kg	ug/Kg REPREP	ug/Kg	ug/Kg REPREP	ug/Kg	ug/Kg REPREP
Surrogate Recovery	Toluene-d8	131 * %	126 * %	112 %	108 %	132 * %	127 * %
	Bromofluorobenzene	109 %	95 %	116 %	112 %	101 %	96 %
	1,2-Dichloroethane-d4	138 * %	143 * %	137 * %	149 * %	148 * %	147 * %
Chloromethane		11 U	11 U	11 U	11 U	11 U	11 U
Bromomethane		11 U	11 U	11 U	11 U	11 U	11 U
Vinyl Chloride		11 U	11 U	11 U	11 U	11 U	11 U
Chloroethane		11 U	11 U	11 U	11 U	11 U	11 U
Methylene Chloride		16 B	46 B	17 B	48 B	19 B	39 B
Acetone		22 B	25 B	18 B	38 B	44 B	35 B
Carbon Disulfide		6 U	6 U	6 U	6 U	6 U	6 U
1,1-Dichloroethene		6 U	6 U	6 U	6 U	6 U	6 U
1,1-Dichloroethane		6 U	6 U	6 U	6 U	6 U	6 U
1,2-Dichloroethene (total)		6 U	6 U	6 U	6 U	6 U	6 U
Chloroform		2 J	3 J	6 U	6 U	6 U	6 U
1,2-Dichloroethane		6 U	6 U	6 U	6 U	6 U	6 U
2-Butanone		11 U	11 U	11 U	11 U	11 U	11 U
1,1,1-Trichloroethane		6 U	6 U	6 U	6 U	6 U	6 U
Carbon Tetrachloride		6 U	6 U	6 U	6 U	6 U	6 U
Vinyl Acetate		11 U	11 U	11 U	11 U	11 U	11 U
Bromodichloromethane		6 U	6 U	6 U	6 U	6 U	6 U
1,2-Dichloropropane		6 U	6 U	6 U	6 U	6 U	6 U
cis-1,3-Dichloropropene		6 U	6 U	6 U	6 U	6 U	6 U
Trichloroethene		6 U	6 U	6 U	6 U	6 U	6 U
Dibromochloromethane		6 U	6 U	6 U	6 U	6 U	6 U
1,1,2-Trichloroethane		6 U	6 U	6 U	6 U	6 U	6 U
Benzene		6 U	6 U	6 U	6 U	6 U	6 U
Trans-1,3-Dichloropropene		6 U	6 U	6 U	6 U	6 U	6 U
Bromoform		6 U	6 U	6 U	6 U	6 U	6 U
4-Methyl-2-pentanone		11 U	11 U	11 U	11 U	11 U	11 U
2-Hexanone		11 U	11 U	11 U	11 U	11 U	11 U
Tetrachloroethene		6 U	6 U	6 U	6 U	6 U	6 U
1,1,2,2-Tetrachloroethane		6 U	6 U	6 U	6 U	6 U	6 U

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Page: 1b

Cust ID: 08-T001-S001 08-T001-S001 08-T002-S001 08-T002-S001 08-T004-S001 08-T004-S001

RFW#:	001	001 REP	002	002 REP	003	003 REP
Toluene	6 U	6 U	6 U	6 U	6 U	6 U
Chlorobenzene	6 U	6 U	6 U	6 U	6 U	6 U
Ethylbenzene	6 U	6 U	6 U	6 U	6 U	6 U
Styrene	6 U	6 U	6 U	6 U	6 U	6 U
Xylene (total)	6 U	6 U	6 U	6 U	6 U	6 U

*= Outside of EPA CLP QC limits.

Roy F. Weston, Inc. - Lionville Laboratory
Volatiles by GC/MS, HSL List

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Report Date: 09/23/91 14:52 Page: 2a

	Cust ID:	08-T004-S101	08-T004-S101	08-T005-S001	08-T005-S001	08-T006-S001	08-T006-S001
Sample Information	RFW#:	004	004	005	005	006	006 MS
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	0.980	1.00	1.00
	Units:	ug/Kg	ug/Kg REPREP	ug/Kg	ug/Kg REPREP	ug/Kg	ug/Kg
Surrogate Recovery	Toluene-d8	123 * %	117 %	104 %	119 * %	105 %	102 %
	Bromofluorobenzene	99 %	102 %	109 %	121 %	110 %	104 %
	1,2-Dichloroethane-d4	149 * %	104 %	137 * %	110 %	140 * %	137 * %
Chloromethane		12 U	12 U	11 U	11 U	11 U	11 U
Bromomethane		12 U	12 U	11 U	11 U	11 U	11 U
Vinyl Chloride		12 U	12 U	11 U	11 U	11 U	11 U
Chloroethane		12 U	12 U	11 U	11 U	11 U	11 U
Methylene Chloride		24 B	15 B	40 B	18 B	36 B	46 B
Acetone		61 B	11 JB	38 B	7 JB	29 B	46 B
Carbon Disulfide		6 U	6 U	6 U	6 U	6 U	6 U
1,1-Dichloroethene		6 U	6 U	6 U	6 U	6 U	108 %
1,1-Dichloroethane		6 U	6 U	6 U	6 U	6 U	6 U
1,2-Dichloroethene (total)		6 U	6 U	6 U	6 U	6 U	6 U
Chloroform		6 U	6 U	6 U	6 U	6 U	6 U
1,2-Dichloroethane		6 U	6 U	6 U	6 U	6 U	6 U
2-Butanone		12 U	12 U	11 U	11 U	11 U	11 U
1,1,1-Trichloroethane		6 U	6 U	6 U	6 U	6 U	6 U
Carbon Tetrachloride		6 U	6 U	6 U	6 U	6 U	6 U
Vinyl Acetate		12 U	12 U	11 U	11 U	11 U	11 U
Bromodichloromethane		6 U	6 U	6 U	6 U	6 U	6 U
1,2-Dichloropropane		6 U	6 U	6 U	6 U	6 U	6 U
cis-1,3-Dichloropropene		6 U	6 U	6 U	6 U	6 U	6 U
Trichloroethene		6 U	6 U	6 U	6 U	6 U	103 %
Dibromochloromethane		6 U	6 U	6 U	6 U	6 U	6 U
1,1,2-Trichloroethane		6 U	6 U	6 U	6 U	6 U	6 U
Benzene		6 U	6 U	6 U	6 U	6 U	128 %
Trans-1,3-Dichloropropene		6 U	6 U	6 U	6 U	6 U	6 U
Bromoform		6 U	6 U	6 U	6 U	6 U	6 U
4-Methyl-2-pentanone		12 U	12 U	11 U	11 U	11 U	11 U
2-Hexanone		12 U	12 U	11 U	11 U	11 U	11 U
Tetrachloroethene		6 U	6 U	6 U	6 U	6 U	6 U
1,1,2,2-Tetrachloroethane		6 U	6 U	6 U	6 U	6 U	6 U

*= Outside of EPA CLP QC Limits.

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Page: 2b

Cust ID:	08-T004-S101	08-T004-S101	08-T005-S001	08-T005-S001	08-T006-S001	08-T006-S001
RFW#:	004	004 REPREP	005	005 REPREP	006	006 MS
Toluene	6 U	6 U	6 U	6 U	6 U	114 %
Chlorobenzene	6 U	6 U	6 U	6 U	6 U	112 %
Ethylbenzene	6 U	6 U	6 U	6 U	6 U	6 U
Styrene	6 U	6 U	6 U	6 U	6 U	6 U
Xylene (total)	6 U	6 U	6 U	6 U	6 U	6 U

*= Outside of EPA CLP QC limits.

Roy F. Weston, Inc. - Lionville Laboratory
Volatiles by GC/MS, HSL List

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Report Date: 09/23/91 14:52 Page: 3a

Cust ID:	08-T006-S001		08-T007-S001		08-T007-W201		TRIP BLANK		VBLK		VBLK	
Sample Information RFW#:	006 MSD		007		008		009		91LVY149-MB1		91LVY150-MB1	
Matrix:	SOIL		SOIL		WATER		WATER		SOIL		SOIL	
D.F.:	0.980		0.980		1.00		1.00		1.00		1.00	
Units:	ug/Kg		ug/Kg		ug/L		ug/L		ug/Kg		ug/Kg	
Surrogate Recovery Toluene-d8	102	%	107	%	101	%	98	%	105	%	106	%
Bromofluorobenzene	107	%	108	%	100	%	98	%	105	%	106	%
1,2-Dichloroethane-d4	136 *	%	101	%	111	%	103	%	102	%	97	%
Chloromethane	11	U	11	U	10	U	10	U	10	U	10	U
Bromomethane	11	U	11	U	10	U	10	U	10	U	10	U
Vinyl Chloride	11	U	11	U	10	U	10	U	10	U	10	U
Chloroethane	11	U	11	U	10	U	10	U	10	U	10	U
Methylene Chloride	34	B	20	B	2	JB	3	JB	3	J	4	J
Acetone	31	B	10	JB	98		2	J	2	J	3	J
Carbon Disulfide	6	U	6	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene	106	%	6	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	6	U	6	U	5	U	5	U	5	U	5	U
1,2-Dichloroethene (total)	6	U	6	U	5	U	5	U	5	U	5	U
Chloroform	6	U	6	U	1	J	5	U	5	U	5	U
1,2-Dichloroethane	6	U	6	U	5	U	5	U	5	U	5	U
2-Butanone	11	U	11	U	10	U	10	U	10	U	10	U
1,1,1-Trichloroethane	6	U	6	U	5	U	5	U	5	U	5	U
Carbon Tetrachloride	6	U	6	U	5	U	5	U	5	U	5	U
Vinyl Acetate	11	U	11	U	10	U	10	U	10	U	10	U
Bromodichloromethane	6	U	6	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	6	U	6	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	6	U	6	U	5	U	5	U	5	U	5	U
Trichloroethene	103	%	6	U	5	U	5	U	5	U	5	U
Dibromochloromethane	6	U	6	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	6	U	6	U	5	U	5	U	5	U	5	U
Benzene	127	%	6	U	5	U	5	U	5	U	5	U
Trans-1,3-Dichloropropene	6	U	6	U	5	U	5	U	5	U	5	U
Bromoform	6	U	6	U	5	U	5	U	5	U	5	U
4-Methyl-2-pentanone	11	U	11	U	10	U	10	U	10	U	10	U
2-Hexanone	11	U	11	U	10	U	10	U	10	U	10	U
Tetrachloroethene	6	U	6	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	6	U	6	U	5	U	5	U	5	U	5	U

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Page: 3b

Cust ID:	08-T006-S001	08-T007-S001	08-T007-W201	TRIP BLANK	VBLK	VBLK
RFW#:	006 MSD	007	008	009	91LVY149-MB1	91LVY150-MB1
Toluene	115 %	6 U	5 U	5 U	5 U	5 U
Chlorobenzene	113 %	6 U	5 U	5 U	5 U	5 U
Ethylbenzene	6 U	6 U	5 U	5 U	5 U	5 U
Styrene	6 U	6 U	5 U	5 U	5 U	5 U
Xylene (total)	6 U	6 U	5 U	5 U	5 U	5 U

*= Outside of EPA CLP QC limits.

Roy F. Weston, Inc. - Lionville Laboratory
Volatiles by GC/MS, HSL List

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Report Date: 09/23/91 14:52 Page: 4a

Cust ID: VBLK

Sample Information

RFW#: 91LVK146-MB1
Matrix: WATER
D.F.: 1.00
Units: ug/L

Surrogate Recovery	Toluene-d8	98	%
	Bromofluorobenzene	96	%
	1,2-Dichloroethane-d4	100	%

Chloromethane	10	U
Bromomethane	10	U
Vinyl Chloride	10	U
Chloroethane	10	U
Methylene Chloride	6	
Acetone	10	U
Carbon Disulfide	5	U
1,1-Dichloroethene	5	U
1,1-Dichloroethane	5	U
1,2-Dichloroethene (total)	5	U
Chloroform	5	U
1,2-Dichloroethane	5	U
2-Butanone	10	U
1,1,1-Trichloroethane	5	U
Carbon Tetrachloride	5	U
Vinyl Acetate	10	U
Bromodichloromethane	5	U
1,2-Dichloropropane	5	U
cis-1,3-Dichloropropene	5	U
Trichloroethene	5	U
Dibromochloromethane	5	U
1,1,2-Trichloroethane	5	U
Benzene	5	U
Trans-1,3-Dichloropropene	5	U
Bromoform	5	U
4-Methyl-2-pentanone	10	U
2-Hexanone	10	U
Tetrachloroethene	5	U
1,1,2,2-Tetrachloroethane	5	U

*= Outside of EPA CLP QC limits.

Cust ID: VBLK

RFW#: 91LVK146-MB1

Toluene	5	U
Chlorobenzene	5	U
Ethylbenzene	5	U
Styrene	5	U
Xylene (total)	5	U

*= Outside of EPA CLP QC limits.

Roy F. Weston, Inc. - Lionville Laboratory
Semivolatiles by GC/MS, HSL List

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Report Date: 09/23/91 15:01 Page: 1a

	Cust ID:	08-T001-S001	08-T002-S001	08-T004-S001	08-T004-S101	08-T005-S001	08-T006-S001
Sample Information	RFW#:	001	002	003	004	005	006
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate Recovery	Nitrobenzene-d5	63 %	66 %	69 %	69 %	72 %	71 %
	2-Fluorobiphenyl	73 %	74 %	81 %	81 %	78 %	80 %
	p-Terphenyl-d14	108 %	124 %	127 %	127 %	113 %	111 %
	Phenol-d5	68 %	70 %	78 %	74 %	75 %	75 %
	2-Fluorophenol	66 %	69 %	71 %	68 %	71 %	76 %
	2,4,6-Tribromophenol	83 %	76 %	93 %	92 %	63 %	74 %
		fl	fl	fl	fl	fl	fl
Phenol		370 U	360 U	370 U	390 U	370 U	370 U
bis(2-Chloroethyl)ether		370 U	360 U	370 U	390 U	370 U	370 U
2-Chlorophenol		370 U	360 U	370 U	390 U	370 U	370 U
1,3-Dichlorobenzene		370 U	360 U	370 U	390 U	370 U	370 U
1,4-Dichlorobenzene		370 U	360 U	370 U	390 U	370 U	370 U
Benzyl alcohol		370 U	360 U	370 U	390 U	370 U	370 U
1,2-Dichlorobenzene		370 U	360 U	370 U	390 U	370 U	370 U
2-Methylphenol		370 U	360 U	370 U	390 U	370 U	370 U
bis(2-Chloroisopropyl)ether		370 U	360 U	370 U	390 U	370 U	370 U
4-Methylphenol		370 U	360 U	370 U	390 U	370 U	370 U
N-Nitroso-Di-n-propylamine		370 U	360 U	370 U	390 U	370 U	370 U
Hexachloroethane		370 U	360 U	370 U	390 U	370 U	370 U
Nitrobenzene		370 U	360 U	370 U	390 U	370 U	370 U
Isophorone		370 U	360 U	370 U	390 U	370 U	370 U
2-Nitrophenol		370 U	360 U	370 U	390 U	370 U	370 U
2,4-Dimethylphenol		370 U	360 U	370 U	390 U	370 U	370 U
Benzoic acid		1800 U	1800 U	1800 U	1900 U	1900 U	1800 U
bis(2-Chloroethoxy)methane		370 U	360 U	370 U	390 U	370 U	370 U
2,4-Dichlorophenol		370 U	360 U	370 U	390 U	370 U	370 U
1,2,4-Trichlorobenzene		370 U	360 U	370 U	390 U	370 U	370 U
Naphthalene		370 U	360 U	52 J	44 J	370 U	370 U
4-Chloroaniline		370 U	360 U	370 U	390 U	370 U	370 U
Hexachlorobutadiene		370 U	360 U	370 U	390 U	370 U	370 U
4-Chloro-3-methylphenol		370 U	360 U	370 U	390 U	370 U	370 U
2-Methylnaphthalene		370 U	360 U	75 J	63 J	370 U	370 U
Hexachlorocyclopentadiene		370 U	360 U	370 U	390 U	370 U	370 U

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000

	Cust ID:	08-T001-S001	08-T002-S001	08-T004-S001	08-T004-S101	08-T005-S001	08-T006-S001
	RFW#:	001	002	003	004	005	006
2,4,6-Trichlorophenol		370 U	360 U	370 U	390 U	370 U	370 U
2,4,5-Trichlorophenol		1800 U	1800 U	1800 U	1900 U	1900 U	1800 U
2-Chloronaphthalene		370 U	360 U	370 U	390 U	370 U	370 U
2-Nitroaniline		1800 U	1800 U	1800 U	1900 U	1900 U	1800 U
Dimethylphthalate		370 U	360 U	370 U	390 U	370 U	370 U
Acenaphthylene		370 U	360 U	370 U	390 U	370 U	370 U
2,6-Dinitrotoluene		370 U	360 U	370 U	390 U	370 U	370 U
3-Nitroaniline		1800 U	1800 U	1800 U	1900 U	1900 U	1800 U
Acenaphthene		370 U	360 U	370 U	390 U	370 U	370 U
2,4-Dinitrophenol		1800 U	1800 U	1800 U	1900 U	1900 U	1800 U
4-Nitrophenol		1800 U	1800 U	1800 U	1900 U	1900 U	1800 U
Dibenzofuran		370 U	360 U	370 U	390 U	370 U	370 U
2,4-Dinitrotoluene		370 U	360 U	370 U	390 U	370 U	370 U
Diethylphthalate		370 U	360 U	370 U	390 U	370 U	370 U
4-Chlorophenyl-phenylether		370 U	360 U	370 U	390 U	370 U	370 U
Fluorene		370 U	360 U	370 U	390 U	370 U	370 U
4-Nitroaniline		1800 U	1800 U	1800 U	1900 U	1900 U	1800 U
4,6-Dinitro-2-methylphenol		1800 U	1800 U	1800 U	1900 U	1900 U	1800 U
N-Nitrosodiphenylamine (1)		370 U	360 U	370 U	390 U	370 U	370 U
4-Bromophenyl-phenylether		370 U	360 U	370 U	390 U	370 U	370 U
Hexachlorobenzene		370 U	360 U	370 U	390 U	370 U	370 U
Pentachlorophenol		1800 U	1800 U	1800 U	1900 U	1900 U	1800 U
Phenanthrene		120 J	360 U	200 J	210 J	370 U	370 U
Anthracene		370 U	360 U	370 U	390 U	370 U	370 U
Di-n-Butylphthalate		370 U	360 U	370 U	390 U	370 U	370 U
Fluoranthene		220 J	360 U	330 J	300 J	370 U	370 U
Pyrene		210 J	360 U	330 J	330 J	370 U	370 U
Butylbenzylphthalate		370 U	360 U	370 U	390 U	370 U	370 U
3,3'-Dichlorobenzidine		740 U	720 U	740 U	770 U	750 U	740 U
Benzo(a)anthracene		130 J	360 U	150 J	150 J	370 U	370 U
Chrysene		170 J	360 U	220 J	200 J	370 U	370 U
bis(2-Ethylhexyl)phthalate		300 J	260 J	160 J	220 J	98 J	190 J
Di-n-Octyl phthalate		370 U	360 U	370 U	390 U	370 U	370 U
Benzo(b)fluoranthene		160 J	360 U	160 J	160 J	370 U	370 U
Benzo(k)fluoranthene		110 J	360 U	160 J	160 J	370 U	370 U
Benzo(a)pyrene		370 U	360 U	370 U	390 U	370 U	370 U
Indeno(1,2,3-cd)pyrene		370 U	360 U	370 U	390 U	370 U	370 U
Dibenzo(a,h)anthracene		370 U	360 U	370 U	390 U	370 U	370 U
Benzo(g,h,i)perylene		370 U	360 U	370 U	390 U	370 U	370 U

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

Roy F. Weston, Inc. - Lionville Laboratory
Semivolatiles by GC/MS, HSL List

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Report Date: 09/23/91 15:01 Page: 2a

	Cust ID:	08-T006-S001	08-T006-S001	08-T007-S001	08-T007-W201	SBLK	SBLK BS
Sample Information	RFW#:	006 MS	006 MSD	007	008	91LE1113-MB1	91LE1113-MB1
	Matrix:	SOIL	SOIL	SOIL	WATER	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/L	ug/Kg	ug/Kg
Surrogate Recovery	Nitrobenzene-d5	77 %	77 %	69 %	93 %	76 %	75 %
	2-Fluorobiphenyl	84 %	87 %	77 %	77 %	87 %	86 %
	p-Terphenyl-d14	113 %	112 %	113 %	112 %	115 %	114 %
	Phenol-d5	80 %	82 %	74 %	31 %	80 %	81 %
	2-Fluorophenol	77 %	77 %	73 %	56 %	82 %	79 %
	2,4,6-Tribromophenol	76 %	74 %	73 %	76 %	79 %	78 %
		fl	fl	fl	fl	fl	fl
Phenol		83 %	88 %	350 U	10 U	330 U	85 %
bis(2-Chloroethyl)ether		360 U	370 U	350 U	10 U	330 U	330 U
2-Chlorophenol		84 %	86 %	350 U	10 U	330 U	85 %
1,3-Dichlorobenzene		360 U	370 U	350 U	10 U	330 U	330 U
1,4-Dichlorobenzene		81 %	83 %	350 U	10 U	330 U	82 %
Benzyl alcohol		360 U	370 U	350 U	10 U	330 U	330 U
1,2-Dichlorobenzene		360 U	370 U	350 U	10 U	330 U	330 U
2-Methylphenol		360 U	370 U	350 U	10 U	330 U	330 U
bis(2-Chloroisopropyl)ether		360 U	370 U	350 U	10 U	330 U	330 U
4-Methylphenol		360 U	370 U	350 U	10 U	330 U	330 U
N-Nitroso-Di-n-propylamine		85 %	90 %	350 U	10 U	330 U	82 %
Hexachloroethane		360 U	370 U	350 U	10 U	330 U	330 U
Nitrobenzene		360 U	370 U	350 U	10 U	330 U	330 U
Isophorone		360 U	370 U	350 U	10 U	330 U	330 U
2-Nitrophenol		360 U	370 U	350 U	10 U	330 U	330 U
2,4-Dimethylphenol		360 U	370 U	350 U	10 U	330 U	330 U
Benzoic acid		1800 U	1800 U	1800 U	50 U	1700 U	1700 U
bis(2-Chloroethoxy)methane		360 U	370 U	350 U	10 U	330 U	330 U
2,4-Dichlorophenol		360 U	370 U	350 U	10 U	330 U	330 U
1,2,4-Trichlorobenzene		81 %	83 %	350 U	10 U	330 U	83 %
Naphthalene		360 U	370 U	350 U	10 U	330 U	330 U
4-Chloroaniline		360 U	370 U	350 U	10 U	330 U	330 U
Hexachlorobutadiene		360 U	370 U	350 U	10 U	330 U	330 U
4-Chloro-3-methylphenol		87 %	91 %	350 U	10 U	330 U	83 %
2-Methylnaphthalene		360 U	370 U	350 U	10 U	330 U	330 U
Hexachlorocyclopentadiene		360 U	370 U	350 U	10 U	330 U	330 U

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000

	Cust ID:	08-T006-S001	08-T006-S001	08-T007-S001	08-T007-W201	SBLK	SBLK BS
	RFW#:	006 MS	006 MSD	007	008	91LE1113-MB1	91LE1113-MB1
2,4,6-Trichlorophenol		360 U	370 U	350 U	10 U	330 U	330 U
2,4,5-Trichlorophenol		1800 U	1800 U	1800 U	50 U	1700 U	1700 U
2-Chloronaphthalene		360 U	370 U	350 U	10 U	330 U	330 U
2-Nitroaniline		1800 U	1800 U	1800 U	50 U	1700 U	1700 U
Dimethylphthalate		360 U	370 U	350 U	10 U	330 U	330 U
Acenaphthylene		360 U	370 U	350 U	10 U	330 U	330 U
2,6-Dinitrotoluene		360 U	370 U	350 U	10 U	330 U	330 U
3-Nitroaniline		1800 U	1800 U	1800 U	50 U	1700 U	1700 U
Acenaphthene		77 %	82 %	350 U	10 U	330 U	79 %
2,4-Dinitrophenol		1800 U	1800 U	1800 U	50 U	1700 U	1700 U
4-Nitrophenol		96 %	95 %	1800 U	50 U	1700 U	86 %
Dibenzofuran		360 U	370 U	350 U	10 U	330 U	330 U
2,4-Dinitrotoluene		86 %	88 %	350 U	10 U	330 U	82 %
Diethylphthalate		360 U	370 U	350 U	10 U	330 U	330 U
4-Chlorophenyl-phenylether		360 U	370 U	350 U	10 U	330 U	330 U
Fluorene		360 U	370 U	350 U	10 U	330 U	330 U
4-Nitroaniline		1800 U	1800 U	1800 U	50 U	1700 U	1700 U
4,6-Dinitro-2-methylphenol		1800 U	1800 U	1800 U	50 U	1700 U	1700 U
N-Nitrosodiphenylamine (1)		360 U	370 U	350 U	10 U	330 U	330 U
4-Bromophenyl-phenylether		360 U	370 U	350 U	10 U	330 U	330 U
Hexachlorobenzene		360 U	370 U	350 U	10 U	330 U	330 U
Pentachlorophenol		89 %	91 %	1800 U	50 U	1700 U	91 %
Phenanthrene		360 U	370 U	350 U	10 U	330 U	330 U
Anthracene		360 U	370 U	350 U	10 U	330 U	330 U
Di-n-Butylphthalate		360 U	370 U	350 U	10 U	330 U	330 U
Fluoranthene		360 U	370 U	350 U	10 U	330 U	330 U
Pyrene		101 %	100 %	350 U	10 U	330 U	100 %
Butylbenzylphthalate		360 U	370 U	350 U	10 U	330 U	330 U
3,3'-Dichlorobenzidine		720 U	740 U	700 U	20 U	670 U	670 U
Benzo(a)anthracene		360 U	370 U	350 U	10 U	330 U	330 U
Chrysene		360 U	370 U	350 U	10 U	330 U	330 U
bis(2-Ethylhexyl)phthalate		67 J	120 J	79 J	10 U	330 U	330 U
Di-n-Octyl phthalate		360 U	370 U	350 U	10 U	330 U	330 U
Benzo(b)fluoranthene		360 U	370 U	350 U	10 U	330 U	330 U
Benzo(k)fluoranthene		360 U	370 U	350 U	10 U	330 U	330 U
Benzo(a)pyrene		360 U	370 U	350 U	10 U	330 U	330 U
Indeno(1,2,3-cd)pyrene		360 U	370 U	350 U	10 U	330 U	330 U
Dibenzo(a,h)anthracene		360 U	370 U	350 U	10 U	330 U	330 U
Benzo(g,h,i)perylene		360 U	370 U	350 U	10 U	330 U	330 U

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

Roy F. Weston, Inc. - Lionville Laboratory
Semivolatiles by GC/MS, HSL List

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Report Date: 09/23/91 15:01 Page: 3a

	Cust ID:	SBLK		SBLK BS		SBLK BSD	
Sample Information	RFW#:	91LE1086-MB1		91LE1086-MB1		91LE1086-MB1	
	Matrix:	WATER		WATER		WATER	
	D.F.:	1.00		1.00		1.00	
	Units:	ug/L		ug/L		ug/L	
Surrogate Recovery	Nitrobenzene-d5	64	%	81	%	93	%
	2-Fluorobiphenyl	66	%	91	%	102	%
	p-Terphenyl-d14	104	%	119	%	131	%
	Phenol-d5	26	%	38	%	30	%
	2-Fluorophenol	32	%	49	%	43	%
	2,4,6-Tribromophenol	50	%	67	%	77	%
Phenol		10	U	38	%	34	%
bis(2-Chloroethyl)ether		10	U	10	U	10	U
2-Chlorophenol		10	U	73	%	72	%
1,3-Dichlorobenzene		10	U	10	U	10	U
1,4-Dichlorobenzene		10	U	82	%	89	%
Benzyl alcohol		10	U	10	U	10	U
1,2-Dichlorobenzene		10	U	10	U	10	U
2-Methylphenol		10	U	10	U	10	U
bis(2-Chloroisopropyl)ether		10	U	10	U	10	U
4-Methylphenol		10	U	10	U	10	U
N-Nitroso-Di-n-propylamine		10	U	97	%	99	%
Hexachloroethane		10	U	10	U	10	U
Nitrobenzene		10	U	10	U	10	U
Isophorone		10	U	10	U	10	U
2-Nitrophenol		10	U	10	U	10	U
2,4-Dimethylphenol		10	U	10	U	10	U
Benzoic acid		50	U	50	U	50	U
bis(2-Chloroethoxy)methane		10	U	10	U	10	U
2,4-Dichlorophenol		10	U	10	U	10	U
1,2,4-Trichlorobenzene		10	U	88	%	102 *	%
Naphthalene		10	U	10	U	10	U
4-Chloroaniline		10	U	10	U	10	U
Hexachlorobutadiene		10	U	10	U	10	U
4-Chloro-3-methylphenol		10	U	72	%	77	%
2-Methylnaphthalene		10	U	10	U	10	U
Hexachlorocyclopentadiene		10	U	10	U	10	U

*= Outside of EPA CLP QC limits.

Cust ID:	SBLK		SBLK BS		SBLK BSD	
RFW#:	91LE1086-MB1		91LE1086-MB1		91LE1086-MB1	
2,4,6-Trichlorophenol	10	U	10	U	10	U
2,4,5-Trichlorophenol	50	U	50	U	50	U
2-Chloronaphthalene	10	U	10	U	10	U
2-Nitroaniline	50	U	50	U	50	U
Dimethylphthalate	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U
3-Nitroaniline	50	U	50	U	50	U
Acenaphthene	10	U	89	%	98	%
2,4-Dinitrophenol	50	U	50	U	50	U
4-Nitrophenol	50	U	29	%	27	%
Dibenzofuran	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	94	%	105 *	%
Diethylphthalate	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U
4-Nitroaniline	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol	50	U	50	U	50	U
N-Nitrosodiphenylamine (1)	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U
Pentachlorophenol	50	U	14	%	15	%
Phenanthrene	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U
Di-n-Butylphthalate	10	U	10	U	10	U
Fluoranthene	10	U	10	U	10	U
Pyrene	10	U	95	%	107	%
Butylbenzylphthalate	10	U	10	U	10	U
3,3'-Dichlorobenzidine	20	U	20	U	20	U
Benzo(a)anthracene	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	U	23		10	U
Di-n-Octyl phthalate	10	U	10	U	10	U
Benzo(b)fluoranthene	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U	10	U
Dibenzo(a,h)anthracene	10	U	10	U	10	U
Benzo(g,h,i)perylene	10	U	10	U	10	U

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

Roy F. Weston, Inc. - Lionville Laboratory

Preliminary Report for : Pesticide/PCBs by GC, CLP List Report Date: 09/23/91 15:05

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Page: 1

	Cust ID:	08-T001-S001		08-T002-S001		08-T004-S001		08-T004-S101		08-T005-S001		08-T006-S001	
Sample Information	RFW#:	001		002		003		004		005		006	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	D.F.:	5.00		1.00		5.00		5.00		1.00		1.00	
	Units:	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Surrogate: Di-n-butylchlorendate		73	% fl	78	% fl	80	% fl	105	% fl	65	% fl	74	% fl
Alpha-BHC		44	U	2.9	J	44	U	45	U	8.9	U	8.7	U
Beta-BHC		44	U	8.8	U	44	U	45	U	8.9	U	8.7	U
Delta-BHC		44	U	8.8	U	44	U	45	U	8.9	U	8.7	U
gamma-BHC (Lindane)		44	U	8.8	U	44	U	45	U	8.9	U	8.7	U
Heptachlor		44	U	8.8	U	44	U	45	U	8.9	U	8.7	U
Aldrin		44	U	8.8	U	44	U	45	U	8.9	U	8.7	U
Heptachlor epoxide		44	U	8.8	U	44	U	45	U	8.9	U	8.7	U
Endosulfan I		44	U	8.8	U	44	U	45	U	8.9	U	8.7	U
Dieldrin		88	U	18	U	88	U	91	U	18	U	17	U
4,4'-DDE		88	U	18	U	88	U	91	U	18	U	17	U
Endrin		88	U	18	U	88	U	91	U	18	U	17	U
Endosulfan II		88	U	18	U	88	U	91	U	18	U	17	U
4,4'-DDD		88	U	18	U	11	J	13	J	18	U	17	U
Endosulfan sulfate		88	U	18	U	88	U	91	U	18	U	17	U
4,4'-DDT		88	U	18	U	88	U	91	U	18	U	17	U
Methoxychlor		440	U	88	U	440	U	450	U	89	U	87	U
Endrin ketone		88	U	18	U	88	U	91	U	18	U	17	U
alpha-Chlordane		440	U	88	U	440	U	450	U	89	U	87	U
gamma-Chlordane		440	U	88	U	440	U	450	U	89	U	87	U
Toxaphene		880	U	180	U	880	U	910	U	180	U	170	U
Aroclor-1016		440	U	88	U	440	U	450	U	89	U	87	U
Aroclor-1221		440	U	88	U	440	U	450	U	89	U	87	U
Aroclor-1232		440	U	88	U	440	U	450	U	89	U	87	U
Aroclor-1242		440	U	88	U	440	U	450	U	89	U	87	U
Aroclor-1248		440	U	88	U	440	U	450	U	89	U	87	U
Aroclor-1254		880	U	180	U	880	U	910	U	180	U	170	U
Aroclor-1260		880	U	180	U	880	U	910	U	180	U	170	U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

PRELIMINARY

Roy F. Weston, Inc. - Lionville Laboratory

Preliminary Report for : Pesticide/PCBs by GC, CLP List Report Date: 09/23/91 15:05

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Page: 2

	Cust ID:	08-T006-S001	08-T006-S001	08-T007-S001	08-T007-W201	PBLK	PBLK BS
Sample Information	RFW#:	006 MS	006 MSD	007	008	91LE1100-MB1	91LE1100-MB1
	Matrix:	SOIL	SOIL	SOIL	WATER	SOIL	SOIL
	D.F.:	2.00	2.00	1.00	1.00	1.00	2.00
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/L	ug/Kg	ug/Kg
Surrogate: Di-n-butylchlorendate		74 %	76 %	68 %	99 %	146 %	97 %
		fl	fl	fl	fl	fl	fl
Alpha-BHC		17 U	17 U	8.7 U	0.051 U	8.0 U	16 U
Beta-BHC		17 U	17 U	8.7 U	0.051 U	8.0 U	16 U
Delta-BHC		17 U	17 U	8.7 U	0.051 U	8.0 U	16 U
gamma-BHC (Lindane)		75 %	78 %	8.7 U	0.051 U	8.0 U	88 %
Heptachlor		65 %	68 %	8.7 U	0.051 U	8.0 U	75 %
Aldrin		60 %	62 %	8.7 U	0.051 U	8.0 U	70 %
Heptachlor epoxide		17 U	17 U	8.7 U	0.051 U	8.0 U	16 U
Endosulfan I		17 U	17 U	8.7 U	0.051 U	8.0 U	16 U
Dieldrin		63 %	61 %	17 U	0.10 U	16 U	71 %
4,4'-DDE		35 U	35 U	17 U	0.10 U	16 U	32 U
Endrin		78 %	79 %	17 U	0.10 U	16 U	86 %
Endosulfan II		35 U	35 U	17 U	0.10 U	16 U	32 U
4,4'-DDD		35 U	35 U	17 U	0.10 U	16 U	32 U
Endosulfan sulfate		35 U	35 U	17 U	0.10 U	16 U	32 U
4,4'-DDT		66 %	67 %	17 U	0.10 U	16 U	67 %
Methoxychlor		170 U	170 U	87 U	0.51 U	80 U	160 U
Endrin ketone		35 U	35 U	17 U	0.10 U	16 U	32 U
alpha-Chlordane		170 U	170 U	87 U	0.51 U	80 U	160 U
gamma-Chlordane		170 U	170 U	87 U	0.51 U	80 U	160 U
Toxaphene		350 U	350 U	170 U	1.0 U	160 U	320 U
Aroclor-1016		170 U	170 U	87 U	0.51 U	80 U	160 U
Aroclor-1221		170 U	170 U	87 U	0.51 U	80 U	160 U
Aroclor-1232		170 U	170 U	87 U	0.51 U	80 U	160 U
Aroclor-1242		170 U	170 U	87 U	0.51 U	80 U	160 U
Aroclor-1248		170 U	170 U	87 U	0.51 U	80 U	160 U
Aroclor-1254		350 U	350 U	170 U	1.0 U	160 U	320 U
Aroclor-1260		350 U	350 U	170 U	1.0 U	160 U	320 U

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PRELIMINARY

Sample Information	Cust ID:	PBLK	PBLK BS	PBLK BSD
	RFW#:	91LE1082-MB1	91LE1082-MB1	91LE1082-MB1
	Matrix:	WATER	WATER	WATER
	D.F.:	1.00	2.00	2.00
	Units:	ug/L	ug/L	ug/L

Surrogate: Di-n-butylchlorendate	91	%	111	%	96	%
Alpha-BHC	0.050	U	0.10	U	0.10	U
Beta-BHC	0.050	U	0.10	U	0.10	U
Delta-BHC	0.050	U	0.10	U	0.10	U
gamma-BHC (Lindane)	0.050	U	100	%	90	%
Heptachlor	0.050	U	85	%	85	%
Aldrin	0.050	U	70	%	80	%
Heptachlor epoxide	0.050	U	0.10	U	0.10	U
Endosulfan I	0.050	U	0.10	U	0.10	U
Dieldrin	0.10	U	102	%	96	%
4,4'-DDE	0.10	U	0.20	U	0.20	U
Endrin	0.10	U	108	%	98	%
Endosulfan II	0.10	U	0.20	U	0.20	U
4,4'-DDD	0.10	U	0.20	U	0.20	U
Endosulfan sulfate	0.10	U	0.20	U	0.20	U
4,4'-DDT	0.10	U	100	%	92	%
Methoxychlor	0.50	U	1.0	U	1.0	U
Endrin ketone	0.10	U	0.20	U	0.20	U
alpha-Chlordane	0.50	U	1.0	U	1.0	U
gamma-Chlordane	0.50	U	1.0	U	1.0	U
Toxaphene	1.0	U	2.0	U	2.0	U
Aroclor-1016	0.50	U	1.0	U	1.0	U
Aroclor-1221	0.50	U	1.0	U	1.0	U
Aroclor-1232	0.50	U	1.0	U	1.0	U
Aroclor-1242	0.50	U	1.0	U	1.0	U
Aroclor-1248	0.50	U	1.0	U	1.0	U
Aroclor-1254	1.0	U	2.0	U	2.0	U
Aroclor-1260	1.0	U	2.0	U	2.0	U

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%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

PRELIMINARY

Roy F. Weston, Inc. - Lionville Laboratory
Petroleum Hydrocarbons by IR

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Report Date: 09/23/91 15:24 Page: 1

	Cust ID:	08-T001-S001	08-T002-S001	08-T004-S001	08-T004-S101	08-T005-S001	08-T006-S001
Sample Information	RFW#:	001	002	003	004	005	006
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Petroleum Hydrocarbon		27	9.8	86	54	5.8	15

	Cust ID:	08-T006-S001	08-T006-S001	08-T007-S001	PBLK	PBLK BS
Sample Information	RFW#:	006 MS	006 MSD	007	91DHC734-MB1	91DHC734-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00
	Units:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Petroleum Hydrocarbon		93 %	95 %	11	6.5	101 %

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

Roy F. Weston, Inc. - Lionville Laboratory

Preliminary Report for : Volatiles by GC/MS, TCLP Leachate Report Date: 09/23/91 15:23

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Page: 1a

	Cust ID:	08-T004-S001		08-T004-S001		08-T004-S001		VBLK		LCHBLK	
Sample Information	RFW#:	010		010 MS		010 MSD		91LVK150-MB1		91LTV049-LB1	
	Matrix:	WATER		WATER		WATER		WATER		WATER	
	D.F.:	10.0		10.0		10.0		1.00		10.0	
	Units:	ug/L		ug/L		ug/L		ug/L		ug/L	
Surrogate Recovery	Toluene-d8	95	%	96	%	99	%	93	%	95	%
	Bromofluorobenzene	95	%	98	%	98	%	93	%	91	%
	1,2-Dichloroethane-d4	103	%	102	%	101	%	102	%	114	%
Vinyl Chloride		100	U	94	%	89	%	10	U	100	U
1,1-Dichloroethene		50	U	100	%	103	%	5	U	50	U
Chloroform		50	U	104	%	103	%	5	U	50	U
1,2-Dichloroethane		50	U	115	%	117	%	5	U	50	U
2-Butanone		100	U	100	%	119	%	10	U	100	U
Carbon Tetrachloride		50	U	109	%	107	%	5	U	50	U
Trichloroethene		50	U	107	%	102	%	5	U	50	U
Benzene		50	U	100	%	95	%	5	U	50	U
Tetrachloroethene		50	U	125	%	131	%	5	U	50	U
Chlorobenzene		50	U	104	%	106	%	5	U	50	U

*= Outside of EPA CLP QC limits.

Roy F. Weston, Inc. - Lionville Laboratory

Preliminary Report for : Semivolatiles by GC/MS, TCLP Leachate Report Date: 09/23/91 15:11

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Page: 1a

	Cust ID:	08-T004-S001	08-T004-S001	08-T004-S001	SBLK	SBLK RE	SBLK BS
Sample Information	RFW#:	011	011 MS	011 MSD	91LE1104-MB1	91LE1104-MB1	91LE1104-MB1
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Surrogate Recovery	Nitrobenzene-d5	81 %	87 %	88 %	79 %	74 %	85 %
	2-Fluorobiphenyl	92 %	97 %	101 %	89 %	93 %	97 %
	p-Terphenyl-d14	132 %	152 * %	140 %	136 %	171 * %	129 %
	Phenol-d5	65 %	63 %	64 %	58 %	51 %	69 %
	2-Fluorophenol	62 %	62 %	64 %	50 %	42 %	61 %
	2,4,6-Tribromophenol	72 %	80 %	79 %	39 %	35 %	47 %
Pyridine		100 U	60 %	67 %	10 U	10 U	73 %
1,4-Dichlorobenzene		100 U	47 %	45 %	10 U	10 U	46 %
2-Methylphenol		100 U	52 %	58 %	10 U	10 U	64 %
3- and/or 4-Methylphenol		100 U	55 %	59 %	10 U	10 U	72 %
Hexachloroethane		100 U	29 %	31 %	10 U	10 U	36 %
Nitrobenzene		100 U	86 %	92 %	10 U	10 U	86 %
Hexachlorobutadiene		100 U	29 %	32 %	10 U	10 U	35 %
2,4,6-Trichlorophenol		100 U	69 %	72 %	10 U	10 U	68 %
2,4,5-Trichlorophenol		500 U	65 %	69 %	50 U	50 U	60 %
2,4-Dinitrotoluene		100 U	72 %	74 %	10 U	10 U	72 %
Hexachlorobenzene		100 U	115 %	119 %	10 U	10 U	98 %
Pentachlorophenol		500 U	113 * %	122 * %	50 U	50 U	45 %

*= Outside of EPA CLP QC limits.

Roy F. Weston, Inc. - Lionville Laboratory

Preliminary Report for : Semivolatiles by GC/MS, TCLP Leachate Report Date: 09/23/91 15:11

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Page: 2a

Cust ID: LCHBLK

Sample Information

RFW#: 91LT0073-LB1
Matrix: WATER
D.F.: 1.00
Units: ug/L

Surrogate Recovery	Nitrobenzene-d5	75	%
	2-Fluorobiphenyl	87	%
	p-Terphenyl-d14	117	%
	Phenol-d5	64	%
	2-Fluorophenol	59	%
	2,4,6-Tribromophenol	54	%

Pyridine	100	U
1,4-Dichlorobenzene	100	U
2-Methylphenol	100	U
3- and/or 4-Methylphenol	100	U
Hexachloroethane	100	U
Nitrobenzene	100	U
Hexachlorobutadiene	100	U
2,4,6-Trichlorophenol	100	U
2,4,5-Trichlorophenol	500	U
2,4-Dinitrotoluene	100	U
Hexachlorobenzene	100	U
Pentachlorophenol	500	U

*= Outside of EPA CLP QC limits.

Roy F. Weston, Inc. - Lionville Laboratory

Preliminary Report for : Pesticide by GC, TCLP Leachate Report Date: 09/23/91 15:09

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Page: 1

	Cust ID:	08-T004-S001	08-T004-S001	PBLK	PBLK BS	LCHBLK
Sample Information	RFW#:	011	011 MS	91LE1109-MB1	91LE1109-MB1	91LT0073-LB1
	Matrix:	WATER	WATER	WATER	WATER	WATER
	D.F.:	1.00	2.00	1.00	2.00	1.00
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L

Surrogate: Di-n-butylchlorendate	63	%	151	%	71	%	117	%	57	%				
		fl		fl		fl		fl		fl		fl		fl
Heptachlor	0.12	U	I	%	0.050	U	80	%	0.11	U				
alpha-Chlordane	1.2	U	110	%	0.50	U	125	* %	1.1	U				
gamma-Chlordane	1.2	U	140	* %	0.50	U	110	%	1.1	U				
gamma-BHC (Lindane)	0.12	U	60	%	0.050	U	60	%	0.11	U				
Endrin	0.23	U	I	%	0.10	U	140	%	0.22	U				
Methoxychlor	1.2	U	87	%	0.50	U	104	%	1.1	U				
Toxaphene	2.3	U	4.5	U	1.0	U	2.0	U	2.2	U				
Heptachlor Epoxide	0.12	U	110	%	0.050	U	100	%	0.11	U				

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

PRELIMINARY

Roy F. Weston, Inc. - Lionville Laboratory

Preliminary Report for : HERBICIDES BY GC, TCLP LEACHATE Report Date: 09/23/91 15:07

RFW Batch Number: 9108L518 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-02-0000 Page: 1

	Cust ID:	08-T004-S001	08-T004-S001	PBLK	PBLK BS	PBLK BSD	LCHBLK
Sample Information	RFW#:	011	011 MS	91LE1117-MB1	91LE1117-MB1	91LE1117-MB1	91LT0073-LB1
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Surrogate:	2,6-D	104 %	89 %	85 %	109 %	91 %	91 %
		fl	fl	fl	fl	fl	fl
2,4-D		2.1 U	87 %	1.0 U	110 %	91 %	2.3 U
2,4,5-TP (Silvex)		1.1 U	80 %	0.50 U	107 %	88 %	1.1 U
2,4,5-T		1.1 U	85 %	0.50 U	107 %	89 %	1.1 U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

PRELIMINARY

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 09/23/91

CLIENT: NAVAL WEAPONS/COLTSNECK
WORK ORDER: 1771-15-02-0000

WESTON BATCH #: 9108L518

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-001	08-T001-S001	Silver, Total	1.9	u	MG/KG	1.9
		Aluminum, Total	4890		MG/KG	38.8
		Arsenic, Total	8.4		MG/KG	1.9
		Barium, Total	44.5		MG/KG	38.8
		Beryllium, Total	0.97	u	MG/KG	0.97
		Calcium, Total	971	u	MG/KG	971
		Cadmium, Total	0.97	u	MG/KG	0.97
		Cobalt, Total	9.7	u	MG/KG	9.7
		Chromium, Total	14.3		MG/KG	1.9
		Copper, Total	8.9		MG/KG	4.9
		Iron, Total	18300		MG/KG	19.4
		Mercury, Total	0.11	u	MG/KG	0.11
		Potassium, Total	971	u	MG/KG	971
		Magnesium, Total	971	u	MG/KG	971
		Manganese, Total	106		MG/KG	2.9
		Sodium, Total	971	u	MG/KG	971
		Nickel, Total	7.8	u	MG/KG	7.8
		Lead, Total	8.3		MG/KG	0.66
		Antimony, Total	11.7	u	MG/KG	11.7
		Selenium, Total	0.93	u	MG/KG	0.93
		Thallium, Total	1.9	u	MG/KG	1.
		Vanadium, Total	12.7		MG/KG	9.
		Zinc, Total	37.3		MG/KG	3.9
-002	08-T002-S001	Silver, Total	2.1	u	MG/KG	2.1
		Aluminum, Total	4150		MG/KG	43.0
		Arsenic, Total	2.1	u	MG/KG	2.1
		Barium, Total	43.0	u	MG/KG	43.0
		Beryllium, Total	1.1	u	MG/KG	1.1
		Calcium, Total	1070	u	MG/KG	1070
		Cadmium, Total	1.1	u	MG/KG	1.1
		Cobalt, Total	10.7	u	MG/KG	10.7
		Chromium, Total	15.7		MG/KG	2.1
		Copper, Total	5.4	u	MG/KG	5.4
		Iron, Total	17000		MG/KG	21.5
		Mercury, Total	0.11	u	MG/KG	0.11
		Potassium, Total	1070	u	MG/KG	1070
		Magnesium, Total	1070	u	MG/KG	1070
		Manganese, Total	148		MG/KG	3.2
		Sodium, Total	1070	u	MG/KG	1070

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 09/23/91

CLIENT: NAVAL WEAPONS/COLTSNECK
WORK ORDER: 1771-15-02-0000

WESTON BATCH #: 9108L518

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-002	08-T002-S001	Nickel, Total	8.6	u	MG/KG	8.6
		Lead, Total	5.4		MG/KG	0.64
		Antimony, Total	12.9	u	MG/KG	12.9
		Selenium, Total	1.0	u	MG/KG	1.0
		Thallium, Total	2.1	u	MG/KG	2.1
		Vanadium, Total	19.1		MG/KG	10.7
		Zinc, Total	23.9		MG/KG	4.3

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 09/23/91

CLIENT: NAVAL WEAPONS/COLTSNECK
WORK ORDER: 1771-15-02-0000

WESTON BATCH #: 9108L518

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-003	08-T004-S001	Silver, Total	2.0	u	MG/KG	2.0
		Aluminum, Total	3950		MG/KG	39.5
		Arsenic, Total	5.3		MG/KG	1.9
		Barium, Total	39.5	u	MG/KG	39.5
		Beryllium, Total	0.99	u	MG/KG	0.99
		Calcium, Total	988	u	MG/KG	988
		Cadmium, Total	0.99	u	MG/KG	0.99
		Cobalt, Total	9.9	u	MG/KG	9.9
		Chromium, Total	13.5		MG/KG	2.0
		Copper, Total	9.0		MG/KG	4.9
		Iron, Total	15600		MG/KG	19.8
		Mercury, Total	0.11	u	MG/KG	0.11
		Potassium, Total	988	u	MG/KG	988
		Magnesium, Total	988	u	MG/KG	988
		Manganese, Total	92.8		MG/KG	3.0
		Sodium, Total	988	u	MG/KG	988
		Nickel, Total	7.9	u	MG/KG	7.9
		Lead, Total	8.4		MG/KG	6.6
		Antimony, Total	11.9	u	MG/KG	11.9
		Selenium, Total	0.96	u	MG/KG	0.96
		Thallium, Total	1.9	u	MG/KG	1.
		Vanadium, Total	13.6		MG/KG	9.
		Zinc, Total	24.9		MG/KG	4.0
-004	08-T004-S101	Silver, Total	2.0	u	MG/KG	2.0
		Aluminum, Total	4010		MG/KG	40.3
		Arsenic, Total	4.6		MG/KG	2.1
		Barium, Total	40.3	u	MG/KG	40.3
		Beryllium, Total	1.0	u	MG/KG	1.0
		Calcium, Total	1010	u	MG/KG	1010
		Cadmium, Total	1.0	u	MG/KG	1.0
		Cobalt, Total	10.1	u	MG/KG	10.1
		Chromium, Total	13.5		MG/KG	2.0
		Copper, Total	10.0		MG/KG	5.0
		Iron, Total	14300		MG/KG	20.1
		Mercury, Total	0.12	u	MG/KG	0.12
		Potassium, Total	1010	u	MG/KG	1010
		Magnesium, Total	1010	u	MG/KG	1010
		Manganese, Total	124		MG/KG	3.0
		Sodium, Total	1010	u	MG/KG	1010

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 09/23/91

CLIENT: NAVAL WEAPONS/COLTSNECK
WORK ORDER: 1771-15-02-0000

WESTON BATCH #: 9108L518

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-004	08-T004-S101	Nickel, Total	8.1	u	MG/KG	8.1
		Lead, Total	18.5		MG/KG	6.4
		Antimony, Total	12.1	u	MG/KG	12.1
		Selenium, Total	1.0	u	MG/KG	1.0
		Thallium, Total	2.1	u	MG/KG	2.1
		Vanadium, Total	13.1		MG/KG	10.1
		Zinc, Total	23.8		MG/KG	4.0

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 09/23/91

CLIENT: NAVAL WEAPONS/COLTSNECK
WORK ORDER: 1771-15-02-0000

WESTON BATCH #: 9108L518

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-005	08-T005-S001	Silver, Total	1.9	u	MG/KG	1.9
		Aluminum, Total	2980		MG/KG	39.0
		Arsenic, Total	2.3		MG/KG	1.8
		Barium, Total	68.8		MG/KG	39.0
		Beryllium, Total	0.97	u	MG/KG	0.97
		Calcium, Total	975	u	MG/KG	975
		Cadmium, Total	0.97	u	MG/KG	0.97
		Cobalt, Total	140		MG/KG	9.8
		Chromium, Total	9.0		MG/KG	1.9
		Copper, Total	4.9	u	MG/KG	4.9
		Iron, Total	15700		MG/KG	19.5
		Mercury, Total	0.00020	u	MG/L	0.00020
		Potassium, Total	975	u	MG/KG	975
		Magnesium, Total	975	u	MG/KG	975
		Manganese, Total	2530		MG/KG	2.9
		Sodium, Total	975	u	MG/KG	975
		Nickel, Total	7.8	u	MG/KG	7.8
		Lead, Total	4.1		MG/KG	0.63
		Antimony, Total	11.7	u	MG/KG	11.7
		Selenium, Total	0.91	u	MG/KG	0.91
		Thallium, Total	1.8	u	MG/KG	1
		Vanadium, Total	12.3		MG/KG	9.
		Zinc, Total	12.8		MG/KG	3.9
-006	08-T006-S001	Silver, Total	2.0	u	MG/KG	2.0
		Aluminum, Total	2200		MG/KG	39.1
		Arsenic, Total	3.8		MG/KG	2.0
		Barium, Total	39.1	u	MG/KG	39.1
		Beryllium, Total	0.98	u	MG/KG	0.98
		Calcium, Total	976	u	MG/KG	976
		Cadmium, Total	0.98	u	MG/KG	0.98
		Cobalt, Total	13.8		MG/KG	9.8
		Chromium, Total	9.6		MG/KG	2.0
		Copper, Total	4.9	u	MG/KG	4.9
		Iron, Total	20300		MG/KG	19.5
		Mercury, Total	0.11	u	MG/KG	0.11
		Potassium, Total	976	u	MG/KG	976
		Magnesium, Total	976	u	MG/KG	976
		Manganese, Total	292		MG/KG	2.9
		Sodium, Total	976	u	MG/KG	976

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 09/23/91

CLIENT: NAVAL WEAPONS/COLTSNECK
WORK ORDER: 1771-15-02-0000

WESTON BATCH #: 9108L518

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-006	08-T006-S001	Nickel, Total	7.8	u	MG/KG	7.8
		Lead, Total	3.1		MG/KG	0.64
		Antimony, Total	11.7	u	MG/KG	11.7
		Selenium, Total	0.98	u	MG/KG	0.98
		Thallium, Total	2.0	u	MG/KG	2.0
		Vanadium, Total	9.8	u	MG/KG	9.8
		Zinc, Total	12.4		MG/KG	3.9

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 09/23/91

CLIENT: NAVAL WEAPONS/COLTSNECK
WORK ORDER: 1771-15-02-0000

WESTON BATCH #: 9108L518

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-007	08-T007-S001	Silver, Total	2.1	u	MG/KG	2.1
		Aluminum, Total	3280		MG/KG	41.9
		Arsenic, Total	3.1		MG/KG	2.1
		Barium, Total	41.9	u	MG/KG	41.9
		Beryllium, Total	1.0	u	MG/KG	1.0
		Calcium, Total	1050	u	MG/KG	1050
		Cadmium, Total	1.0	u	MG/KG	1.0
		Cobalt, Total	10.5	u	MG/KG	10.5
		Chromium, Total	11.0		MG/KG	2.1
		Copper, Total	5.2	u	MG/KG	5.2
		Iron, Total	16700		MG/KG	21.0
		Mercury, Total	0.11	u	MG/KG	0.11
		Potassium, Total	1050	u	MG/KG	1050
		Magnesium, Total	1050	u	MG/KG	1050
		Manganese, Total	113		MG/KG	3.1
		Sodium, Total	1050	u	MG/KG	1050
		Nickel, Total	8.4	u	MG/KG	8.4
		Lead, Total	4.1		MG/KG	0.64
		Antimony, Total	12.6	u	MG/KG	12.6
		Selenium, Total	1.0	u	MG/KG	1.0
		Thallium, Total	2.1	u	MG/KG	2
		Vanadium, Total	18.3		MG/KG	10.
		Zinc, Total	17.2		MG/KG	4.2
-008	08-T007-W201	Silver, Total	0.010	u	MG/L	0.010
		Aluminum, Total	0.20	u	MG/L	0.20
		Arsenic, Total	0.010	u	MG/L	0.010
		Barium, Total	0.20	u	MG/L	0.20
		Beryllium, Total	0.0050	u	MG/L	0.0050
		Calcium, Total	5.0	u	MG/L	5.0
		Cadmium, Total	0.0050	u	MG/L	0.0050
		Cobalt, Total	0.050	u	MG/L	0.050
		Chromium, Total	0.010	u	MG/L	0.010
		Copper, Total	0.025	u	MG/L	0.025
		Iron, Total	0.10	u	MG/L	0.10
		Mercury, Total	0.00020	u	MG/L	0.00020
		Potassium, Total	5.0	u	MG/L	5.0
		Magnesium, Total	5.0	u	MG/L	5.0
		Manganese, Total	0.015	u	MG/L	0.015
		Sodium, Total	5.0	u	MG/L	5.0

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 09/23/91

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WORK ORDER: 1771-15-02-0000

WESTON BATCH #: 9108L518

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-008	08-T007-W201	Nickel, Total	0.040	u	MG/L	0.040
		Lead, Total	0.0030	u	MG/L	0.0030
		Antimony, Total	0.060	u	MG/L	0.060
		Selenium, Total	0.0050	u	MG/L	0.0050
		Thallium, Total	0.010	u	MG/L	0.010
		Vanadium, Total	0.050	u	MG/L	0.050
		Zinc, Total	0.020	u	MG/L	0.020

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 09/23/91

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WORK ORDER: 1771-15-02-0000

WESTON BATCH #: 9108L518

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-011	08-T004-S001	Silver, TCLP Leachate	0.010	u	MG/L	0.010
		Arsenic, TCLP Leachate	0.50	u	MG/L	0.50
		Barium, TCLP Leachate	0.77		MG/L	0.20
		Cadmium, TCLP Leachate	0.024		MG/L	0.0050
		Chromium, TCLP Leachate	0.010	u	MG/L	0.010
		Mercury, TCLP Leachate	0.00020	u	MG/L	0.00020
		Lead, TCLP Leachate	0.090	u	MG/L	0.090
		Selenium, TCLP Leachate	0.50	u	MG/L	0.50

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 09/23/91

CLIENT: NAVAL WEAPONS/COLTSNECK
WORK ORDER: 1771-15-02-0000

WESTON BATCH #: 9108L518

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-001	08-T001-S001	% Solids	89.8		%	0.10
		Cyanide, Total	1.1	u	MG/KG	1.1
-002	08-T002-S001	% Solids	91.4		%	0.10
		Cyanide, Total	1.1	u	MG/KG	1.1
-003	08-T004-S001	% Solids	90.1		%	0.10
		Cyanide, Total	1.1	u	MG/KG	1.1
-004	08-T004-S101	% Solids	86.0		%	0.10
		Cyanide, Total	1.2	u	MG/KG	1.2
-005	08-T005-S001	% Solids	88.8		%	0.10
		Cyanide, Total	1.1	u	MG/KG	1.1

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WESTON BATCH #: 9108L518

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-006	08-T006-S001	% Solids	89.8		%	0.10
		Cyanide, Total	1.1	u	MG/KG	1.1
-007	08-T007-S001	% Solids	92.4		%	0.10
		Cyanide, Total	1.1	u	MG/KG	1.1