N61165.AR.003351
CNC CHARLESTON
5090.3a

RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION REPORT ADDENDUM CORRECTIVE MEASURES STUDY WORK PLAN AREAS OF CONCERN 613 AND 615 SOLID WASTE MANAGEMENT UNIT 175 (SWMU 175) ZONE F CNC CHARLESTON SC

6/11/2002

CH2M HILL

RFI REPORT ADDENDUM - Volume II

RFI Report Addendum and CMS Work Plan

AOC 613/AOC 615/SWMU 175, Zone F

Charleston Naval Complex
North Charleston, South Carolina

SUBMITTED TO
U.S. Navy Southern Division
Naval Facilities Engineering Command

CH2M Jones

June 2002

Revision 1
Contract N62467-99-C-0960

CH2MHILL TRANSMITTAL

To: Mr. David Scaturo
South Carolina Department of Health
and Environmental Control
Bureau of Land and Waste
Management
2600 Bull Street
Columbia, SC 29201

From: Sara Vivas
(352) 335-5877 ext. 2384

Date: June 11, 2002

Re: RFI Report Addendum & CMS Work Plan, AOC 613/AOC 615/SWMU 175, Zone F, Revision 1, Charleston Naval Complex – Volume II Covers/Spines and Flysheets

Quantity	Description
2	Two sets of Revision 1 Covers/Spines and Flysheets for insertion into the **Volume II** 3-ring binder of the RFI Report Addendum & CMS Work Plan, AOC 613/AOC 615/SWMU 175, Zone F.

If material received is not as listed, please notify us at once.

Remarks:

Revision 1 Covers/Spines and Flysheets for **Volume I** of the RFI Report Addendum & CMS Work Plan for AOC 613/AOC 615/SWMU 175, Zone F were distributed on June 5, 2002. Revision 1 Covers/Spines and Flysheets for **Volume II**, which are attached to this letter, were inadvertently omitted from the prior submittal. Please replace the Revision 0 Volume II Cover/Spine and Flysheet in the original 3-ring binder with the attached material.

cc: Tim Frederick/Gannett Fleming, Inc., w/att
Rob Harrell/Navy, w/att
Gary Foster/CH2M HILL, w/att

RFI REPORT ADDENDUM - Volume II

RFI Report Addendum and CMS Work Plan
AOC 613/AOC 615 /SWMU 175, Zone F

Charleston Naval Complex
North Charleston, South Carolina

SUBMITTED TO
U.S. Navy Southern Division
Naval Facilities Engineering Command

PREPARED BY
CH2M-Jones

June 2002

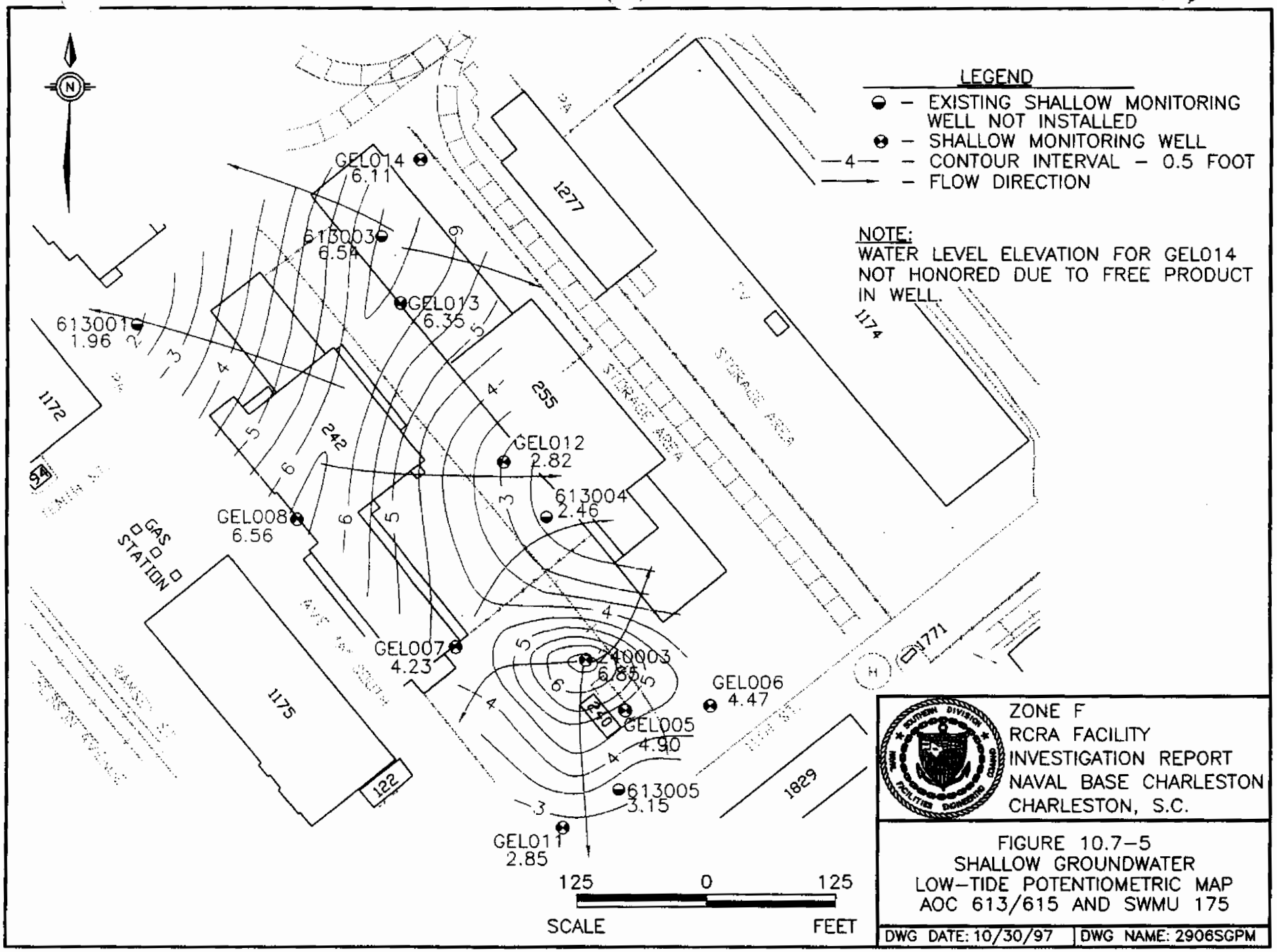
Revision 1
Contract N62467-99-C-0960
158814.ZF.PR.02

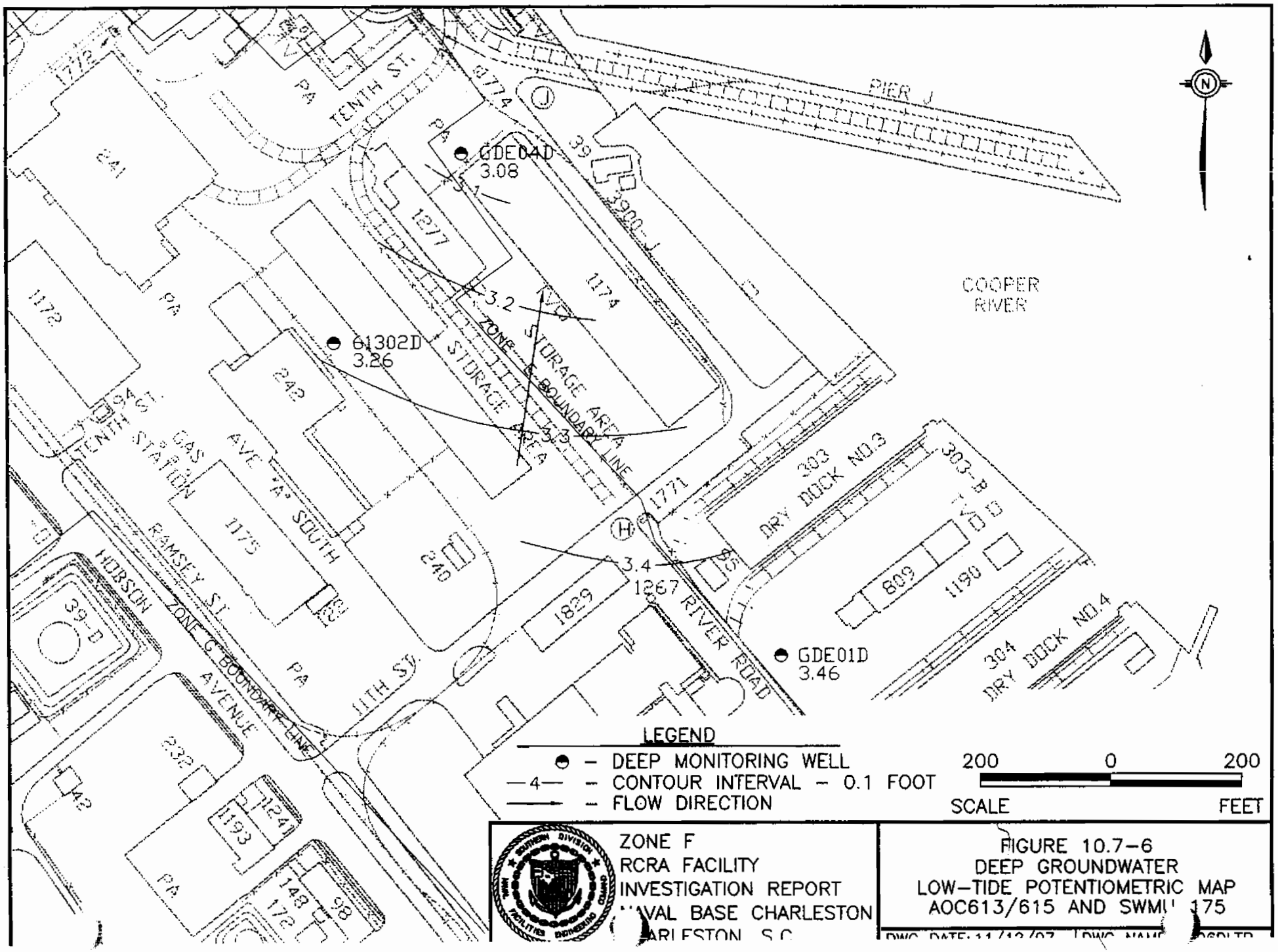
Contents, Volume II

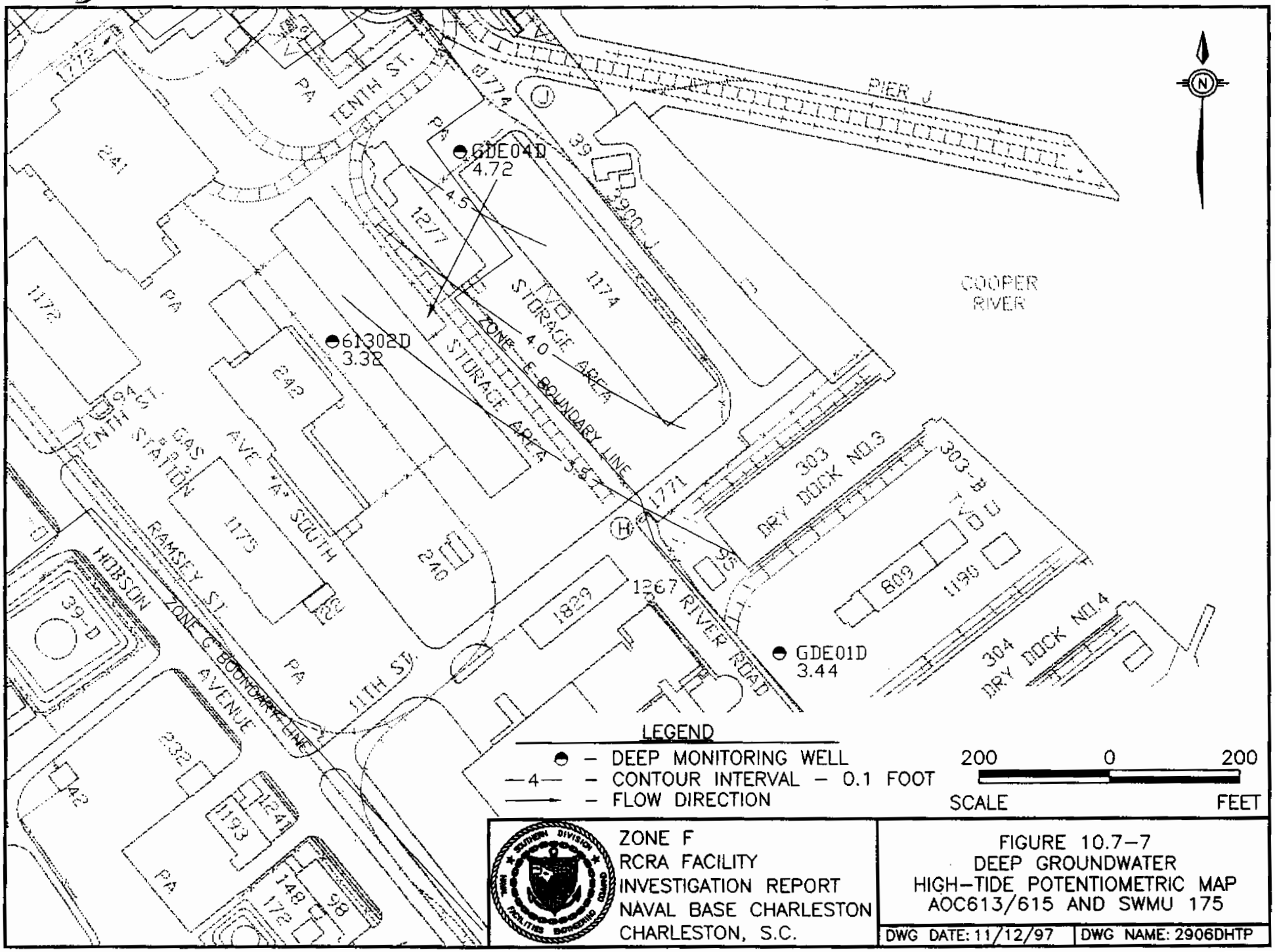
Appendices

A Excerpts from the *Zone F RFI Report, Revision 0* and the *Zone L RFI Report, Revision 0*
B *Initial Ground-Water Assessment Report for Site 20, Building 240* and *Rapid Assessment Report for Site 22, Building 242*
C Analytical Data from Sampling Subsequent to the *Zone F RFI Report, Revision 0*
D Data Validation Reports from Sampling Subsequent to the *Zone F RFI Report, Revision 0*
E Well Installation Logs
F Responses to SCDHEC Comments on the *Zone F RFI Report, Revision 0*
G Human Health Risk Calculation Sheets

The *Initial Ground-Water Assessment Report for Site 20, Building 240* and *Rapid Assessment Report for Site 22, Building 242* are contained on CD-ROM, and inserted into the pocket of the Volume II Binder.


LEGEND
EXISTING SHALLOW MONITORING WELL NOT INSTALLED
SHALLOW MONITORING WELL
CONTOUR INTERVAL – 0.5 FOOT
FLOW DIRECTION
NOTE:
WATER LEVEL ELEVATION FOR GEL014 NOT HONORED DUE TO FREE PRODUCT IN WELL.
GEL014 6.11
613003 6.54
GEL013 6.35
613001 1.96
GEL012 2.82
613004 2.46
GEL008 6.56
GEL007 4.23
240003 6.85
GEL006 4.47
GEL005 4.90
613005 3.15
GEL011 2.85
1277
1174
1172
255
242
240
1175
122
1829
1771
GAS STATION
STORAGE AREA
125 0 125
SCALE FEET
ZONE F
RCRA FACILITY
INVESTIGATION REPORT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 10.7-5
SHALLOW GROUNDWATER
LOW-TIDE POTENTIOMETRIC MAP
AOC 613/615 AND SWMU 175
DWG DATE: 10/30/97
DWG NAME: 2906SGPM


PIER J
COOPER RIVER
TENTH ST.
GDE04D
3.08
61302D
3.26
3.2
3.3
3.4
GDE01D
3.46
STORAGE AREA
ZONE G BOUNDARY LINE
GAS STATION
AVE "A" SOUTH
RAMSEY ST.
HOBSON AVENUE
11TH ST.
RIVER ROAD
DRY DOCK NO.3
DRY DOCK NO.4
LEGEND
DEEP MONITORING WELL
CONTOUR INTERVAL - 0.1 FOOT
FLOW DIRECTION
200 0 200
SCALE FEET
ZONE F
RCRA FACILITY
INVESTIGATION REPORT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 10.7-6
DEEP GROUNDWATER
LOW-TIDE POTENTIOMETRIC MAP
AOC613/615 AND SWMU 175


PIER J
COOPER RIVER
TENTH ST.
GDE04D
4.72
61302D
3.38
GDE01D
3.44
STORAGE AREA
ZONE F BOUNDARY LINE
ZONE G BOUNDARY LINE
GAS STATION
AVE "A" SOUTH
RAMSEY ST.
HOBSON AVENUE
11TH ST.
RIVER ROAD
DRY DOCK NO.3
DRY DOCK NO.4
LEGEND
DEEP MONITORING WELL
CONTOUR INTERVAL – 0.1 FOOT
FLOW DIRECTION
200 0 200
SCALE FEET
ZONE F
RCRA FACILITY
INVESTIGATION REPORT
NAVAL BASE CHARLESTON
CHARLESTON, S.C.
FIGURE 10.7–7
DEEP GROUNDWATER
HIGH–TIDE POTENTIOMETRIC MAP
AOC613/615 AND SWMU 175
DWG DATE: 11/12/97
DWG NAME: 2906DHTP

The approved final RFI work plan proposed the screening survey results be used to optimize placement of the 10 discrete soil borings, and the three shallow and one deep monitoring wells proposed for this investigation. However, the soil screening data was of sufficient quality, and site coverage extensive enough, for this data to be used in lieu of the proposed discrete soil sampling. Therefore, no discrete soil samples were collected. Soil and groundwater screening data were used for monitoring well placement as planned. Table 10.7.1 summarizes the AOCs 613/615 and SWMU 175 screening samples and analyses.

Table 10.7.1
AOCs 613/615 and SWMU 175
Screening Samples and Analyses

Screening Location	Sample Identifier	Matrix	Date Collected	Analyses	Remarks
613SP001	613SP00101 613CP00101* 613GP00101	Soil Groundwater	9/12/96	Note 1 Note 2	 Duplicate Sample
613SP002	613SP00201 613GP00201	Soil Groundwater	9/13/96	Note 1 See remarks	GP002-SVOAs, VOAs only
613SP003	613SP00301 613GP00301	Soil Groundwater	8/29/96	Note 1	
613SP004	613SP00401 613GP00401	Soil Groundwater	10/02/96	Note 1	
613SP005	613SP00501 613GP00501	Soil Groundwater	10/03/96	Note 1 See remarks	GP005-VOAs only
613SP006	613SP00601 613GP00601	Soil Groundwater	10/04/96	Note 1 See remarks	GP006-metals, SVOAs only
613SP007	613SP00701 613GP00701	Soil Groundwater	9/12/96	Note 1	
613SP008	613SP00801 613GP00801	Soil Groundwater	9/13/96	Note 1 See remarks	GP008-VOAs only
613SP009	613SP00901 613GP00901	Soil Groundwater	8/29/96	Note 1 See remarks	GP009-VOAs only
613SP010	613SP01001 613GP01001	Soil Groundwater	10/02/96	Note 1	
613SP012	613SP01201 613CP01201* 613GP01201	Soil Groundwater	10/10/96	Note 1 Note 2 See remarks	 Duplicate Sample GP012-VOAs only

Table 10.7.1
AOCs 613/615 and SWMU 175
Screening Samples and Analyses

Screening Location	Sample Identifier	Matrix	Date Collected	Analyses	Remarks
613SP013	613SP01301 613GP01301	Soil Groundwater	10/07/96	Note 1	
613SP014	613SP01401	Soil	9/12/96	Note 1	
613SP017	613SP01701 613GP01701	Soil Groundwater	10/03/96	Note 1 See remarks	GP017-VOAs only
613SP018	613SP01801	Soil	10/04/96	Note 1	
613SP019	613SP01901 613GP01901	Soil Groundwater	10/07/96 10/08/96	Note 1	
613SP020	613SP02001 613GP02001	Soil Groundwater	9/11/96 9/12/96	Note 1 See remarks	GP020-VOAs only
613SP021	613SP02101 613GP02101	Soil Groundwater	8/29/96	Note 1	
613SP022	613SP02201 613GP02201	Soil Groundwater	9/15/96	Note 1 See remarks	GP022-VOAs only
613SP023	613SP02301	Soil	9/14/96	Note 1	
613SP024	613SP02401 613GP02401	Soil Groundwater	9/11/96	Note 1 See remarks	GP024-metals, VOAs only
613SP025	613SP02501 613GP02501	Soil Groundwater	8/28/96 8/29/96	Note 1 See remarks	GP025-SVOAs, VOAs only
613SP026	613SP02601 613GP02601	Soil Groundwater	9/15/96	Note 1 See remarks	GP026-VOAs only
613SP027	613SP02701 613GP02701	Soil Groundwater	9/14/96 9/15/96	Note 1 See remarks	GP027-VOAs only
613SP028	613SP02801 613GP02801	Soil Groundwater	9/11/96	Note 1	
613SP029	613SP02901 613GP02901	Soil Groundwater	8/28/96	Note 1	
613SP030	613SP03001 613GP03001 613HP03001*	Soil Groundwater	9/28/96	Note 1 Note 2	 Duplicate Sample
613SP031	613SP03101 613GP03101	Soil Groundwater	9/14/96	Note 1 See remarks	GP031-metals, VOAs only
613SP032	613SP03201 613GP03201	Soil Groundwater	9/10/96	Note 1	
613SP033	613SP03301 613GP03301	Soil Groundwater	8/28/96	Note 1	

Table 10.7.1
AOCs 613/615 and SWMU 175
Screening Samples and Analyses

Screening Location	Sample Identifier	Matrix	Date Collected	Analyses	Remarks
613SP034	613SP03401 613GP03401	Soil Groundwater	9/28/96	Note 1	
613SP035	613SP03501 613GP03501	Soil Groundwater	9/16/96	Note 1	
613SP036	613SP03601 613GP03601	Soil Groundwater	9/09/96	Note 1	
613SP037	613SP03701 613GP03701	Soil Groundwater	8/30/96	Note 1	
613SP038	613SP03801 613GP03801	Soil Groundwater	8/28/96 9/16/96	Note 1	
613SP039	613SP03901 613GP03901	Soil Groundwater	9/29/96	Note 1 See remarks	GP031-metals, VOAs only
613SP040	613SP04001 613GP04001	Soil Groundwater	9/13/96	Note 1	
613SP041	613SP04101 613GP04101 613HP00101*	Soil Groundwater	9/10/96	Note 1 Note 2	 Duplicate Sample
613SP042	613SP04201 613GP04201	Soil Groundwater	9/03/96	Note 1	
613SP043	613SP04301 613GP04301	Soil Groundwater	9/09/96	Note 1	
613SP044	613SP04401 613GP04401	Soil Groundwater	8/27/96	Note 1	
613SP045	613SP04501	Soil	9/29/96	Note 1	
613SP046	613SP04601 613GP04601	Soil Groundwater	10/09/96	Note 1	
613SP047	613SP04701 613GP04701	Soil Groundwater	10/08/96	Note 1	
613SP048	613SP04801 613GP04801	Soil Groundwater	9/10/96	Note 1	
613SP049	613SP04901 613GP04901	Soil Groundwater	9/09/96	Note 1	
613SP050	613SP05001 613GP05001 613HP05001*	Soil Groundwater	9/04/96	Note 1 Note 2	 Duplicate Sample
613SP051	613SP05101 613GP05101	Soil Groundwater	8/27/96	Note 1	

Table 10.7.1
AOCs 613/615 and SWMU 175
Screening Samples and Analyses

Screening Location	Sample Identifier	Matrix	Date Collected	Analyses	Remarks
613SP052	613SP05201 613GP05201	Soil Groundwater	10/09/96	Note 1	
613SP053	613SP05301 613GP05301	Soil Groundwater	9/17/96	Note 1 See remarks	GP053-VOAs only
613SP054	613SP05401 613GP05401	Soil Groundwater	9/17/96	Note 1 See remarks	GP054-VOAs only
613SP055	613SP05501	Soil	9/13/96	Note 1	
613SP056	613SP05601 613GP05601	Soil Groundwater	9/03/96	Note 1 See remarks	GP056-VOAs only
613SP057	613SP05701 613GP05701	Soil Groundwater	8/30/96	Note 1	
613SP058	613SP05801 613GP05801	Soil Groundwater	8/30/96	Note 1	
613SP059	613SP05901 613GP05901	Soil Groundwater	9/03/96	Note 1	
613SP060	613SP06001 613GP06001	Soil Groundwater	9/03/96 9/04/96	Note 1	
613SP061	613SP06101	Soil	9/16/96	Note 1	
613SP062	613SP06201	Soil	9/16/96	Note 1	
613SP063	613SP06301 613GP06301	Soil Groundwater	10/16/96	Note 1	
613SP064	613SP06401 613GP06401	Soil Groundwater	10/15/96	Note 1	
613SP065	613SP06501 613CP06501* 613GP06501 613HP06501*	Soil Groundwater 	10/14/96	Note 1 Note 2 Note 1 Note 2	 Duplicate Sample Duplicate Sample
613SP066	613SP06601 613CP06601* 613GP06601	Soil Groundwater	10/13/96	Note 1 Note 2	 Duplicate Sample
613SP067	613SP06701 613CP06701* 613GP06701	Soil Groundwater	10/11/96 10/12/96	Note 1 Note 2	 Duplicate Sample

Table 10.7.1
AOCs 613/615 and SWMU 175
Screening Samples and Analyses

Screening Location	Sample Identifier	Matrix	Date Collected	Analyses	Remarks
613SP068	613SP06801	Soil	10/10/96	Note 1	HP068-Appendix IX
	613CP06801*			Note 2	Duplicate Sample
	613GP06801	Groundwater	10/11/96	See remarks	VOAs only.
	613HP06801*			Note 2	Duplicate Sample

Notes:
1 = SW-846 (metals, SVOAs, VOAs) at DQO Level III.
2 = Appendix IX suite: Appendix IX (pesticides/PCBs, herbicides, SVOAs, VOAs); SW-846 (metals, dioxins, OP-pesticides); cyanides; hex-chrome at DQO Level IV.
* = Duplicate sample.

10.7.3.1 Nature of Contamination in Soil

Organic compound analytical results for soil are summarized in Table 10.7.2. Inorganic analytical results for soil are summarized in Table 10.7.3. Table 10.7.4 presents a summary of all analytes detected in soil at AOC 613/615 and SWMU 175. Appendix D contains a complete analytical data report for all Zone F samples collected.

Volatile Organics in Soil

Fifteen VOCs were detected in surface soil samples. None of the detections exceeded its respective RBC. Three VOCs were detected in the subsurface soil sample below the respective SSL. No VOCs exceeded the RBC or SSL at the combined site.

Semivolatile Organic Compounds in Soil

Twenty-three SVOCs were detected surface soil. Concentrations of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenz(a,h)anthracene were detected in surface soils above their respective RBCs. Figure 10.7-8 illustrates the distribution of these compounds as total BEQs concentrations in surface soil. Benzo(a)anthracene was detected in the subsurface soil sample exceeding its SSL. Figure 10.7-9 illustrates the distribution in subsurface soil.

Table 10.7.A
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Volatile Organic Compounds (µg/kg)							
1,1,2,2-Tetrachloroethane	613SP031	32.0	3200	NA	NT	3.0	NA
1,1-Dichloroethane	613SP057	2.0	780000	NA	NT	23000	NA
	613SP059	1.0		NA	NT		NA
1,1-Dichloroethene	613SP046	3.0	1100	NA	NT	60	NA
1,2-Dichloroethene (total)	613SP034	14.0		NA	NT		NA
	613SP039	13.0	70000	NA	NT	400	NA
2-Butanone (MEK)	613SP001	44.0	420000	NA	NT	790	NA
	613SP003	4.0		NA	NT		NA
	613SP009	17.0		NA	NT		NA
	613SP013	5.0		NA	NT		NA
	613SP018	3.0		NA	NT		NA
	613SP019	8.0		NA	NT		NA
	613SP021	6.0		NA	NT		NA
	613SP025	9.0		NA	NT		NA
	613SP027	22.0		NA	NT		NA
	613SP029	8.0		NA	NT		NA
	613SP031	24.0		NA	NT		NA
	613SP035	41.0		NA	NT		NA
	613SP040	5.0		NA	NT		NA
	613SP044	14.0		NA	NT		NA
	613SP046	18.0		NA	NT		NA
	613SP047	4.0		NA	NT		NA
	613SP050	8.0		NA	NT		NA
	613SP051	10.0		NA	NT		NA
	613SP055	10.0		NA	NT		NA
	613SP061	11.0		NA	NT		NA
	613SP062	55.0		NA	NT		NA
	613SP063	4.0		NA	NT		NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Volatile Organic Compounds (µg/kg)							
2-Hexanone	613SP046	18.0	630000	NA	NT	27600	NA
Acetone	613SP027	170.0	780000	NA	NT	16000	NA
Benzene	613SP042	11.0	22000	NA	NT	30	NA
	613SP046	3.0		NA	NT		NA
	613SP051	2.0		NA	NT		NA
	613SP059	4.0		NA	NT		NA
	613SP061	2.0		NA	NT		NA
Carbon disulfide	613SP010	2.0	780000	NA	NT	32000[a]	NA
	613SP012	8.5		NA	NT		NA
	613SP014	2.0		NA	NT		NA
	613SP022	5.0		NA	14.0		NA
	613SP026	4.0		NA	NT		NA
	613SP030	3.0		NA	NT		NA
	613SP045	9.0		NA	NT		NA
	613SP053	110.0		NA	NT		NA
	613SP056	2.0		NA	NT		NA
	613SP062	2.0		NA	NT		NA
	613SP067	2.0		NA	NT		NA
	613SP068	4.5		NA	NT		NA
Ethylbenzene	613SP022	ND	780000	NA	32.0	13000	NA
	613SP031	30.0		NA	NT		NA
	613SP039	1.0		NA	NT		NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC[a] (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL[a] (DAF=20)	Subsurface Background
Volatile Organic Compounds (µg/kg)							
Methylene chloride	613SP002	1.0	85000	NA	NT	20	NA
	613SP014	2.0		NA	NT		NA
	613SP020	2.0		NA	NT		NA
	613SP023	50.0		NA	NT		NA
	613SP026	50.0		NA	NT		NA
	613SP027	3.0		NA	NT		NA
	613SP051	4.0		NA	NT		NA
Toluene	613SP030	9.0	1600000	NA	NT	12000	NA
	613SP034	9.0		NA	NT		NA
	613SP039	26.0		NA	NT		NA
	613SP045	16.0		NA	NT		NA
	613SP046	3.0		NA	NT		NA
Trichloroethene	613SP010	8.0	58000	NA	NT	60	NA
	613SP012	3.0		NA	NT		NA
	613SP019	23.0		NA	NT		NA
	613SP039	4.0		NA	NT		NA
	613SP042	2.0		NA	NT		NA
	613SP046	3.0		NA	NT		NA
	613SP051	2.0		NA	NT		NA
	613SP061	1.0		NA	NT		NA
	613SP067	3.0		NA	NT		NA
Vinyl chloride	613SP034	2.0	340	NA	NT	10	NA
Xylene (total)	613SP022	ND	16000000	NA	46.0	190000	NA
	613SP031	120.0		NA	NT		NA
	613SP039	5.0		NA	NT		NA
	613SP045	13.0		NA	NT		NA
	613SP051	4.0		NA	NT		NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Semivolatile Organic Compounds (µg/kg)							
BEQs[1]	613SP009	226.23	88	NA	NA	NA	NA
	613SP010	105.86		NA	NA	NA	NA
	613SP012	95.57		NA	NA	NA	NA
	613SP021	1086.40		NA	NA	NA	NA
	613SP022	305.93		NA	NA	NA	NA
	613SP024	108.23		NA	NA	NA	NA
	613SP029	564.78		NA	NA	NA	NA
	613SP031	5.98		NA	NA	NA	NA
	613SP032	82.03		NA	NA	NA	NA
	613SP034	86.57		NA	NA	NA	NA
	613SP035	82.16		NA	NA	NA	NA
	613SP044	59.00		NA	NA	NA	NA
	613SP047	50.00		NA	NA	NA	NA
	613SP050	87.00		NA	NA	NA	NA
	613SP051	1775.30		NA	NA	NA	NA
	613SP052	7.80		NA	NA	NA	NA
	613SP053	243.82		NA	NA	NA	NA
	613SP054	56.40		NA	NA	NA	NA
	613SP060	90.00		NA	NA	NA	NA
	613SP061	239.47		NA	NA	NA	NA
	613SP062	71.50		NA	NA	NA	NA
	613SP064	100.00		NA	NA	NA	NA
	613SP065	94.32		NA	NA	NA	NA
	613SP066	98.54		NA	NA	NA	NA
	613SP068	10.07		NA	NA	NA	NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC[a] (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL[a] (DAF=20)	Subsurface Background
Semivolatile Organic Compounds (µg/kg)							
2-Methylnaphthalene	613SP005	3000.0	310000	NA	NT	126000	NA
	613SP006	480.0		NA	NT		NA
	613SP022	ND		NA	43000.0		NA
	613SP031	6800.0		NA	NT		NA
	613SP035	740.0		NA	NT		NA
	613SP040	230.0		NA	NT		NA
	613SP043	90.0		NA	NT		NA
	613SP044	380.0		NA	NT		NA
	613SP045	72.0		NA	NT		NA
	613SP046	280.0		NA	NT		NA
	613SP051	66.0		NA	NT		NA
4-Methylphenol (p-Cresol)	613SP012	81.0	39000	NA	NT	1380	NA
Acenaphthene	613SP005	180.0	470000	NA	NT	570000	NA
	613SP006	160.0			NT		
	613SP022	ND			55000.0		
	613SP029	97.0			NT		
	613SP031	590.0			NT		
	613SP044	85.0			NT		
	613SP051	580.0			NT		
	613SP053	58.0			NT		
	613SP061	160.0			NT		
	613SP065	150.0			NT		
Acenaphthylene	613SP051	120.0	470000	NA	NT	11000	NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Semivolatile Organic Compounds (µg/kg)							
Anthracene	613SP009	98.0	2300000	NA	NT	12000000	NA
	613SP021	3800.0		NA	NT		NA
	613SP022	ND		NA	26000		NA
	613SP029	130.0		NA	NT		NA
	613SP031	550.0		NA	NT		NA
	613SP035	150.0		NA	NT		NA
	613SP051	1600.0		NA	NT		NA
	613SP053	93.0		NA	NT		NA
	613SP061	150.0		NA	NT		NA
	613SP065	89.0		NA	NT		NA
Benzo(a)anthracene	613SP009	160.0	880	NA	NT	2000	NA
	613SP010	100.0		NA	NT		NA
	613SP012	95.0		NA	NT		NA
	613SP021	860.0		NA	NT		NA
	613SP022	200.0		NA	5300.0		NA
	613SP024	70.0		NA	NT		NA
	613SP029	380.0		NA	NT		NA
	613SP032	70.0		NA	NT		NA
	613SP034	75.0		NA	NT		NA
	613SP035	110.0		NA	NT		NA
	613SP051	2400.0		NA	NT		NA
	613SP053	220.0		NA	NT		NA
	613SP054	43.0		NA	NT		NA
	613SP061	280.0		NA	NT		NA
	613SP062	55.0		NA	NT		NA
	613SP065	108.5		NA	NT		NA
	613SP066	110.0		NA	NT		NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Semivolatile Organic Compounds (µg/kg)							
Benzo(a)pyrene	613SP009	150.0	88	NA	NT	8000	NA
	613SP010	87.0		NA	NT		NA
	613SP012	78.0		NA	NT		NA
	613SP021	740.0		NA	NT		NA
	613SP022	190.0		NA	1200.0		NA
	613SP024	92.0		NA	NT		NA
	613SP029	440.0		NA	NT		NA
	613SP032	69.0		NA	NT		NA
	613SP034	71.0		NA	NT		NA
	613SP035	71.0		NA	NT		NA
	613SP044	59.0		NA	NT		NA
	615SP047	50.0		NA	NT		NA
	613SP050	97.0		NA	NT		NA
	613SP051	1200.0		NA	NT		NA
	613SP053	190.0		NA	NT		NA
	613SP054	47.0		NA	NT		NA
	613SP060	98.0		NA	NT		NA
	613SP061	130.0		NA	NT		NA
	613SP062	65.0		NA	NT		NA
	613SP064	100.0		NA	NT		NA
	613SP065	75.0		NA	NT		NA
	613SP066	79.0		NA	NT		NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Semivolatile Organic Compounds (µg/kg)							
Benzo(b)fluoranthene	613SP009	180.0	880	NA	NT	5000	NA
	613SP010	79.0		NA	ND		NA
	613SP021	950.0		NA	ND		NA
	613SP022	200.0		NA	2700.0		NA
	613SP024	83.0		NA	ND		NA
	613SP029	580.0		NA	ND		NA
	613SP032	53.0		NA	ND		NA
	613SP034	72.0		NA	ND		NA
	613SP051	1800.0		NA	ND		NA
	613SP052	78.0		NA	ND		NA
	613SP053	180.0		NA	ND		NA
	613SP054	46.0		NA	ND		NA
	613SP061	260.0		NA	ND		NA
	613SP065	75.5		NA	ND		NA
	613SP066	77.0		NA	ND		NA
	613SP068	100.0		NA	ND		NA
Benzo(g,h,i)perylene	613SP009	85.0	230000	NA	NT	4.66E+08	NA
	613SP012	73.0		NA	NT		NA
	613SP021	210.0		NA	NT		NA
	613SP022	100.0		NA	360.0		NA
	613SP029	210.0		NA	NT		NA
	613SP031	160.0		NA	NT		NA
	613SP035	54.0		NA	NT		NA
	613SP051	250.0		NA	NT		NA
	613SP053	110.0		NA	NT		NA
	613SP061	82.0		NA	NT		NA
	613SP062	55.0		NA	NT		NA
	613SP065	55.0		NA	NT		NA
	613SP066	51.0		NA	NT		NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Semivolatile Organic Compounds (µg/kg)							
Benzo(k)fluoranthene	613SP009	200.0	3800	NA	NT	49000	NA
	613SP010	84.0		NA	NT		NA
	613SP012	88.0		NA	NT		NA
	613SP021	640.0		NA	NT		NA
	613SP022	76.0		NA	ND		NA
	613SP024	84.0		NA	NT		NA
	613SP029	420.0		NA	NT		NA
	613SP032	66.0		NA	NT		NA
	613SP034	78.0		NA	NT		NA
	613SP051	1500.0		NA	NT		NA
	613SP053	160.0		NA	NT		NA
	613SP054	45.0		NA	NT		NA
	613SP061	91.0		NA	NT		NA
	613SP062	94.0		NA	NT		NA
	613SP065	79.0		NA	NT		NA
	613SP066	72.0		NA	NT		NA
Benzoic acid	613SP002	53.0	31000000	NA	NT	400000	NA
	613SP008	86.0		NA	NT		NA
	613SP010	72.0		NA	NT		NA
	613SP047	51.0		NA	NT		NA
	613SP051	68.0		NA	NT		NA
	613SP053	60.0		NA	NT		NA
	613SP055	67.0		NA	NT		NA
	613SP059	58.0		NA	NT		NA
	613SP065	100.0		NA	NT		NA
	613SP066	78.0		NA	NT		NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC[a] (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL[a] (DAF=20)	Subsurface Background
Semivolatile Organic Compounds (µg/kg)							
bis(2-ethylhexyl)phthalate	613SP001	109.0	46000	NA	NT	3600000	NA
	613SP009	130.0		NA	NT		NA
	613SP021	47.0		NA	NT		NA
	613SP022	140.0		NA	ND		NA
	613SP023	68.0		NA	NT		NA
	613SP025	380.0		NA	NT		NA
	613SP026	79.0		NA	NT		NA
	613SP027	41.0		NA	NT		NA
	613SP033	380.0		NA	NT		NA
	613SP041	45.0		NA	NT		NA
	613SP042	67.0		NA	NT		NA
	613SP050	130.0		NA	NT		NA
	613SP056	73.0		NA	NT		NA
	613SP058	43.0		NA	NT		NA
	613SP061	190.0		NA	NT		NA
	613SP062	63.0		NA	NT		NA
	613SP063	110.0		NA	NT		NA
	613SP065	150.0		NA	NT		NA
	613SP066	49.0		NA	NT		NA
Butylbenzylphthalate	613SP012	170.0	1600000	NA	NT	930000[a]	NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Semivolatile Organic Compounds (µg/kg)							
Chrysene	613SP009	230.0	18000	NA	NT	160000	NA
	613SP010	120.0		NA	NT		NA
	633SP012	87.0		NA	NT		NA
	613SP021	3000.0		NA	NT		NA
	613SP022	170.0		NA	3300.0		NA
	613SP024	90.0		NA	NT		NA
	613SP029	580.0		NA	NT		NA
	613SP031	480.0		NA	NT		NA
	613SP032	73.0		NA	NT		NA
	613SP034	91.0		NA	NT		NA
	613SP035	160.0		NA	NT		NA
	613SP051	2300.0		NA	NT		NA
	613SP053	220.0		NA	NT		NA
	613SP054	45.0		NA	NT		NA
	613SP061	260.0		NA	NT		NA
	613SP062	64.0		NA	NT		NA
	613SP065	130.0		NA	NT		NA
	613SP066	120.0		NA	NT		NA
	613SP068	72.0		NA	NT		NA
Di-n-butylphthalate	613SP012	74.0	780000	NA	NT	2300000	NA
Dibenz(a,h)anthracene	613SP021	130.0	88	NA	NT	2000	NA
	613SP022	64.0		NA	270.0		NA
	613SP051	110.0		NA	NT		NA
	613SP061	46.0		NA	NT		NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Semivolatile Organic Compounds (µg/kg)							
Dibenzofuran	613SP005	160.0	31000	NA	NT	240000	NA
	613SP006	110.0		NA	NT		NA
	613SP022	ND		NA	46000.0		NA
	613SP031	470.0		NA	NT		NA
	613SP051	330.0		NA	NT		NA
	613SP061	64.0		NA	NT		NA
	613SP065	120.0		NA	NT		NA
Fluoranthene	613SP008	72.0	31000	NA	NT	4300000	NA
	613SP009	450.0		NA	NT		NA
	613SP010	240.0		NA	NT		NA
	613SP012	92.0		NA	NT		NA
	613SP021	820.0		NA	NT		NA
	613SP022	350.0		NA	32000.0		NA
	613SP024	100.0		NA	NT		NA
	613SP026	62.0		NA	NT		NA
	613SP029	580.0		NA	NT		NA
	613SP031	350.0		NA	NT		NA
	613SP032	150.0		NA	NT		NA
	613SP034	150.0		NA	NT		NA
	613SP044	200.0		NA	NT		NA
	613SP045	99.0		NA	NT		NA
	613SP051	4500.0		NA	NT		NA
	613SP053	450.0		NA	NT		NA
	613SP054	63.0		NA	NT		NA
	613SP061	1000.0		NA	NT		NA
	613SP062	97.0		NA	NT		NA
	613SP065	290.0		NA	NT		NA
	613SP066	135.0		NA	NT		NA
	613SP067	77.0		NA	NT		NA
	613SP068	130.0		NA	NT		NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC[a] (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL[a] (DAF=20)	Subsurface Background
Semivolatile Organic Compounds (µg/kg)							
Fluorene	613SP005	260.0	310000	NA	NT	560000	NA
	613SP006	380.0		NA	NT		NA
	613SP021	71.0		NA	NT		NA
	613SP022	ND		NA	60000.0		NA
	613SP029	59.0		NA	NT		NA
	613SP031	1000.0		NA	NT		NA
	613SP035	300.0		NA	NT		NA
	613SP040	69.0		NA	NT		NA
	613SP043	160.0		NA	NT		NA
	613SP044	84.0		NA	NT		NA
	613SP051	1100.0		NA	NT		NA
	613SP061	87.0		NA	NT		NA
	613SP065	190.0		NA	NT		NA
Indeno(1,2,3-cd)pyrene	613SP009	100.0	880	NA	NT	14000	NA
	613SP012	71.0		NA	NT		NA
	613SP021	260.0		NA	NT		NA
	613SP022	110.0		NA	450.0		NA
	613SP029	240.0		NA	NT		NA
	613SP031	55.0		NA	NT		NA
	613SP051	280.0		NA	NT		NA
	613SP053	120.0		NA	NT		NA
	613SP061	83.0		NA	NT		NA
Naphthalene	613SP022	ND	310000	NA	38000.0	84000	NA
	613SP051	81.0		NA	NT		NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Semivolatile Organic Compounds (µg/kg)							
Phenanthrene	613SP005	850.0	230000	NA	NT	1380000	NA
	613SP006	880.0		NA	NT		NA
	613SP009	120.0		NA	NT		NA
	613SP010	100.0		NA	NT		NA
	613SP019	68.0		NA	NT		NA
	613SP021	160.0		NA	NT		NA
	613SP022	200.0		NA	110000.0		NA
	613SP029	490.0		NA	NT		NA
	613SP031	2600.0		NA	NT		NA
	613SP032	44.0		NA	NT		NA
	613SP035	500.0		NA	NT		NA
	613SP040	160.0		NA	NT		NA
	613SP043	300.0		NA	NT		NA
	613SP044	130.0		NA	NT		NA
	613SP051	3100.0		NA	NT		NA
	613SP053	390.0		NA	NT		NA
	613SP061	87.0		NA	NT		NA
	613SP062	58.0		NA	NT		NA
	613SP065	410.0		NA	NT		NA
	613SP068	72.0		NA	NT		NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Semivolatile Organic Compounds (µg/kg)							
Pyrene	613SP005	170.0	230000	NA	NT	4200000	NA
	613SP009	330.0		NA	NT		NA
	613SP010	230.0		NA	NT		NA
	613SP012	86.0		NA	NT		NA
	613SP013	48.0		NA	NT		NA
	613SP020	77.0		NA	NT		NA
	613SP021	1100.0		NA	NT		NA
	613SP022	310.0		NA	18000.0		NA
	613SP024	95.0		NA	NT		NA
	613SP026	71.0		NA	NT		NA
	613SP029	350.0		NA	NT		NA
	613SP031	1200.0		NA	NT		NA
	613SP032	100.0		NA	NT		NA
	613SP034	160.0		NA	NT		NA
	613SP035	480.0		NA	NT		NA
	613SP040	63.0		NA	NT		NA
	613SP044	150.0		NA	NT		NA
	613SP045	150.0		NA	NT		NA
	613SP046	56.0		NA	NT		NA
	613SP047	87.0		NA	NT		NA
	613SP051	8500.0		NA	NT		NA
	613SP053	400.0		NA	NT		NA
	613SP054	77.0		NA	NT		NA
	613SP056	79.0		NA	NT		NA
	613SP061	860.0		NA	NT		NA
	613SP062	93.0		NA	NT		NA
	613SP065	325.0		NA	NT		NA
	613SP066	165.0		NA	NT		NA
	613SP067	91.0		NA	NT		NA
	613SP068	155.0		NA	NT		NA

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Dioxin (ng/kg)							
Dioxin (2,3,7,8-TCDD TEQ)	613SP001	0.0361	1000	NA	ND	1900	NA
Inorganics (mg/kg)							
Aluminum (Al)	613SP001	14550.0	7800	18500	NT	1000000	17100
	613SP002	9460.0			NT		
	613SP003	8620.0			NT		
	613SP004	23200.0			NT		
	613SP005	18600.0			NT		
	613SP006	8650.0			NT		
	613SP007	24800.0			NT		
	613SP008	25400.0			NT		
	613SP009	8030.0			NT		
	613SP010	13100.0			NT		
	613SP012	21500.0			NT		
	613SP013	9150.0			NT		
	613SP014	21300.0			NT		
	613SP017	8180.0			NT		
	613SP018	2570.0			NT		
	613SP019	9200.0			NT		
	613SP020	17200.0			NT		
	613SP021	7210.0			NT		
	613SP022	10600.0			10000		
	613SP023	9380.0			NT		
	613SP024	17500.0			NT		
	613SP025	7640.0			NT		
	613SP026	9290.0			NT		
	613SP027	8020.0			NT		
	613SP028	11900.0			NT		
	613SP029	7890.0			NT		
	613SP030	18800.0			NT		
	613SP031	11100.0			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Aluminum (Al) (continued)	613SP032	11000.0	7800	18500	NT	1000000	17100
	613SP033	7890.0			NT		
	613SP034	11800.0			NT		
	613SP035	8070.0			NT		
	613SP036	12800.0			NT		
	613SP037	11300.0			NT		
	613SP038	7400.0			NT		
	613SP039	3400.0			NT		
	613SP040	14400.0			NT		
	613SP041	4670.0			NT		
	613SP042	8550.0			NT		
	613SP043	6300.0			NT		
	613SP044	11900.0			NT		
	613SP045	13800.0			NT		
	613SP046	9190.0			NT		
	613SP047	10600.0			NT		
	613SP048	5890.0			NT		
	613SP049	4940.0			NT		
	613SP050	14600.0			NT		
	613SP051	4340.0			NT		
	613SP052	21000.0			NT		
	613SP053	19500.0			NT		
	613SP054	7870.0			NT		
	613SP055	17100.0			NT		
	613SP056	26700.0			NT		
	613SP057	13100.0			NT		
	613SP058	9310.0			NT		
	613SP059	17000.0			NT		
	613SP060	9840.0			NT		
	613SP061	6060.0			NT		
	613SP062	16900.0			NT		
	613SP063	12200.0			NT		
	613SP064	10900.0			NT		
	613SP065	14550.0			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Aluminum (Al) (continued)	613SP066	16250.0	7800	18500	NT	1000000	17100
	613SP067	14850.0			NT		
	613SP068	24350.0			NT		
Antimony (Sb)	613SP044	0.54	3.1	0.79	NT	5	NL
	613SP051	1.10			NT		
	613SP053	0.53			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC[a] (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL[a] (DAF=20)	Subsurface Background
Arsenic (As)	613SP001	7.85	0.43	19.9	NT	29[c]	18.2
	613SP002	5.70			NT		
	613SP003	4.50			NT		
	613SP004	17.40			NT		
	613SP005	17.50			NT		
	613SP006	8.70			NT		
	613SP007	21.50			NT		
	613SP008	20.20			NT		
	613SP009	4.00			NT		
	613SP010	15.60			NT		
	613SP012	24.95			NT		
	613SP013	10.20			NT		
	613SP014	21.30			NT		
	613SP017	8.90			NT		
	613SP018	2.90			NT		
	613SP019	4.00			NT		
	613SP020	19.40			NT		
	613SP021	2.00			NT		
	613SP022	6.00			13.0		
	613SP023	2.80			NT		
	613SP024	44.80			NT		
	613SP025	2.30			NT		
	613SP026	8.50			NT		
	613SP027	4.50			NT		
	613SP028	11.60			NT		
	613SP029	2.20			NT		
	613SP030	10.20			NT		
	613SP031	8.50			NT		
	613SP032	4.20			NT		
	613SP033	1.80			NT		
	613SP034	7.60			NT		
	613SP035	6.90			NT		
	613SP036	6.80			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC[a] (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL[a] (DAF=20)	Subsurface Background
Arsenic (As) (continued)	613SP037	5.00	0.43	19.9	NT	29[a]	18.2
	613SP038	2.10			NT		
	613SP039	1.00			NT		
	613SP040	6.30			NT		
	613SP041	3.20			NT		
	613SP042	5.60			NT		
	613SP043	2.40			NT		
	613SP044	18.90			NT		
	613SP045	11.00			NT		
	613SP046	9.00			NT		
	613SP047	7.80			NT		
	613SP048	0.71			NT		
	613SP049	3.50			NT		
	613SP050	17.40			NT		
	613SP051	6.10			NT		
	613SP052	21.90			NT		
	613SP053	17.60			NT		
	613SP054	3.50			NT		
	613SP055	6.40			NT		
	613SP056	15.20			NT		
	613SP057	14.40			NT		
	613SP058	7.20			NT		
	613SP059	8.10			NT		
	613SP060	4.70			NT		
	613SP061	5.00			NT		
	613SP062	20.90			NT		
	613SP063	6.80			NT		
	613SP064	6.90			NT		
	613SP065	11.00			NT		
	613SP066	10.70			NT		
	613SP067	19.00			NT		
	613SP068	24.50			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Barium (Ba)	613SP001	29.05	550.0	61.5	NT	1600[a]	51.8
	613SP002	29.80			NT		
	613SP003	20.40			NT		
	613SP004	37.50			NT		
	613SP005	30.60			NT		
	613SP006	18.60			NT		
	613SP007	37.30			NT		
	613SP008	38.50			NT		
	613SP009	14.10			NT		
	613SP010	28.70			NT		
	613SP012	36.45			NT		
	613SP013	32.20			NT		
	613SP014	36.70			NT		
	613SP017	12.90			NT		
	613SP018	9.00			NT		
	613SP019	11.60			NT		
	613SP020	32.90			NT		
	613SP021	10.80			NT		
	613SP022	22.50			18.60		
	613SP023	9.70			NT		
	613SP024	27.80			NT		
	613SP025	12.40			NT		
	613SP026	17.00			NT		
	613SP027	13.80			NT		
	613SP028	19.40			NT		
	613SP029	9.80			NT		
	613SP030	20.60			NT		
	613SP031	20.80			NT		
	613SP032	14.60			NT		
	613SP033	9.00			NT		
	613SP034	17.50			NT		
	613SP035	13.10			NT		
	613SP036	22.70			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Barium (Ba) (continued)	613SP037	23.60	550.0	61.5	NT	1600*	51.8
	613SP038	10.70			NT		
	613SP039	7.80			NT		
	613SP040	22.70			NT		
	613SP041	24.80			NT		
	613SP042	48.00			NT		
	613SP043	17.40			NT		
	613SP044	19.70			NT		
	613SP045	23.20			NT		
	613SP046	17.90			NT		
	613SP047	22.70			NT		
	613SP048	7.30			NT		
	613SP049	10.50			NT		
	613SP050	28.60			NT		
	613SP051	19.50			NT		
	613SP052	33.00			NT		
	613SP053	32.00			NT		
	613SP054	15.70			NT		
	613SP055	28.90			NT		
	613SP056	39.20			NT		
	613SP057	20.80			NT		
	613SP058	20.40			NT		
	613SP059	24.40			NT		
	613SP060	14.60			NT		
	613SP061	12.30			NT		
	613SP062	30.10			NT		
	613SP063	20.40			NT		
	613SP064	23.00			NT		
	613SP065	30.55			NT		
	613SP066	21.75			NT		
	613SP067	24.90			NT		
	613SP068	37.75			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC[a] (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL[b] (DAF=20)	Subsurface Background
Beryllium (Be)	613SP001	0.49	0.15	1.05	NT	63[c]	1.20
	613SP002	0.57			NT		
	613SP003	0.70			NT		
	613SP004	1.50			NT		
	613SP005	1.30			NT		
	613SP006	0.45			NT		
	613SP007	1.70			NT		
	613SP008	1.50			NT		
	613SP009	0.19			NT		
	613SP010	0.94			NT		
	613SP012	1.45			NT		
	613SP013	0.66			NT		
	613SP014	1.40			NT		
	613SP017	0.35			NT		
	613SP020	1.00			NT		
	613SP021	0.14			NT		
	613SP022	0.71			0.78		
	613SP024	1.20			NT		
	613SP025	0.14			NT		
	613SP026	0.60			NT		
	613SP028	0.73			NT		
	613SP029	0.13			NT		
	613SP030	0.70			NT		
	613SP031	0.51			NT		
	613SP032	0.27			NT		
	613SP033	0.11			NT		
	613SP034	0.50			NT		
	613SP036	0.33			NT		
	613SP037	0.26			NT		
	613SP038	0.13			NT		
	613SP039	0.12			NT		
	613SP040	0.68			NT		
	613SP041	0.23			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC[a] (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL[a] (DAF=20)	Subsurface Background
Beryllium (Be) (continued)	613SP042	0.25	0.15	1.05	NT	63[a]	1.20
	613SP043	0.18			NT		
	613SP044	0.87			NT		
	613SP045	0.96			NT		
	613SP046	0.55			NT		
	613SP047	0.45			NT		
	613SP048	0.14			NT		
	613SP049	0.23			NT		
	613SP050	1.00			NT		
	613SP051	0.18			NT		
	613SP052	1.40			NT		
	613SP053	1.20			NT		
	613SP054	0.44			NT		
	613SP055	0.71			NT		
	613SP056	1.40			NT		
	613SP057	0.85			NT		
	613SP058	0.34			NT		
	613SP059	0.35			NT		
	613SP060	0.37			NT		
	613SP061	0.35			NT		
	613SP062	1.20			NT		
	613SP063	0.52			NT		
	613SP064	0.69			NT		
	613SP065	0.75			NT		
	613SP066	0.55			NT		
	613SP067	1.05			NT		
	613SP068	1.45			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Cadmium (Cd)	613SP001	0.12	3.9	0.26	NT	8*	0.09
	613SP003	0.23			NT		
	613SP004	0.14			NT		
	613SP005	0.25			NT		
	613SP007	0.22			NT		
	613SP008	0.60			NT		
	613SP009	0.10			NT		
	613SP010	0.25			NT		
	613SP014	0.42			NT		
	613SP020	0.48			NT		
	613SP021	0.05			NT		
	613SP022	ND			0.21		
	613SP024	0.43			NT		
	613SP025	0.05			NT		
	613SP026	0.23			NT		
	613SP028	0.19			NT		
	613SP029	0.07			NT		
	613SP031	0.26			NT		
	613SP035	0.08			NT		
	613SP036	0.09			NT		
	613SP037	0.12			NT		
	613SP039	0.04			NT		
	613SP040	0.12			NT		
	613SP044	0.34			NT		
	613SP045	0.61			NT		
	613SP049	0.10			NT		
	613SP050	0.16			NT		
	613SP051	0.32			NT		
	613SP053	0.26			NT		
	613SP054	0.10			NT		
	613SP055	0.15			NT		
	613SP056	0.26			NT		
	613SP057	1.40			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Cadmium (Cd) (continued)	613SP058	0.11	3.9	0.26	NT	8*	0.09
	613SP059	0.12			NT		
	613SP060	1.50			NT		
	613SP061	0.12			NT		
	613SP062	0.33			NT		
	613SP065	0.15			NT		
	613SP067	0.22			NT		
Calcium (Ca)	613SP001	875.50	NL	NL	NT	NL	NL
	613SP002	880.00			NT		
	613SP003	32600.00			NT		
	613SP004	12400.00			NT		
	613SP005	25600.00			NT		
	613SP006	6770.00			NT		
	613SP007	4870.00			NT		
	613SP008	5280.00			NT		
	613SP009	13900.00			NT		
	613SP010	54100.00			NT		
	613SP012	15450.00			NT		
	613SP013	6980.00			NT		
	613SP014	20100.00			NT		
	613SP017	7790.00			NT		
	613SP018	96000.00			NT		
	613SP019	1610.00			NT		
	613SP020	50200.00			NT		
	613SP021	1840.00			NT		
	613SP022	4740.00			23100.00		
	613SP023	485.00			NT		
	613SP024	21000.00			NT		
	613SP025	2550.00			NT		
	613SP026	26100.00			NT		
	613SP027	441.00			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Calcium (Ca) (continued)	613SP028	2970.00	NL	NL	NT	NL	NL
	613SP029	1080.00			NT		
	613SP030	1890.00			NT		
	613SP031	16800.00			NT		
	613SP032	913.00			NT		
	613SP033	704.00			NT		
	613SP034	1600.00			NT		
	613SP035	2840.00			NT		
	613SP036	1590.00			NT		
	613SP037	4150.00			NT		
	613SP038	730.00			NT		
	613SP039	3430.00			NT		
	613SP040	3160.00			NT		
	613SP041	575.00			NT		
	613SP042	2150.00			NT		
	613SP043	1570.00			NT		
	613SP044	7390.00			NT		
	613SP045	346000.00			NT		
	613SP046	59300.00			NT		
	613SP047	8090.00			NT		
	613SP048	1060.00			NT		
	613SP049	8280.00			NT		
	613SP050	3660.00			NT		
	613SP051	10800.00			NT		
	613SP052	12600.00			NT		
	613SP053	13000.00			NT		
	613SP054	3980.00			NT		
	613SP055	3650.00			NT		
	613SP056	19300.00			NT		
	613SP057	15100.00			NT		
	613SP058	690.00			NT		
	613SP059	755.00			NT		
	613SP060	1090.00			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC[a] (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL[a] (DAF=20)	Subsurface Background
Calcium (Ca) (continued)	613SP061	13500.00	NL	NL	NT	NL	NL
	613SP062	12800.00			NT		
	613SP063	5280.00			NT		
	613SP064	35500.00			NT		
	613SP065	56050.00			NT		
	613SP066	7560.00			NT		
	613SP067	52100.00			NT		
	613SP068	26850.00			NT		
Chromium (Cr)	613SP001	25.40	39 VI	34.8	NT	38[e] (total)	32.2
	613SP002	12.20	7800 III		NT		
	613SP003	27.20			NT		
	613SP004	41.60			NT		
	613SP005	39.10			NT		
	613SP006	19.30			NT		
	613SP007	42.40			NT		
	613SP008	38.40			NT		
	613SP009	9.20			NT		
	613SP010	29.20			NT		
	613SP012	43.30			NT		
	613SP013	18.70			NT		
	613SP014	41.50			NT		
	613SP017	15.80			NT		
	613SP018	6.30			NT		
	613SP019	9.90			NT		
	613SP020	33.70			NT		
	613SP021	8.00			NT		
	613SP022	16.20			29.50		
	613SP023	7.70			NT		
	613SP024	35.60			NT		
	613SP025	8.60			NT		
	613SP026	16.60			NT		
	613SP027	12.50			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Chromium (Cr) (continued)	613SP028	22.00	39VI	34.8	NT	38* (total)	32.2
	613SP029	9.40	7800III		NT		
	613SP030	31.30			NT		
	613SP031	20.90			NT		
	613SP032	23.90			NT		
	613SP033	7.70			NT		
	613SP034	23.80			NT		
	613SP035	13.30			NT		
	613SP036	25.20			NT		
	613SP037	20.70			NT		
	613SP038	8.10			NT		
	613SP039	4.50			NT		
	613SP040	22.50			NT		
	613SP041	6.10			NT		
	613SP042	17.50			NT		
	613SP043	10.50			NT		
	613SP044	21.90			NT		
	613SP045	29.90			NT		
	613SP046	18.50			NT		
	613SP047	20.20			NT		
	613SP048	4.50			NT		
	613SP049	13.40			NT		
	613SP050	26.90			NT		
	613SP051	14.60			NT		
	613SP052	39.80			NT		
	613SP053	40.00			NT		
	613SP054	14.50			NT		
	613SP055	25.90			NT		
	613SP056	48.10			NT		
	613SP057	24.00			NT		
	613SP058	20.90			NT		
	613SP059	39.40			NT		
	613SP060	19.30			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Chromium (Cr) (continued)	613SP061	12.00	39VI	34.8	NT	38[e] (total)	32.2
	613SP062	34.10	7800III		NT		
	613SP063	18.80			NT		
	613SP064	15.60			NT		
	613SP065	26.60			NT		
	613SP066	22.40			NT		
	613SP067	28.80			NT		
	613SP068	42.50			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Cobalt (Co)	613SP001	1.95	470.0	15.1	NT	2000	6.85
	613SP002	2.50			NT		
	613SP003	1.10			NT		
	613SP004	7.80			NT		
	613SP005	6.90			NT		
	613SP006	3.10			NT		
	613SP007	7.50			NT		
	613SP008	8.30			NT		
	613SP009	1.10			NT		
	613SP010	4.80			NT		
	613SP012	7.65			NT		
	613SP013	3.10			NT		
	613SP014	6.70			NT		
	613SP017	1.60			NT		
	613SP018	1.10			NT		
	613SP019	0.52			NT		
	613SP020	4.80			NT		
	613SP021	0.60			NT		
	613SP022	3.0			4.10		
	613SP023	0.70			NT		
	613SP024	7.40			NT		
	613SP025	0.60			NT		
	613SP026	3.70			NT		
	613SP027	0.67			NT		
	613SP028	3.90			NT		
	613SP029	0.50			NT		
	613SP030	3.50			NT		
	613SP031	2.60			NT		
	613SP032	1.20			NT		
	613SP033	0.35			NT		
	613SP034	1.10			NT		
	613SP035	1.90			NT		
	613SP036	1.40			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Cobalt (Co) (continued)	613SP037	1.50	470.0	15.1	NT	2000	6.85
	613SP038	0.48			NT		
	613SP039	0.47			NT		
	613SP040	2.80			NT		
	613SP041	0.73			NT		
	613SP042	3.70			NT		
	613SP043	0.89			NT		
	613SP044	4.30			NT		
	613SP045	4.10			NT		
	613SP046	2.50			NT		
	613SP047	1.90			NT		
	613SP048	1.00			NT		
	613SP049	0.97			NT		
	613SP050	5.00			NT		
	613SP051	0.89			NT		
	613SP052	6.50			NT		
	613SP053	6.30			NT		
	613SP054	2.00			NT		
	613SP055	3.40			NT		
	613SP056	6.60			NT		
	613SP057	4.10			NT		
	613SP058	1.60			NT		
	613SP059	1.90			NT		
	613SP060	1.60			NT		
	613SP061	1.90			NT		
	613SP062	7.50			NT		
	613SP063	2.70			NT		
	613SP064	3.00			NT		
	613SP065	4.25			NT		
	613SP066	3.00			NT		
	613SP067	5.65			NT		
	613SP068	7.65			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC[a] (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL[a] (DAF=20)	Subsurface Background
Copper (Cu)	6135P002	4.70	310.0	48.2	NT	920	30.4
	6135P003	4.10			NT		
	6135P004	32.80			NT		
	6135P005	39.30			NT		
	6135P007	28.00			NT		
	6135P008	28.00			NT		
	6135P009	5.80			NT		
	6135P010	23.90			NT		
	6135P012	29.65			NT		
	6135P014	32.50			NT		
	6135P017	11.60			NT		
	6135P020	22.50			NT		
	6135P021	2.20			NT		
	6135P022	ND			15.60		
	6135P024	32.00			NT		
	6135P025	4.20			NT		
	6135P026	13.40			NT		
	6135P028	19.40			NT		
	6135P029	2.50			NT		
	6135P030	5.20			NT		
	6135P031	11.00			NT		
	6135P032	0.92			NT		
	6135P033	1.40			NT		
	6135P036	0.95			NT		
	6135P038	1.50			NT		
	6135P040	11.70			NT		
	6135P041	2.60			NT		
	6135P043	0.97			NT		
	6135P044	18.50			NT		
	6135P045	34.70			NT		
	6135P046	18.90			NT		
	6135P048	1.90			NT		
	6135P049	5.50			NT		
	6135P050	21.90			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Copper (Cu) (continued)	613SP051	43.90	310.0	48.2	NT	920	30.4
	613SP052	32.00			NT		
	613SP053	143.00			NT		
	613SP054	10.40			NT		
	613SP055	11.70			NT		
	613SP056	32.20			NT		
	613SP057	19.80			NT		
	613SP060	4.10			NT		
	613SP061	7.60			NT		
	613SP062	27.30			NT		
	613SP063	6.70			NT		
	613SP064	8.00			NT		
	613SP065	22.15			NT		
	613SP066	11.15			NT		
	613SP067	23.65			NT		
	613SP068	31.50			NT		
Iron (Fe)	613SP001	21700.00	2300.0	NL	NT	NL	NL
	613SP002	8110.00			NT		
	613SP003	12200.00			NT		
	613SP004	36200.00			NT		
	613SP005	27700.00			NT		
	613SP006	13300.00			NT		
	613SP007	35400.00			NT		
	613SP008	26600.00			NT		
	613SP009	6630.00			NT		
	613SP010	20900.00			NT		
	613SP012	31150.00			NT		
	613SP013	13400.00			NT		
	613SP014	32500.00			NT		
	613SP017	14500.00			NT		
	613SP018	4990.00			NT		
	613SP019	7890.00			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Iron (Fe) (continued)	613SP020	23800.00	2300.0	NL	NT	NL	NL
	613SP021	3300.00			NT		
	613SP022	22300.00			18200.00		
	613SP023	6450.00			NT		
	613SP024	33100.00			NT		
	613SP025	4830.00			NT		
	613SP026	11500.00			NT		
	613SP027	11500.00			NT		
	613SP028	18800.00			NT		
	613SP029	5770.00			NT		
	613SP030	24000.00			NT		
	613SP031	15300.00			NT		
	613SP032	14700.00			NT		
	613SP033	4340.00			NT		
	613SP034	21900.00			NT		
	613SP035	9250.00			NT		
	613SP036	20200.00			NT		
	613SP037	19800.00			NT		
	613SP038	5700.00			NT		
	613SP039	3120.00			NT		
	613SP040	15500.00			NT		
	613SP041	3860.00			NT		
	613SP042	16800.00			NT		
	613SP043	7070.00			NT		
	613SP044	21500.00			NT		
	613SP045	14800.00			NT		
	613SP046	11400.00			NT		
	613SP047	14200.00			NT		
	613SP048	1750.00			NT		
	613SP049	6890.00			NT		
	613SP050	21000.00			NT		
	613SP051	7740.00			NT		
	613SP052	31900.00			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Iron (Fe) (continued)	613SP053	27000.00	2300	NL	NT	NL	NL
	613SP054	12000.00			NT		
	613SP055	18300.00			NT		
	613SP056	26900.00			NT		
	613SP057	28100.00			NT		
	613SP058	25000.00			NT		
	613SP059	25400.00			NT		
	613SP060	17000.00			NT		
	613SP061	7890.00			NT		
	613SP062	28300.00			NT		
	613SP063	14400.00			NT		
	613SP064	10400.00			NT		
	613SP065	6050.00			NT		
	613SP066	18400.00			NT		
	613SP067	22050.00			NT		
	613SP068	35500.00			NT		
Lead(Pb)	613SP001	8.65	400.0[d]	180	NT	400.0[d]	51.7
	613SP002	14.40			NT		
	613SP003	5.10			NT		
	613SP004	60.50			NT		
	613SP005	60.90			NT		
	613SP006	12.20			NT		
	613SP007	52.80			NT		
	613SP008	54.60			NT		
	613SP009	11.20			NT		
	613SP010	38.30			NT		
	613SP012	42.10			NT		
	613SP013	27.20			NT		
	613SP014	45.80			NT		
	613SP017	37.90			NT		
	613SP018	6.60			NT		
	613SP019	4.30			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Lead (Pb) (continued)	613SP020	86.80	400.0[d]	180	NT	400.0[d]	51.7
	613SP021	5.50			NT		
	613SP022	9.10			31.90		
	613SP023	4.50			NT		
	613SP024	52.50			NT		
	613SP025	6.80			NT		
	613SP026	23.20			NT		
	613SP027	5.50			NT		
	613SP028	34.40			NT		
	613SP029	6.20			NT		
	613SP030	16.40			NT		
	613SP031	19.20			NT		
	613SP032	8.00			NT		
	613SP033	4.30			NT		
	613SP034	8.60			NT		
	613SP035	9.40			NT		
	613SP036	8.60			NT		
	613SP037	7.10			NT		
	613SP038	3.50			NT		
	613SP039	1.50			NT		
	613SP040	20.50			NT		
	613SP041	10.20			NT		
	613SP042	6.60			NT		
	613SP043	5.40			NT		
	613SP044	29.50			NT		
	613SP045	66.70			NT		
	613SP046	17.70			NT		
	613SP047	26.80			NT		
	613SP048	3.00			NT		
	613SP049	11.60			NT		
	613SP050	37.10			NT		
	613SP051	104.00			NT		
	613SP052	65.10			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Lead (Pb) (continued)	613SP053	78.60	400.0[d]	180	NT	400.0[d]	51.7
	613SP054	17.00			NT		
	613SP055	25.30			NT		
	613SP056	32.00			NT		
	613SP057	45.50			NT		
	613SP058	7.50			NT		
	613SP059	9.40			NT		
	613SP060	21.20			NT		
	613SP061	28.50			NT		
	613SP062	60.90			NT		
	613SP063	20.20			NT		
	613SP064	16.60			NT		
	613SP065	44.95			NT		
	613SP066	25.60			NT		
	613SP067	46.40			NT		
	613SP068	60.65			NT		
Magnesium (Mg)	613SP001	1144.50	NL	NL	NT	NL	NL
	613SP002	597.00			NT		
	613SP003	2110.00			NT		
	613SP004	4280.00			NT		
	613SP005	4450.00			NT		
	613SP006	1900.00			NT		
	613SP007	3630.00			NT		
	613SP008	3110.00			NT		
	613SP009	581.00			NT		
	613SP010	3670.00			NT		
	613SP012	5285.00			NT		
	613SP013	1990.00			NT		
	613SP014	5030.00			NT		
	613SP017	1040.00			NT		
	613SP018	1230.00			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Magnesium (Mg) (continued)	613SP019	306.00	NL	NL	NT	NL	NL
	613SP020	6060.00			NT		
	613SP021	262.00			NT		
	613SP022	1000.00			2960.00		
	613SP023	223.00			NT		
	613SP024	4570.00			NT		
	613SP025	291.00			NT		
	613SP026	1820.00			NT		
	613SP027	347.00			NT		
	613SP028	2340.00			NT		
	613SP029	227.00			NT		
	613SP030	1930.00			NT		
	613SP031	2010.00			NT		
	613SP032	1290.00			NT		
	613SP033	164.00			NT		
	613SP034	1170.00			NT		
	613SP035	869.00			NT		
	613SP036	1370.00			NT		
	613SP037	1680.00			NT		
	613SP038	157.00			NT		
	613SP039	206.00			NT		
	613SP040	1980.00			NT		
	613SP041	259.00			NT		
	613SP042	1230.00			NT		
	613SP043	710.00			NT		
	613SP044	2910.00			NT		
	613SP045	5500.00			NT		
	613SP046	2020.00			NT		
	613SP047	1340.00			NT		
	613SP048	329.00			NT		
	613SP049	667.00			NT		
	613SP050	3040.00			NT		
	613SP051	311.00			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Magnesium (Mg) (continued)	613SP052	5600.00	NL	NL	NT	NL	NL
	613SP053	4520.00			NT		
	613SP054	1290.00			NT		
	613SP055	2370.00			NT		
	613SP056	5290.00			NT		
	613SP057	2470.00			NT		
	613SP058	1320.00			NT		
	613SP059	1630.00			NT		
	613SP060	1440.00			NT		
	613SP061	1140.00			NT		
	613SP062	4580.00			NT		
	613SP063	1550.00			NT		
	613SP064	1930.00			NT		
	613SP065	3210.00			NT		
	613SP066	2385.00			NT		
	613SP067	4725.00			NT		
	613SP068	6545.00			NT		
Manganese (Mn)	613SP001	42.05	180.0	307	NT	1100	469
	613SP002	43.30			NT		
	613SP003	55.30			NT		
	613SP004	414.00			NT		
	613SP005	650.00			NT		
	613SP006	95.60			NT		
	613SP007	344.00			NT		
	613SP008	234.00			NT		
	613SP009	87.80			NT		
	613SP010	370.00			NT		
	613SP012	461.00			NT		
	613SP013	114.00			NT		
	613SP014	433.00			NT		
	613SP017	90.70			NT		
	613SP018	109.00			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Manganese (Mn) (continued)	613SP019	11.60	180.0	307	NT	1100	469
	613SP020	556.00			NT		
	613SP021	12.40			NT		
	613SP022	77.90			309.00		
	613SP023	12.80			NT		
	613SP024	755.00			NT		
	613SP025	15.20			NT		
	613SP026	137.00			NT		
	613SP027	12.100			NT		
	613SP028	149.00			NT		
	613SP029	16.80			NT		
	613SP030	73.90			NT		
	613SP031	142.00			NT		
	613SP032	19.70			NT		
	613SP033	8.40			NT		
	613SP034	26.50			NT		
	613SP035	45.40			NT		
	613SP036	21.70			NT		
	613SP037	24.90			NT		
	613SP038	8.50			NT		
	613SP039	13.00			NT		
	613SP040	131.00			NT		
	613SP041	17.70			NT		
	613SP042	194.00			NT		
	613SP043	22.00			NT		
	613SP044	221.00			NT		
	613SP045	291.00			NT		
	613SP046	165.00			NT		
	613SP047	124.00			NT		
	613SP048	7.40			NT		
	613SP049	38.20			NT		
	613SP050	215.00			NT		
	613SP051	40.30			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Manganese (Mn) (continued)	613SP052	530.00	180.0	307	NT	1100	469
	613SP053	380.00			NT		
	613SP054	118.00			NT		
	613SP055	233.00			NT		
	613SP056	301.00			NT		
	613SP057	189.00			NT		
	613SP058	45.80			NT		
	613SP059	33.40			NT		
	613SP060	37.20			NT		
	613SP061	65.50			NT		
	613SP062	479.00			NT		
	613SP063	274.00			NT		
	613SP064	157.00			NT		
	613SP065	260.00			NT		
	613SP066	219.50			NT		
	613SP067	315.50			NT		
	613SP068	775.50			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Mercury (Hg)	613SP001	0.11	2.3	0.62	NT	2*	0.23
	613SP002	0.07			NT		
	613SP004	0.37			NT		
	613SP005	0.48			NT		
	613SP006	0.07			NT		
	613SP007	0.28			NT		
	613SP008	0.34			NT		
	613SP009	0.06			NT		
	613SP010	0.50			NT		
	613SP012	0.13			NT		
	613SP014	0.12			NT		
	613SP017	0.26			NT		
	613SP018	0.13			NT		
	613SP020	0.05			NT		
	613SP021	0.98			NT		
	613SP022	0.20			0.23		
	613SP023	0.05			NT		
	613SP024	0.19			NT		
	613SP025	0.16			NT		
	613SP026	0.19			NT		
	613SP027	0.05			NT		
	613SP028	0.57			NT		
	613SP029	0.17			NT		
	613SP030	0.08			NT		
	613SP031	0.09			NT		
	613SP033	0.04			NT		
	613SP035	0.10			NT		
	613SP036	0.08			NT		
	613SP037	0.09			NT		
	613SP038	0.04			NT		
	613SP040	0.14			NT		
	613SP043	0.06			NT		
	613SP045	0.63			NT		
	613SP048	0.23			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Mercury (Hg) (continued)	613SP047	0.06	2.3	0.62	NT	2*	0.23
	613SP049	0.06			NT		
	613SP050	0.20			NT		
	613SP051	0.10			NT		
	613SP052	0.54			NT		
	613SP053	0.22			NT		
	613SP055	0.12			NT		
	613SP056	0.12			NT		
	613SP057	0.30			NT		
	613SP060	0.04			NT		
	613SP061	0.12			NT		
	613SP062	0.45			NT		
	613SP063	0.10			NT		
	613SP064	0.60			NT		
	613SP065	0.17			NT		
	613SP066	0.14			NT		
	613SP067	0.25			NT		
	613SP068	0.38			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Nickel (Ni)	613SP001	4.85	160.0	12.6	NT	130*	8.85
	613SP002	5.20			NT		
	613SP003	9.50			NT		
	613SP004	13.80			NT		
	613SP005	14.30			NT		
	613SP006	4.40			NT		
	613SP007	10.30			NT		
	613SP008	13.90			NT		
	613SP009	3.60			NT		
	613SP010	10.40			NT		
	613SP012	14.15			NT		
	613SP013	5.00			NT		
	613SP014	14.30			NT		
	613SP017	2.90			NT		
	613SP018	3.90			NT		
	613SP020	15.00			NT		
	613SP021	2.20			NT		
	613SP022	2.20			9.70		
	613SP023	1.10			NT		
	613SP024	12.90			NT		
	613SP025	2.50			NT		
	613SP026	6.80			NT		
	613SP027	1.60			NT		
	613SP028	6.80			NT		
	613SP029	2.10			NT		
	613SP030	8.00			NT		
	613SP031	6.00			NT		
	613SP032	2.60			NT		
	613SP033	1.80			NT		
	613SP034	2.60			NT		
	613SP035	3.80			NT		
	613SP036	5.10			NT		
	613SP037	3.40			NT		
	613SP038	1.90			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Nickel (Ni) (continued)	613SP040	6.30	160.0	12.6	NT	130[a]	8.85
	613SP041	2.10			NT		
	613SP042	3.20			NT		
	613SP043	1.80			NT		
	613SP044	7.40			NT		
	613SP045	13.90			NT		
	613SP046	7.30			NT		
	613SP047	4.90			NT		
	613SP048	1.90			NT		
	613SP049	2.90			NT		
	613SP050	8.40			NT		
	613SP051	5.20			NT		
	613SP052	13.70			NT		
	613SP053	15.50			NT		
	613SP054	4.10			NT		
	613SP055	7.20			NT		
	613SP056	15.90			NT		
	613SP057	8.30			NT		
	613SP058	3.00			NT		
	613SP059	4.90			NT		
	613SP060	3.50			NT		
	613SP061	4.10			NT		
	613SP062	12.40			NT		
	613SP063	5.50			NT		
	613SP064	7.10			NT		
	613SP065	10.50			NT		
	613SP066	6.35			NT		
	613SP067	10.55			NT		
	613SP068	13.95			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Potassium (K)	613SP001	497.00	NL	NL	NT	NL	NL
	613SP002	318.00			NT		
	613SP003	589.00			NT		
	613SP004	2100.00			NT		
	613SP005	2190.00			NT		
	613SP006	1210.00			NT		
	613SP007	2000.00			NT		
	613SP008	1720.00			NT		
	613SP009	248.00			NT		
	613SP010	1640.00			NT		
	613SP012	2950.00			NT		
	613SP013	918.00			NT		
	613SP014	2520.00			NT		
	613SP015	653.00			NT		
	613SP018	239.00			NT		
	613SP019	400.00			NT		
	613SP020	1540.00			NT		
	613SP022	639.00			1330.00		
	613SP024	2040.00			NT		
	613SP026	827.00			NT		
	613SP027	337.00			NT		
	613SP028	1200.00			NT		
	613SP030	1070.00			NT		
	613SP031	1040.00			NT		
	613SP032	752.00			NT		
	613SP034	794.00			NT		
	613SP035	641.00			NT		
	613SP036	840.00			NT		
	613SP037	943.00			NT		
	613SP040	1180.00			NT		
	613SP042	296.00			NT		
	613SP043	252.00			NT		
	613SP044	1390.00			NT		
	613SP045	1680.00			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Potassium (K) (continued)	613SP046	881.00	NL	NL	NT	NL	NL
	613SP047	710.00			NT		
	613SP049	326.00			NT		
	613SP050	1530.00			NT		
	613SP052	2890.00			NT		
	613SP053	2410.00			NT		
	613SP054	717.00			NT		
	613SP055	1510.00			NT		
	613SP056	2970.00			NT		
	613SP057	1390.00			NT		
	613SP058	537.00			NT		
	613SP059	991.00			NT		
	613SP060	812.00			NT		
	613SP061	559.00			NT		
	613SP062	2100.00			NT		
	613SP063	941.00			NT		
	613SP064	869.00			NT		
	613SP065	1410.00			NT		
	613SP066	1228.00			NT		
	613SP067	2210.00			NT		
	613SP068	3005.00			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC[a] (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL[a] (DAF=20)	Subsurface Background
Selenium (Se)	613SP001	0.86	39	1.15	NT	5	1.24
	613SP003	1.00			NT		
	613SP004	2.60			NT		
	613SP005	1.80			NT		
	613SP006	0.77			NT		
	613SP007	1.80			NT		
	613SP008	1.50			NT		
	613SP010	1.40			NT		
	613SP012	1.24			NT		
	613SP013	0.84			NT		
	613SP014	1.10			NT		
	613SP017	0.61			NT		
	613SP020	1.10			NT		
	613SP022	0.76			0.95		
	613SP023	0.56			NT		
	613SP024	1.30			NT		
	613SP025	0.42			NT		
	613SP027	0.69			NT		
	613SP030	1.60			NT		
	613SP031	1.10			NT		
	613SP032	0.80			NT		
	613SP034	1.40			NT		
	613SP035	0.67			NT		
	613SP036	1.10			NT		
	613SP037	0.48			NT		
	613SP040	0.79			NT		
	613SP041	0.41			NT		
	613SP042	0.56			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Selenium (Se) (continued)	613SP043	0.48	39	1.15	NT	5	1.24
	613SP044	1.40			NT		
	613SP045	2.10			NT		
	613SP047	0.62			NT		
	613SP050	1.20			NT		
	613SP051	0.51			NT		
	613SP052	2.30			NT		
	613SP053	2.30			NT		
	613SP054	0.84			NT		
	613SP055	0.90			NT		
	613SP056	1.50			NT		
	613SP057	0.92			NT		
	613SP058	0.79			NT		
	613SP059	1.30			NT		
	613SP060	1.00			NT		
	613SP062	1.10			NT		
	613SP063	0.73			NT		
	613SP064	0.48			NT		
	613SP065	1.00			NT		
	613SP066	0.90			NT		
	613SP067	0.75			NT		
	613SP068	1.29			NT		
Silver (Ag)	613SP038	0.27	39	1.85	NT	34	NL

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Sodium (Na)	613SP001	504.50	NL	NL	NT	NL	NL
	613SP002	245.00			NT		
	613SP003	492.00			NT		
	613SP007	789.00			NT		
	613SP008	449.00			NT		
	613SP009	192.00			NT		
	613SP012	3125.00			NT		
	613SP014	2420.00			NT		
	613SP020	2380.00			NT		
	613SP021	178.00			NT		
	613SP022	456.00			1810.00		
	613SP023	179.00			NT		
	613SP024	1970.00			NT		
	613SP025	212.00			NT		
	613SP026	398.00			NT		
	613SP027	356.00			NT		
	613SP028	763.00			NT		
	613SP029	187.00			NT		
	613SP031	1120.00			NT		
	613SP032	628.00			NT		
	613SP033	166.00			NT		
	613SP035	395.00			NT		
	613SP036	774.00			NT		
	613SP037	998.00			NT		
	613SP038	172.00			NT		
	613SP040	896.00			NT		
	613SP041	220.00			NT		
	613SP042	972.00			NT		
	613SP043	955.00			NT		
	613SP044	966.00			NT		
	613SP048	221.00			NT		
	613SP049	516.00			NT		
	613SP050	683.00			NT		
	613SP051	227.00			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Sodium (Na) (continued)	613SP052	6950.00	NL	NL	NT	NL	NL
	613SP053	2520.00			NT		
	613SP054	297.00			NT		
	613SP055	805.00			NT		
	613SP056	2630.00			NT		
	613SP057	520.00			NT		
	613SP058	393.00			NT		
	613SP059	600.00			NT		
	613SP060	933.00			NT		
	613SP061	459.00			NT		
	613SP062	2390.00			NT		
	613SP063	667.00			NT		
	613SP064	1500.00			NT		
	613SP065	1975.00			NT		
	613SP066	1845.00			NT		
	613SP067	5560.00			NT		
	613SP068	6920.00			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Thallium (Tl)	613SP001	0.88	0.63	NL	NT	1.24	1.24
	613SP003	0.53			NT		
	613SP007	0.73			NT		
	613SP020	0.85			NT		
	613SP022	0.93			ND		
	613SP024	0.70			NT		
	613SP025	0.52			NT		
	613SP029	0.47			NT		
	613SP036	1.20			NT		
	613SP037	0.76			NT		
	613SP042	0.62			NT		
	613SP043	0.48			NT		
	613SP044	1.50			NT		
	613SP049	0.87			NT		
	613SP050	1.40			NT		
	613SP051	0.55			NT		
	613SP056	0.95			NT		
	613SP057	0.90			NT		
	613SP058	0.90			NT		
	613SP059	1.30			NT		
	613SP062	1.10			NT		
	613SP063	0.52			NT		
	613SP065	0.50			NT		
	613SP066	0.75			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Vanadium (V)	613SP001	43.00	55.0	48.9	NT	6000[e]	49.4
	613SP002	19.70			NT		
	613SP003	20.80			NT		
	613SP004	80.60			NT		
	613SP005	60.50			NT		
	613SP006	38.40			NT		
	613SP007	72.40			NT		
	613SP008	63.90			NT		
	613SP009	13.30			NT		
	613SP010	44.80			NT		
	613SP012	68.40			NT		
	613SP013	31.30			NT		
	613SP014	68.40			NT		
	613SP017	30.60			NT		
	613SP018	6.00			NT		
	613SP019	33.40			NT		
	613SP020	48.00			NT		
	613SP021	12.10			NT		
	613SP022	26.90			36.0		
	613SP023	17.00			NT		
	613SP024	71.30			NT		
	613SP025	12.60			NT		
	613SP026	29.50			NT		
	613SP027	27.60			NT		
	613SP028	42.00			NT		
	613SP029	14.50			NT		
	613SP030	50.70			NT		
	613SP031	36.70			NT		
	613SP032	33.60			NT		
	613SP033	13.40			NT		
	613SP034	42.90			NT		
	613SP035	25.30			NT		
	613SP036	42.10			NT		
	613SP037	26.40			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Vanadium (V) (continued)	613SP038	14.50	55.0	48.9	NT	6000[a]	49.4
	613SP039	5.30			NT		
	613SP040	36.60			NT		
	613SP041	8.50			NT		
	613SP042	25.00			NT		
	613SP043	13.00			NT		
	613SP044	43.50			NT		
	613SP045	34.20			NT		
	613SP046	26.20			NT		
	613SP047	29.90			NT		
	613SP048	3.80			NT		
	613SP049	12.20			NT		
	613SP050	51.10			NT		
	613SP051	13.10			NT		
	613SP052	80.40			NT		
	613SP053	64.20			NT		
	613SP054	21.40			NT		
	613SP055	39.90			NT		
	613SP056	59.40			NT		
	613SP057	39.20			NT		
	613SP058	30.50			NT		
	613SP059	51.30			NT		
	613SP060	29.10			NT		
	613SP061	17.40			NT		
	613SP062	64.90			NT		
	613SP063	29.30			NT		
	613SP064	24.10			NT		
	613SP065	36.25			NT		
	613SP066	37.00			NT		
	613SP067	54.50			NT		
	613SP068	75.75			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Zinc (Zn)	613SP001	19.10	2300	198	NT	12000	84.2
	613SP002	15.70			NT		
	613SP003	22.40			NT		
	613SP004	115.00			NT		
	613SP005	159.00			NT		
	613SP006	31.00			NT		
	613SP007	117.00			NT		
	613SP008	113.00			NT		
	613SP009	27.20			NT		
	613SP010	94.70			NT		
	613SP012	127.00			NT		
	613SP013	54.60			NT		
	613SP014	146.00			NT		
	613SP017	42.80			NT		
	613SP018	28.70			NT		
	613SP020	109.00			NT		
	613SP021	7.50			NT		
	613SP022	16.30			66.10		
	613SP024	123.00			NT		
	613SP025	18.70			NT		
	613SP026	61.30			NT		
	613SP028	78.90			NT		
	613SP029	8.60			NT		
	613SP030	46.80			NT		
	613SP031	43.00			NT		
	613SP032	13.20			NT		
	613SP034	13.60			NT		
	613SP035	21.00			NT		
	613SP036	13.80			NT		
	613SP037	14.80			NT		
	613SP038	5.90			NT		
	613SP040	45.90			NT		
	613SP041	14.50			NT		
	613SP042	19.70			NT		

Table 10.7.4
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Surface and Subsurface Soil

Parameters	Location	Surface Conc.	Residential RBC* (THQ=0.1)	Surface Background	Subsurface Conc.	Soil to Groundwater SSL* (DAF=20)	Subsurface Background
Zinc (Zn) (continued)	613SP043	10.20	2300	198	NT	12000	84.2
	613SP044	67.50			NT		
	613SP045	137.00			NT		
	613SP046	48.00			NT		
	613SP047	34.50			NT		
	613SP048	7.50			NT		
	613SP049	15.90			NT		
	613SP050	74.60			NT		
	613SP051	67.10			NT		
	613SP052	121.00			NT		
	613SP053	125.00			NT		
	613SP054	34.50			NT		
	613SP055	50.90			NT		
	613SP056	95.80			NT		
	613SP057	79.90			NT		
	613SP058	16.40			NT		
	613SP059	20.60			NT		
	613SP060	24.70			NT		
	613SP061	52.40			NT		
	613SP062	116.00			NT		
	613SP063	33.90			NT		
	613SP064	33.70			NT		
	613SP065	78.60			NT		
	613SP066	50.10			NT		
	613SP067	90.10			NT		
	613SP068	129.50			NT		

Notes:

a	=	Calculated values correspond to a noncancer hazard quotient of 1.
b	=	Calculated values correspond to a cancer risk level of 1 in 1,000,000.
c	=	SSL for pH of 6.8.
d	=	A screening level of 400 mg/kg has been set for lead based on *Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities* (USEPA, 1994a).
e	=	Soil saturation concentration (C_{sat}).
*	=	Residential RBCs (THQ=0.1) were used as a reference concentration for upper interval samples. Generic soil to groundwater SSLs (DAF=20) from the *Soil Screening Guidance: Technical Background Document* (USEPA, 1996c) were used as a reference concentration for lower interval samples.
l	=	Calculated from methods described in USEPA Interim *Supplemental Guidance to RAGS: Human Health Risk Assessment*, Bulletin 2 (USEPA, 1995b).
ND	=	Not detected
NT	=	Not taken
NL	=	Not listed
NA	=	Not applicable
µg/kg	=	Micrograms per kilogram
mg/kg	=	Milligrams per kilogram
ng/kg	=	Nanograms per kilogram

Bolded concentrations exceed both the reference concentration (RBC or SSL) and the zone background.

All background reference values for Zone F are based on twice the means of the grid sample concentrations. One grid sample from Zone E is included in each group.

Table 10.7.4a
Zone F
AOCs 613/615 and SWMU 175
Sediment Samples and Analyses

Boring Location	Sample Idenifier	Date Collected	Analyses	Remarks
613M0001	613M000101 613N000101	9/27/96	Note 1 Note 2	 Duplicate Sample
613M0002	613M000201	9/27/96	Note 1	
613M0003	NA	NA	NA	Not Sampled

Notes:
1 = SW-846 (metals, SVOAs, VOAs); cyanides at DQO Level III
2 = Appendix IX suite: Appendix IX (pesticides/PCBs, herbicides, SVOAs, VOAs); SW-846 (metals, dioxins, OP-pesticides); cyanide; hex-chrome at DQO Level IV
* = Duplicate sample

Table 10.7.5
Zone F
AOC 613/615 and SWMU 175
Organic Compound Analytical Results for Sediment

Parameters	Frequency of Detection	Range of Detections (µg/kg)	Mean of Detections (µg/kg)
Volatile Organic Compounds (µg/kg)			
Trichloroethene	1/2	2.00	2.00
Semivolatile Organic Compounds (µg/kg)			
B(a)P Equiv.	2/2	122 - 568	345
Acenaphthene	1/2	71.0	71.0
Anthracene	1/2	140	140
Benzo(a)anthracene	2/2	95.5 - 410	253
Benzo(a)pyrene	2/2	95.5-390	243
Benzo(b)fluoranthene	1/2	86.0	86.0
Benzo(g,h,i)perylene	2/2	81.0 - 220	151
Benzo(k)fluoranthene	2/2	140 - 610	375
Benzoic acid	1/2	51.0	51.0

Table 10.7.7
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Sediment Samples

Parameters	Location	Concentration
Volatile Organic Compounds (µg/kg)		
Trichloroethene	613M0002	2.0000
Semivolatile Organic Compounds (µg/kg)		
Acenaphthene	613M0002	71.0000
Anthracene	613M0002	140.0000
Benzo(a)anthracene	613M0001	95.5000
	613M0002	410.0000
Benzo(a)pyrene	613M0001	95.5000
	613M0002	390.0000
Benzo(b)fluoranthene	613M0001	86.0000
Benzo(g,h,i)perylene	613M0001	81.0000
	613M0002	220.0000
Benzo(k)fluoranthene	613M0001	140.0000
	613M0002	610.0000
Benzoic acid	613M0001	51.0000
bis(2-ethylhexyl)phthalate (BEHP)	613M0001	120.0000
	613M0002	570.0000
Butylbenzylphthalate	613M0001	160.0000
	613M0002	73.0000
Chrysene	613M0001	115.0000
	613M0002	470.0000
Dibenz(a,h)anthracene	613M0002	110.0000
Di-n-butylphthalate	613M0002	61.0000
Fluoranthene	613M0001	200.0000
	613M0002	1000.0000
Fluorene	613M0002	72.0000
Indeno(1,2,3-cd)pyrene	613M0001	68.5000
	613M0002	200.0000
Phenanthrene	613M0001	109.0000
	613M0002	520.0000

Table 10.7.7
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Sediment Samples

Parameters	Location	Concentration
Pyrene	613M0001	165.0000
	613M0002	880.0000
Pesticides		
4,4'-DDE	613M0001	10.0000
Heptachlor epoxide	613M0001	1.6000
gamma-Chlordane	613M0001	11.0000
Inorganics (mg/kg)		
Aluminum (Al)	613M0001	3970.0000
	613M0002	12200.0000
Arsenic (As)	613M0001	4.2500
	613M0002	11.7000
Barium (Ba)	613M0001	17.0000
	613M0002	126.0000
Cadmium (Cd)	613M0001	0.9000
	613M0002	0.8200
Calcium (Ca)	613M0001	191000.0000
	613M0002	35000.0000
Chromium (Cr)	613M0001	18.9500
	613M0002	27.3000
Cobalt (Co)	613M0001	3.3500
	613M0002	3.2000
Copper (Cu)	613M0001	58.6000
Cyanide (CN)	613M0001	1.0950
Iron (Fe)	613M0001	6410.0000
	613M0002	14000.0000
Lead(Pb)	613M0001	30.6500
	613M0002	30.4000
Magnesium (Mg)	613M0001	2840.0000
	613M0002	23600

Table 10.7.7
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Sediment Samples

Parameters	Location	Concentration
Manganese (Mn)	613M0001	210.0000
	613M0002	145.0000
Mercury (Hg)	613M0001	0.0550
Nickel (Ni)	613M0001	15.6000
	613M0002	41.3000
Potassium (K)	613M0001	576.5000
	613M0002	658.0000
Vanadium (V)	613M0001	13.0500
	613M0002	26.1000
Zinc (Zn)	613M0001	100.2000
	613M0002	90.2000

The following sections discuss sediment sample analytical results relative to detected soil parameters as an indication of soil contaminant migration via storm water flow. Given that this sediment was collected from engineered structures (storm catch basins, storm water culverts, etc.), it is not true sediment generated in a native setting, and therefore, is not compared to reference concentrations or other criteria. The storm sewer system will be addressed in the Zone L RFI.

Volatile Organic Compounds in Sediment

Trichloroethene was the only VOC detected in sediment. This VOC was also detected in nine of the soil samples.

Semivolatile Organic Compounds in Sediment

Eighteen SVOCs were detected in sediment samples. Each of the compounds was also present in site soil samples.

Table 10.7.8
Zone F
AOCs 613/615 and SWMU 175
Groundwater Samples and Analyses

Well Number	Well Depth	Sample Identifier	Date Sampled	Analyses	Remarks
613001	Shallow	61300101*	11/20/96	Notes 1/2*	
61302D	Deep	61302D01	11/21/96	Note 1	
613003	Shallow	61300301	11/18/96	Note 1	
613004	Shallow	61300401	11/12/96	Note 1	
613005	Shallow	61300501	11/20/96	Note 1	
240003	Shallow	24000301	11/18/96	Note 1	
GEL005	Shallow	GEL00501	11/18/96	Note 1	
GEL006	Shallow	GEL00601	11/12/96	Note 1	
GEL007	Shallow	GEL00701	11/10/96	Note 1	
GEL008	Shallow	GEL00801	11/10/96	Note 1	
GEL011	Shallow	GEL01101	11/12/96	Note 1	
GEL012	Shallow	GEL01201*	11/12/96	Notes 1/2*	
GEL013	Shallow	GEL01301	11/12/96	Note 1	
GEL014	Shallow	GEL01401	11/12/96	Note 1	

Notes:
1 = SW-846 (metals, SVOAs, VOAs) at DQO Level III.
2 = Appendix IX suite: Appendix IX (pesticides/PCBs, herbicides, SVOAs, VOAs); SW-846 (metals, dioxins, OP-pesticides); cyanide; hex-chrome at DQO Level IV.
* = Duplicate sample collected.

10.7.5.1 Nature of Contamination in Groundwater

Organic analytical results for groundwater are summarized in Table 10.7.9. Inorganic analytical results for groundwater are summarized in Table 10.7.10. Table 10.7.11 presents a summary of the analytes detected at the combined site.

Table 10.7.11
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Groundwater

Parameters	Location	1st Quarter Conc.	2nd Quarter Conc.	3rd Quarter Conc/	Tap Water RBC* (µg/L)	MCL/SMCLs* (µg/L)	Background
Volatile Organic Compounds (~~µg/kg~~ µg/L)							
1,1-Dichloroethane	GEL007	2	2	ND	81	NL	NA
1,2-Dichloroethene (total)	613004	24	39	35	5.5	70	NA
	GEL007	3	3	ND			
	GEL012	2	ND	ND			
Benzene	GEL014	3800	2	4	0.36	5	NA
Carbon disulfide	GEL012	1	ND	ND	100	NL	NA
	61302D	3	ND	9			NA
Chloromethane	GEL007	2	ND	ND	1.4	NL	NA
Tetrachloroethene	613004	2	3	ND	1.1	5.0	NA
	61302D	ND	2	ND			NA
	GEL014	ND	3	ND			NA
Toluene	GEL011	1	ND	ND	75	1000	NA
	GEL012	2	ND	ND			NA
	GEL014	4900	ND	ND			NA
	61302D	24	11	9			NA
Trichloroethene	613004	3	3	ND	1.6	5.0	NA
Vinyl chloride	613004	ND	7	ND	0.019	2	NA
Xylene (total)	613003	1.0	ND	ND	1200	10000	NA
	GEL008	4.0	ND	ND			NA
	GEL011	3.0	ND	ND			NA
Semivolatile Organic Compounds (µg/L)							
2-Chlorophenol	61302D	ND	ND	2	18	NL	NA
	GEL013	ND	ND	2			NA

Table 10.7.11
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Groundwater

Parameters	Location	1st Quarter Conc.	2nd Quarter Conc.	3rd Quarter Conc/	Tap Water RBC* (µg/L)	MCL/SMCLs* (µg/L)	Background
2-Methylnaphthalene	GEL005	ND	4	ND	150	NL	NA
	GEL014	2400000	44	590			NA
4-Chloro-3-methylphenol	GEL013	ND	ND	2	NL	NL	NA
Acenaphthene	GEL013	ND	ND	2	220	NL	NA
	GEL014	210000	ND	83			
Anthracene	613003	1	ND	ND	1100	NL	NA
Benzoic acid	GEL005	2	ND	ND	15000	NL	NA
	GEL007	1	ND	ND			
	GEL008	3	ND	6			
	GEL012	ND	ND	6			
	GEL013	ND	ND	4			
	61302D	1	ND	ND			
bis(2-ethylhexyl)phthalate	GEL014	4000	ND	75	4.8	6	NA
Butylbenzylphthalate	GEL013	ND	ND	2	730	NL	NA
Dibenzofuran	GEL014	ND	4	ND	15	NL	NA
Diethylphthalate	613001	ND	ND	1	2900	NL	NA
	GEL013	ND	ND	1			
Di-n-butylphthalate	613001	ND	ND	1	370	NL	NA
	GEL005	ND	ND	2			NA
	GEL008	ND	1	ND			NA
	GEL011	ND	ND	2			NA
	GEL012	ND	ND	1			NA
	GEL013	ND	ND	1			NA
Fluorene	613003	1	ND	ND	150	NL	NA
	GEL014	34000	8	140			NA

Table 10.7.11
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Groundwater

Parameters	Location	1st Quarter Conc.	2nd Quarter Conc.	3rd Quarter Conc/	Tap Water RBC* (µg/L)	MCL/SMCLs* (µg/L)	Background
Naphthalene	613001	ND	2	ND	150	NL	NA
	GEL005	3	ND	ND			
Pentachlorophenol	GEL013	ND	ND	2	0.56	1	NA
Phenanthrene	GEL014	570000	11	210	150	NL	NA
Pyrene	GEL005	ND	ND	0.6	110	NL	NA
	GEL013	ND	ND	1.0			NA
	GEL014	2400	ND	ND			NA
TPH							
Gasoline	GEL014	1950000	NT	NT	NL	NL	NA
Dioxin (~~ng/kg~~ pg/L)							
Dioxin (2,3,7,8-TCDD TEQ*)	~~613BP001~~ GEL012	~~0.0461~~ 0.306	~~1990~~ NT	NA	ND	~~1990~~ 30	NA
Inorganics (µg/L)							
Aluminum (Al)	240003	808.00	ND	158.00	3700	50	224
	613001	3585.00	2100.0	2010.00			
	613003	472.00	ND	161.00			
	613004	3640.00	267.0	ND			
	613005	549.00	322.0	404.00			
	GEL005	6500.00	316.0	2180.00			
	GEL006	838.00	198.0	107.00			
	GEL007	2590.00	ND	ND			
	GEL008	20000.00	289.0	ND			
	GEL011	17000.00	58.3	ND			
	GEL012	679.00	141.0	270.00			
	GEL013	2190.00	379.0	129.00			
	GEL014	0.91	391.0	ND			
	61302D	465.00	ND	ND			77.7

Table 10.7.11
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Groundwater

Parameters	Location	1st Quarter Conc.	2nd Quarter Conc.	3rd Quarter Conc/	Tap Water RBC* (µg/L)	MCL/SMCLs* (µg/L)	Background
Antimony (Sb)	613001	ND	ND	2.80	1.5	6	NL
	613004	ND	2.00	ND			
	GEL008	ND	2.90	ND			
	GEL011	ND	3.60	ND			
	GEL012	ND	3.90	ND			
	GEL013	ND	2.80	ND			
	GEL014	0.15	4.60	ND			
Arsenic (As)	240003	7.80	9.40	ND	0.045	50	16.7
	613004	2.50	2.90	ND			
	613003	5.80	3.90	ND			
	613004	3.30	3.30	ND			
	613005	9.90	27.10	44.7			
	GEL005	23.10	3.10	ND			
	GEL007	72.00	23.00	9.70			
	GEL008	20.30	ND	ND			
	GEL011	14.30	4.70	4.00			
	GEL012	2.95	ND	ND			
	GEL013	13.20	10.50	12.40			
	GEL014	1.30	60.70	60.60			
	61302D	4.70	ND	ND			

Table 10.7.11
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Groundwater

Parameters	Location	1st Quarter Conc.	2nd Quarter Conc.	3rd Quarter Conc/	Tap Water RBC* (µg/L)	MCL/SMCLs* (µg/L)	Background
Barium (Ba)	240003	66.30	60.20	53.5	260	2000	94.3
	613001	71.65	54.80	73.45			
	613003	25.20	21.10	31.40			
	613004	76.80	38.10	37.60			
	613005	32.00	24.80	25.70			
	GEL005	52.90	32.20	46.10			
	GEL006	23.80	30.60	30.30			
	GEL007	111.00	150.00	146.00			
	GEL008	79.50	39.10	16.10			
	GEL011	107.00	57.30	46.10			
	GEL012	40.90	34.45	40.80			
	GEL013	55.20	53.20	55.10			
	GEL014	1.20	18.20	17.00			
	61302D	232.00	223.00	234.00			200
Beryllium (Be)	613001	1.90	2.00	2.00	0.016	4	0.66
	613004	ND	ND	0.43			
	GEL008	1.80	ND	ND			
	GEL011	ND	0.29	MD			
	GEL012	ND	0.23	MD			
	GEL013	ND	0.26	MD			
	61302D	0.77	ND	1.60			0.46
Cadmium (Cd)	613001	0.935	1.80	1.85	1.8	5	0.82
	613003	ND	0.31	ND			
	613005	ND	0.35	0.46			
	GEL007	ND	0.35	1.20			
	GEL011	2.70	0.40	ND			
	GEL014	0.30	0.68	ND			

Table 10.7.11
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Groundwater

Parameters	Location	1st Quarter Conc.	2nd Quarter Conc.	3rd Quarter Conc/	Tap Water RBC* (µg/L)	MCL/SMCLs* (µg/L)	Background
Calcium (Ca)	240003	58200	56000	51600	NL	NL	NL
	613001	315000	334000	409500			
	613003	176000	176000	164000			
	613004	78000	61000	50200			
	613005	153000	101000	111000			
	GEL005	73700	114000	100000			
	GEL006	22300	9050	24400			
	GEL007	121000	182000	415000			
	GEL008	195000	161000	152000			
	GEL011	242000	210000	184000			
	GEL012	34550	29150	29850			
	GEL013	198000	185000	182000			
	GEL014	28.3	42700	33100			
	61302D	294000	274000	270000			NL
Chromium (Cr)	613003	1.70	1.20	ND	18	100	2.05
	613004	6.00	1.30	ND			
	613005	1.40	1.90	ND			
	GEL005	11.90	1.90	5.50			
	GEL007	4.50	ND	ND			
	GEL008	42.70	3.60	1.50			
	GEL011	32.30	2.00	1.00			
	GEL012	ND	ND	1.20			
	GEL013	ND	2.40	1.10			
	GEL014	0.27	2.30	1.40			
	61302D	3.40	2.10	1.30			1.31

Table 10.7.11
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Groundwater

Parameters	Location	1st Quarter Conc.	2nd Quarter Conc.	3rd Quarter Conc/	Tap Water RBC* (µg/L)	MCL/SMCLs* (µg/L)	Background
Cobalt (Co)	613001	104.00	108.00	132.00	220	NL	10.9
	613003	ND	1.40	2.60			
	613004	2.00	7.30	5.90			
	613005	18.10	5.30	6.20			
	GEL006	ND	ND	1.40			
	GEL007	10.80	22.40	83.40			
	GEL008	6.40	ND	1.80			
	GEL011	48.70	49.80	40.90			
	GEL012	7.10	7.05	10.15			
	GEL013	ND	0.98	ND			
	GEL014	ND	2.30	1.80			
	61302D	ND	ND	1.20			67.0
Copper (Cu)	613003	ND	4.2	ND	1.50	1000	ND
	GEL005	7.40	ND	ND			
	GEL008	15.00	1.4	ND			
	GEL011	19.80	ND	ND			
	GEL014	3.30	6.6	2.80			
	61302D	ND	ND	2.20			NL
Cyanide (CN)	GEL012	2.00	NT	NT	73	200	3.3

Table 10.7.11
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Groundwater

Parameters	Location	1st Quarter Conc.	2nd Quarter Conc.	3rd Quarter Conc/	Tap Water RBC* (µg/L)	MCL/SMCLs* (µg/L)	Background
Iron (Fe)	240003	20500	26200	17000	1100	300	NL
	613001	51450	53450	50600			
	613003	42100	13300	25200			
	613004	5960	7460	7670			
	613005	38600	35500	47400			
	GEL005	12500	551	2270			
	GEL006	3100	2940	3110			
	GEL007	20400	13100	26200			
	GEL008	40200	18500	4050			
	GEL011	48300	31100	24100			
	GEL012	10060	8635	10650			
	GEL013	18000	11300	7520			
	GEL015	16.6	20600	18200			
	61302D	738	ND	ND			
Lead (Pb)	613001	2.00	ND	ND	15	15	NL
	613004	3.50	ND	ND			
	GEL005	8.80	ND	ND			
	GEL007	2.70	ND	ND			
	GEL008	33.30	ND	ND			
	GEL011	30.80	1.20	ND			
	GEL012	ND	1.20	ND			
	GEL013	2.90	ND	ND			
	GEL014	4.60	3.90	ND			

Table 10.7.11
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Groundwater

Parameters	Location	1st Quarter Conc.	2nd Quarter Conc.	3rd Quarter Conc/	Tap Water RBC* (µg/L)	MCL/SMCLs* (µg/L)	Background
Magnesium (Mg)	240003	28200	25000	22900	NL	NL	NL
	613001	184500	176000	211500			
	613003	65700	32000	44200			
	613004	26000	22100	19800			
	613005	270000	218000	21000			
	GEL005	31200	21100	24400			
	GEL006	2720	2870	4120			
	GEL007	26300	41100	95600			
	GEL008	362000	274000	248000			
	GEL011	211000	188000	146000			
	GEL012	25750	23100	30900			
	GEL013	164000	329000	54200			
	GEL014	1.8	14900	15700			
	61302D	814000	745000	594000			NL
Manganese (Mn)	240003	179.00	196.00	156.00	84	50	2010
	613001	6020.00	6350.00	7740.00			
	613003	4050.00	1390.00	3010.00			
	613004	428.00	405.00	351.00			
	613005	672.00	404.00	415.00			
	GEL005	274.00	302.00	304.00			
	GEL006	51.20	40.00	69.70			
	GEL007	827.00	1430.00	4040.00			
	GEL008	2120.00	2020.00	1760.00			
	GEL011	1300.00	1290.00	1060.00			
	GEL012	201.50	183.00	252.00			
	GEL013	923.00	962.00	745.00			
	GEL014	0.07	282.00	235.00			
	61302D	267.00	175.00	162.00			1256

Table 10.7.11
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Groundwater

Parameters	Location	1st Quarter Conc.	2nd Quarter Conc.	3rd Quarter Conc/	Tap Water RBC* (µg/L)	MCL/SMCLs* (µg/L)	Background
Mercury (Hg)	240003	ND	ND	0.11	1.1	2	NL
	613004	0.24	ND	ND			
	613005	ND	0.10	0.14			
	GEL008	0.15	0.11	ND			
	GEL011	0.12	ND	ND			
	GEL012	0.15	ND	ND			
	GEL014	0.01	ND	ND			
	61302D	ND	0.13	0.14			
Nickel (Ni)	613001	58.85	54.05	64.75	73	100	5.55
	613003	2.20	1.60	ND			
	613004	2.90	2.90	2.70			
	613005	9.40	ND	ND			
	GEL005	ND	ND	3.60			
	GEL006	1.30	ND	2.00			
	GEL007	10.70	11.30	26.60			
	GEL008	12.60	4.30	2.70			
	GEL011	26.70	15.60	15.60			
	GEL012	4.10	3.35	5.00			
	GEL013	2.40	2.70	2.90			
	GEL014	0.89	2.70	1.80			
	61302D	3.20	ND	ND			61.1

Table 10.7.11
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Groundwater

Parameters	Location	1st Quarter Conc.	2nd Quarter Conc.	3rd Quarter Conc/	Tap Water RBC* (µg/L)	MCL/SMCLs* (µg/L)	Background
Potassium (K)	240003	32500.00	27300.00	28400.00	NL	NL	NL
	613001	10750.00	860.00	12400.00			
	613003	48100.00	23700.00	41800.00			
	613004	176300.00	11400.00	15700.00			
	613005	85300.00	75300.00	88600.00			
	GEL005	35200.00	17800.00	28500.00			
	GEL006	2300.00	2750.00	3690.00			
	GEL007	4450.00	5290.00	9920.00			
	GEL008	172000.00	107000.00	121000.00			
	GEL011	37600.00	45400.00	65200.00			
	GEL012	6690.00	5245.00	8195.00			
	GEL013	92700.00	112000.00	47200.00			
	GEL014	ND	16100.00	19300.00			
	61302D	177000.00	168000.00	188000.00			NL
Selenium (Se)	613004	4.70	ND	ND	18	50	NL
	GEL006	3.60	ND	ND			
	GEL008	ND	4.40	ND			
	GEL011	5.70	ND	ND			
	GEL012	3.10	MD	ND			
	GEL013	5.90	MD	ND			
	GEL014	0.80	4.90	ND			

Table 10.7.11
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Groundwater

Parameters	Location	1st Quarter Conc.	2nd Quarter Conc.	3rd Quarter Conc/	Tap Water RBC* (µg/L)	MCL/SMCLs* (µg/L)	Background
Sodium (Na)	240003	258000	215000	222000	NL	NL	NL
	613001	1470000	1450000	1520000			
	613003	250000	149000	268000			
	613004	517000	482000	530000			
	613005	3630000	3130000	3870000			
	GEL005	472000	172000	262000			
	GEL006	158000	158000	193000			
	GEL007	472000	532000	1100000			
	GEL008	2920000	2170000	2590000			
	GEL011	2210000	1960000	1760000			
	GEL012	506000	446500	615000			
	GEL013	1270000	2600000	302000			
	GEL014	28.1	89200	146000			
	61302D	6150000	5080000	6230000			NL
Thallium (Tl)	240003	ND	8.60	ND	0.29	2	5.58
	613001	ND	9.05	ND			
	613004	ND	7.60	ND			
	613005	ND	6.60	ND			
	GEL006	ND	5.30	ND			
	GEL007	4.40	8.10	ND			
	GEL008	<8.90	ND	ND			
	61302D	ND	5.50	ND			8.18

Table 10.7.11
Zone F
AOC 613/615 and SWMU 175
Analytes Detected in Groundwater

Parameters	Location	1st Quarter Conc.	2nd Quarter Conc.	3rd Quarter Conc/	Tap Water RBC* (µg/L)	MCL/SMCLs* (µg/L)	Background
Vanadium (V)	240003	ND	ND	1.30	26	NL	1.58
	613001	ND	1.90	2.25			
	613003	ND	1.90	5.10			
	613004	8.20	1.30	ND			
	613005	ND	1.10	1.20			
	GEL005	23.60	8.70	15.80			
	GEL006	2.00	ND	ND			
	GEL007	5.60	1.20	ND			
	GEL008	68.30	3.20	11.10			
	GEL011	30.00	ND	ND			
	GEL012	2.20	ND	1.10			
	GEL013	11.10	5.90	6.50			
	GEL014	5.20	4.30	4.20			
	61302D	4.20	1.3	ND			1.13
Zinc (Zn)	613001	102.50	93.85	108.50	1100	5000	NL
	613003	ND	9.00	ND			
	613004	16.90	ND	8.90			
	613005	ND	13.60	ND			
	GEL005	12.80	ND	22.80			
	GEL006	65.00	ND	8.60			
	GEL007	ND	ND	26.40			
	GEL008	ND	ND	9.50			
	GEL011	1440	ND	35.70			
	GEL012	16.75	ND	15.80			
	GEL013	15.00	ND	20.40			
	GEL014	7.00	ND	21.20			
pH							
pH	619001	NT	5.75	NT	NL	NL	NL

Notes:

*	=	Tap water RBCs (THQ=0.1) and MCLs/SMCLs were used as reference concentrations
NT	=	Not taken
NL	=	Not listed
NA	=	Not applicable

Bolded concentrations exceed both the reference concentration (RBC or SSL) and the zone background.

All background reference values for Zone F are based on twice the means of the grid sample concentrations. One grid sample from Zone E is included in each group. Background reference values for groundwater are based on two sampling rounds in two wells at each depth.

Inorganics Detected in Zone L Surface Soil within AOC 613/615/SWMU 175 Investigative Area

Aluminum	LE504SB001	6520	=	mg/Kg	7800	NL	261 - 20500
Aluminum	LE504SB002	5230	=	mg/Kg	7800	NL	261 - 20500
Aluminum	LE504SB003	4380	=	mg/Kg	7800	NL	261 - 20500
Aluminum	LE504SB004	9980	=	mg/Kg	7800	NL	261 - 20500
Aluminum	LE504SB005	11600	=	mg/Kg	7800	NL	261 - 20500
Arsenic	LE504SB001	4.6	=	mg/Kg	0.43	15	0.95 - 67.5
Arsenic	LE504SB002	43.5	=	mg/Kg	0.43	15	0.95 - 67.5
Arsenic	LE504SB003	17.3	=	mg/Kg	0.43	15	0.95 - 67.5
Arsenic	LE504SB004	15.2	=	mg/Kg	0.43	15	0.95 - 67.5
Arsenic	LE504SB005	14.9	=	mg/Kg	0.43	15	0.95 - 67.5
Barium	LE504SB001	16.3	=	mg/Kg	550	800	1.8 - 1980
Barium	LE504SB002	46.3	=	mg/Kg	550	800	1.8 - 1980
Barium	LE504SB003	21	=	mg/Kg	550	800	1.8 - 1980
Barium	LE504SB004	23.2	=	mg/Kg	550	800	1.8 - 1980
Barium	LE504SB005	34.3	=	mg/Kg	550	800	1.8 - 1980
Calcium	LE504SB001	2930	=	mg/Kg	NL	NL	167 - 182000
Calcium	LE504SB002	7370	=	mg/Kg	NL	NL	167 - 182000
Calcium	LE504SB003	83800	=	mg/Kg	NL	NL	167 - 182000
Calcium	LE504SB004	29100	=	mg/Kg	NL	NL	167 - 182000
Calcium	LE504SB005	7200	=	mg/Kg	NL	NL	167 - 182000
Cadmium	LE504SB001	0.48	J	mg/Kg	7.8	4	0.06 - 1.5
Cadmium	LE504SB002	0.33	J	mg/Kg	7.8	4	0.06 - 1.5
Cadmium	LE504SB003	0.55	J	mg/Kg	7.8	4	0.06 - 1.5
Cadmium	LE504SB004	0.33	J	mg/Kg	7.8	4	0.06 - 1.5
Cadmium	LE504SB005	0.55	J	mg/Kg	7.8	4	0.06 - 1.5
CYANIDE	LE504SB001	0.15	J	mg/Kg	160	NL	NA - NA
CYANIDE	LE504SB002	0.12	J	mg/Kg	160	NL	NA - NA
CYANIDE	LE504SB003	0.24	J	mg/Kg	160	NL	NA - NA
CYANIDE	LE504SB004	0.2	J	mg/Kg	160	NL	NA - NA
CYANIDE	LE504SB005	0.16	J	mg/Kg	160	NL	NA - NA
Cobalt	LE504SB001	3.5	=	mg/Kg	470	1000	0.35 - 111
Cobalt	LE504SB002	8.8	=	mg/Kg	470	1000	0.35 - 111
Cobalt	LE504SB003	3.9	=	mg/Kg	470	1000	0.35 - 111
Cobalt	LE504SB004	5.3	=	mg/Kg	470	1000	0.35 - 111
Cobalt	LE504SB005	7.1	=	mg/Kg	470	1000	0.35 - 111
Chromium, Total	LE504SB001	32.3	J	mg/Kg	210	19	2.3 - 567
Chromium, Total	LE504SB002	22	=	mg/Kg	210	19	2.3 - 567
Chromium, Total	LE504SB003	18.2	=	mg/Kg	210	19	2.3 - 567
Chromium, Total	LE504SB004	37.5	=	mg/Kg	210	19	2.3 - 567
Chromium, Total	LE504SB005	44.9	=	mg/Kg	210	19	2.3 - 567

Inorganics Detected in Zone L Surface Soil within AOC 613/615/SWMU 175 Investigative Area

Copper	LE504SB001	13.6	=	mg/Kg	310	5300	0.47 - 866
Copper	LE504SB002	88.9	=	mg/Kg	310	5300	0.47 - 866
Copper	LE504SB003	35.4	=	mg/Kg	310	5300	0.47 - 866
Copper	LE504SB004	14.3	=	mg/Kg	310	5300	0.47 - 866
Copper	LE504SB005	38	=	mg/Kg	310	5300	0.47 - 866
Iron	LE504SB001	13800	=	mg/Kg	2300	NL	1050 - 30600
Iron	LE504SB002	10700	=	mg/Kg	2300	NL	1050 - 30600
Iron	LE504SB003	8540	=	mg/Kg	2300	NL	1050 - 30600
Iron	LE504SB004	15000	=	mg/Kg	2300	NL	1050 - 30600
Iron	LE504SB005	21200	=	mg/Kg	2300	NL	1050 - 30600
Mercury	LE504SB001	0.14	=	mg/Kg	2.3	1	0.03 - 2.7
Mercury	LE504SB002	0.26	=	mg/Kg	2.3	1	0.03 - 2.7
Mercury	LE504SB003	0.16	=	mg/Kg	2.3	1	0.03 - 2.7
Mercury	LE504SB004	0.05	=	mg/Kg	2.3	1	0.03 - 2.7
Mercury	LE504SB005	**5.1**	=	mg/Kg	2.3	1	0.03 - 2.7
Potassium	LE504SB001	323	J	mg/Kg	NL	NL	45.6 - 2620
Potassium	LE504SB002	492	J	mg/Kg	NL	NL	45.6 - 2620
Potassium	LE504SB003	552	J	mg/Kg	NL	NL	45.6 - 2620
Potassium	LE504SB004	936	=	mg/Kg	NL	NL	45.6 - 2620
Potassium	LE504SB005	1290	=	mg/Kg	NL	NL	45.6 - 2620
Magnesium	LE504SB001	357	=	mg/Kg	NL	NL	31 - 14800
Magnesium	LE504SB002	895	=	mg/Kg	NL	NL	31 - 14800
Magnesium	LE504SB003	1550	=	mg/Kg	NL	NL	31 - 14800
Magnesium	LE504SB004	1970	=	mg/Kg	NL	NL	31 - 14800
Magnesium	LE504SB005	2250	=	mg/Kg	NL	NL	31 - 14800
Manganese	LE504SB001	107	J	mg/Kg	1100	480	0.93 - 508
Manganese	LE504SB002	158	=	mg/Kg	1100	480	0.93 - 508
Manganese	LE504SB003	108	=	mg/Kg	1100	480	0.93 - 508
Manganese	LE504SB004	120	=	mg/Kg	1100	480	0.93 - 508
Manganese	LE504SB005	174	=	mg/Kg	1100	480	0.93 - 508
Sodium	LE504SB001	201	J	mg/Kg	NL	NL	11.9 - 28200
Sodium	LE504SB002	296	=	mg/Kg	NL	NL	11.9 - 28200
Sodium	LE504SB003	514	=	mg/Kg	NL	NL	11.9 - 28200
Sodium	LE504SB004	402	=	mg/Kg	NL	NL	11.9 - 28200
Sodium	LE504SB005	998	=	mg/Kg	NL	NL	11.9 - 28200
Nickel	LE504SB001	5.9	=	mg/Kg	160	65	0.6 - 71.5
Nickel	LE504SB002	16.2	=	mg/Kg	160	65	0.6 - 71.5
Nickel	LE504SB003	9.7	=	mg/Kg	160	65	0.6 - 71.5
Nickel	LE504SB004	7	=	mg/Kg	160	65	0.6 - 71.5
Nickel	LE504SB005	16.3	=	mg/Kg	160	65	0.6 - 71.5

Inorganics Detected in Zone L Surface Soil within AOC 613/615/SWMU 175 Investigative Area

Lead*	LE504SB001	30.3	=	mg/Kg	400	400	1 - 400
Lead*	LE504SB002	83	=	mg/Kg	400	400	1 - 400
Lead*	LE504SB003	96.8	=	mg/Kg	400	400	1 - 400
Lead*	LE504SB004	36.1	=	mg/Kg	400	400	1 - 400
Lead*	LE504SB005	84.5	=	mg/Kg	400	400	1 - 400
Antimony	LE504SB002	4.9	J	mg/Kg	3.1	2.5	0.5 - 7.4
Selenium	LE504SB001	0.37	J	mg/Kg	39	2.5	0.44 - 4
Selenium	LE504SB002	0.57	J	mg/Kg	39	2.5	0.44 - 4
Selenium	LE504SB003	0.27	J	mg/Kg	39	2.5	0.44 - 4
Selenium	LE504SB004	0.39	J	mg/Kg	39	2.5	0.44 - 4
Selenium	LE504SB005	0.54	J	mg/Kg	39	2.5	0.44 - 4
Tin (Sn)	LE504SB001	2.1	J	mg/Kg	NL	NL	0.77 - 44.7
Tin (Sn)	LE504SB002	10.1	J	mg/Kg	NL	NL	0.77 - 44.7
Tin (Sn)	LE504SB003	4.4	J	mg/Kg	NL	NL	0.77 - 44.7
Tin (Sn)	LE504SB004	2.1	J	mg/Kg	NL	NL	0.77 - 44.7
Tin (Sn)	LE504SB005	2.6	J	mg/Kg	NL	NL	0.77 - 44.7
Vanadium	LE504SB001	18.2	=	mg/Kg	55	3000	1.1 - 60.4
Vanadium	LE504SB002	17.7	=	mg/Kg	55	3000	1.1 - 60.4
Vanadium	LE504SB003	12.2	=	mg/Kg	55	3000	1.1 - 60.4
Vanadium	LE504SB004	29.8	=	mg/Kg	55	3000	1.1 - 60.4
Vanadium	LE504SB005	46.8	=	mg/Kg	55	3000	1.1 - 60.4
Zinc	LE504SB001	102	J	mg/Kg	2300	6000	1.9 - 855
Zinc	LE504SB002	231	=	mg/Kg	2300	6000	1.9 - 855
Zinc	LE504SB003	196	=	mg/Kg	2300	6000	1.9 - 855
Zinc	LE504SB004	78.1	=	mg/Kg	2300	6000	1.9 - 855
Zinc	LE504SB005	198	=	mg/Kg	2300	6000	1.9 - 855

Concentrations shown outlined and in bold print indicate exceedance of screening criteria.

[a] RBCs from EPA Region III RBC Tables, October 2000. RBCs for non-carcinogenic compounds are adjusted

[b] Values extrapolated from EPA Soil Soil Screening Guidance: User's Guide; DAF = 10

[c] Background Range values are the minimum and maximum concentrations detected in Zones E and F combin

* RBCs for Total Chromium and Lead from EPA Region IX PRG Tables, November 2000.

Organic Compounds Detected in Zone L Surface Soil within AOC 613/615/SWMU 175 investigative area

PCB-1260 (Arochlor 1260)	LE504SB001	**0.34**	=	mg/Kg	0.32	NL	NA
Alpha-chlordane***	LE504SB002	0.0023	=	mg/Kg	1.8	5	NA
Alpha-chlordane***	LE504SB005	0.0086	=	mg/Kg	1.8	5	NA
Dieldrin	LE504SB001	**0.0051**	J	mg/Kg	0.04	0.002	NA
Endrin Aldehyde**	LE504SB001	0.014	=	mg/Kg	2.3	NL	NA
Gamma-chlordane***	LE504SB001	0.0067	=	mg/Kg	1.8	5	NA
Gamma-chlordane***	LE504SB002	0.012	=	mg/Kg	1.8	5	NA
Gamma-chlordane***	LE504SB004	0.002	=	mg/Kg	1.8	5	NA
Gamma-chlordane***	LE504SB005	0.0079	J	mg/Kg	1.8	5	NA
Heptachlor	LE504SB003	0.0021	J	mg/Kg	0.14	12	NA
p,p'-DDD	LE504SB001	0.023	=	mg/Kg	2.7	8	NA
p,p'-DDD	LE504SB002	0.0062	=	mg/Kg	2.7	8	NA
p,p'-DDD	LE504SB003	0.011	=	mg/Kg	2.7	8	NA
p,p'-DDD	LE504SB005	0.022	=	mg/Kg	2.7	8	NA
p,p'-DDE	LE504SB001	0.015	=	mg/Kg	1.9	27	NA
p,p'-DDE	LE504SB002	0.0031	=	mg/Kg	1.9	27	NA
p,p'-DDE	LE504SB005	0.01	=	mg/Kg	1.9	27	NA
p,p'-DDT	LE504SB001	0.022	J	mg/Kg	1.9	16	NA
Acenaphthene	LE504SB001	0.16	J	mg/Kg	470	290	NA
Acenaphthene	LE504SB003	0.043	J	mg/Kg	470	290	NA
Anthracene	LE504SB001	0.23	J	mg/Kg	2300	6000	NA
Anthracene	LE504SB002	0.051	J	mg/Kg	2300	6000	NA
Anthracene	LE504SB003	0.068	J	mg/Kg	2300	6000	NA
Benzo(a)Anthracene	LE504SB001	0.69	=	mg/Kg	0.87	1	0.616
Benzo(a)Anthracene	LE504SB002	0.12	J	mg/Kg	0.87	1	0.616
Benzo(a)Anthracene	LE504SB003	0.17	J	mg/Kg	0.87	1	0.616
Benzo(a)Pyrene	LE504SB001	**0.66**	=	mg/Kg	0.087	4	0.598
Benzo(a)Pyrene	LE504SB002	0.12	J	mg/Kg	0.087	4	0.598
Benzo(a)Pyrene	LE504SB003	0.18	J	mg/Kg	0.087	4	0.598
Benzo(b)Fluoranthene	LE504SB001	0.49	=	mg/Kg	0.87	2.5	0.608
Benzo(b)Fluoranthene	LE504SB002	0.1	J	mg/Kg	0.87	2.5	0.608
Benzo(b)Fluoranthene	LE504SB003	0.13	J	mg/Kg	0.87	2.5	0.608
Benzo(g,h,i)Perylene	LE504SB001	0.36	J	mg/Kg	NL	NL	NA

Organic Compounds Detected in Zone L Surface Soil within AOC 613/615/SWMU 175 investigative area

[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Benzo(g,h,i)Perylene	LE504SB002	0.086	J	mg/Kg	NL	NL	NA
Benzo(g,h,i)Perylene	LE504SB003	0.19	J	mg/Kg	NL	NL	NA
Benzo(k)Fluoranthene	LE504SB001	0.68	=	mg/Kg	8.7	25	0.596
Benzo(k)Fluoranthene	LE504SB002	0.12	J	mg/Kg	8.7	25	0.596
Benzo(k)Fluoranthene	LE504SB003	0.19	J	mg/Kg	8.7	25	0.596
Benzo(k)Fluoranthene	LE504SB004	0.041	J	mg/Kg	8.7	25	0.596
Benzyl Butyl Phthalate	LE504SB001	0.088	J	mg/Kg	1600	470	NA
Benzyl Butyl Phthalate	LE504SB002	0.1	J	mg/Kg	1600	470	NA
Benzyl Butyl Phthalate	LE504SB003	0.08	J	mg/Kg	1600	470	NA
Benzyl Butyl Phthalate	LE504SB004	0.064	J	mg/Kg	1600	470	NA
Chrysene	LE504SB001	0.68	=	mg/Kg	87	80	0.62
Chrysene	LE504SB002	0.14	J	mg/Kg	87	80	0.62
Chrysene	LE504SB003	0.24	J	mg/Kg	87	80	0.62
Dibenz(a,h)anthracene	LE504SB001	0.14	J	mg/Kg	0.087	1	0.525
Dibenzofuran	LE504SB001	0.052	J	mg/Kg	31	3.9	NA
Flouranthene	LE504SB001	1.6	=	mg/Kg	310	2200	NA
Flouranthene	LE504SB002	0.23	J	mg/Kg	310	2200	NA
Flouranthene	LE504SB003	0.24	J	mg/Kg	310	2200	NA
Flouranthene	LE504SB004	0.043	J	mg/Kg	310	2200	NA
Flouranthene	LE504SB005	0.059	J	mg/Kg	310	2200	NA
Fluorene	LE504SB001	0.087	J	mg/Kg	310	280	NA
Indeno(1,2,3-c,d)pyrene	LE504SB001	0.34	J	mg/Kg	0.87	7	0.525
Indeno(1,2,3-c,d)pyrene	LE504SB002	0.072	J	mg/Kg	0.87	7	0.525
Indeno(1,2,3-c,d)pyrene	LE504SB003	0.16	J	mg/Kg	0.87	7	0.525
Phenanthrene	LE504SB001	0.88	=	mg/Kg	NL	NL	NA
Phenanthrene	LE504SB002	0.14	J	mg/Kg	NL	NL	NA
Phenanthrene	LE504SB003	0.26	J	mg/Kg	NL	NL	NA
Pyrene	LE504SB001	1.4	=	mg/Kg	230	2100	NA
Pyrene	LE504SB002	0.32	J	mg/Kg	230	2100	NA
Pyrene	LE504SB003	0.39	J	mg/Kg	230	2100	NA
Pyrene	LE504SB005	0.044	J	mg/Kg	230	2100	NA
Carbon Disulfide	LE504SB001	0.002	J	mg/Kg	780	*2*	NA
Carbon Disulfide	LE504SB003	0.002	J	mg/Kg	780	*2*	NA
Methyl ethyl ketone (2-Butanone	LE504SB001	0.007	J	mg/Kg	4700	*0.4*	NA
Methyl ethyl ketone (2-Butanone	LE504SB002	0.02	J	mg/Kg	4700	*0.4*	NA

Organic Compounds Detected in Zone L Surface Soil within AOC 613/615/SWMU 175 investigative area

[redacted]							
Methyl ethyl ketone (2-Butanone	LE504SB003	0.017	J	mg/Kg	4700	*0.4*	NA

Concentrations shown outlined and in bold print indicate exceedance of screening criteria.

** RBC and SSL for Endrin

*** RBC and SSL for Chlordane

***No Region III generic SSL available, value listed is from Region IX RBC table, November 2000

[a] RBCs from EPA Region III RBC Tables, October 2000. RBCs for non-carcinogenic compounds are adjusted for

[b]Values extrapolated from EPA Soil Soil Screening Guidance: User's Guide; DAF = 1.0 used for VOCs (*italicized*)

[c] Sitewide background concentration from *Background PAHs Study Report: Technical Information for the Develop*

Inorganics Detected in Zone L Subsurface Soil within AOC 613/615/SWMU 175 Investigative Area

Parameter	Station ID	Concentration	Qualifier	Units	SSLa	Background Range
Aluminum	LE504SB002	13800	=	mg/Kg	NL	1220 - 36800
	LE504SB003	10800	=	mg/Kg		
	LE504SB004	10800	=	mg/Kg		
	LE504SB005	20700	=	mg/Kg		
	LF037SP018	6960	=	mg/Kg		
	LF037SP022	16400	=	mg/Kg		
	LF037SP023	11700	=	mg/Kg		
	LF037SP027	12600	=	mg/Kg		
	LF037SP048	7030	=	mg/Kg		
Arsenic	LE504SB002	14	=	mg/Kg	15	0.83 - 35.8
	LE504SB003	17.6	=	mg/Kg		
	LE504SB004	6.3	=	mg/Kg		
	LE504SB005	24	=	mg/Kg		
	LF037SP018	1.84	=	mg/Kg		
	LF037SP022	4.03	=	mg/Kg		
	LF037SP023	15.1	=	mg/Kg		
	LF037SP027	7.5	=	mg/Kg		
	LF037SP048	5.84	=	mg/Kg		
Barium	LE504SB002	26.3	=	mg/Kg	800	6.1 - 62.8
	LE504SB003	27.5	=	mg/Kg		
	LE504SB004	13.8	=	mg/Kg		
	LE504SB005	35.3	=	mg/Kg		
	LF037SP018	14.4	=	mg/Kg		
	LF037SP022	28.3	=	mg/Kg		
	LF037SP023	24.6	=	mg/Kg		
	LF037SP027	25.6	=	mg/Kg		
	LF037SP048	19.8	=	mg/Kg		
Beryllium	LE504SB002	0.92	=	mg/Kg	32	0.15 - 2.4
	LE504SB005	1.2	=	mg/Kg		
	LF037SP018	0.415	=	mg/Kg		
	LF037SP022	0.366	=	mg/Kg		
	LF037SP023	0.525	=	mg/Kg		
	LF037SP027	0.642	=	mg/Kg		
	LF037SP048	0.526	=	mg/Kg		
Cadmium	LE504SB002	0.27	J	mg/Kg	4	0.08 - 0.52
	LE504SB003	0.53	J	mg/Kg		
	LE504SB004	0.08	J	mg/Kg		
	LE504SB005	0.37	J	mg/Kg		
Calcium	LE504SB002	10600	=	mg/Kg	NL	323 - 127000
	LE504SB003	21200	=	mg/Kg		
	LE504SB004	2780	=	mg/Kg		
	LE504SB005	10200	=	mg/Kg		
	LF037SP018	106000	=	mg/Kg		
	LF037SP022	3630	=	mg/Kg		

Inorganics Detected in Zone L Subsurface Soil within AOC 613/615/SWMU 175 Investigative Area

Parameter	Station ID	Concentration	Qualifier	Units	SSLa	Background Range
	LF037SP023	9760	=	mg/Kg		
	LF037SP027	9040	=	mg/Kg		
	LF037SP048	120000	=	mg/Kg		
Chromium, Total	LE504SB002	28.2	=	mg/Kg	19	1.6 - 65.4
	LE504SB003	37	=	mg/Kg		
	LE504SB004	22.5	=	mg/Kg		
	LE504SB005	38.9	=	mg/Kg		
	LF037SP018	10.4	=	mg/Kg		
	LF037SP022	20	=	mg/Kg		
	LF037SP023	22	=	mg/Kg		
	LF037SP027	30	=	mg/Kg		
	LF037SP048	16.4	=	mg/Kg		
Cobalt	LE504SB002	5.7	=	mg/Kg	1000	0.41 - 14.7
	LE504SB003	4.6	=	mg/Kg		
	LE504SB004	1.3	J	mg/Kg		
	LE504SB005	5.8	=	mg/Kg		
	LF037SP018	2.3	=	mg/Kg		
	LF037SP022	2.44	=	mg/Kg		
	LF037SP023	2.94	=	mg/Kg		
	LF037SP027	3.35	=	mg/Kg		
	LF037SP048	3.27	=	mg/Kg		
Copper	LE504SB002	27.7	=	mg/Kg	5300	1.3 - 46.2
	LE504SB003	45.9	=	mg/Kg		
	LE504SB005	25	=	mg/Kg		
	LF037SP018	5.76	=	mg/Kg		
	LF037SP023	17.4	=	mg/Kg		
	LF037SP027	15.8	=	mg/Kg		
	LF037SP048	12.3	=	mg/Kg		
Cyanide	LE504SB002	0.14	J	mg/Kg	20	NA
	LE504SB003	0.18	J	mg/Kg		
	LE504SB004	0.14	J	mg/Kg		
	LE504SB005	0.2	J	mg/Kg		
	LF037SP022	0.769	=	mg/Kg		
	LF037SP023	0.333	=	mg/Kg		
	LF037SP048	0.502	=	mg/Kg		
Iron	LE504SB002	21000	=	mg/Kg	NL	924 - 58100
	LE504SB003	17400	=	mg/Kg		
	LE504SB004	18500	=	mg/Kg		
	LE504SB005	26200	=	mg/Kg		
	LF037SP018	5290	=	mg/Kg		
	LF037SP022	14900	=	mg/Kg		
	LF037SP023	15700	=	mg/Kg		
	LF037SP027	15400	=	mg/Kg		
	LF037SP048	7060	=	mg/Kg		

Inorganics Detected in Zone L Subsurface Soil within AOC 613/615/SWMU 175 Investigative Area

Parameter	Station ID	Concentration	Qualifie	Units	SSLa	Background Range
Lead*	LE504SB002	64.3	=	mg/Kg	400	1.8 - 76.4
	LE504SB003	61.8	=	mg/Kg		
	LE504SB004	9.3	=	mg/Kg		
	LE504SB005	49.1	=	mg/Kg		
	LF037SP018	10.4	=	mg/Kg		
	LF037SP022	10	=	mg/Kg		
	LF037SP023	62.4	=	mg/Kg		
	LF037SP027	36.7	=	mg/Kg		
	LF037SP048	38.4	=	mg/Kg		
Magnesium	LE504SB002	2820	=	mg/Kg	NL	76.5 - 7040
	LE504SB003	2210	=	mg/Kg		
	LE504SB004	1240	=	mg/Kg		
	LE504SB005	3960	=	mg/Kg		
	LF037SP018	2060	=	mg/Kg		
	LF037SP022	1190	=	mg/Kg		
	LF037SP023	1570	=	mg/Kg		
	LF037SP027	1990	=	mg/Kg		
	LF037SP048	2450	=	mg/Kg		
Manganese	LE504SB002	346	=	mg/Kg	480	4.9 - 409
	LE504SB003	214	=	mg/Kg		
	LE504SB004	31.6	=	mg/Kg		
	LE504SB005	297	=	mg/Kg		
	LF037SP018	138	=	mg/Kg		
	LF037SP022	43.6	=	mg/Kg		
	LF037SP023	215	=	mg/Kg		
	LF037SP027	174	=	mg/Kg		
	LF037SP048	159	=	mg/Kg		
Mercury	LE504SB002	0.26	=	mg/Kg	1	0.04 - 0.37
	LE504SB003	0.84	=	mg/Kg		
	LE504SB005	0.39	=	mg/Kg		
	LF037SP018	0.0668	=	mg/Kg		
	LF037SP023	0.128	=	mg/Kg		
	LF037SP027	0.241	=	mg/Kg		
	LF037SP048	0.112	=	mg/Kg		
Nickel	LE504SB002	9.5	=	mg/Kg	65	0.85 - 21.9
	LE504SB003	13.2	=	mg/Kg		
	LE504SB004	3.1	J	mg/Kg		
	LE504SB005	12	=	mg/Kg		
	LF037SP018	5.64	=	mg/Kg		
	LF037SP022	5.13	=	mg/Kg		
	LF037SP023	6.79	=	mg/Kg		
	LF037SP027	8.43	=	mg/Kg		
	LF037SP048	11.2	=	mg/Kg		
Potassium	LE504SB002	1520	=	mg/Kg	NL	106 - 3790
	LE504SB003	1250	=	mg/Kg		

Inorganics Detected in Zone L Subsurface Soil within AOC 613/615/SWMU 175 Investigative Area

Parameter	Station ID	Concentration	Qualifier	Units	SSLa	Background Range
	LE504SB004	762	=	mg/Kg		
	LE504SB005	2300	=	mg/Kg		
	LF037SP018	581	=	mg/Kg		
	LF037SP022	621	=	mg/Kg		
	LF037SP023	716	=	mg/Kg		
	LF037SP027	921	=	mg/Kg		
	LF037SP048	655	=	mg/Kg		
Selenium	LE504SB002	0.78	=	mg/Kg	2.5	0.4 - 1
	LE504SB003	0.46	J	mg/Kg		
	LE504SB004	1	=	mg/Kg		
	LE504SB005	0.87	=	mg/Kg		
	LF037SP022	1.09	=	mg/Kg		
	LF037SP023	1.54	=	mg/Kg		
	LF037SP027	0.857	=	mg/Kg		
Sodium	LE504SB002	536	=	mg/Kg	NL	20.8 - 3890
	LE504SB003	1020	=	mg/Kg		
	LE504SB004	512	=	mg/Kg		
	LE504SB005	2010	=	mg/Kg		
	LF037SP018	249	=	mg/Kg		
	LF037SP022	394	=	mg/Kg		
	LF037SP023	311	=	mg/Kg		
	LF037SP027	314	=	mg/Kg		
	LF037SP048	505	=	mg/Kg		
Tin (Sn)	LE504SB002	2.5	J	mg/Kg	NL	2.8 - 2.9
	LE504SB003	4.7	J	mg/Kg		
	LE504SB004	1.3	J	mg/Kg		
	LE504SB005	2.7	J	mg/Kg		
	LF037SP027	5.49	=	mg/Kg		
Vanadium	LE504SB002	45.4	=	mg/Kg	3000	1.6 - 112
	LE504SB003	33.1	=	mg/Kg		
	LE504SB004	37.1	=	mg/Kg		
	LE504SB005	58.4	=	mg/Kg		
	LF037SP018	14	=	mg/Kg		
	LF037SP022	31	=	mg/Kg		
	LF037SP023	34	=	mg/Kg		
	LF037SP027	33.5	=	mg/Kg		
	LF037SP048	17	=	mg/Kg		
Zinc	LE504SB002	107	=	mg/Kg	6000	5.8 - 198
	LE504SB003	179	=	mg/Kg		
	LE504SB004	19	=	mg/Kg		
	LE504SB005	109	=	mg/Kg		
	LF037SP018	22.5	=	mg/Kg		
	LF037SP022	16	=	mg/Kg		
	LF037SP023	70.7	=	mg/Kg		
	LF037SP027	76.7	=	mg/Kg		

Inorganics Detected in Zone L Subsurface Soil within AOC 613/615/SWMU 175 Investigative Area

Parameter	Station ID	Concentration	Qualifie	Units	SSL a	Background Range
	LF037SP048	60.6	=	mg/Kg		

Concentrations shown outlined and in **bold** print indicate exceedance of comparison criteria.

[a] Values extrapolated from EPA Soil Soil Screening Guidance: User's Guide; DAF = 10

[b] Background Range values are the minimum and maximum concentrations detected in Zones E and F

* Default Soil Screening Level (SSL) for lead = 400 mg/kg

Organic Compounds Detected in Zone L Subsurface Soil within AOC 613/615/SWMU 175 Investigative Area

Alpha-chlordane	LE504SB002	0.018	=	mg/Kg	5	NA
Anthracene	LE504SB002	0.057	J	mg/Kg	6000	NA
Benzo(a)Anthracene	LE504SB002	0.21	J	mg/Kg	1	0.627
	LE504SB003	0.07	J	mg/Kg		
Benzo(a)Pyrene	LE504SB002	0.22	J	mg/Kg	4	0.623
Benzo(b)Fluoranthene	LE504SB002	0.15	J	mg/Kg	2.5	NA
	LE504SB003	0.066	J	mg/Kg		
Benzo(g,h,i)Perylene	LE504SB002	0.31	J	mg/Kg	NL	NA
Benzo(k)Fluoranthene	LE504SB002	0.11	J	mg/Kg	25	0.609
	LE504SB003	0.051	J	mg/Kg		
Benzyl Butyl Phthalate	LE504SB002	0.14	J	mg/Kg	470	NA
	LE504SB003	0.13	J	mg/Kg		
Chrysene	LE504SB002	0.33	J	mg/Kg	80	0.616
	LE504SB003	0.13	J	mg/Kg		
Dieldrin	LE504SB003	**0.0054**	=	mg/Kg	0.002	NA
Endrin	LE504SB003	0.0039	=	mg/Kg	0.5	NA
Flouranthene	LE504SB002	0.26	J	mg/Kg	2200	NA
	LE504SB003	0.12	J	mg/Kg		
Gamma BHC (Lindane)	LE504SB003	**0.0072**	J	mg/Kg	0.0045	NA
Gamma-chlordane	LE504SB002	0.15	=	mg/Kg	5	NA
Heptachlor	LE504SB003	0.0094	J	mg/Kg	12	NA
Indeno(1,2,3-c,d)pyrene	LE504SB002	0.14	J	mg/Kg	7	0.592
Methyl ethyl ketone (2-Butanone	LE504SB002	0.014	J	mg/Kg	0.4	NA
p,p'-DDD	LE504SB002	0.097	=	mg/Kg	8	NA
	LE504SB003	0.025	=	mg/Kg		
p,p'-DDE	LE504SB002	0.11	=	mg/Kg	27	NA
	LE504SB003	0.0051	J	mg/Kg		
p,p'-DDT	LE504SB002	0.038	J	mg/Kg	16	NA
	LE504SB003	0.0036	J	mg/Kg		

Organic Compounds Detected in Zone L Subsurface Soil within AOC 613/615/SWMU 175 Investigative Area

Parameter	Sample ID	Concentration	Qualifier	Units	SSL	Background Concentration
Phenanthrene	LE504SB002	0.16	J	mg/Kg	NL	NA
	LE504SB003	0.1	J	mg/Kg		
Pyrene	LE504SB002	1.2	J	mg/Kg	2100	NA
	LE504SB003	0.31	J	mg/Kg		
Acetone	LF037SP018	0.0525	=	mg/Kg	*0.8*	NA
	LF037SP022	0.231	=	mg/Kg		
	LF037SP023	0.208	=	mg/Kg		
Tetrachloroethylene (PCE)	LF037SP018	**0.00938**	=	mg/Kg	*0.003*	NA

Concentrations shown outlined and in bold print indicate exceedance of comparison criteria.

[a] Values extrapolated from EPA Soil Soil Screening Guidance: User's Guide; DAF = 1.0 used for VOCs (italicized),and DAF = 10 for other compounds.

Organic Compounds Detected in Zone L Groundwater within AOC 613/615/SWMU 175 Investigative Area

						MCL/*RBC*
037GP037F1	10-Jun-1997	1,1-Dichloroethane	27.5	=	ug/L	*80*
037GP037F1	10-Jun-1997	Chlorobenzene	15.5	=	ug/L	*100*
037GP037F1	10-Jun-1997	cis-1,2-Dichloroethylene	13.3	=	ug/L	70
037GP037F1	10-Jun-1997	Vinyl chloride	**17.1**	=	ug/L	2

Concentrations shown outlined and in bold print indicate exceedance of screening criteria.
RBC listed in *italics* where no primary MCL exists.

CD-ROM:

The *Initial Ground-Water Assessment Report for Site 20, Building 240* (TTNUS, 2000a) and *Rapid Assessment Report for Site 22, Building 242* (TTNUS, 2000b) are contained on CD-ROM, and inserted into the front pocket of this Volume II Binder.

D H E C

SERVE PROTECT PROSPER

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4 April 2000

Department of the Navy
Southern Division NFEC
P.O. Box 190010
North Charleston, SC 29419-9010
Attention: Mr. Gabriel Magwood

Re: Final Assessment Report dated 08 March 2000
Zone F/Site 20-Building 240 (Site Identification # 14689)
Charleston Naval Complex/Charleston Naval Base
Charleston, SC
Charleston County

Dear Mr. Magwood:

The author has completed technical review of the referenced document. As submitted, the report provides a narrative describing previous assessment activities and analytical results from additional sampling conducted to determine the environmental fate of suspected contamination at the subject property. The analytical results provided indicate that reportable concentrations of BTEX and PAH compounds were not detected above established method detection limits in soil and/or groundwater samples obtained at the subject site. Reported metals concentrations (total-soil) do not exceed calculated concentrations expected to exceed TCLP testing procedures. Based on the analytical results presented and description of site specific geology/hydrogeology, potential releases, if any, from previous activities at the subject site do not appear to present a significant threat to human health and/or the environment at the present time. In this regard, the employed assessment activities and sampling results appear to indicate that no additional endeavors for remedial actions and/or contaminant characterization is warranted for the Zone F/Site 20-Building 240 area at this time.

With consideration to the above comments, the Department has reviewed the referenced environmental data. Based on the information and analytical data submitted, the Department recognizes that the Department of the Navy and Charleston Naval Complex has adequately addressed the known environmental contamination identified on the property to date in accordance with the approved scope of work. Please note, this statement pertains only to the portion of the site addressed in the referenced report and does not apply to other areas of the site and/or any other potential regulatory violations. Further, the Department retains the right to request further investigation if deemed necessary.

Should you have any questions please contact me at (803) 898-3559.

Sincerely,

Paul L. Bristol, Hydrogeologist
Groundwater Quality Section
Bureau of Water

Tom Knight, Manager
Groundwater Quality Section
Bureau of Water

cc: Trident District EQC

SAMPLING AND ANALYSIS PLAN
FOR
ZONE F/ SITE 22-BUILDING 242

SITE IDENTIFICATION # 10645

Charleston Naval Complex
Charleston, South Carolina

Submitted to:
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
Charleston, South Carolina 29406

Submitted by:
CH2M-JONES, LLC.
115 Perimeter Center Place NE
Suite 700
Atlanta, Georgia 30346-1278

Contract Number: N62467-99-C-0960

August 2000

REPARED BY:

8-29-00

Brian R. Crawford
Engineer II
CH2M-JONES, LLC.

APPROVED BY:

8/29/00

Jed A. Heames
Site Superintendent
CH2M-JONES, LLC.

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ACRONYMS

AST	Aboveground Storage Tank
bls	below land surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene Isomers
CAP	Corrective Action Plan
CNC	Charleston Naval Complex
COC	Chemical of Concern
EISOPQAM	Environmental Investigations Standard Operating Procedures and Quality Assurance Manual
EPA	Environmental Protection Agency
ft	foot
mg/kg	microgram per kilogram
mg/L	microgram per liter
OVA	Organic Vapor Analyzer
QA	Quality Assurance
QC	Quality Control
RBSL	Risk-Based Screening Level
RDA	Redevelopment Authority
SAP	Sampling and Analysis Plan
SCDHEC	South Carolina Department of Health and Environmental Control
SOUTHDIV	Southern Division Naval Facilities Engineering Command
SSTL	Site-Specific Target Level
TTNUS	Tetra Tech NUS
UST	Underground Storage TanK

1.0 INTRODUCTION

This Sampling and Analysis Plan (SAP) has been prepared by CH2M-JONES, LLC. The plan is designed for Zone F/ Site 22-Building 242; Underground Storage Tank (UST) 242 located at the Charleston Naval Complex (CNC), Charleston, South Carolina.

The South Carolina Department of Health and Environmental Control (SCDHEC) has designated this site as Identification Number: 10645. This SAP provides methods to further evaluate the applicability of intrinsic remediation and monitoring well abandonment as a corrective action for UST 242 in accordance with SCDHEC Corrective Action Guidance, June 1997.

1.1 General Site Description

The CNC is in the city of North Charleston, on the west bank of the Cooper River in Charleston County, South Carolina as shown in Figure 1. This installation consists of two major areas: an undeveloped dredge materials area on the east bank of the Cooper River on Daniel Island in Berkley County, and a developed area on the west bank of the Cooper River. The developed portion of the base is on the peninsula bounded on the west by the Ashley River and on the east by the Cooper River.

The area surrounding CNC is "mature urban", having long been developed with commercial, industrial, and residential land use. Commercial areas are primarily west of CNC; industrial areas are primarily to the north of the base along Shipyard Creek. A site vicinity map, which exhibits adjacent properties and structures, vicinity roads, current utilities, and vicinity surface drainage, is included as Figure 2.

Building 242 is a garage constructed in 1989 and was last occupied in March 1996. UST 242 was a 5,000 gallon waste oil tank on the east side of the building. The UST was installed in 1989 and was equipped with a leak detection monitor with an alarm in the garage supervisors office. The UST was an Owens-Corning double wall fiberglass tank (Tetra Tech NUS, Inc. [TTNUS] Rapid Assessment [RA], 2000).

1.2 Objective

This RA presents the groundwater monitoring plan to assess the down gradient plume migration and intrinsic bioremediation/natural attenuation of petroleum hydrocarbons contamination in order to validate the assumptions and calculations used in the in the RA completed by TTNUS 2000. Details for the abandonment of monitoring wells at this site are also included in this plan.

2.0 RECEPTOR SURVEY

A receptor survey of the site vicinity was conducted by TTNUS to identify potential receptors for petroleum hydrocarbon contamination. Figure 2 depicts the public utilities located within 250 feet of the former UST 242 study area. Specific information concerning the depth of utilities below land surface (bls) is currently unavailable, however, utilities at this site generally are between 2 to 6 feet (ft) bls. The following utility receptors were located:

Sanitary sewer, water utility: A sanitary sewer line originates to the northeast of Building 242. This line runs in a southeasterly direction toward 11th street, and then continues parallel to 11th street. A sewer line running parallel to Ramsey Street connects to this line at the streets intersection. This line runs underneath the west side of building 242. A sewer line also runs off this and connects to Building 1175, which is located to the east of Building 242. There are no water mains located within 250 feet of building 242.

Electrical utility, gas utility: A subsurface electrical line runs approximately 50 feet to the east of Building 242 and continues along the north side of Building to terminate on Avenue A south. A gas utility line runs approximately 50 feet south of Building 242, and connects to a gas utility line associated with Building 1175.

Storm drain utility: there are two storm drains located 80 feet east of Building 242.

Compressed air utility: A compressed air utility line runs parallel to Avenue A south on the west side of Building 242, and enters the north end of the Building.

According to the SLA report completed by TTNUS, a survey of groundwater users within a 7-mile radius of CNC was conducted by the South Carolina Water Resources Commission to ascertain the extent of any shallow groundwater usage. Results of the water use investigation revealed that no drinking water wells, which utilize the shallow aquifer, are located within a 4- mile radius of CNC. Irrigation wells are not identified within 1,000 feet of the site. Numerous monitoring wells are located within 1,000 feet of the site.

There are no city, county or state-zoning ordinances, the property (CNC) is currently owned by the federal government. Information concerning zoning ordinances was obtained from the SOUTHDIV Remedial Project Manager located at 2155 Eagle Drive, North Charleston, South Carolina 29406 (TTNUS, 1999).

2.1 Fate and Transport Modeling

The Dominico was the Fate and Transport model used to determine groundwater SSTLs in the risk analysis. The impacted groundwater source area was modeled as 50 feet wide and 6.56 feet deep according to the RA report.

2.2 Soil Leaching SSTL

Soil leaching SSTLs were calculated for benzene and naphthalene concentrations leaching from subsurface soil to groundwater using SCDHEC Soil Leachability Model and Selected Minimum RBSLs. The soil leaching SSTLs calculated in the RA for benzene and naphthalene are provided in the table below:

Chemical of Concern	Concentration in CNC-B05/ 22SLB050304	Soil Leaching SSTL (mg/kg)
Benzene	0.005	0.602
Naphthalene	0.572	126.72

3.0 PROPOSED REMEDIATION TECHNOLOGY

Based on the results of the RA modeling, an Intrinsic Remediation with a monitoring period of 12 months will be performed for the site. The monitoring program will consist of sampling initially a total of five surrounding wells adjacent to the source point, and only sampling selected wells thereafter. The proposed monitoring program is described in detail in Sections 4.0 and 5.0 of this plan.

4.0 MONITORING WELL INSTALLATION AND ABANDONMENT

4.1 Monitoring Well Installation

Because of the large amount of monitoring wells located in and around this site, no monitoring wells will be installed as part of this plan.

4.2 Monitoring Well Abandonment

Seven monitoring wells will be abandoned at Building 242 following the South Carolina Well Standards and Regulations R.61-71. The well abandonment will include grouting wells, removing stick-ups and removing all guard posts.

4.3 Surveying

Because no monitoring wells will be installed at this site, a new survey will not be conducted.

4.4 Equipment Decontamination

All drilling equipment, augers, well casing and screens, and soil and groundwater sampling equipment involved in field sampling activities will be decontaminated according to the Environmental Protection Agencies (EPA) " Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM).

5.0 PROPOSED GROUNDWATER MONITORING PROGRAM

5.1 Monitoring Frequency and Reporting

The groundwater monitoring program proposed at building 242 will be performed in accordance with SCDHEC Corrective Action Guidance, June 1997, and consist of the following:

TABLE 4

Sampling date	Monitoring Wells Sampled	Field Measures	Laboratory Analytical
Second half [1] 2000	CNC22- MW-01, MW-02, MW-03, MW-04, MW-05, MW-06, MW-07	T°, pH, DO, Conductivity, Depth to water, Total depth, Turbidity	MTBE 8260 Naphthalene 8260 BTEX 8260 Sulfate, nitrate, total dissolved iron, alkalinity, methane
First half [2] 2001	CNC22- MW-03, MW-04, MW-06	T°, pH, DO, Conductivity, Depth to water, Total depth, Turbidity	MTBE 8260 Naphthalene 8260 BTEX 8260 Sulfate, nitrate, total dissolved iron, alkalinity, methane

1. Second half is defined by the second half of the year (July through December).
2. First half is defined by the first half of the year (January through June).

- **Frequency:** Initially all monitoring wells at this site will be sampled. Thereafter, groundwater samples will be collected from wells MW-03 as a source well, MW-06 as the up gradient well and MW-04 as the down gradient well.

- **Reporting:** Semi-annual groundwater monitoring reports will be submitted to SCDHEC.

Included in the semi-annual reports will be field and analytical information from the certified laboratory indicating well numbers, analytical methods used, date sampled, date analyzed, and method detection limits.

At the end of the 12-month period, (or as necessary) a performance evaluation will be submitted to SCDHEC providing the effectiveness of the intrinsic biodegradation/natural attenuation occurring and any recommendations for the site.

- **Groundwater Sampling**

Prior to any groundwater sampling, each well will be measured for water levels and total depth and each well will be purged in accordance the EPA EISOPQAM.

5.2 Analytical Parameters

The following constituents will be analyzed for each groundwater sample:

- Naphthalene using method 8260.
- BTEX using method 8260
- MTBE using method 8260

The following parameters will be analyzed in order to evaluate the effectiveness of intrinsic remediation:

- Nitrate (NO^{-3})
- Sulfate (SO^{-4})
- Total dissolved iron
- Methane (CH_4)
- Alkalinity

5.3 Field Measurements

The following parameters will be sampled in the field:

- Temperature
- pH
- Dissolved Oxygen
- Depth to water table
- Depth of well
- Turbidity
- Specific Conductance

Field measurements will be recorded in the field book and in field forms.

5.4 Groundwater Level Measurements

Groundwater measurements will be taken from all monitoring wells at the site during each sampling event. All water level measurements will be taken on the same day as anticipated sampling.

Measurements will be taken with an electrical water level meter or interface probe if floating product is present using the highest part of the top of the casing as a reference point for determining depths to water and total depths. Water level measurements will be recorded to the nearest 0.01-foot in the field book.

5.5 Sample Handling

Sample Handling will be conducted with the following references:

EPA EISOPQAM (EPA May, 1996)
Charleston Naval Shipyard Sampling and Analysis Plan, June 1999

5.6 Sample Packing and Shipping

The following forms will be completed to complete the packing/shipping process:

- Sample labels
- Chain-of-custody labels
- Appropriate labels applied to shipping coolers
- Chain-of-custody forms
- Federal express air bills

5.7 Quality Check

Quality Control (QC) samples will be collected during sampling events. QC samples may include field blanks, field duplicates, and trip blanks. Definitions of each can be found below as described by the EISOPQAM:

- **Field Blank:** a sample collected using organic-free water, which has been run over/through sample collection equipment. These samples are used to determine if contaminants have been introduced by contact of the sample medium with sampling equipment. Equipment field blanks are often associated with collecting rinse blanks of equipment that has been field cleaned.

- **Field Duplicates:** Two or more samples collected from a common source. The purpose of a duplicate sample is to estimate the variability of a given characteristic or contamination associated with a population.

- **Trip Blank:** A sample, which is prepared prior to the sampling event in the actual container and is stored with the investigative samples throughout the sampling event. They are often packaged for shipment with the other samples and submitted for analysis. At no time after their preparation are trip blanks to be opened before they reach the laboratory. Trip blanks are used to determine if samples were contaminated during storage and/or transportation back to the laboratory (a measure of sample handling variability resulting in positive bias in contaminant concentration). If samples are to be shipped, trip blanks are to be provided with each shipment but not for each cooler.

5.8 Field QA/QC

More information on field QC can be found in section 5.6

5.9 Control Limits

TABLE 5

Analysis	Control Parameter	Control Limit	Corrective Action
Air Monitoring	Check Calibration of OVA daily	Calibrate to manufactures specifications	Recalibrate. If unable to calibrate, replace.
pH of water	Continuing calibration check of pH 7.0 buffer	pH= 7.0	Recalibrate. If unable to calibrate, replace electrode.
Specific Conductance of water	Continuing calibration check of standard solution	> 1% of standard	Recalibrate.

5.10 Record keeping

In addition to records kept in logbooks, forms will be kept on log sheets for soil and groundwater. See Appendix B.

5.11 Site Management and Base Support

Throughout the investigation activities, work on the CNC will be coordinated through SOUTHDIV and SCDHEC.

The primary contacts for each are as follows:

1. SOUTHDIV point of contact
   Gabe Magwood
   Southern Division Engineering Command
   2155 Eagle Drive
   North Charleston, SC 29406
   (843) 820-7307

2. SOUTHDIV point of contact
   Tony Hunt
   Southern Division Engineering Command
   2155 Eagle Drive
   North Charleston, SC 29406
   (843) 820-7307

3. SCDHEC point of contact
   Paul Bristol
   South Carolina Department of Health and Environmental Control
   2600 Bull Street
   Columbia, SC 29201
   (843) 898-3559

REFERENCES

South Carolina Department of Health and Environmental Control. 1997. Corrective Action Guidance.

Tetra Tech NUS, Inc.; 1999 Rapid Assessment for Site 22 (Building 242), Charleston, South Carolina.

United States Environmental Protection Agency. 1990. Code of Federal Regulations 136.

United States Environmental Protection Agency. 1988. EPA Users Guide to Contract Laboratory Program.

United States Environmental Protection Agency. 1996. EPA Environmental Investigations Standard Operating Procedures for Quality Assurance Manual.

IN-SITU SOIL RISK EVALUATION

SOUTH CAROLINA
Department of Health and Environmental Control (DHEC)

Site Data

SITE ID #		COUNTY	Columbia
FACILITY NAME	Site 22, Building 242		
STREET ADDRESS	Charleston Naval Complex, North Charleston, SC		

Soil Risk Evaluation Data

					Figure
TPH		381	mg/kg		
Soil % SAND (Estimated)		64	%		
Soil % CLAY (Estimated)		25	%		
Worst Case	Benzene	0.005	mg/kg	Cs	
Soil Analyses	Toluene		mg/kg	Cs	
	Ethylbenzene		mg/kg	Cs	
	Xylenes		mg/kg	Cs	
	Naphthalene	0.572	mg/kg	Cs	
	MTBE		mg/kg	Cs	
Natural Organic Carbon Content		4470	mg/kg	foc	
Average Annual Recharge		25	cm	Hw	
Distance from highest Soil Impact to water table		60.960	cm	L	
Bulk Density of Soil		1.64	g/cc	Bd	1
Wetting Front Suction		15	cm	Hf	2
Soil Hydraulic Conductivity		1.13E-04	cm/sec	Kf	3
Porosity		0.45	decimal %	Φ	4
Residual Water Content		0.09	decimal %	Wr	5

List possible human exposure pathways from surface soil.
Soil leaching to groundwater - off-site ingestion or irrigational use of shallow groundwater.

IN-SITU SOIL RISK EVALUATION

SOIL LEACHABILITY MODEL FOR BENZENE

RISK-BASED CORRECTIVE ACTION FOR PETROLEUM RELEASES

SITE INFORMATION:

Site: [redacted]

Location: [redacted]

REFERENCES:

(1) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Figure 1.
(2) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Table 2.
(3) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Input Parameters.
(4) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Table 1.
(5) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Figure 2.
(6) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Figure 3.
(7) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Figure 4.
(8) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Figure 5.

INPUT:

COC	Chemical of Concern		BENZENE
Bd	Soil Bulk Density (1)	g/cm3	1.64
Crabl	Risk Based Screening Level	mg/L	0.15
Cs	Concentration of COC in soil	mg/kg	0.005
DAF	Dilution/Attenuation Factor (2)	unitless	8
foc	Organic Carbon Content in Soil (3)	mg/kg	4470
H'	Henry's Law Constant (4)	unitless	0.23
Hf	Wetting front suction head (always negative) (5)	cm	-15
Hw	Average Annual Recharge (3)	cm	25.00
Kf	Soil Hydraulic Conductivity (6)	cm/s	1.13E-04
Koc	Soil/Water Partioning Coefficient (2)	ml/g	81
L	Depth between soil sample with greatest COC concentration to groundwater.	cm	61
Φ	Porosity (7)	unitless	0.45
t1/2	Biodegradation "half life" (2)	days	16
TPH	Total Petroleum Hydrocarbons, EPA Method 3550	mg/kg	381
Wr	Residual Water Content (8)	volume fraction	0.09

CALCULATIONS:

Equation Set I - Determine soil pore water concentration resulting from physical partioning (Cw).

Step 1 - Calculate the total organic carbon content (fcs) of the soil.

fcs = (foc + TPH/1.724)*1E-6 = 0.0047 decimal %

Step 2 - Calculate the concentration of COC in soil pore water (Cw) directly in contact with the contaminate soil.

Cw = Cs*((Wr *1g/cc + Bd)/((Bd*Koc*fcs) + Wr + ((ø-Wr)*H'))) = 0.0109 mg/l

Equation Set II - Determine the velocity of the soil pore water (Vw)

Step 1 - Calculate the air filled porosity (f) in decimal percent.

f = ø - Wr = 0.36 decimal %

Step 2 - Determine the time for water to percolate through the vadose zone soil (from depth of worst case soil sample to the water table at site).

t = (f/Kf)*(L-((Hw-Hf)*(ln((Hw + L-Hf)/(Hw-Hf)))) = 76,225 seconds

Step 3 - Determine the velocity of the water (Vw) in feet per year.

Vw = (L/30.48cm/ft)/(t/31,500,000sec/year) = 826 ft/year

Equation Set III - Determine the organic retardation effect (Vc) of the contaminant.

Step 1 - Calculate the soil/water distribution coefficient (Kd) (ml/g) for uncontaminated soil.

Kd = Koc*foc*1E-6 = 0.36207 ml/g

Step 2 - Calculate the retardation effect of natural soil organic matter on COC migration.

Vc = Vw/(1 + ((Bd*Kd)/ø)) = 356 ft/year

Equation Set IV - Determine biodegradation rates and provide final COC concentration (Cf) at depth of concern.

Step 1 - Calculate the time (Tc) in days required for the COC to reach groundwater.

Tc = 365 day/yr*((L/30.48cm/ft)/Vc) = 2.05 days

Step 2 - Calculate estimated concentration of COC in the soil pore water (Cp) necessary to protect groundwater.

Cp = 10^(log (Crsbl) + ((Tc/2.3)*(0.693/t1/2))) = 0.1639 mg/l

COC concentration in soil pore water (Cw) is less than concentration necessary to protect groundwater (Cp). Not necessary to calculate SSTL

Equation Set V - Calculate the Site Specific Target Level (SSTL) for the COC in soil.

Cssti for BENZENE in soil = Cp*DAF*((Bd*Koc*fcs)+Wr+(F*'H'''))/(Wr*1g/cc+Bd)) = 0.602235 mg/kg

PREPARED BY: _____

Date

CHECKED BY: _____

Date

IN-SITU SOIL RISK EVALUATION

SOUTH CAROLINA
Department of Health and Environmental Control (DHEC)

Site Data

SITE ID # 0
FACILITY NAME Site 22, Building 242

Instructions

Provide results, separately, for each constituent in the worst case soil analysis.

Data

List Constituent: BENZENE
(BTEX, Napth.)

				Table
Bioremediation "half-life"	16	days	t 1/2	1
Soil/water partitioning coefficient	81	ml/g	K oc	1

Results

				Equation Set	Step
Total Organic Carbon Content	0.0045	decimal %	f cs	I	1
Leachate Concentration	0.011	mg/l	C w	I	2
Air Filled Porosity	0.36	decimal %	f	II	1
Infiltration Rate Time	76,225	seconds	t	II	2
Velocity of Water	826	ft/year	V w	II	3
Soil/Water Distribution Coefficient	0.3621	ml/g	K d	III	1
Contaminant Percolation Rate	356	ft/year	V c	III	2
Time to Reach Groundwater	2.05	days	T c	IV	1
Concentration reaching Groundwater	0.1639	mg/l	C p	IV	2
Site Specific Target Level	**0.60**	mg/kg	C sstl	V	

Conclusions

Does concentration of chemical of concern in soil exceed SSTL? NO

Risk of Human Exposure due to contaminated soil.

YES X NO

IN-SITU SOIL RISK EVALUATION

SOIL LEACHABILITY MODEL FOR NAPHTHALENE

RISK-BASED CORRECTIVE ACTION FOR PETROLEUM RELEASES

SITE INFORMATION:

Site: [redacted]

Location: [redacted]

REFERENCES:

(1) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Figure 1.
(2) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Table 2.
(3) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Input Parameters.
(4) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Table 1.
(5) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Figure 2.
(6) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Figure 3.
(7) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Figure 4.
(8) SCDHEC, RBCA For Petroleum Releases, June 1995, Appendix B, Figure 5.

INPUT:

			NAPHTHALENE
COC	Chemical of Concern		
Bd	Soil Bulk Density (1)	g/cm3	1.64
Crsbl	Risk Based Screening Level	mg/L	1.63
Cs	Concentration of COC in soil	mg/kg	0.572
DAF	Dilution/Attenuation Factor (2)	unitless	8
foc	Organic Carbon Content in Soil (3)	mg/kg	4470
H'	Henry's Law Constant (4)	unitless	0.23
Hf	Wetting front suction head (always negative) (5)	cm	-15
Hw	Average Annual Recharge (3)	cm	25
Kf	Soil Hydraulic Conductivity (6)	cm/s	0.0001
Koc	Soil/Water Partioning Coefficient (2)	ml/g	1543
L	Depth between soil sample with greatest COC concentration to groundwater.	cm	61
ø	Porosity (7)	unitless	0.45
t1/2	Biodegradation "half life" (2)	days	48
TPH	Total Petroleum Hydrocarbons, EPA Method 3550	mg/kg	381
Wr	Residual Water Content (8)	volume fraction	0.09

CALCULATIONS:

Equation Set I - Determine soil pore water concentration resulting from physical partioning (Cw).

Step 1 - Calculate the total organic carbon content (fcs) of the soil.

fcs = (foc + TPH/1.724)*1E-6 = 0.0047 decimal %

Step 2 - Calculate the concentration of COC in soil pore water (Cw) directly in contact with the contaminate soil.

Cw = Cs*((Wr *1g/cc + Bd)/((Bd*Koc*fcs) + Wr + ((ø-Wr)*H'))) = 0.01 mg/l

Equation Set II - Determine the velocity of the soil pore water (Vw)

Step 1 - Calculate the air filled porosity (f) in decimal percent.

f = ø - Wr = 0.36 decimal %

Step 2 - Determine the time for water to percolate through the vadose zone soil (from depth of worst case soil sample to the water table at site).

t = (f/Kf)*(L-(Hw-Hf))*(ln(Hw + ((L-Hf)/(Hw-Hf)))) = 76,225 seconds

Step 3 - Determine the velocity of the water (Vw) in feet per year.

Vw = (L/30.48cm/ft)/(t/31,500,000sec/year) = 826 ft/year

Equation Set III - Determine the organic retardation effect (Vc) of the contaminant.

Step 1 - Calculate the soil/water distribution coefficient (Kd) (ml/g) for uncontaminated soil.

Kd = Koc*foc*1E-6 = 6.89721 ml/g

Step 2 - Calculate the retardation effect of natural soil organic matter on COC migration.

Vc = Vw*(1 + ((Bd*Kd)/ø)) = 32 ft/year

Equation Set IV - Determine biodegradation rates and provide final COC concentration (Cf) at depth of concern.

Step 1 - Calculate the time (Tc) in days required for the COC to reach groundwater.

Tc = 365 day/yr*((L/30.48cm/ft)/Vc) = **23.08** days

Step 2 - Calculate estimated concentration of COC in the soil pore water (Cp) necessary to protect groundwater.

Cp = 10^(log (Crsbl)+((Tc/2.3)*(0.693/t1/2))) = **2.28** mg/l

COC concentration in soil pore water (Cp) is greater than Crsbl, therefore the SSTL must be calculated.

Equation Set V - Calculate the Site Specific Target Level (SSTL) for the COC in soil.

Csstl for APHTHALENE in soil = Cp*DAF*(((Bd*Koc*fcs)+Wr+(F*'H'''))/(Wr*1g/cc+Bd)) = **126.718125** mg/kg

PREPARED BY:_____

Date

CHECKED BY:_____

Date

IN-SITU SOIL RISK EVALUATION

SOUTH CAROLINA
Department of Health and Environmental Control (DHEC)

Site Data

SITE ID # 0
FACILITY NAME Site 22, Building 242

Instructions

Provide results, separately, for each constituent in the worst case soil analysis.

Data

List Constituent: NAPHTHALENE
(BTEX, Napth.)

				Table
Bioremediation "half-life"	48	days	t 1/2	1
Soil/water partitioning coefficient	1543	ml/g	K oc	1

Results

				Equation Set	Step
Total Organic Carbon Content	0.0045	decimal %	f cs	I	1
Leachate Concentration	0.007	mg/l	C w	I	2
Air Filled Porosity	0.36	decimal %	f	II	1
Infiltration Rate Time	76,225	seconds	t	II	2
Velocity of Water	826	ft/year	V w	II	3
Soil/Water Distribution Coefficient	6.90	ml/g	K d	III	1
Contaminant Percolation Rate	32	ft/year	V c	III	2
Time to Reach Groundwater	23	days	T c	IV	1
Concentration reaching Groundwater	2.28	mg/l	C p	IV	2
Site Specific Target Level	**126.72**	mg/kg	C sstl	V	

Conclusions

Does concentration of chemical of concern in soil exceed SSTL? NO

Risk of Human Exposure due to contaminated soil.

_____ YES X _____ NO

IN-SITU SOIL RISK EVALUATION

SITE 22
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA
SCDHEC UST ID No. 10645

DOMENICO'S DILUTION/ATTENUATION EQUATION FOR GROUNDWATER TRANSPORT

Site-Specific Target Level Calculations for Groundwater: Potential Future Migration to the Cooper River

Parameter Descriptions:	Units
POE = Point of Exposure	
SSTL = Site-Specific Target Level	mg/L
$SSTL_{source}$ = Hydrocarbon Concentration in Plume Source Area protective of RBSLs at POE	mg/L
$SSTL_{comp}$ = Hydrocarbon Concentration at Compliance Point protective of RBSLs at POE	mg/L
X_{POE} = x = Distance from Plume Source to POE (along Centerline)	m
X_{comp} = x = Distance from POE to Compliance Point (along Centerline)	m
Y = Source Width (Perpendicular to Flow Direction)	m
Z = Source Depth (Perpendicular to Flow Direction in Vertical Plane)	m
K_s = Saturated Hydraulic Conductivity	m/sec
I = Groundwater Gradient	cm/cm
θ = Porosity in Saturated Zone	cm^3/cm^3

Parameter Descriptions:	Units
ρ_s = Soil Bulk Density	g/cm^3
f_{oc} = Fraction Organic Carbon in Soil	g-C/g-soil
α_X = Longitudinal Dispersivity = 0.2x	m
α_Y = Transverse Dispersivity = $\alpha_X/300$	m
α_Z = Vertical Dispersivity = 1×10^{-99}	m
k_{oc} = Organic Carbon Partition Coefficient	cm^3-H_2O/g-C
k_p = Soil-Water Sorption Coefficient	cm^3-H_2O/g-soil
V = Pore Water Velocity	m/sec
R_c = Constituent Retardation Factor	
V/R_c = Maximum Transport Rate of Dissolved Constituent = $(K_sI/\theta R_c)$	m/sec
RBSL = Risk-Based Screening Level in Water Provided by SCDHEC (1998)	mg/L

Dilution & Attenuation without Biological Decay

Constituent	X_{POE} ft	X_{POE} m	Y m	Z m	t sec	K_s m/sec	I m/m	θ cm^3/cm^3	ρ_s g/cm^3	α_X m	α_Y m	α_Z m	f_{oc} g-C/g-soil	k_{oc} cm^3-H_2O/g-C	k_p cm^3-H_2O/g-s	V m/sec	R_c	C_{POE}/C_{source}
Benzene	720	219.459	15	2	1.00E+13	1.13E-06	0.0027	0.45	1.64	21.96	7.32	1.10	4.47E-03	83	0.37101	6.78E-09	2.352	7.644E-03
MTBE	720	219.459	15	2	1.00E+13	1.13E-06	0.0027	0.45	1.64	21.96	7.32	1.10	4.47E-03	11.5	0.051405	6.78E-09	1.167	7.644E-03

Constituent	X_{comp} ft	X_{comp} m	Y m	Z m	t sec	K_s m/sec	I m/m	θ cm^3/cm^3	ρ_s g/cm^3	α_X m	α_Y m	α_Z m	f_{oc} g-C/g-soil	k_{oc} cm^3-H_2O/g-C	k_p cm^3-H_2O/g-s	V m/sec	R_c	C_{POE}/C_{comp}
Benzene	686	209.791	15	2	1.00E+13	1.13E-06	0.0027	0.45	1.64	20.98	6.99	1.04	4.47E-03	83	0.37101	6.78E-09	2.352	8.444E-03
MTBE	686	209.791	15	2	1.00E+13	1.13E-06	0.0027	0.45	1.64	20.98	6.99	1.04	4.47E-03	11.5	0.051405	6.78E-09	1.167	8.444E-03

Source: South Carolina Department of Health and Environmental Control (SCDHEC) 1998. *Risk-Based Corrective Action for Petroleum Releases*, Bureau of Underground Storage Tank Management.

DOMENICO DILUTION/ATTENUATION MODEL WITHOUT BIOLOGICAL DECAY

$$\frac{C_X}{C_{SOURCE}} = \frac{1}{2}\,erfc\left[\frac{\left(x - \frac{vt}{R_c}\right)}{2\sqrt{\alpha_X \frac{vt}{R_c}}}\right] \times erf\left[\frac{Y}{4\sqrt{\alpha_Y X}}\right] \times erf\left[\frac{Z}{2\sqrt{\alpha_Z X}}\right]$$

Constituent	POE RBSL mg/L	$SSTL_{source}$ mg/L	$SSTL_{comp}$ mg/L
Benzene	0.005	0.654	0.592
MTBE	0.040	5.231	4.737

SITE 22
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

DOMENICO'S DILUTION/ATTENUATION EQUATION FOR GROUNDWATER TRANSPORT

Predicted 10-year Migration of Constituents in Groundwater

Parameter Descriptions:	Units
POE = Point of Exposure	
SSTL = Site-Specific Target Level	mg/L
$SSTL_{source}$ = Hydrocarbon Concentration in Plume Source Area protective of RBSLs at POE	mg/L
$SSTL_{comp}$ = Hydrocarbon Concentration at Compliance Point protective of RBSLs at POE	mg/L
X_{POE} = x = Distance from Plume Source to POE (along Centerline)	m
X_{comp} = x = Distance from POE to Compliance Point (along Centerline)	m
Y = Source Width (Perpendicular to Flow Direction)	m
Z = Source Depth (Perpendicular to Flow Direction in Vertical Plane)	m
K_s = Saturated Hydraulic Conductivity	m/sec
i = Groundwater Gradient	cm/cm
θ = Porosity in Saturated Zone	cm^3/cm^3

Parameter Descriptions:	Units
ρ_s = Soil Bulk Density	g/cm^3
f_{oc} = Fraction Organic Carbon in Soil	g-C/g-soil
α_x = Longitudinal Dispersivity = x/10	m
α_y = Transverse Dispersivity = $\alpha_x/3$	m
α_z = Vertical Dispersivity = $\alpha_x/20$	m
k_{oc} = Organic Carbon Partition Coefficient	cm^3-H_2O/g-C
k_o = Soil-Water Sorption Coefficient	cm^3-H_2O/g-soil
V = Pore Water Velocity	m/sec
R_c = Constituent Retardation Factor	
V/R_c = Maximum Transport Rate of Dissolved Constituent = $(K_s i)/(\theta R_c)$	m/sec
RBSL = Risk-Based Screening Level in Water Provided by SCDHEC (1998)	mg/L

Dilution & Attenuation without Biological Decay

Constituent	X_{POE} ft	X_{POE} m	Y m	Z m	t sec	K_s m/sec	i m/m	θ m^3/cm	ρ_s g/cm^3	α_x m	α_y m	α_z m	f_{oc} g-C/g-soil	k_{oc} cm^3-H_2O/g-C	k_o cm^3-H_2O/g-soil	V m/sec	R_c	C_{POE}/C_{source}
Benzene	5.5	1.67642	15	2	3.15E+08	1.13E-06	0.0027	0.48	1.64	0.17	0.06	0.01	4.47E-03	83	0.37101	6.78E-09	2.352	8.226E-02
MTBE	2.7	0.82297	15	2	3.15E+08	1.13E-06	0.0027	0.48	1.64	0.08	0.03	0.00	4.47E-03	11.5	0.051408	6.78E-09	1.167	9.638E-01

Source: South Carolina Department of Health and Environmental Control (SCDHEC) 1998. *Risk-Based Corrective Action for Petroleum Releases*, Bureau of Underground Storage Tank Management.

DOMENICO DILUTION/ATTENUATION MODEL WITHOUT BIOLOGICAL DECAY

$$\frac{C_X}{C_{SOURCE}} = \frac{1}{2} erfc\left[\frac{\left(x - \frac{vt}{R_c}\right)}{2\sqrt{\alpha_X \frac{vt}{R_c}}}\right] \times erf\left[\frac{Y}{4\sqrt{\alpha_Y x}}\right] \times erf\left[\frac{Z}{2\sqrt{\alpha_Z x}}\right]$$

Constituent	C_{source} mg/L	C_x mg/L
Benzene	0.056	0.005
MTBE	0.042	0.040

Prepared By: [signature]

Reviewed By: [signature]

SITE 22
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

DOMENICO'S DILUTION/ATTENUATION EQUATION FOR GROUNDWATER TRANSPORT

Predicted 20-year Migration of Constituents in Groundwater

Parameter Descriptions:	Units
POE = Point of Exposure	
SSTL = Site-Specific Target Level	mg/L
$SSTL_{source}$ = Hydrocarbon Concentration in Plume Source Area protective of RBSLs at POE	mg/L
$SSTL_{comp}$ = Hydrocarbon Concentration at Compliance Point protective of RBSLs at POE	mg/L
X_{POE} = x = Distance from Plume Source to POE (along Centerline)	m
X_{comp} = x = Distance from POE to Compliance Point (along Centerline)	m
Y = Source Width (Perpendicular to Flow Direction)	m
Z = Source Depth (Perpendicular to Flow Direction in Vertical Plane)	m
K_s = Saturated Hydraulic Conductivity	m/sec
I = Groundwater Gradient	cm/cm
θ = Porosity in Saturated Zone	cm^3/cm^3

Parameter Descriptions:	Units
ρ_s = Soil Bulk Density	g/cm^3
f_{oc} = Fraction Organic Carbon in Soil	g-C/g-soil
α_x = Longitudinal Dispersivity = x/10	m
α_y = Transverse Dispersivity = $\alpha_x/3$	m
α_z = Vertical Dispersivity = $\alpha_y/20$	m
k_{oc} = Organic Carbon Partition Coefficient	cm^3-H_2O/g-C
k_o = Soil-Water Sorption Coefficient	cm^3-H_2O/g-soil
V = Pore Water Velocity	m/sec
R_c = Constituent Retardation Factor	
V/R_c = Maximum Transport Rate of Dissolved Constituent = $(K_s I)/(\theta R_c)$	m/sec
RBSL = Risk-Based Screening Level in Water Provided by SCDHEC (1998)	mg/L

Dilution & Attenuation without Biological Decay

Constituent	X_{POE} ft	X_{POE} m	Y m	Z m	t sec	K_s m/sec	I m/m	θ m^3/cm^3	ρ_s g/cm^3	α_x m	α_y m	α_z m	f_{oc} g-C/g-soil	k_{oc} cm^3-H_2O/g-C	k_o cm^3-H_2O/g-soil	V m/sec	R_c	C_{POE}/C_{source}
Benzene	11	3.35284	15	2	6.31E+08	1.13E-06	0.0027	0.45	1.64	0.34	0.11	0.02	4.47E-03	83	0.37101	6.78E-09	2.352	8.228E-02
MTBE	5	1.52402	15	3	6.31E+08	1.13E-06	0.0027	0.45	1.64	0.15	0.05	0.01	4.47E-03	11.5	0.051405	6.78E-09	1.187	9.763E-01

Source: South Carolina Department of Health and Environmental Control (SCDHEC) 1998. *Risk-Based Corrective Action for Petroleum Releases*, Bureau of Underground Storage Tank Management.

DOMENICO DILUTION/ATTENUATION MODEL WITHOUT BIOLOGICAL DECAY

$$\frac{C_X}{C_{SOURCE}} = \frac{1}{2} erfc\left[\frac{\left(x - \frac{vt}{R_c}\right)}{2\sqrt{\alpha_X \frac{vt}{R_c}}}\right] \times erf\left[\frac{Y}{4\sqrt{\alpha_Y x}}\right] \times erf\left[\frac{Z}{2\sqrt{\alpha_Z x}}\right]$$

Constituent	C_{SOURCE} mg/L	C_X mg/L
Benzene	0.056	0.005
MTBE	0.042	0.041

Prepared By: [illegible]

Reviewed By: [illegible]

TABLE 1

GROUNDWATER ELEVATIONS
SITE 22, BUILDING 242
ZONE F, CHARLESTON NAVAL BASE COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

Well #	Total Depth of Well (ft)	Top of Casing Elevation, ft (MSL)	Date Measured	Depth to Water, ft (BTOC)	Depth to Product, ft (BTOC)	Product Thickness (ft)	Groundwater Elevation (MSL)
CNC22-M01	12.18	9.27	9/10/99	5.64	ND	ND	3.63
CNC22-M02	14.35	9.41	9/10/99	5.94	ND	ND	3.47
CNC22-M03	13.75	9.42	9/10/99	6.11	ND	ND	3.31
CNC22-M04	14.05	9.39	9/10/99	6.12	ND	ND	3.27
CNC22-M05	14.02	9.41	9/10/99	5.92	ND	ND	3.49
CNC22-M06	14.21	9.34	9/10/99	5.90	ND	ND	3.44
CNC22-M07D	28.33	9.64	9/10/99	5.80	ND	ND	3.84

Notes:
MSL - Mean Sea Level
LRS - Local Relative Survey
BTOC - Below Top of Casing
NM - Not Measured
ND- Not Detected
ft - Feet
* Permanent Piezometer Well
**Corrected Depth to Water Measurements Based on Free Product Thickness

TABLE 2

GROUNDWATER FIELD MEASUREMENTS
SITE 22, BUILDING 242
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

Well I.D.	Date Sampled	Purge method	Volume (gallons)	Temp. (° C)	pH	Specific Conductivity (uMHOS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
CNC22-M01	9/10/99	PP	5.25	30.4	6.34	1.42	0	1.48
CNC22-M02	9/10/99	PP	4.05	27.2	6.04	2.260	0	0.65
CNC22-M03	9/10/99	PP	3.75	29.1	5.56	2.33	1	1.28
CNC22-M04	9/10/99	PP	4.00	28.0	4.47	3.250	0	1.05
CNC22-M05	9/10/99	PP	6.50	27.5	5.94	6.4	0	1.85
CNC22-M06	9/10/99	PP	4.14	26.3	5.72	6.06	0	1.5
CNC22-M07D	9/10/99	PP	4.00	25.9	8.45	1.25	>999	3.42

Notes:
(° C) - Degrees Celsius
PP - Peristaltic pump, low flow technique
uMHOS/cm - Micro MHOS per centimer
NTU - Nephelometric turbidity units
mg/L - milligrams per liter

TABLE 3

GROUNDWATER NATURAL ATTENUATION FIELD MEASUREMENTS
SITE 22, BUILDING 242
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

Well I.D.	Date Sampled	Dissolved Oxygen (mg/L)	Alkalinity (mg/L)	Carbon Dioxide (mg/L)	Sulfide (mg/L)	Ferrous Iron (mg/L)	Nitrite (mg/L)	Manganese (mg/L)	Nitrogen/ Nitrate (mg/L)*	Sulfate (mg/L)*
CNC22-M03	9/21/99	0.80	79.2	384	0.02	3.30	0.117	0.1	NA	NA
CNC22-M04	9/21/99	0.30	19.7	500	0.00	3.30	0.004	0.0	NA	NA
CNC22-M06	9/21/99	1.00	116.0	588	0.00	3.30	0.021	14.4	NA	NA

Notes:
mg/L - Milligrams per liter
ug/L - Micrograms per liter
NA - Not Analyzed
E- Estimated Concentration
* Fixed base laboratory analysis

TABLE 4

SUMMARY OF OVA SOIL SCREENING RESULTS
SITE 22, BUILDING 242
ZONE F, FORMER CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

Sample Location	Sample Identification	Sample Depth (feet)	Organic Vapor Headspace Concentration (ppm)
CNC22-B01	22SSB0104	0-4	3
	22SSB0108	4-8	0
	22SSB0112	8-12	2
CNC22-B02	22SSB0204	0-4	0
	22SSB0208	4-8	0
	22SSB0212	8-12	0
	22SSB0215	12-15	0
CNC22-B03	22SSB0304	0-4	0
	22SSB0308	4-8	0
	22SSB0312	8-12	0
	22SSB0315	12-15	0
CNC22-B04	22SSB0404	0-4	0
	22SSB0408	4-8	25
CNC22-B05	22SSB0504	0-4	160
CNC22-B06	22SSB0604	0-4	0
	22SSB0608	4-8	0
	22SSB0611	8-11	0
CNC22-B07	22SSB0708	4-8	0
CNC22-B08	22SSB0804	0-4	0
	22SSB0808	4-8	0
	22SSB0812	8-12	0
	22SSB0815	12-15	0
CNC22-B09	22SSB0904	0-4	28
	22SSB0908	4-8	150
CNC22-B10	22SSB1003	3	0
	22SSB1006	6	0
	22SSB1009	9	230
CNC22-B11	22SSB1104	4	0
	22SSB1108	8	0
	22SSB1110	10	0
CNC22-B12	22SSB1203	3	37
	22SSB1206	6	77
CNC22-B13	22SSB1301	1	No Recording
	22SSB1302	2	No Recording
	22SSB1303	3	No Recording
	22SSB1304	4	No Recording
	22SSB1305	5	No Recording
	22SSB1306	6	No Recording
	22SSB1307	7	No Recording
	22SSB1308	8	No Recording
	22SSB1309	9	No Recording
	22SSB1310	10	No Recording
	22SSB1311	11	No Recording
	22SSB1312	12	No Recording

TABLE 4-CONTINUED

SUMMARY OF OVA SOIL SCREENING RESULTS
SITE 22, BUILDING 242
Zone F, Former Charleston Naval Complex
North Charleston, South Carolina

Sample Location	Sample Identification	Sample Depth (feet)	Organic Vapor Headspace Concentration
CNC22-B14	22SSB1407	7	0
	22SSB1409	9	14
CNC22-B15	22SSB1506	6	110
	22SSB1510	10	50
CNC22-B16	22SSB1601	1	No Recording
	22SSB1602	2	No Recording
	22SSB1603	3	No Recording
	22SSB1604	4	No Recording
	22SSB1605	5	No Recording
	22SSB1606	6	No Recording
	22SSB1607	7	No Recording
	22SSB1608	8	No Recording
	22SSB1609	9	No Recording
	22SSB1610	10	No Recording
	22SSB1611	11	No Recording
	22SSB1612	12	No Recording
CNC22-B17	22SSB1707	7	260
	22SSB1710	10	90
CNC22-B18	22SSB1807	7	220
CNC22-B19	22SSB1903	3	5
	22SSB1907	7	13
	22SSB1909	9	14
CNC22-B20	22SSB2003	3	20
	22SSB2005	5	100
	22SSB2007	7	20
CNC22-B21	22SSB2104	4	60
	22SSB2106	6	20
	22SSB2109	9	0
CNC22-B22	22SSB2202	2	20
	22SSB2206	6	90
CNC22-B23	22SSB2305	5	70

Notes:
OVA - organic vapor analyzer equipped with a flame ionization detector and charcoal filter where necessary
ND- not detected

TABLE 5

SUMMARY OF MOBILE LABORATORY SCREENING RESULTS FOR SOIL
SITE 22, BUILDING 242
ZONE F, FORMER CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

Sample Location	Sample Identification	Sample Depth (feet)	Laboratory Screening Data[1]					
			Benzene (µg/Kg)	Toluene (µg/Kg)	Ethylbenzene (µg/Kg)	Total Xylenes (µg/Kg)	Naphthalene (µg/Kg)	Diesel Range Organics (mg/Kg)
CNC22-B01	22SFB011112	11-12*	ND	ND	ND	ND	ND	ND
CNC22-B02	22SFB021112	11-12*	ND	ND	ND	ND	ND	ND
CNC22-B03	22SFB031112	11-12*	ND	ND	ND	ND	ND	ND
CNC22-B04	22SFB040006	0-6	ND	ND	ND	ND	ND	ND
CNC22-B05	22SFB050508	5-8	ND	ND	ND	ND	ND	ND
CNC22-B06	22SFB060405	4-5	ND	ND	ND	ND	ND	ND
CNC22-B07	22SFB071112	11-12*	ND	ND	ND	ND	ND	ND
CNC22-B08	22SFB080304	3-4	ND	ND	ND	ND	ND	ND
CNC22-B09	22SFB090405	4-5	ND	ND	ND	ND	ND	ND
CNC22-B10	22SFB100506	5-6	ND	ND	ND	ND	ND	ND
CNC22-B11	22SFB110708	7-8	ND	ND	ND	ND	51.8J	66
CNC22-B12	22SFB120607	6-7	ND	ND	ND	ND	ND	ND
CNC22-B13	22SFB130607	6-7	ND	ND	ND	ND	ND	ND
CNC22-B14	22SFB140708	7-8	ND	ND	ND	ND	ND	ND
CNC22-B15	22SFB150607	6-7	ND	ND	ND	ND	ND	ND
CNC22-B16	22SFB160708	7-8	ND	ND	ND	ND	ND	ND
CNC22-B17	22SFB170708	7-8	ND	ND	ND	ND	ND	ND
CNC22-B18	22SFB180708	7-8	ND	ND	ND	ND	ND	47
CNC22-B19	22SFB190910	9-10*	ND	ND	ND	ND	ND	ND
CNC22-B20	22SFB200506	5-6	ND	ND	ND	ND	ND	ND
CNC22-B21	22SFB210506	5-6	ND	ND	ND	ND	ND	1300
CNC22-B22	22SFB220506	5-6	ND	ND	ND	ND	ND	ND
CNC22-B23	22SFB230506	5-6	ND	ND	ND	ND	ND	ND

NOTES:
[1] Laboratory screening data were analyzed using USEPA Method 8020/8015M. Compounds not detected are reported as less than the instrument detection limit.
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
J = Estimated value detection was above the instrument minimum detection level, but below the practical quantification limit.
E = Estimated value detection exceeded the upper calibration range of the instrument.
* Soil samples collected above water table at time of boring installation.

TABLE 6

SUMMARY OF MOBILE LABORATORY SCREENING RESULTS FOR GROUNDWATER
SITE 22, BUILDING 242
ZONE F, FORMER CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

Sample Location	Sample Identification	Sample Depth (feet)	Laboratory Screening Data[1]					
			Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	Diesel Range Organics (mg/L)
CNC22-B01	22GFB011013	10-13	ND	ND	ND	ND	ND	ND
CNC22-B02	22GFB021315	13-15	ND	ND	ND	ND	ND	ND
CNC22-B03	22GFB031315	13-15	ND	ND	ND	ND	ND	ND
CNC22-B04	22GFB041315	13-15	ND	ND	ND	ND	ND	ND
CNC22-B05	22GFB050811	8-11	ND	ND	ND	14.0	ND	ND
CNC22-B06	22GFB060811	8-11	ND	ND	ND	ND	ND	ND
CNC22-B07	22GFB071315	13-15	27.3	ND	ND	ND	ND	ND
CNC22-B08	22GFB081315	13-15	ND	ND	ND	ND	ND	ND
CNC22-B09	22GFB090811	8-11	ND	ND	ND	ND	ND	ND
CNC22-B10	22GFB100512	5-12	ND	ND	ND	ND	ND	ND
CNC22-B11	22GFB110612	6-12	ND	ND	ND	ND	ND	ND
CNC22-B12	22GFB120612	6-12	ND	ND	ND	ND	ND	ND
CNC22-B13	22GFB130612	6-12	ND	ND	ND	ND	ND	ND
CNC22-B14	22GFB140812	8-12	ND	ND	ND	ND	ND	ND
CNC22-B15	22GFB150812	8-12	ND	ND	ND	ND	25.9	ND
CNC22-B16	22GFB160812	8-12	16.3	ND	ND	ND	ND	ND
CNC22-B17	22GFB170712	7-12	ND	ND	ND	ND	ND	ND
CNC22-B18	22GFB180812	8-12	20.4	ND	ND	ND	ND	ND
CNC22-B19	22GFB191012	10-12	ND	ND	ND	ND	ND	ND
CNC22-B20	22GFB201012	10-12	ND	ND	ND	ND	ND	ND
CNC22-B21	22GFB210612	6-12	ND	ND	ND	ND	ND	4.98
CNC22-B22	22GFB220612	6-12	ND	ND	ND	ND	ND	ND
CNC22-B23	22GFB230912	9-12	ND	ND	ND	ND	ND	ND

NOTES:
[1] Laboratory screening data were analyzed using USEPA Method 8020/8015M. Compounds not detected are reported as less than the instrument detection limit.
µg/L = micrograms per liter
mg/L = milligrams per liter
J = Estimated value detection was above the instrument minimum detection level, but below the practical quantification limit.
E = Estimated value detection exceeded the upper calibration range of the instrument.

TABLE 7

SUMMARY OF FIXED-BASE LABORATORY ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL
SITE 22, BUILDING 242
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

Soil Boring / Sample No.	Sample Date	Benzene (ug/kg)	Toluene (ug/kg)	Ethyl-benzene (ug/kg)	Xylenes (total) (ug/kg)	Benzo(a) anthracene (ug/kg)	Benzo(b) fluoranthene (ug/kg)	Benzo(k) fluoranthene (ug/kg)	Chrysene (ug/kg)	Dibenzo(a,h) anthracene (ug/kg)	Naphthalene (ug/kg)
RBSL [1]		5	478	364	11119	17687	7042	55930	3146	21265	52
CNC22-B02 / 22SLB020708	8/18/99	< 5	2[J]	< 5	< 5	< 400	< 400	< 400	< 400	< 400	< 5
CNC22-B05 / 22SLB050304	8/18/99	5[J]	2[J]	37	75	< 360	< 360	< 360	< 360	< 360	572
CNC22-B07 / 22SLB070910	8/18/99	< 6	< 6	< 6	< 6	< 400	< 400	< 400	< 400	< 400	< 6
CNC22-B11 / 22SLB110708	8/18/99	< 5	4[J]	< 5	< 5	< 400	< 400	< 400	< 400	< 400	< 5
CNC22-B11 / 22SLB110708D	8/18/99	< 5	< 5	< 5	< 5	< 400	< 400	< 400	< 400	< 400	< 5
CNC22-B15 / 22SLB150506	8/18/99	< 6	< 6	< 6	< 6	< 430	< 430	< 430	< 430	< 430	< 6
CNC22-B018 / 22SLB180708	8/18/99	< 4	4[J]	< 4	< 4	< 400	< 400	< 400	< 400	< 400	< 4
CNC22-B21 / 22SLB210506	8/18/99	< 4	3[J]	< 4	< 4	< 400	< 400	< 400	< 400	< 400	< 4

All concentrations are in micrograms per kilogram (ug/kg).

NA - Not analyzed

[1] South Carolina Department of Health and Environmental Control Risk Based Screening Levels for clay-rich soils; depth to groundwater less than 5 feet.

[2] Trip blank

[J] Indicates the presence of an analyte at a concentration less than the reporting limit and greater than the detection limit.

TABLE 8

SUMMARY OF FIXED-BASE LABORATORY ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER
SITE 22, BUILDING 242
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

Monitoring Well/ Sample No.	Sample Date	Benzene (ug/L)	Ethyl-benzene (ug/L)	Toluene (ug/L)	Xylenes (total) (ug/L)	Naphthalene (ug/L)	Benzo(a) anthracene (ug/L)	Benzo(b) fluoranthene (ug/L)	Benzo(k) fluoranthene (ug/L)	Chrysene (ug/L)	Dibenzo(a,h) anthracene (ug/L)	MTBE (ug/L)
RBSL[1]		5	700	1000	10000	10 [2]	10 [2]	10 [2]	10 [2]	10 [2]	10 [2]	40
CNC22M-01 / 22GLM0101	10-Sep-99	< 5	< 5	< 5	< 5	< 5	< 10	< 10	< 10	< 10	< 10	< 5
CNC22M-02 / 22GLM0201	10-Sep-99	29	< 5	< 5	< 5	< 5	< 10	< 10	< 10	< 10	< 10	6
CNC22M-03 / 22GLM0301	21-Sep-99	56	< 5	< 5	< 5	< 5	< 12	< 12	< 12	< 12	< 12	39
CNC22M-03 / 22GLM0301D[3]	14-Sep-99	NA	NA	NA	NA	NA	< 10	< 10	< 10	< 10	< 10	NA
CNC22M-03 / 22GLM0301D[3]	21-Sep-99	56	< 5	4 (J)	< 5	< 5	< 11	< 11	< 11	< 11	< 11	42
CNC22M-04 / 22GLM0401	21-Sep-99	3 [J]	< 5	< 5	< 5	< 5	< 11	< 11	< 11	< 11	< 11	< 5
CNC22M-05 / 22GLM0501	10-Sep-99	< 5	< 5	< 5	< 5	< 5	< 10	< 10	< 10	< 10	< 10	< 5
CNC22M-06 / 22GLM0601	21-Sep-99	7	< 5	< 5	< 5	< 5	< 11	< 11	< 11	< 11	< 11	< 5
CNC22M-07 / 22GLM0701	10-Sep-99	< 5	< 5	< 5	< 5	< 5	< 10	< 10	< 10	< 10	< 10	< 5

All concentrations are in ug/L.

NA - Not analyzed

[1] South Carolina Department of Health and Environmental Control Risk Based Screening Levels for groundwater.

[2] The Risk based screening level for individual PAH CoC is 10 ug/L or 25 ug/L for total PAHs.

[3] Duplicate sample

(J) Indicates presence of analyte at a concentration less than the reporting limit and greater than the detection limit.

TABLE 8

SUMMARY OF FIXED-BASE LABORATORY ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER
SITE 22, BUILDING 242
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

Monitoring Well/ Sample No.	Sample Date	Lead (ug/L)	Arsenic (ug/L)	Barium (ug/L)	Cadmium (ug/L)	Total Chromium (ug/L)	Mercury (ug/L)	Selenium (ug/L)	Silver (ug/L)
RBSL[1]		15	50	2000	5	100	2	50	5
CNC22M-01 / 22GLM0101	10-Sep-99	< 1.1	< 4.0	30.9	< 1.94	< 4.31	< 0.03	< 2.57	< 2.54
CNC22M-02 / 22GLM0201	10-Sep-99	< 1.09	22.4	17.5	< 1.94	< 4.31	< 0.06	< 2.57	< 2.54
CNC22M-03 / 22GLM0301	21-Sep-99	< 1.1	18.6	24.3	< 1.94	< 4.31	< 0.09	< 3.6	< 2.54
CNC22M-03 / 22GLM0301D	21-Sep-99	< 1.09	15.8	23.8	< 1.94	< 4.31	< 0.02	< 2.57	< 2.54
CNC22M-04 / 22GLM0401	21-Sep-99	< 1.3	8.2	28.4	< 2.6	< 4.31	< 0.05	< 2.57	< 2.54
CNC22M-05 / 22GLM0501	10-Sep-99	< 1.5	31	30.4	< 1.94	< 4.31	< 0.04	< 2.57	< 2.54
CNC22M-06 / 22GLM0601	21-Sep-99	< 1.3	< 6.1	65.4	< 1.94	< 4.31	< 0.05	< 2.57	< 2.54
CNC22M-07 / 22GLM0701	10-Sep-99	< 1.3	< 4.2	116	< 1.94	< 4.31	< 0.03	< 2.57	< 2.54

All concentrations are in ug/L.
NA - Not analyzed
(1) South Carolina Department of Health and Environmental Control Risk Based Screening Levels for groundwater.

TABLE 9

FATE AND TRANSPORT INPUT PARAMETERS
SITE 22, BUILDING 242
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

Parameter	Domenico Dilution/Attenuation Model [1]
Hydraulic Conductivity [m/sec]	1.13E-06
Hydraulic Gradient	0.0027
Porosity [a]	0.45
Estimated Plume Length [ft]	NA
Soil Bulk Density [a] [kg/L]	1.64
Partition Coefficient [L/kg]	chemical specific
Fraction of Organic Carbon in soil [g/g]	4.47E-03
First Order Decay Rate [sec^{-1}]	0
Modeled Plume Length [ft]	NA
Modeled Plume Width [ft]	NA
Source Width [b] [m]	15
Source Thickness [b] [m]	2
Soluble Mass [kg]	Infinite [c]

Notes:
(1) - *South Carolina Risk-Based Corrective Action for Petroleum Releases,* South Carolina Department of Health and Environmental Control, 1998.
(a) - Determined from SCDHEC 1998 Tables C1 and C3
(b) - Default value
(c) - Assumption of the Domenico model

TABLE 10

COMPARISON OF MAXIMUM CONCENTRATIONS TO RBSLs
SITE 22, BUILDING 242
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

Chemical of Concern	Maximum Concentration Soil (mg/kg)	Tier 1 Soil Leaching RBSLs (mg/kg)[a]	Maximum Concentration GW (mg/L)	Tier 1 RBSLs GW (mg/L)[b]	RBSLs GW Protective of On-Site Construction Worker[c]
Benzene		0.005		0.005	0.15
Toluene	0.004	0.478	0.004(J)	1	5.38
Ethylbenzene	0.037	0.364	ND	0.7	6.05
Xylenes	0.075	1.119	ND	10	102.33
Benzo(a)anthracene	ND	17.687	ND	0.010	-
Benzo(b)fluoranthene	ND	7.042	ND	0.010	-
Benzo(k)fluoranthene	ND	5.593	ND	0.010	-
Chyrsene	ND	3.146	ND	0.010	-
Dibenzo(a,h)anthracene	ND	21.265	ND	0.010	-
MTBE	NA	NA		0.040	25.9
Naphthalene		0.052	ND	0.010	1.63

(a) - From Risk-Based Corrective Action for Petroleum Releases, Table B4, Depth to GW - <5 ft, SCDHEC RBCA Guidelines, 1998.
(b) - From Risk-Based Corrective Action for Petroleum Releases, Table B1, SCDHEC RBCA Guidelines, 1998.
(c) - Calculated for dermal, incidental ingestion, and inhalation routes for the on-site construction worker (see Section 3.5.1 of the text and Appendix H).
(d) - Groundwater concentration in equilbrium with free product as calculated using Raoult's Law.
GW - Groundwater
RBSLs - Risk Based Screening Levels
ND - Not detected
NA - Not analyzed
Shaded cell indicates the concentration exceeded one of the RBSLs.
J - Estimated value detection was above instrument minimum detecton limit, but below practical quantification limit

TABLE 11

EXPOSURE PATHWAY ASSESSMENT - CURRENT USE
SITE 22, BUILDING 242
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

Media	Exposure Route	Pathway Selected for Evaluation? (Yes or No)	Exposure point or Reason for Non-Selection	Data Requirements (If pathway selected)
Air	Inhalation	No	No volatilization to enclosed space.	
	Explosion Hazard	No	No explosion hazard.	
Groundwater	Ingestion	No	No water supply well downgradient or residential basements.	
	Dermal contact	No		
	Inhalation	No		
Surface Water	Ingestion	No	Cooper River 720 feet downgradient	
	Dermal contact	No		
	Inhalation	No		
Surficial Soil	Ingestion	No	No impacted surface soil	
	Dermal contact	No		
	Inhalation	No		
Subsurface Soil	Ingestion	Yes	Leachibility model performed for benzene and naphthalene	No additional data required
	Dermal contact	Yes		
	Inhalation	yes		
	Leaching to Groundwater			

TABLE 12

EXPOSURE PATHWAY ASSESSMENT - FUTURE USE
SITE22, BUILDING 242
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

Media	Exposure Route	Pathway Selected for Evaluation? (Yes or No)	Exposure point or Reason for Non-Selection	Data Requirements (If pathway selected)
Air	Inhalation	No	No volatilization to enclosed space.	
	Explosion Hazard	No	No explosion hazard.	
Groundwater	Ingestion	Yes	Future use of property expected to be industrial or commercial. Sewer line and storm drain within 80 feet of site; therefore, construction worker exposure possible.	No additional data required
	Dermal contact	Yes		
	Inhalation	Yes		
Surface Water	Ingestion	Yes	Cooper River 720 feet downgradient via regional groundwater flow	No additional data required
	Dermal contact	No		
	Inhalation	No		
Surficial Soil	Ingestion	No	No impacted surface soil	
	Dermal contact	No		
	Inhalation	No		
Subsurface Soil	Ingestion	Yes	Leachability model performed for benzene and naphthalene for construction worker exposure	No additional data required
	Dermal contact	Yes		
	Inhalation	Yes		
	Leaching to Groundwater	Yes		

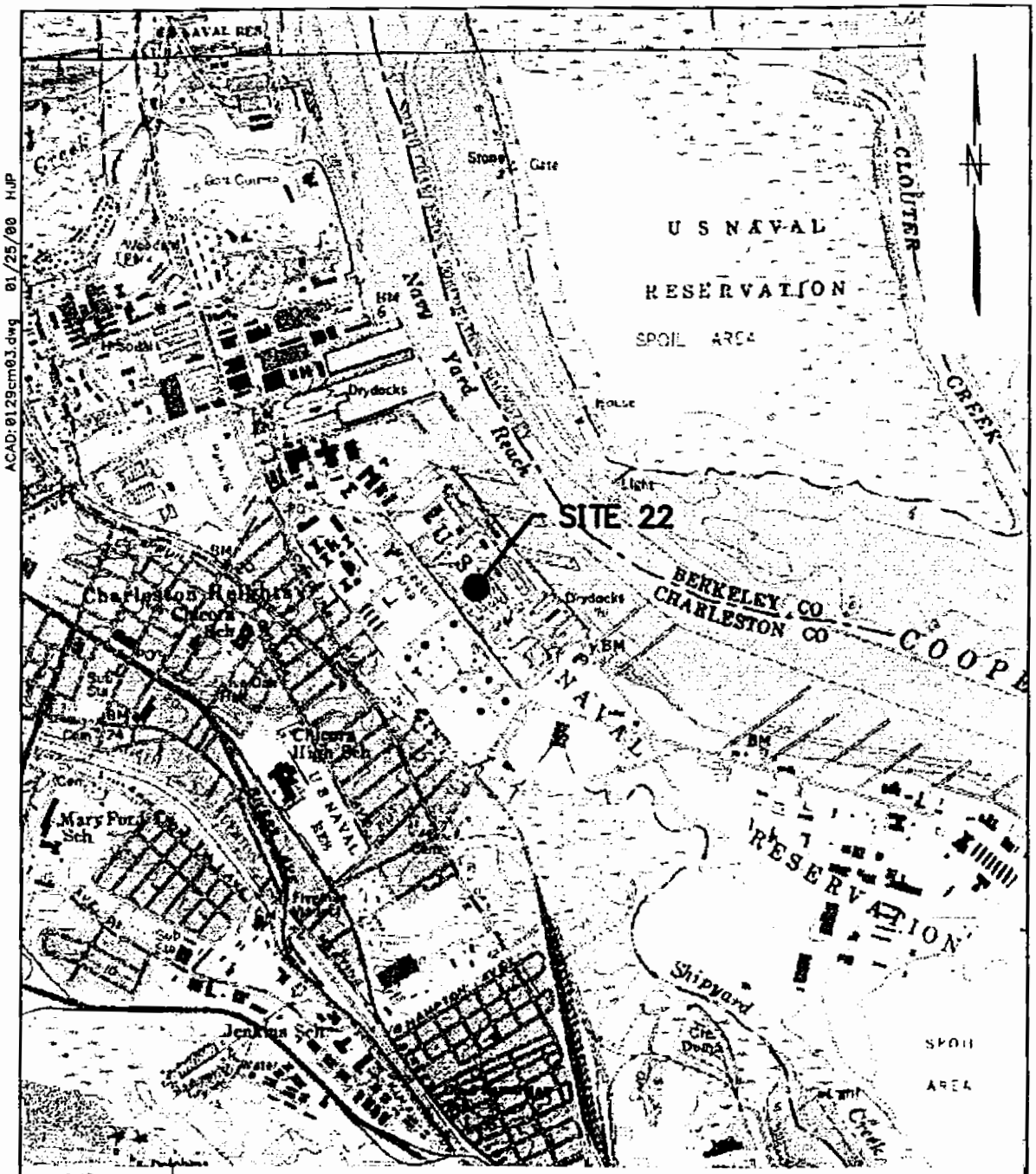
TABLE 13

COMPARISON OF MAXIMUM GROUNDWATER CONCENTRATIONS TO SSTLs
SITE 22, BUILDING 242
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

Chemical of Concern	Source Area Concentration (mg/L)	SSTLs Protective of Surface Water (Cooper River)		SSTLs Protective of Construction Workers	Minimum On-Site SSTLs [a]
		$SSTL_{SOURCE}$ (mg/L)	$SSTL_{COMP}$ (mg/L)	$SSTL_{SOURCE}$ (mg/L)	(mg/L)
Benzene	0.056	0.654	0.592	0.15	0.15
MTBE	0.042	5.231	4.737	25.90	5.23

mg/L - milligrams per liter
Shaded cell indicates the concentration exceeded the SSTL.

(a) The minimum on-site SSTLs are chosen as those SSTLs protective of both surface water (the Cooper River) and the on-site construction worker.



SOURCE: QUADRANGLE MAP SOUTH CAROLINA, REVISED 1979
QUADRANGLE MAP NORTH CHARLESTON REVISED, 1979

DRAWN BY HJP 8/20/99	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND	SITE LOCATION MAP SITE 22, BUILDING 242, ZONE F CHARLESTON NAVAL COMPLEX NORTH CHARLESTON, SC	CONTRACT NO. N0129
CHECKED BY DATE			APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1 / REV. 0

FORM CADD NO SDIV_AV.DWG - REV 0 - 1/20/98

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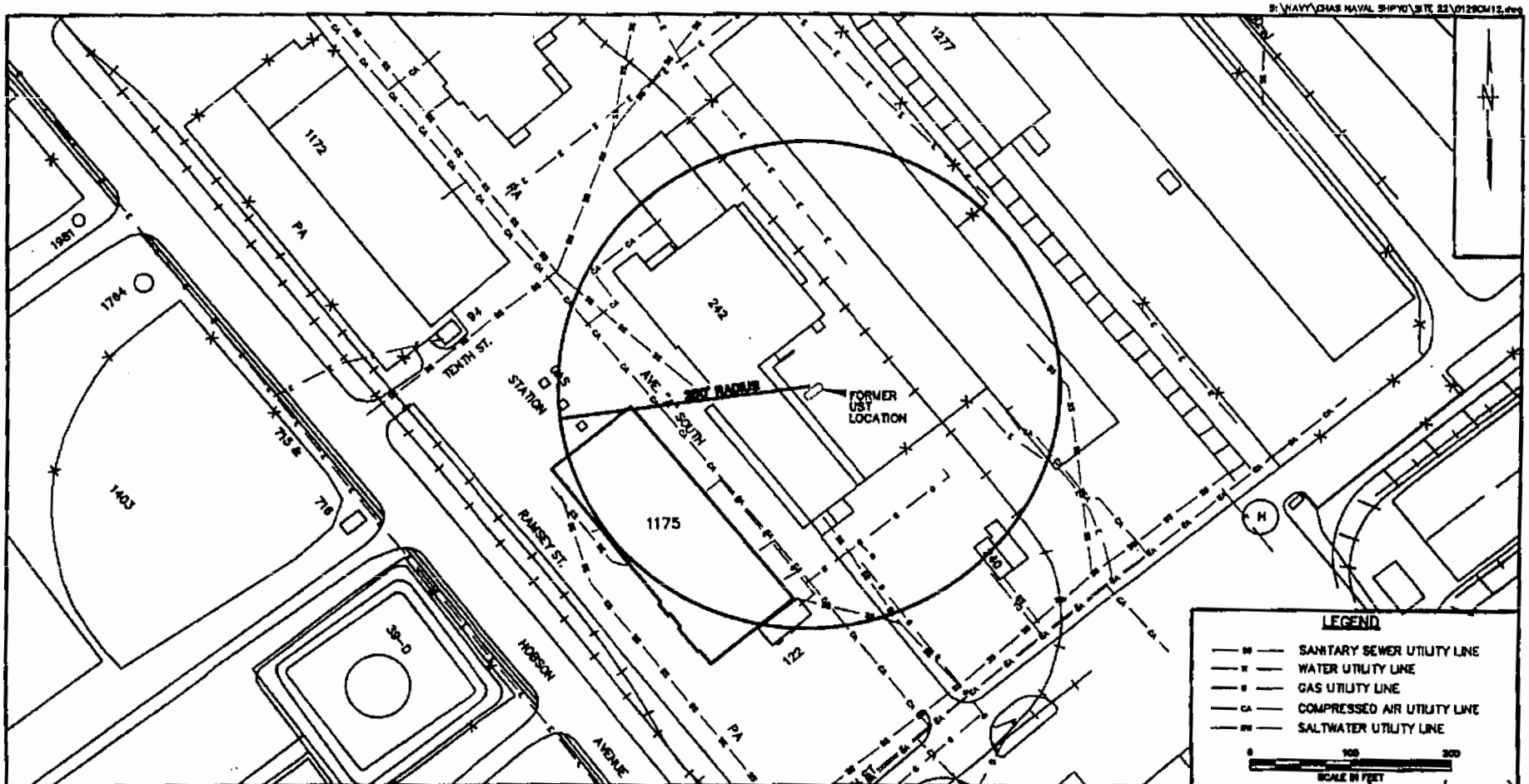

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY LLK DATE 11/2/99
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

SITE VICINITY MAP
SITE 22, BUILDING 242
ZONE F, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

CONTRACT NO. 0219
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 2
REV. 0

FORM CADD NO. SDIV_SHJ700 - REV 0 - 1/26/96

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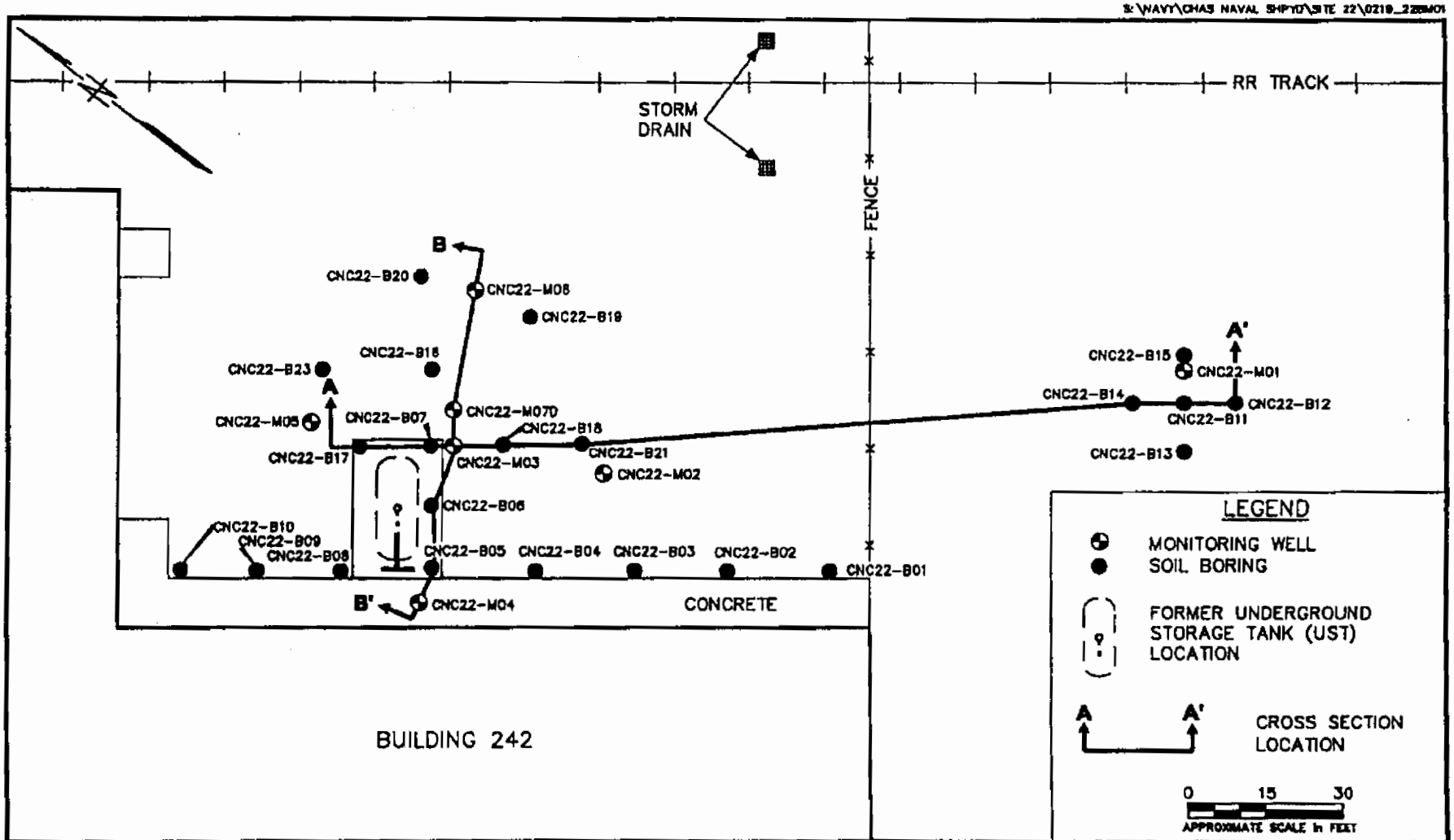
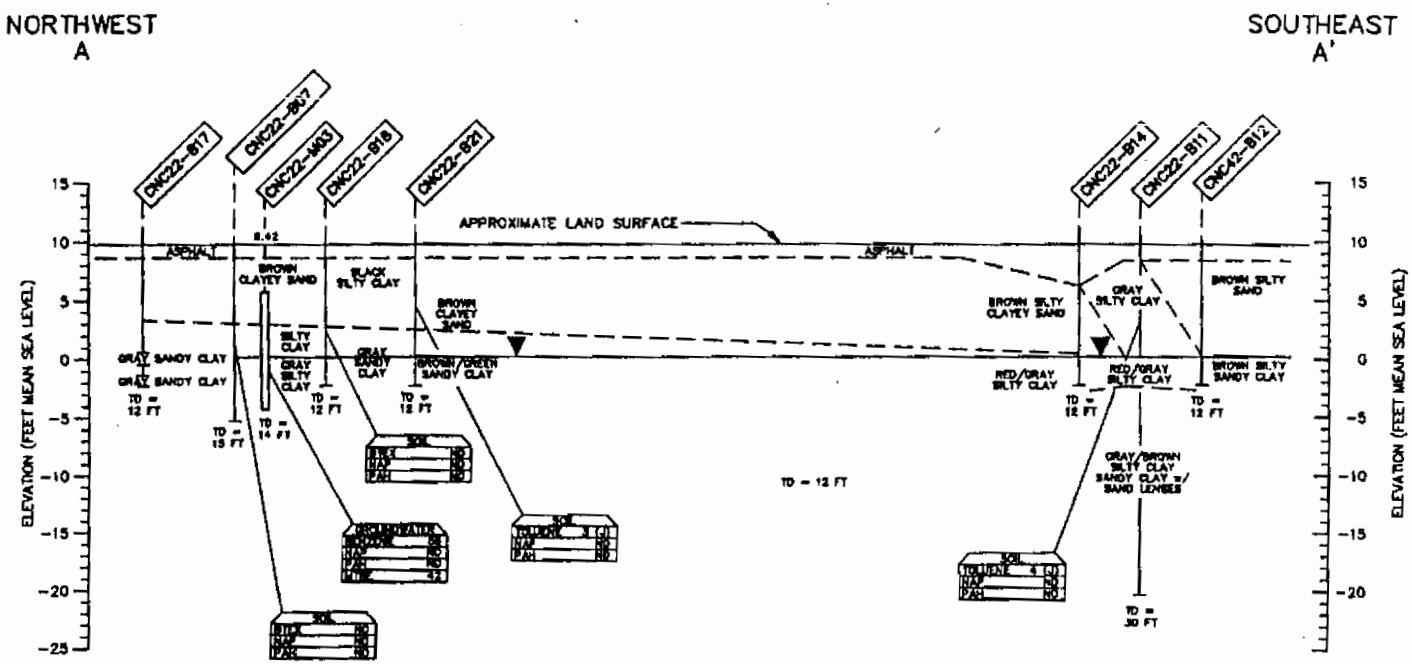


DRAWN BY LLK	DATE 11/1/99	SITE MAP SITE 22, BUILDING 242 ZONE F, CHARLESTON NAVAL SHIPYARD CHARLESTON, SOUTH CAROLINA	CONTRACT NO. 0219
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 3 REV. 0

FORM CADD NO. SOIV_AHLDWG - REV 0 - 1/20/98



LEGEND

CNC22-M08 — MONITORING WELL OR BORING NUMBER

9.34 — TOP-OF-CASING ELEVATION (FT ABOVE MEAN SEA LEVEL)

TOP OF MONITORED INTERVAL

APPROXIMATE POTENTIOMETRIC SURFACE

TD = 14 FT — BOTTOM OF MONITORED INTERVAL

SOIL: BTEX ND, NAP ND, PAH ND

REPORTED CONCENTRATIONS IN SAMPLES
SOIL–MICROGRAMS PER KILOGRAM (µg/kg)
GW–MICROGRAMS PER LITER (µg/L)

BTEX = SUM OF BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
NAP = NAPHTHALENE
PAH = POLYNUCLEAR AROMATIC HYDROCARBONS
ND = NONE DETECTED
(J) = ESTIMATED VALUE

NOTE: SEE FIGURE 3 FOR CROSS-SECTION LOCATION

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

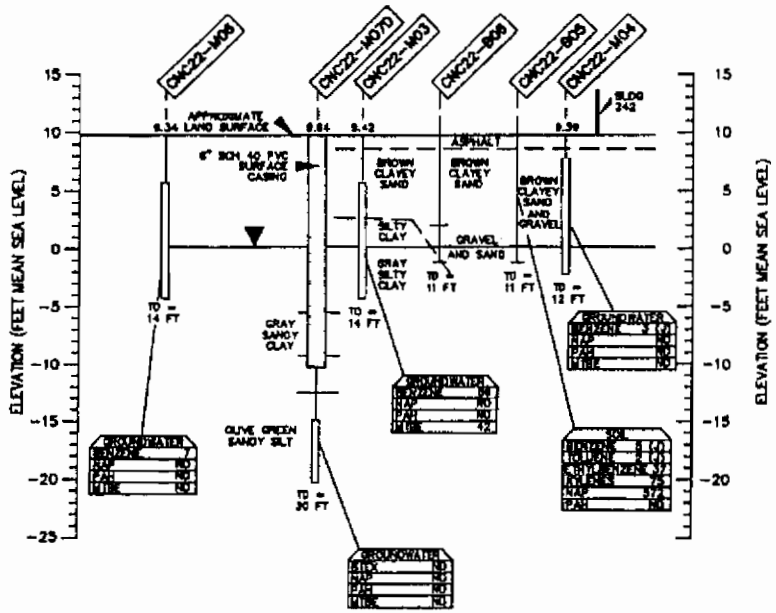
DRAWN BY LLK DATE 11/04/99
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

GEOLOGIC CROSS-SECTION A–A'
SITE 22, BUILDING 242
ZONE F, CHARLESTON NAVAL SHIPYARD
CHARLESTON, SOUTH CAROLINA

CONTRACT NO. 0219
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 4 REV. 0

NORTHEAST
B

SOUTHWEST
B'



LEGEND

CWC22-MW06 — MONITORING WELL OR BORING NUMBER.

9.34 — TOP-OF-CASING ELEVATION (FT ABOVE MEAN SEA LEVEL)

TOP OF MONITORED INTERVAL

APPROXIMATE POTENTIOMETRIC SURFACE

BOTTOM OF MONITORED INTERVAL

TD = 14 FT

SOIL
BTEX ND
NAP ND
PAH ND

REPORTED CONCENTRATIONS IN SAMPLES
SOIL–MICROGRAMS PER KILOGRAM (µg/kg)
GW–MICROGRAMS PER LITER (µg/L)

BTEX = SUM OF BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
NAP = NAPHTHALENE
PAH = POLYNUCLEAR AROMATIC HYDROCARBONS
ND = NONE DETECTED
(J) = ESTIMATED VALUE

0 10 20
APPROXIMATE SCALE IN FEET (HORIZONTAL)

0 5 10
APPROXIMATE SCALE IN FEET (VERTICAL)

NOTE: SEE FIGURE 3 FOR CROSS-SECTION LOCATION

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY LLK DATE 11/05/99
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

GEOLOGIC CROSS-SECTION B–B'
SITE 22, BUILDING 242
ZONE F, CHARLESTON NAVAL SHIPYARD
CHARLESTON, SOUTH CAROLINA

CONTRACT NO. 0219
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 5
REV. 0

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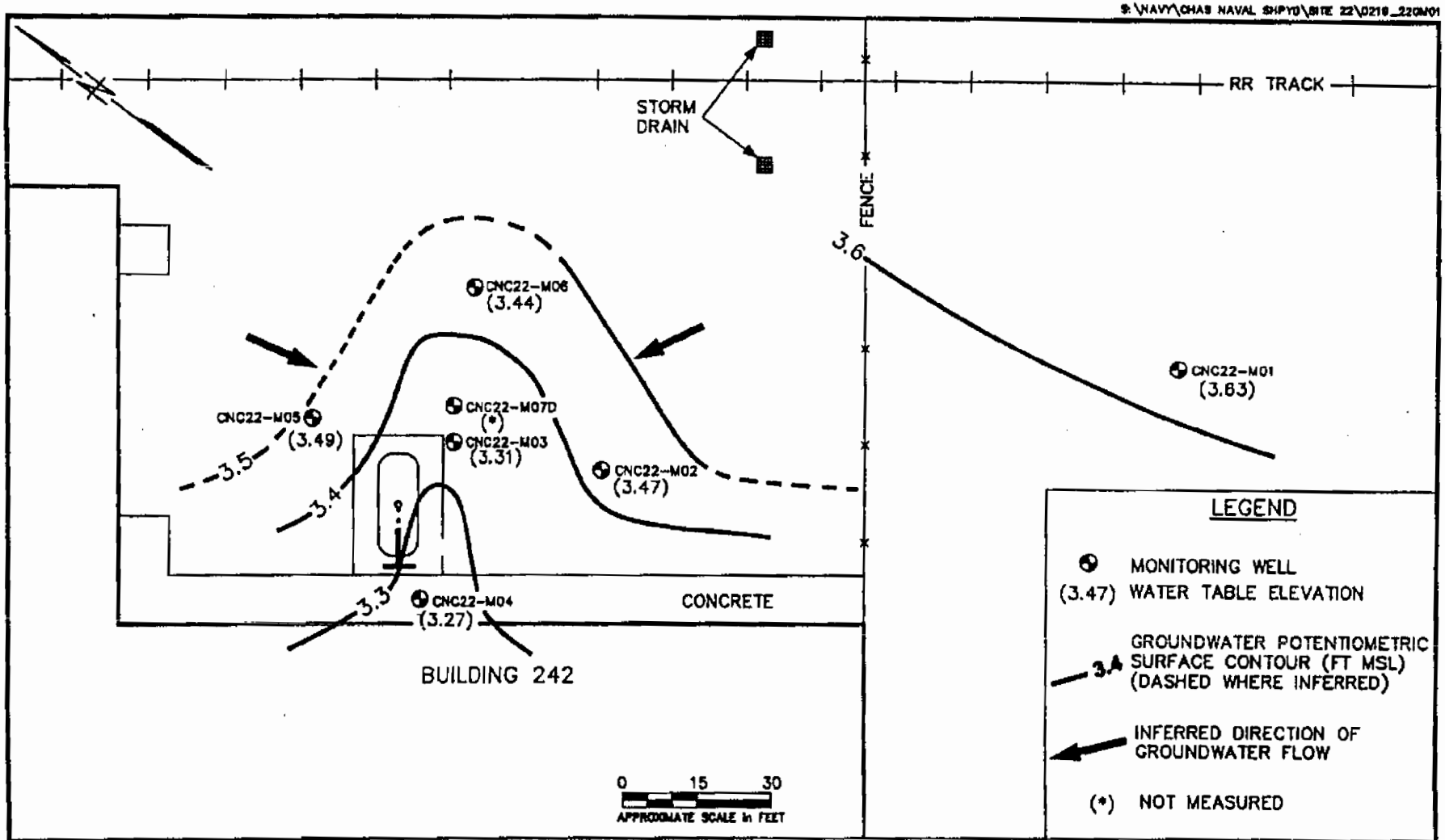

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CHECKED BY	DATE		APPROVED BY / DATE
COST/SCHED-AREA			APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. FIGURE 6 / REV. 0

FORM CADD NO. SDIV_AHLDWG -- REV 0 -- 1/20/98

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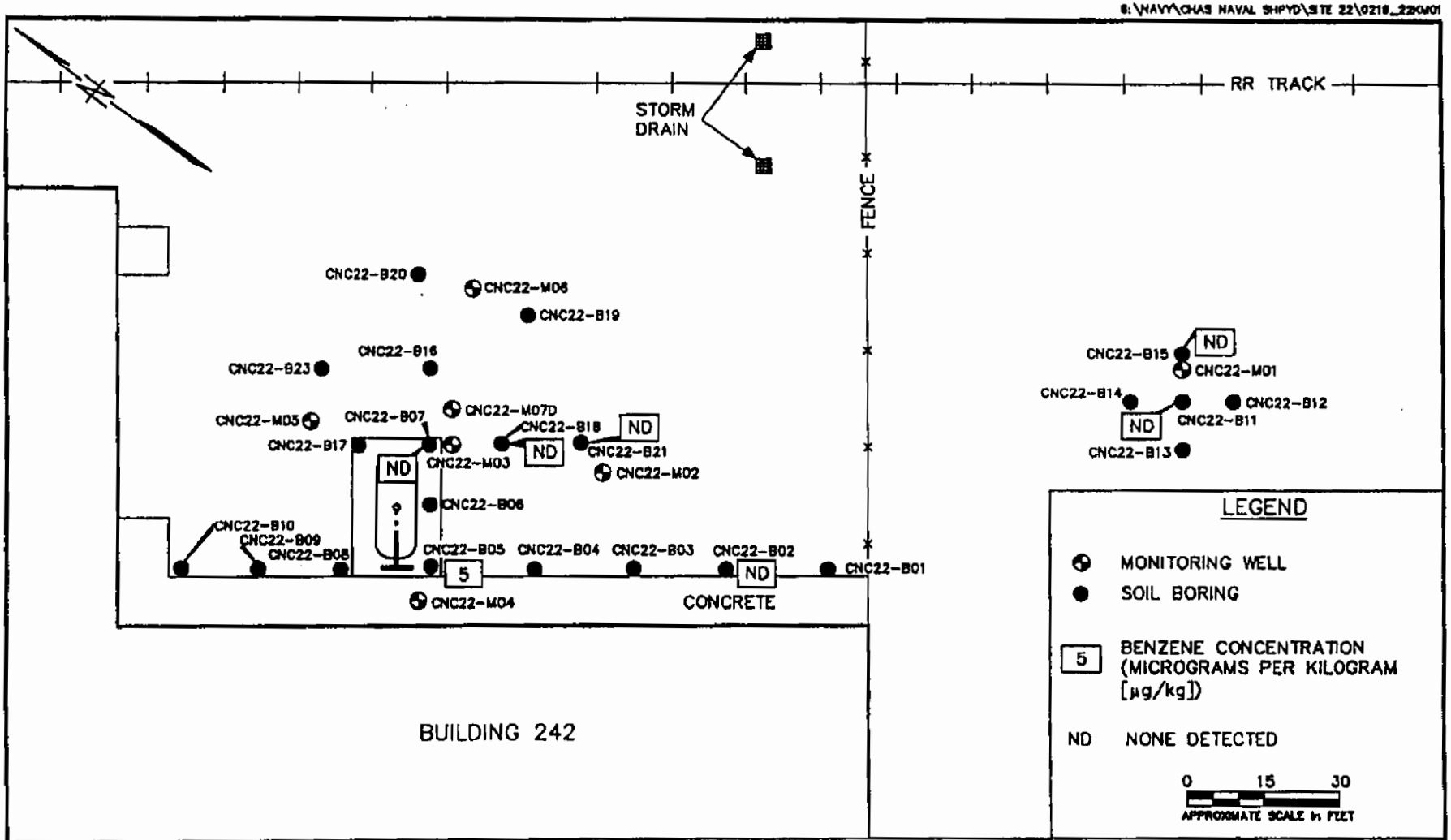

LEGEND

- MONITORING WELL
- SOIL BORING
- 5 — BENZENE CONCENTRATION (MICROGRAMS PER KILOGRAM [µg/kg])
- ND — NONE DETECTED

0 15 30
APPROXIMATE SCALE in FEET

DRAWN BY LLK	DATE 11/1/99	SOIL BENZENE CONCENTRATION MAP AUGUST 18, 1999 SITE 22, BUILDING 242 ZONE F, CHARLESTON NAVAL SHIPYARD CHARLESTON, SOUTH CAROLINA	CONTRACT NO. 0219
CHECKED BY	DATE		APPROVED BY / DATE
COST/SCHED-AREA			APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. FIGURE 7 / REV. 0

FORM CADD NO. SDIV_AH.DWG – REV 0 – 1/20/98

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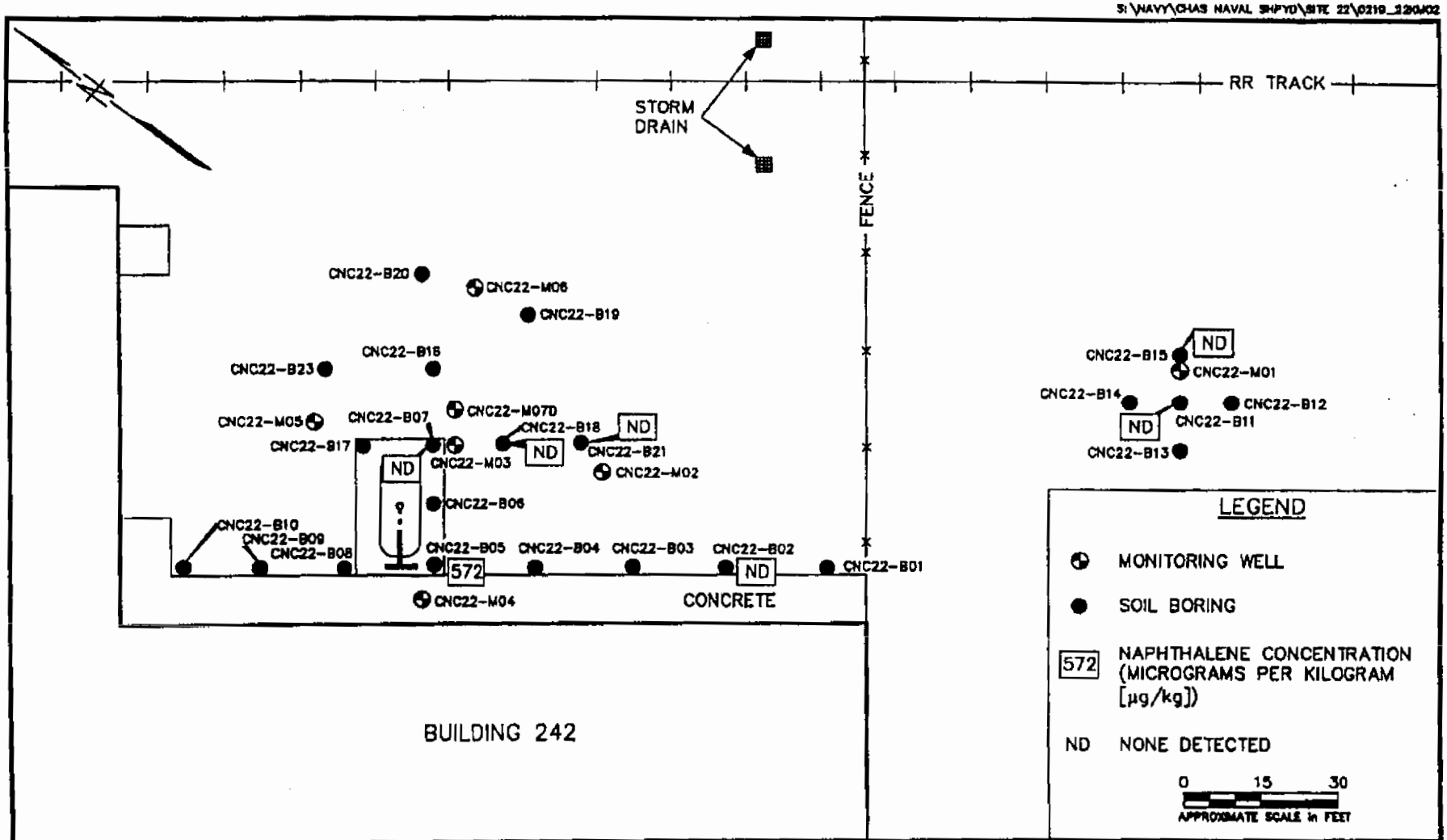
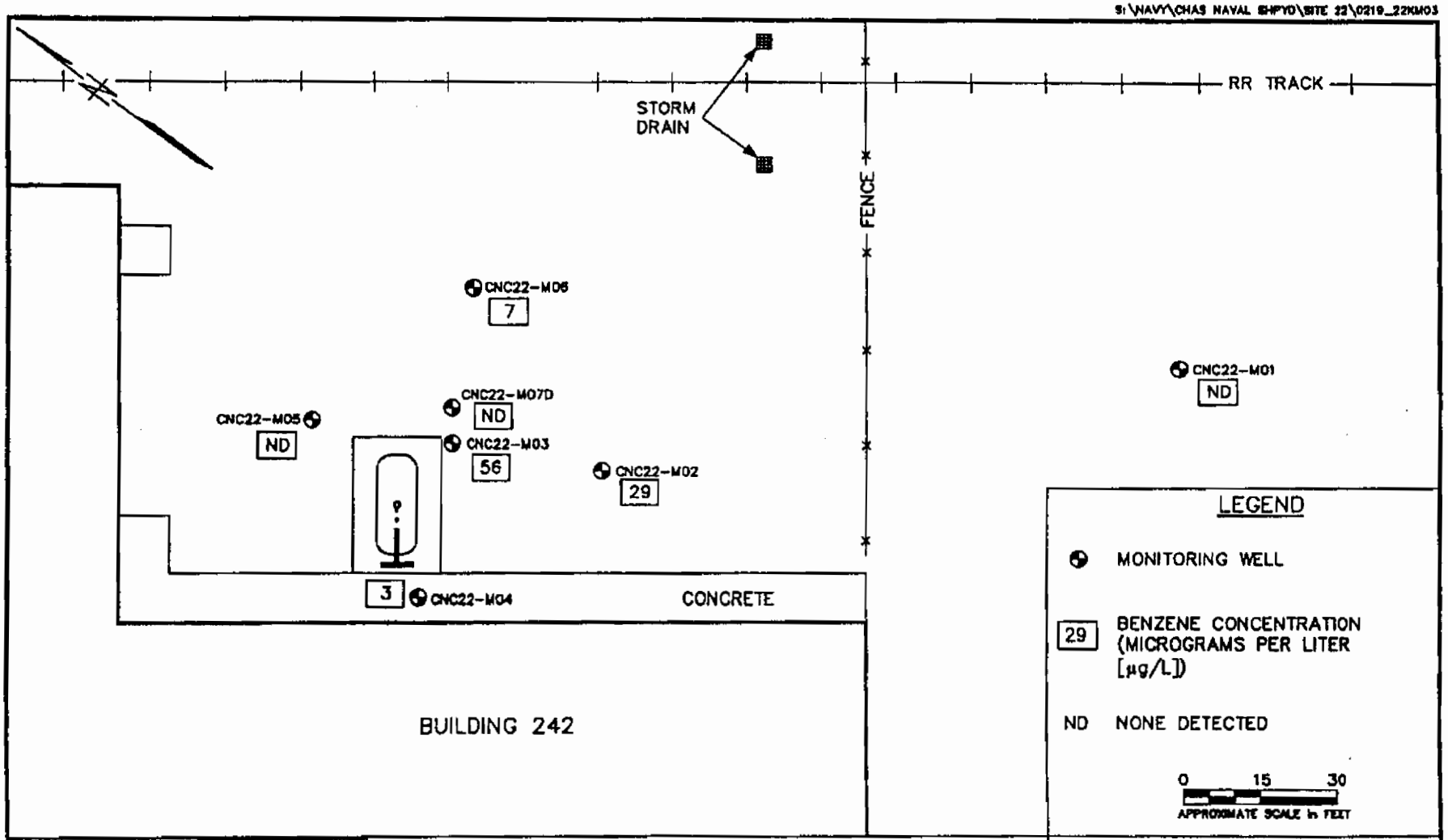


DRAWN BY LLK	DATE 11/1/99	SOIL NAPHTHALENE CONCENTRATION MAP AUGUST 18,1999 SITE 22, BUILDING 242 ZONE F, CHARLESTON NAVAL SHIPYARD CHARLESTON, SOUTH CAROLINA	CONTRACT NO. 0219
CHECKED BY	DATE		APPROVED BY / DATE
COST/SCHED-AREA			APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. FIGURE 8 / REV. 0

FORM CADD NO. SDIV_AHLDWG - REV 0 - 1/20/98

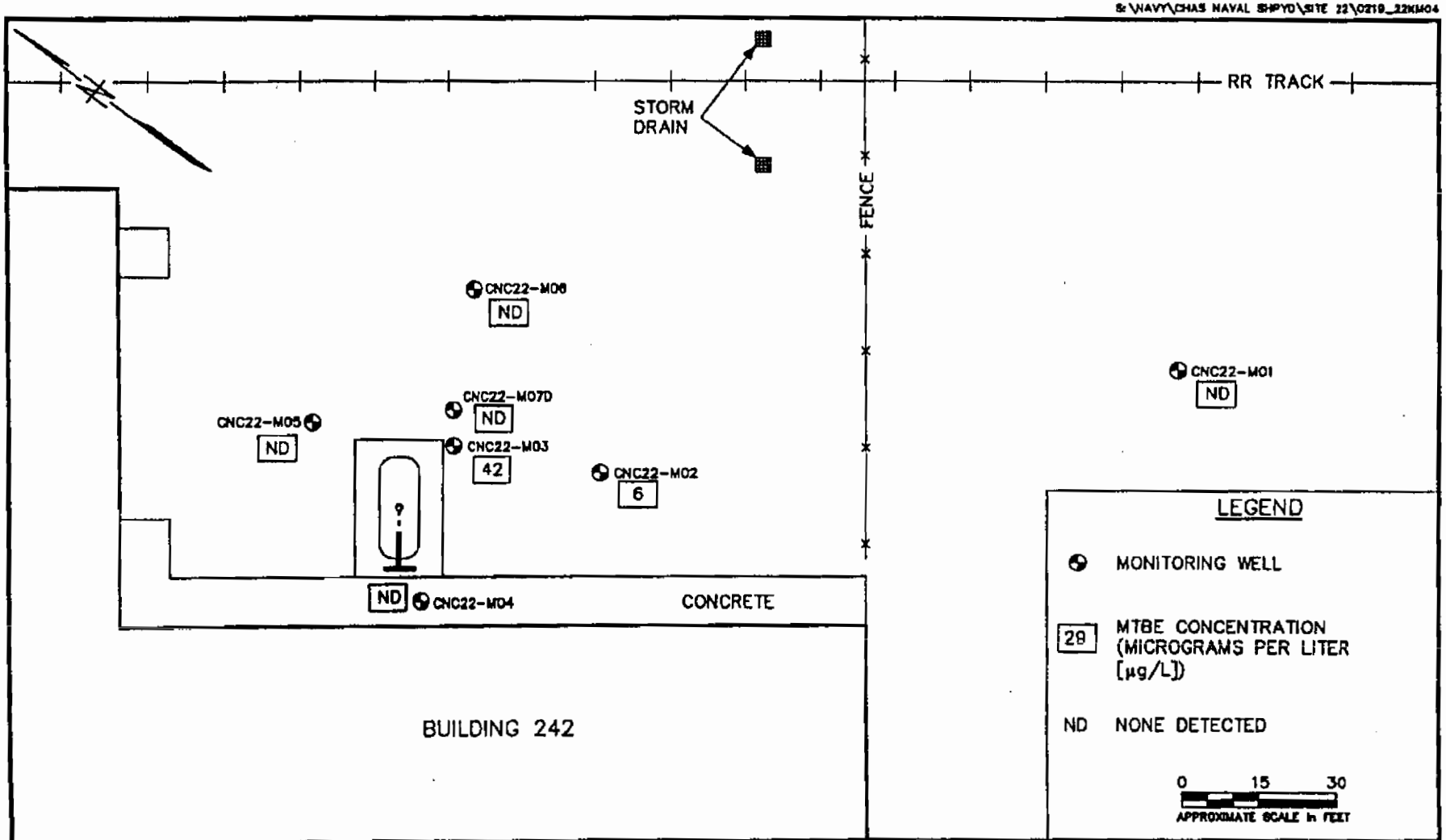
S:\NAVY\CHAS NAVAL SHPYD\SITE 22\0219_22KM03



DRAWN BY LLK	DATE 11/1/99	GROUNDWATER BENZENE CONCENTRATION MAP SEPTEMBER 10 AND 21, 1999 SITE 22, BUILDING 242 ZONE F, CHARLESTON NAVAL SHIPYARD CHARLESTON, SOUTH CAROLINA	CONTRACT NO. 0219
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 9 REV. 0

FORM CADD NO. SDIV_AH.DWG - REV 0 - 1/20/98

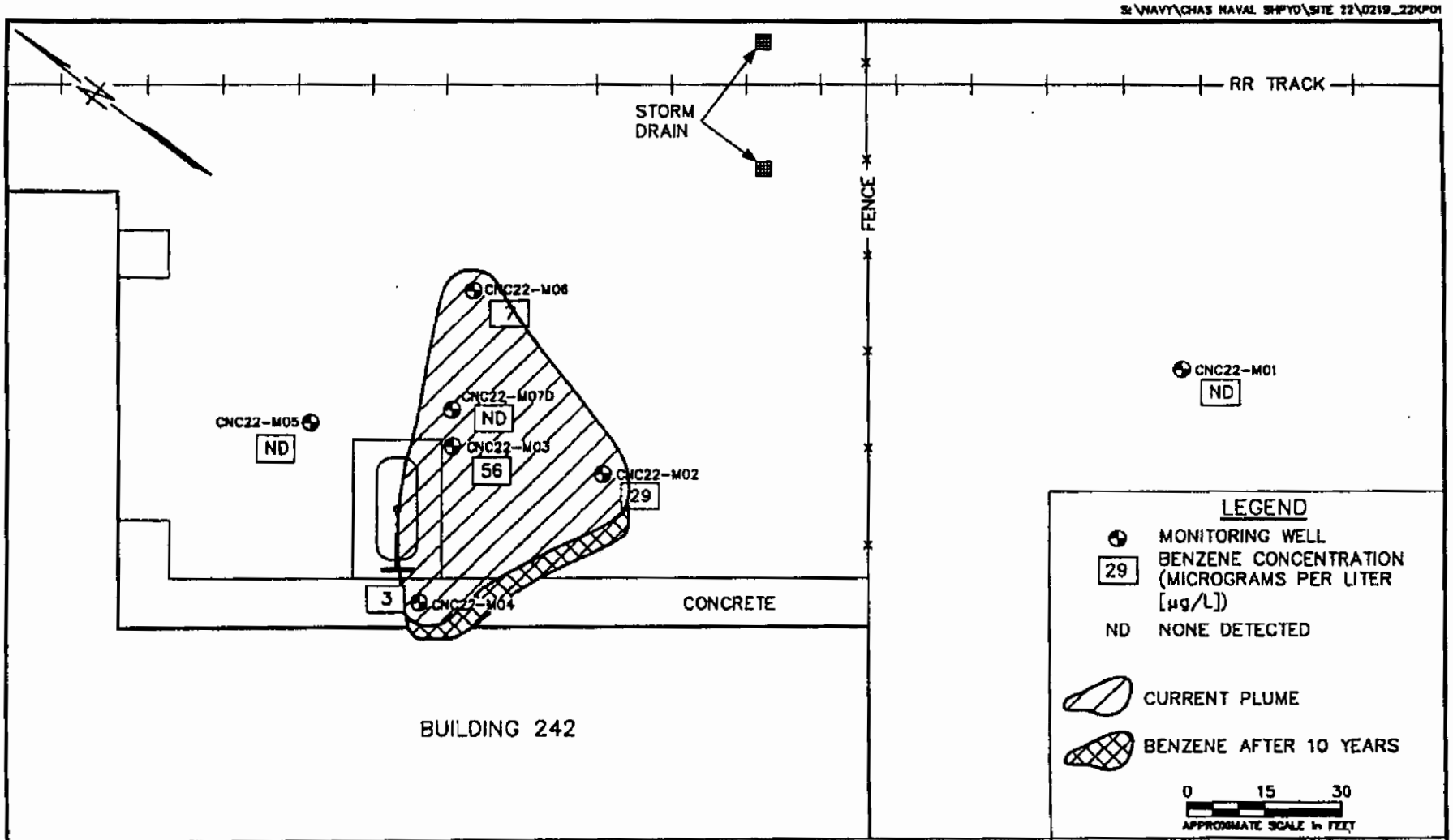
S:\NAVY\CHAS NAVAL SHPYD\SITE 22\0219_22KM04



DRAWN BY LLK	DATE 11/1/99	GROUNDWATER MTBE CONCENTRATION MAP SEPTEMBER 10 AND 21, 1999 SITE 22, BUILDING 242 ZONE F, CHARLESTON NAVAL SHIPYARD CHARLESTON, SOUTH CAROLINA	CONTRACT NO. 0219
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 10 REV. 0

FORM CADD NO. SDIV_AH.DWG – REV 0 – 1/20/98

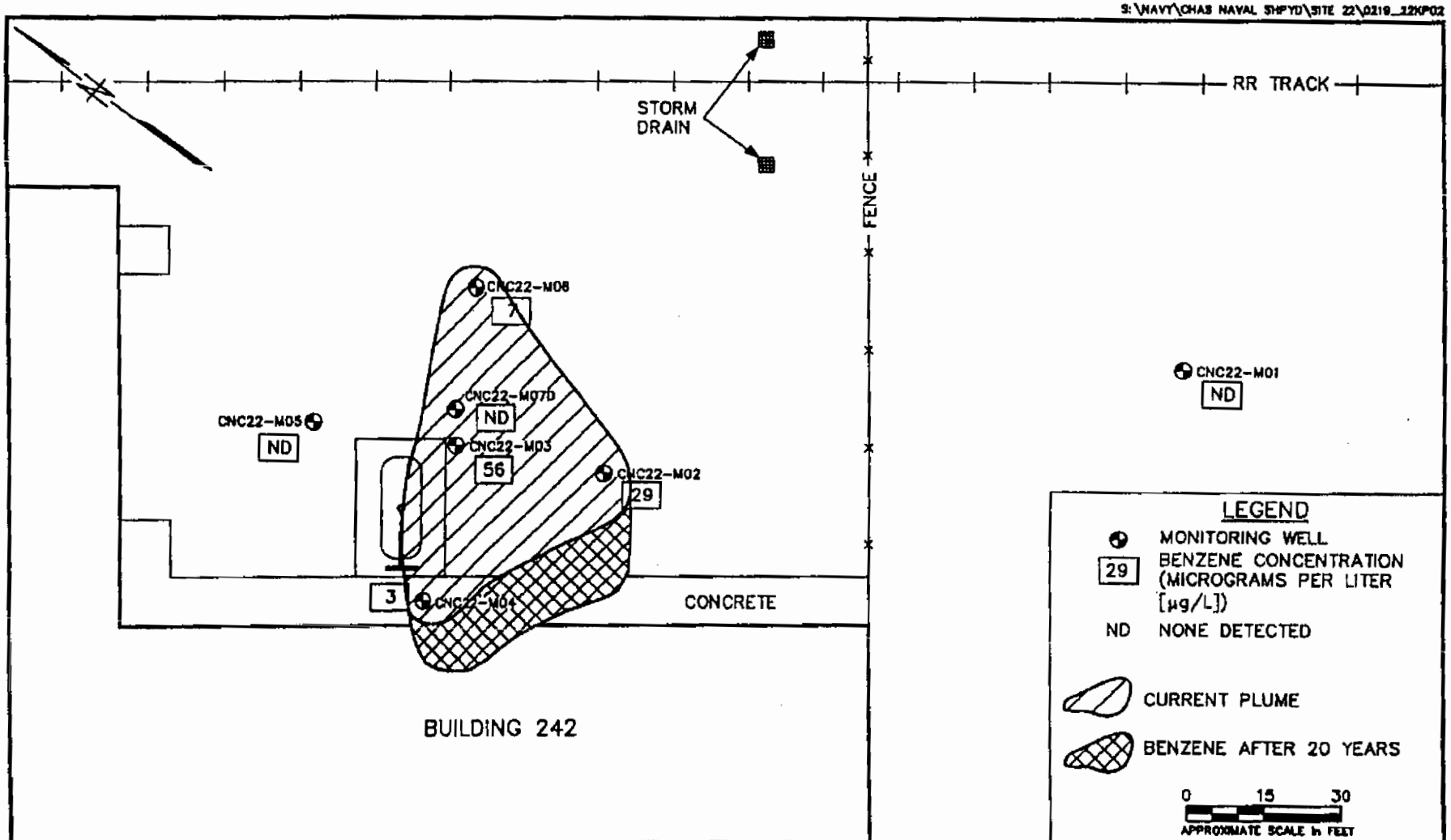
S:\NAVY\CHAS NAVAL SHPYD\SITE 22\0219_22KP01



DRAWN BY LLK	DATE 11/1/99	PREDICTED 10-YEAR MIGRATION OF BENZENE SITE 22, BUILDING 242 ZONE F, CHARLESTON NAVAL SHIPYARD CHARLESTON, SOUTH CAROLINA	CONTRACT NO. 0219
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 11 REV. 0

FORM CADD NO. SDIV_AHLDWG – REV 0 – 1/20/98

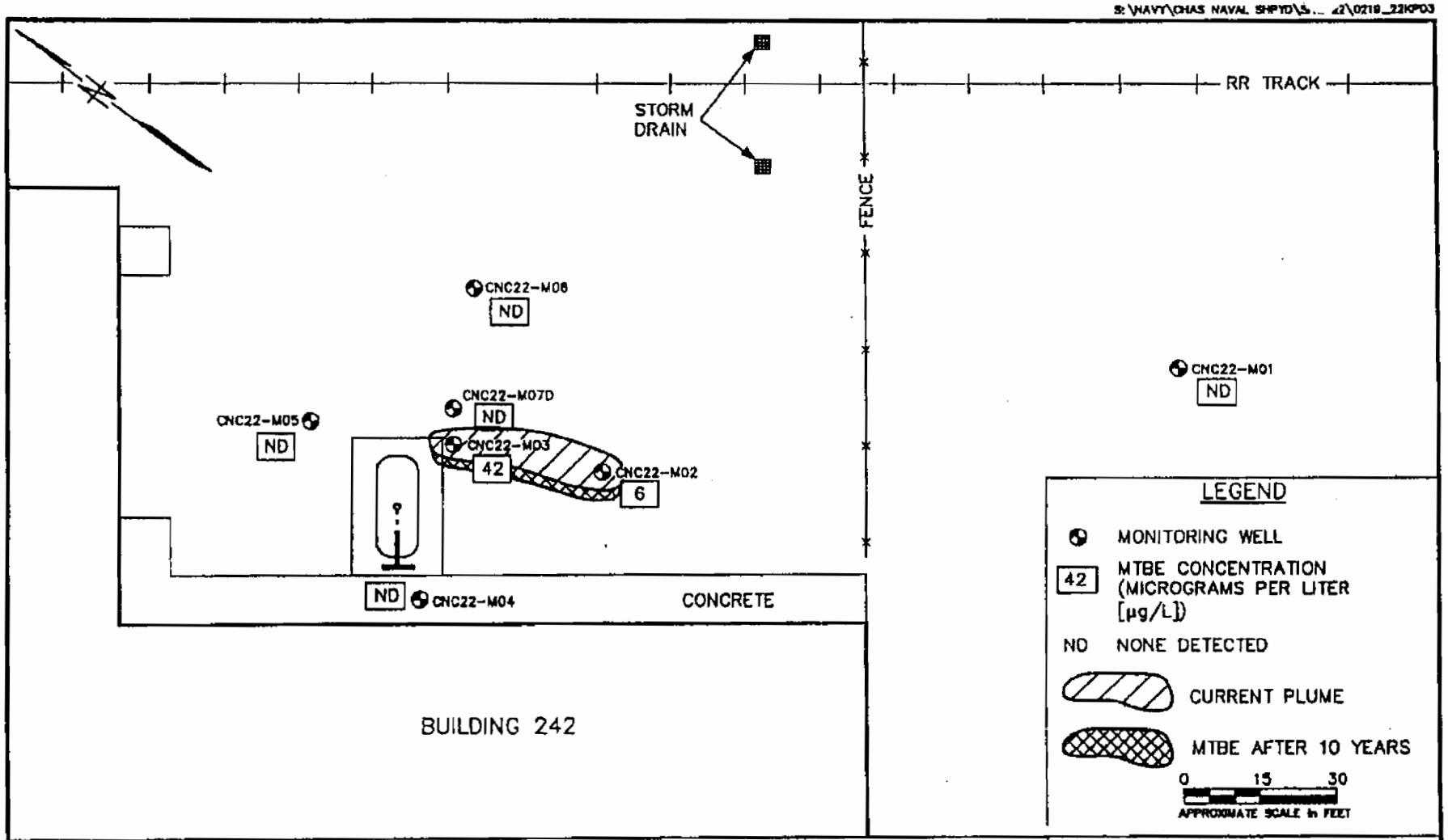
S:\NAVY\CHAS NAVAL SHPYD\SITE 22\0219_22KP02



DRAWN BY LLK	DATE 11/1/99	PREDICTED 20-YEAR MIGRATION OF BENZENE SITE 22, BUILDING 242 ZONE F, CHARLESTON NAVAL SHIPYARD CHARLESTON, SOUTH CAROLINA	CONTRACT NO. 0219
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 12 REV. 0

FORM CADD NO. SDIV_AHLDWG - REV 0 - 1/20/98

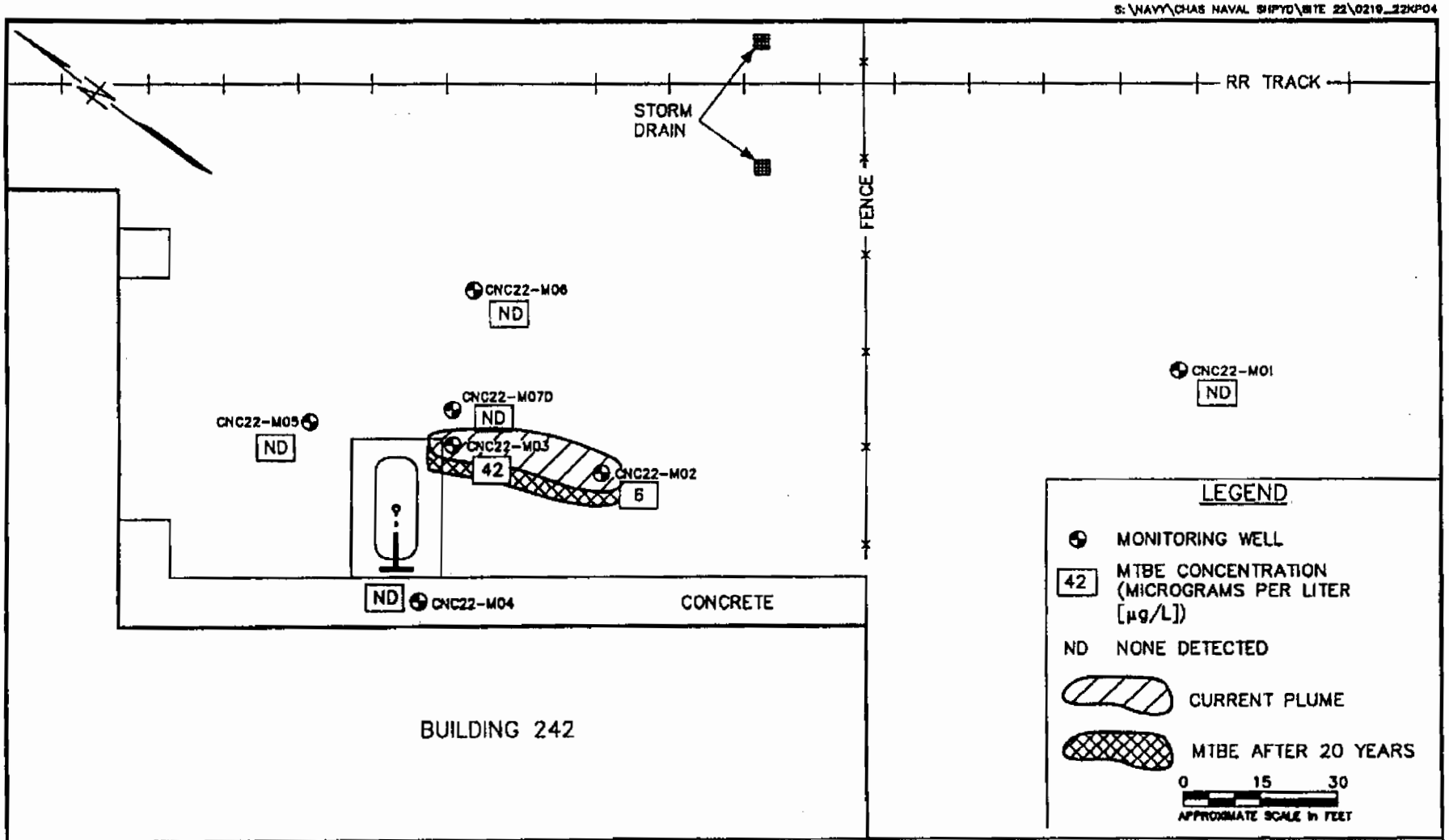
S:\NAVY\CHAS NAVAL SHPYD\S... 22\0219_22KP03



DRAWN BY LLK	DATE 11/1/99	PREDICTED 10-YEAR MIGRATION OF MTBE SITE 22, BUILDING 242 ZONE F, CHARLESTON NAVAL SHIPYARD CHARLESTON, SOUTH CAROLINA	CONTRACT NO. 0219
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 13 REV. 0

FORM CADD NO. SDIV_AH.DWG – REV 0 – 1/20/98

S:\NAVY\CHAS NAVAL SHIPYD\SITE 22\0219_22KP04



DRAWN BY LLK	DATE 11/1/99	PREDICTED 20-YEAR MIGRATION OF MTBE SITE 22, BUILDING 242 ZONE F, CHARLESTON NAVAL SHIPYARD CHARLESTON, SOUTH CAROLINA	CONTRACT NO. 0219
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHED-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 14 REV. 0

FORM CADD NO. SDIV_AH.DWG - REV 0 - 1/20/98

Analytical Data Summary

	StationID	F613SP022		F613SP022		F613SP027		F613SP027	
	SampleID	613SP022T1 (0-1ft)		613SP022T2 (3-5ft)		613SP027T1 (0-1ft)		613SP027T2 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/27/1999		10/27/1999		10/29/1999		10/29/1999	
	SDGNumber	EN019		EN019		EN020		EN020	
Parameter	**Units**								
Cyanide	mg/Kg	0.5	U	0.6	U	0.5	U	0.5	U

	StationID	F613SP051		F613SP051	
	SampleID	613SP051T1 (0-1ft)		613SP051T2 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	11/01/1999		11/01/1999	
	SDGNumber	EN023		EN023	
Parameter	**Units**				
Cyanide	mg/Kg	0.6	U	1	U

	StationID	F613SP022		F613SP022		F613SP027		F613SP027	
	SampleID	613SP022T1 (0-1ft)		613SP022T2 (3-5ft)		613SP027T1 (0-1ft)		613SP027T2 (3-5ft)	
	DateCollected	10/13/1999 00:nn		10/13/1999 00:nn		10/14/1999 00:nn		10/14/1999 00:nn	
	DateAnalyzed	10/26/1999		10/26/1999		11/01/1999		11/01/1999	
	SDGNumber	EN019		EN019		EN020		EN020	
Parameter	**Units**								
Total Organic Carbon	%, DR	0.68	=	0.1	U	0.37	=	0.51	=

	StationID	F613SP051		F613SP051	
	SampleID	613SP051T1 (0-1ft)		613SP051T2 (3-5ft)	
	DateCollected	10/15/1999 00:nn		10/15/1999 00:nn	
	DateAnalyzed	11/02/1999		11/02/1999	
	SDGNumber	EN023		EN023	
Parameter	**Units**				
Total Organic Carbon	%, DR	1.2	=	2.8	=

	StationID	F175SB036		F175SB036		F175SB037		F613SB001	
	SampleID	175SB03601 (0-1ft)		175SB03603 (2-3ft)		175SB03703 (2-3ft)		613SB00101 (0-1ft)	
	DateCollected	6/7/2001 12:00 AM		6/7/2001 12:00 AM		6/7/2001 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	06/19/2001		06/19/2001		06/19/2001		10/28/1999	
	SDGNumber	43574		43574		43574		EN019	
Parameter	**Units**								
Aluminum	mg/Kg							4480	=
Antimony	mg/Kg							1.6	J
Arsenic	mg/Kg							8.6	=
Barium	mg/Kg							31.3	=
Beryllium	mg/Kg							0.16	J
Cadmium	mg/Kg							0.03	U
Calcium	mg/Kg							1570	=
Chromium, Total	mg/Kg							10.3	=
Cobalt	mg/Kg							15	J
Copper	mg/Kg							24.6	J
Iron	mg/Kg							6750	=
Lead	mg/Kg	246	=	218	=	139	=	36.2	J
Magnesium	mg/Kg							363	J
Manganese	mg/Kg							39.6	=
Mercury	mg/Kg							0.05	=
Nickel	mg/Kg							5.5	=
Potassium	mg/Kg							243	J
Selenium	mg/Kg							0.97	J
Silver	mg/Kg							2.1	J
Sodium	mg/Kg							95.7	J
Thallium	mg/Kg							0.24	UJ
Tin (Sn)	mg/Kg							4.2	U
Vanadium	mg/Kg							15.4	=
Zinc	mg/Kg							104	J

	StationID	F613SB001		F613SB002		F613SB002		F613SB003	
	SampleID	613SB00102 (3-5ft)		613SB00201 (0-1ft)		613SB00202 (3-5ft)		613CB00301 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/28/1999		10/22/1999		10/22/1999		10/22/1999	
	SDGNumber	EN019		EN021		EN021		EN021	
Parameter	**Units**								
Aluminum	mg/Kg	24800	=	9200	=	38400	=	11000	=
Antimony	mg/Kg	0.84	J	0.85	J	2	J	1.9	J
Arsenic	mg/Kg	18	=	6.1	=	36.2	=	7.2	=
Barium	mg/Kg	38.6	=	70.6	=	54.2	=	40.1	=
Beryllium	mg/Kg	1.2	=	0.53	=	1.5	=	0.45	J
Cadmium	mg/Kg	0.04	U	1.1	=	0.06	U	0.04	J
Calcium	mg/Kg	11500	=	132000	J	31600	J	22700	J
Chromium, Total	mg/Kg	45	=	23.3	J	58.9	J	20.9	J
Cobalt	mg/Kg	8.8	J	4.2	J	13.6	J	6.1	J
Copper	mg/Kg	36.8	J	104	J	76.2	J	24	J
Iron	mg/Kg	29700	=	7670	J	40600	J	13700	J
Lead	mg/Kg	56.3	J	3980	J	94.1	J	68.2	J
Magnesium	mg/Kg	4020	=	3410	J	6060	J	1440	J
Manganese	mg/Kg	225	=	82.2	J	593	J	84.7	J
Mercury	mg/Kg	0.28	=	0.12	=	0.35	=	0.14	=
Nickel	mg/Kg	19.8	=	11.4	J	22.7	J	9	J
Potassium	mg/Kg	2130	J	1070	J	3510	J	855	J
Selenium	mg/Kg	2.7	=	0.9	=	3.3	=	1.3	=
Silver	mg/Kg	0.07	UJ	0.05	J	0.1	U	0.05	U
Sodium	mg/Kg	547	J	1180	=	2290	=	433	J
Thallium	mg/Kg	0.36	UJ	0.28	J	0.49	U	0.24	U
Tin (Sn)	mg/Kg	6.1	U	7.7	U	12.1	J	5.8	U
Vanadium	mg/Kg	63.6	=	19.7	=	97.4	=	25.9	=
Zinc	mg/Kg	162	J	498	J	150	J	132	J

	StationID	F613SB003		F613SB003		F613SB003		F613SB004	
	SampleID	613CB00302 (3-5ft)		613SB00301 (0-1ft)		613SB00302 (3-5ft)		613SB00401 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/22/1999		10/22/1999		10/22/1999		10/28/1999	
	SDGNumber	EN021		EN021		EN021		EN019	
Parameter	**Units**								
Aluminum	mg/Kg	39600	=	16400	=	34000	=	18100	=
Antimony	mg/Kg	1.4	J	0.6	J	1.7	J	1.1	J
Arsenic	mg/Kg	25.7	=	5.9	=	22.3	=	17.1	=
Barium	mg/Kg	59.1	=	33	=	50.7	=	38	=
Beryllium	mg/Kg	1.5	=	0.56	=	1.3	=	0.81	=
Cadmium	mg/Kg	0.04	U	0.03	U	0.04	U	0.04	U
Calcium	mg/Kg	4430	J	9710	J	6730	J	33100	=
Chromium, Total	mg/Kg	57.7	J	23.5	J	53.3	J	39.2	=
Cobalt	mg/Kg	11.8	J	4.2	J	10.2	J	14.9	J
Copper	mg/Kg	43	J	9.7	J	43	J	39.7	J
Iron	mg/Kg	37000	J	15200	J	34800	J	19700	=
Lead	mg/Kg	54.1	J	37.3	J	55.3	J	65.7	J
Magnesium	mg/Kg	4460	J	1520	J	4140	J	4680	=
Manganese	mg/Kg	294	J	61	J	267	J	268	=
Mercury	mg/Kg	0.31	=	0.17	=	0.48	=	0.22	=
Nickel	mg/Kg	20.4	J	7.6	J	16.6	J	21	=
Potassium	mg/Kg	3310	J	888	J	3050	J	1830	J
Selenium	mg/Kg	2.5	=	1.3	=	2.7	=	1.4	=
Silver	mg/Kg	0.06	U	0.05	U	0.07	U	0.06	UJ
Sodium	mg/Kg	1550	=	417	J	1440	=	1460	=
Thallium	mg/Kg	0.29	U	0.24	U	0.34	U	0.29	UJ
Tin (Sn)	mg/Kg	7.9	U	4.8	U	8.5	U	7	U
Vanadium	mg/Kg	88.2	=	33.3	=	82	=	42.4	=
Zinc	mg/Kg	132	J	44.6	J	113	J	118	J

	StationID	F613SB004		F613SB005		F613SB005		F613SB006	
	SampleID	613SB00402 (3-5ft)		613SB00501 (0-1ft)		613SB00502 (3-5ft)		613SB00601 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/28/1999		10/28/1999		10/28/1999		10/28/1999	
	SDGNumber	EN019		EN019		EN019		EN019	
Parameter	**Units**								
Aluminum	mg/Kg	24700	=	20000	=	16100	=	6910	=
Antimony	mg/Kg	1	J	0.55	J	0.69	J	0.31	J
Arsenic	mg/Kg	26.9	=	14.7	=	12.4	=	4.6	=
Barium	mg/Kg	37.7	=	35.1	=	39.2	=	16.5	J
Beryllium	mg/Kg	1.2	=	0.74	=	0.69	=	0.08	J
Cadmium	mg/Kg	0.05	U	0.07	J	0.29	J	0.03	U
Calcium	mg/Kg	19500	=	106000	=	111000	=	2740	=
Chromium, Total	mg/Kg	42.3	=	34	=	31.7	=	22.7	=
Cobalt	mg/Kg	9.2	J	6.8	J	6.6	J	10.8	J
Copper	mg/Kg	33.2	J	25.5	J	26.9	J	4.8	J
Iron	mg/Kg	35000	=	20900	=	20300	=	12400	=
Lead	mg/Kg	55	J	49.5	J	67.1	J	20.1	J
Magnesium	mg/Kg	5340	=	4150	=	3900	=	681	=
Manganese	mg/Kg	654	=	326	=	540	=	57.9	=
Mercury	mg/Kg	0.84	=	0.26	=	0.28	=	0.09	=
Nickel	mg/Kg	14.9	=	17.6	=	17.8	=	4.9	=
Potassium	mg/Kg	2620	J	2470	J	2360	J	333	J
Selenium	mg/Kg	3	=	1.3	J	1.1	J	1.1	=
Silver	mg/Kg	0.09	UJ	0.07	UJ	0.06	UJ	0.05	UJ
Sodium	mg/Kg	2970	=	791	=	1140	=	298	J
Thallium	mg/Kg	2.2	UJ	1.8	UJ	2.7	UJ	0.22	UJ
Tin (Sn)	mg/Kg	8.2	U	6.5	U	5.4	U	3.8	U
Vanadium	mg/Kg	83.8	=	54.5	=	43.2	=	15.2	=
Zinc	mg/Kg	116	J	96.9	J	98.6	J	39.3	J

	StationID	F613SB006		F613SB007		F613SB007		F613SB008	
	SampleID	613SB00602 (3-5ft)		613SB00701 (0-1ft)		613SB00702 (3-5ft)		613SB00801 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/28/1999		10/28/1999		10/28/1999		10/28/1999	
	SDGNumber	EN019		EN019		EN019		EN019	
Parameter	**Units**								
Aluminum	mg/Kg	18300	=	1960	=	22700	=	7670	=
Antimony	mg/Kg	0.62	J	0.41	J	0.68	J	0.44	J
Arsenic	mg/Kg	13.2	=	3.2	=	26	=	6.1	=
Barium	mg/Kg	64.7	=	11.1	J	37.6	=	18.1	J
Beryllium	mg/Kg	0.86	=	0.09	U	1.3	=	0.25	J
Cadmium	mg/Kg	0.04	U	0.54	J	0.05	U	0.03	U
Calcium	mg/Kg	9300	=	275000	=	14000	=	16800	=
Chromium, Total	mg/Kg	30.1	=	10.3	=	51.4	=	14.6	=
Cobalt	mg/Kg	5.7	J	3	J	9	J	2.6	J
Copper	mg/Kg	24.3	J	5.8	J	30.3	J	9.5	J
Iron	mg/Kg	23500	=	3710	=	32900	=	9590	=
Lead	mg/Kg	79	J	13.9	J	52.3	J	58.1	J
Magnesium	mg/Kg	3650	=	2720	=	5340	=	1290	=
Manganese	mg/Kg	394	=	224	=	474	=	112	=
Mercury	mg/Kg	0.35	=	0.05	U	0.33	=	0.28	=
Nickel	mg/Kg	9.6	=	9.7	=	16.1	=	5.2	=
Potassium	mg/Kg	2070	J	884	J	2930	J	699	J
Selenium	mg/Kg	1.5	=	0.17	U	2.8	=	0.82	J
Silver	mg/Kg	0.06	UJ	0.05	UJ	0.08	UJ	0.05	UJ
Sodium	mg/Kg	2640	=	621	=	4910	=	331	J
Thallium	mg/Kg	1.5	UJ	2.4	UJ	2	UJ	1.1	UJ
Tin (Sn)	mg/Kg	6.2	U	2.9	U	7.6	U	7.8	U
Vanadium	mg/Kg	48.1	=	6.4	=	71.2	=	21.4	=
Zinc	mg/Kg	176	J	36	J	126	J	41.8	J

	StationID	F613SB008		F613SB009		F613SB009		F613SB010	
	SampleID	613SB00802 (3-5ft)		613SB00901 (0-1ft)		613SB00902 (3-5ft)		613SB01001 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/28/1999		10/28/1999		10/28/1999		10/28/1999	
	SDGNumber	EN019		EN019		EN019		EN019	
Parameter	**Units**								
Aluminum	mg/Kg	24400	=	12600	=	27600	=	7460	=
Antimony	mg/Kg	0.79	J	0.92	J	0.72	J	0.57	J
Arsenic	mg/Kg	17.7	=	9.8	=	19.6	=	8.7	=
Barium	mg/Kg	39.5	=	23.4	=	45.3	=	34.1	=
Beryllium	mg/Kg	1.3	=	0.71	=	1.4	=	0.53	=
Cadmium	mg/Kg	0.05	U	0.13	J	0.04	U	0.03	U
Calcium	mg/Kg	12100	=	80000	=	7370	=	4960	=
Chromium, Total	mg/Kg	41.8	=	28	=	44.7	=	33.4	=
Cobalt	mg/Kg	10.1	J	4.5	J	7.9	J	4	J
Copper	mg/Kg	29.9	J	19.9	J	33.7	J	18.2	J
Iron	mg/Kg	33900	=	15800	=	29600	=	10100	=
Lead	mg/Kg	61.5	J	32.6	J	44.2	J	32.2	J
Magnesium	mg/Kg	4600	=	3200	=	4450	=	977	=
Manganese	mg/Kg	405	=	403	=	362	=	61.2	=
Mercury	mg/Kg	0.35	=	0.1	=	0.28	=	0.13	=
Nickel	mg/Kg	13.7	=	11.6	=	14.4	=	8.8	=
Potassium	mg/Kg	2790	J	1600	J	2590	J	620	J
Selenium	mg/Kg	2.6	=	1.2	=	2	=	1.2	=
Silver	mg/Kg	0.08	UJ	0.05	UJ	0.07	UJ	0.05	UJ
Sodium	mg/Kg	2290	=	961	=	1960	=	279	J
Thallium	mg/Kg	1.8	UJ	1.3	UJ	1.6	UJ	0.23	UJ
Tin (Sn)	mg/Kg	7.5	U	5	U	7	U	3.9	U
Vanadium	mg/Kg	76.1	=	32.8	=	75.4	=	24.1	=
Zinc	mg/Kg	119	J	95.5	J	109	J	96.1	J

	StationID	F613SB010		F613SB011		F613SB011		F613SB012	
	SampleID	613SB01002 (3-5ft)		613SB01101 (0-1ft)		613SB01102 (3-5ft)		613CB01201 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/15/1999 12:00 AM		10/15/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/28/1999		10/22/1999		10/22/1999		10/22/1999	
	SDGNumber	EN019		EN023		EN023		EN021	
Parameter	**Units**								
Aluminum	mg/Kg	15800	=	14700	=	12900	=	12400	=
Antimony	mg/Kg	0.38	J	1.1	UJ	0.95	UJ	0.92	J
Arsenic	mg/Kg	21.5	=	9.5	=	7.2	=	8.9	=
Barium	mg/Kg	43.8	=	31.2	=	27	=	24.8	=
Beryllium	mg/Kg	1.2	=	0.38	J	0.26	J	0.31	J
Cadmium	mg/Kg	0.04	U	0.03	U	0.03	U	0.03	U
Calcium	mg/Kg	8320	=	15000	J	6530	J	8610	J
Chromium, Total	mg/Kg	34	=	43.7	J	22.6	J	28.6	J
Cobalt	mg/Kg	7.2	J	6	=	3.5	J	3	J
Copper	mg/Kg	35.5	J	18.9	J	14.7	J	12.7	J
Iron	mg/Kg	21800	=	17700	J	12300	J	11400	J
Lead	mg/Kg	39.6	J	56.3	J	37.4	J	29.5	J
Magnesium	mg/Kg	3670	=	2310	J	1820	J	1350	J
Manganese	mg/Kg	296	=	164	J	100	J	120	J
Mercury	mg/Kg	0.33	=	0.18	=	0.15	=	0.11	=
Nickel	mg/Kg	12.2	=	10.3	J	8.4	J	6.5	J
Potassium	mg/Kg	1860	J	1370	J	1170	J	828	J
Selenium	mg/Kg	2.1	=	1.3	=	1.2	=	1.2	=
Silver	mg/Kg	0.07	UJ	0.05	U	0.05	U	0.05	U
Sodium	mg/Kg	2580	=	777	=	984	=	443	J
Thallium	mg/Kg	1.7	UJ	0.22	UJ	0.25	UJ	0.22	U
Tin (Sn)	mg/Kg	5.9	U	9.3	=	5.1	U	4.8	U
Vanadium	mg/Kg	77.2	=	35	=	29.3	=	23.5	=
Zinc	mg/Kg	133	J	111	J	63.8	J	64.5	J

	StationID	F613SB012		F613SB012		F613SB012		F613SB013	
	SampleID	613CB01202 (3-5ft)		613SB01201 (0-1ft)		613SB01202 (3-5ft)		613CB01301 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/22/1999		10/22/1999		10/22/1999		10/22/1999	
	SDGNumber	EN021		EN021		EN021		EN021	
Parameter	**Units**								
Aluminum	mg/Kg	34900	=	9480	=	35400	=	16500	=
Antimony	mg/Kg	1.3	J	0.52	J	1.3	J	0.67	J
Arsenic	mg/Kg	32.6	=	5.3	=	30.1	=	14.2	=
Barium	mg/Kg	47.8	=	20.8	=	48.4	=	125	=
Beryllium	mg/Kg	1.5	=	0.2	J	1.3	=	0.67	=
Cadmium	mg/Kg	0.05	U	0.03	U	0.05	U	0.03	U
Calcium	mg/Kg	11300	J	9870	J	10500	J	4270	J
Chromium, Total	mg/Kg	51.4	J	22.1	J	49.8	J	27.1	J
Cobalt	mg/Kg	12.8	J	2.4	J	11.5	J	4	J
Copper	mg/Kg	35.7	J	7.4	J	34.5	J	9.2	J
Iron	mg/Kg	45900	J	7980	J	40200	J	16800	J
Lead	mg/Kg	62.7	J	25.9	J	98.7	J	46.2	J
Magnesium	mg/Kg	4810	J	951	J	4510	J	1680	J
Manganese	mg/Kg	1940	J	104	J	1060	J	100	J
Mercury	mg/Kg	0.47	=	0.12	=	0.29	=	0.39	=
Nickel	mg/Kg	21.1	J	4.1	J	18.6	J	8.2	J
Potassium	mg/Kg	3080	J	535	J	2870	J	1160	J
Selenium	mg/Kg	3.4	=	1	=	3.3	=	1.3	=
Silver	mg/Kg	0.08	U	0.05	U	0.08	U	0.53	U
Sodium	mg/Kg	2260	=	367	J	2180	=	583	=
Thallium	mg/Kg	3.7	U	0.25	U	3.7	U	0.25	U
Tin (Sn)	mg/Kg	9.2	U	5	U	9.4	U	5.1	U
Vanadium	mg/Kg	92.1	=	17.1	=	84.7	=	32.3	=
Zinc	mg/Kg	154	J	83.1	J	154	J	64	J

	StationID	F613SB013		F613SB013		F613SB013		F613SB014	
	SampleID	613CB01302 (3-5ft)		613SB01301 (0-1ft)		613SB01302 (3-5ft)		613SB01401 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/22/1999		10/22/1999		10/22/1999		10/28/1999	
	SDGNumber	EN021		EN021		EN021		EN019	
Parameter	**Units**								
Aluminum	mg/Kg	24900	=	12900	=	22800	=	6560	=
Antimony	mg/Kg	1.1	J	1.2	J	0.95	J	3.2	J
Arsenic	mg/Kg	13.6	=	39.5	=	15	=	17.1	=
Barium	mg/Kg	54.6	=	76.6	=	57.8	=	38.6	=
Beryllium	mg/Kg	1.1	=	0.95	=	0.92	=	0.34	J
Cadmium	mg/Kg	0.04	U	0.03	U	0.03	U	0.28	J
Calcium	mg/Kg	10800	J	9500	J	10500	J	25900	=
Chromium, Total	mg/Kg	38.6	J	23.5	J	34.5	J	23.4	=
Cobalt	mg/Kg	6.8	J	7.6	J	6.5	J	3.5	J
Copper	mg/Kg	33.6	J	35.5	J	31.2	J	80.1	J
Iron	mg/Kg	25300	J	16900	J	23200	J	10200	=
Lead	mg/Kg	119	J	99.3	J	149	J	277	J
Magnesium	mg/Kg	3300	J	1680	J	3040	J	890	=
Manganese	mg/Kg	407	J	161	J	269	J	83.8	=
Mercury	mg/Kg	1.1	=	0.32	=	0.58	=	0.43	=
Nickel	mg/Kg	13.2	J	19.6	J	12.8	J	10.3	=
Potassium	mg/Kg	2180	J	1140	J	1980	J	517	J
Selenium	mg/Kg	2.2	=	1.4	=	1.9	=	0.61	J
Silver	mg/Kg	0.06	U	0.05	U	0.05	U	0.04	UJ
Sodium	mg/Kg	1130	=	663	=	996	=	251	J
Thallium	mg/Kg	2.9	U	0.24	U	0.25	U	0.21	UJ
Tin (Sn)	mg/Kg	6.2	U	5.9	U	6.9	U	10.2	U
Vanadium	mg/Kg	58.3	=	37.8	=	52.1	=	24.6	=
Zinc	mg/Kg	217	J	123	J	223	J	215	J

	StationID	F613SB014		F613SB016		F613SB016		F613SB017	
	SampleID	613SB01402 (3-5ft)		613SB01601 (0-1ft)		613SB01602 (3-5ft)		613CB01701 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	10/28/1999		10/28/1999		10/28/1999		11/23/1999	
	SDGNumber	EN019		EN019		EN019		EN027	
Parameter	**Units**								
Aluminum	mg/Kg	18300	=	3350	=	34100	=	29500	J
Antimony	mg/Kg	0.37	J	0.42	J	1.2	J	1.2	R
Arsenic	mg/Kg	10.2	=	3.8	=	24.6	=	16.7	J
Barium	mg/Kg	37.2	=	10.8	J	47.6	=	43.6	J
Beryllium	mg/Kg	0.54	=	0.09	U	1.5	=	1.7	=
Cadmium	mg/Kg	0.02	U	0.7	J	0.05	U	0.04	UJ
Calcium	mg/Kg	1720	=	307000	=	20700	=	24800	J
Chromium, Total	mg/Kg	26.7	=	8.7	=	51.1	=	46.9	J
Cobalt	mg/Kg	2.8	J	5.3	=	10.4	=	9.8	J
Copper	mg/Kg	2.3	J	7.8	=	38.1	=	35.7	=
Iron	mg/Kg	19800	=	4360	=	41700	=	30000	J
Lead	mg/Kg	11.4	J	9.2	=	56.7	=	80.1	J
Magnesium	mg/Kg	1060	=	6340	=	4600	=	4680	J
Manganese	mg/Kg	49.4	=	264	=	538	=	557	J
Mercury	mg/Kg	0.05	=	0.04	U	0.42	=	0.34	=
Nickel	mg/Kg	7.5	=	13	=	18.4	=	17.6	J
Potassium	mg/Kg	657	J	1430	J	3040	J	3340	=
Selenium	mg/Kg	1.9	=	0.24	J	3.5	=	1.7	J
Silver	mg/Kg	0.04	UJ	0.05	U	0.08	U	0.07	U
Sodium	mg/Kg	449	=	627	=	627	J	446	J
Thallium	mg/Kg	0.19	UJ	2.5	UJ	2	UJ	0.39	J
Tin (Sn)	mg/Kg	5.1	U	4.4	U	8.7	U	7.8	UJ
Vanadium	mg/Kg	42.2	=	10	=	86.6	=	70.6	J
Zinc	mg/Kg	19.7	J	21	=	133	J	120	J

	StationID	F613SB017		F613SB017		F613SB017		F613SB018	
	SampleID	613CB01702 (3-5ft)		613SB01701 (0-1ft)		613SB01702 (3-5ft)		613SB01801 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/23/1999		11/23/1999		11/23/1999		11/23/1999	
	SDGNumber	EN027		EN027		EN027		EN027	
Parameter	**Units**								
Aluminum	mg/Kg	7210	J	30400	J	7620	J	24800	J
Antimony	mg/Kg	0.47	R	0.98	R	0.45	R	1.2	R
Arsenic	mg/Kg	8.6	J	15.4	J	7.4	J	15.8	J
Barium	mg/Kg	17.2	J	41.6	J	17.5	J	42.9	J
Beryllium	mg/Kg	0.51	J	1.7	=	0.53	J	1.5	=
Cadmium	mg/Kg	0.03	UJ	0.03	UJ	0.03	UJ	0.04	UJ
Calcium	mg/Kg	1660	J	11000	J	1420	J	4890	J
Chromium, Total	mg/Kg	9.9	J	47	J	9.6	J	39.2	J
Cobalt	mg/Kg	1.9	J	9.9	J	2.1	J	8.5	J
Copper	mg/Kg	4.6	=	33.9	=	4.8	=	25.6	=
Iron	mg/Kg	7420	J	31000	J	6630	J	30600	J
Lead	mg/Kg	12.2	J	56.8	J	14.3	J	37.8	J
Magnesium	mg/Kg	549	J	4130	J	542	J	2880	J
Manganese	mg/Kg	38.3	J	539	J	32.4	J	255	J
Mercury	mg/Kg	0.06	=	0.3	=	0.06	=	0.3	=
Nickel	mg/Kg	3.7	J	16.8	J	3.9	J	14.3	J
Potassium	mg/Kg	387	J	3310	=	399	J	2240	=
Selenium	mg/Kg	0.66	J	1.8	J	0.62	J	2	J
Silver	mg/Kg	0.05	U	0.06	U	0.06	U	0.06	U
Sodium	mg/Kg	76.2	J	360	J	70.2	J	276	J
Thallium	mg/Kg	0.25	U	0.63	J	0.27	U	0.31	U
Tin (Sn)	mg/Kg	4.2	UJ	6.6	UJ	3.9	UJ	6.8	UJ
Vanadium	mg/Kg	13.8	J	73.6	J	14.3	J	66	J
Zinc	mg/Kg	16.7	J	123	J	16.5	J	97.4	J

	StationID	F613SB018		F613SB019		F613SB019		F613SB020	
	SampleID	613SB01802 (3-5ft)		613SB01901 (0-1ft)		613SB01902 (3-5ft)		613SB02001 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	11/23/1999		11/23/1999		11/18/1999		11/18/1999	
	SDGNumber	EN027		EN026		EN026		EN026	
Parameter	**Units**								
Aluminum	mg/Kg	4660	J	4990	J	4230	J	4580	J
Antimony	mg/Kg	0.34	R	7.8	J	0.27	J	0.93	J
Arsenic	mg/Kg	2.1	J	9.4	J	2.5	J	5.9	J
Barium	mg/Kg	15.1	J	30.8	J	13.6	J	23.8	J
Beryllium	mg/Kg	0.42	J	0.45	J	0.09	U	0.14	J
Cadmium	mg/Kg	0.03	UJ	0.08	J	0.19	J	0.75	J
Calcium	mg/Kg	404	J	2770	J	514	J	282000	J
Chromium, Total	mg/Kg	5	J	136	J	5	J	31.7	J
Cobalt	mg/Kg	1.4	J	5.7	=	0.51	J	5.5	=
Copper	mg/Kg	0.46	J	48.4	J	2	J	20.4	J
Iron	mg/Kg	2870	J	13600	J	2700	J	7710	J
Lead	mg/Kg	4.9	J	76.9	J	5.1	J	87.7	J
Magnesium	mg/Kg	262	J	452	J	350	J	3440	J
Manganese	mg/Kg	19.7	J	152	J	22.6	J	419	J
Mercury	mg/Kg	0.05	U	0.64	J	0.05	U	0.08	J
Nickel	mg/Kg	2.5	J	48.4	J	1.9	J	36.1	J
Potassium	mg/Kg	140	J	327	J	145	J	1280	J
Selenium	mg/Kg	0.58	J	1.1	U	0.45	U	0.26	U
Silver	mg/Kg	0.05	U	1.2	=	0.05	U	0.05	U
Sodium	mg/Kg	43.8	J	160	J	448	J	1330	=
Thallium	mg/Kg	0.22	U	0.24	UJ	0.25	UJ	0.24	UJ
Tin (Sn)	mg/Kg	3.3	UJ	5.7	U	3.6	U	5.8	U
Vanadium	mg/Kg	6.9	J	19.2	J	4.1	J	12.5	J
Zinc	mg/Kg	5.2	J	338	J	9.9	J	110	J

	StationID	F613SB020		F613SB021		F613SB021		F613SB022	
	SampleID	613SB02002 (3-5ft)		613SB02101a (0-1ft)		613SB02102a (3-5ft)		613SB02201a (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	11/18/1999		11/18/1999		11/18/1999		11/18/1999	
	SDGNumber	EN026		EN026		EN026		EN026	
Parameter	**Units**								
Aluminum	mg/Kg	21000	J	7940	J	21700	J	5560	J
Antimony	mg/Kg	0.84	J	0.43	J	1.3	J	1.6	J
Arsenic	mg/Kg	22.7	J	4.9	J	35.7	J	10.8	J
Barium	mg/Kg	33.5	J	10.9	J	36.6	J	88.5	J
Beryllium	mg/Kg	1.2	=	0.15	J	1.5	=	0.63	=
Cadmium	mg/Kg	0.05	UJ	0.03	UJ	0.04	UJ	3.2	J
Calcium	mg/Kg	11400	J	6760	J	25200	J	16300	J
Chromium, Total	mg/Kg	36.8	J	11.2	J	42.5	J	30	J
Cobalt	mg/Kg	8.3	J	4.3	=	10	=	11.1	=
Copper	mg/Kg	28.1	J	4.2	J	37.3	J	195	J
Iron	mg/Kg	30700	J	8970	J	31700	J	10000	J
Lead	mg/Kg	46.6	J	9.2	J	61.5	J	353	J
Magnesium	mg/Kg	4810	J	611	J	5390	J	1220	J
Manganese	mg/Kg	561	J	43.6	J	562	J	128	J
Mercury	mg/Kg	0.48	J	0.05	J	0.36	J	0.31	J
Nickel	mg/Kg	12.6	J	3.3	J	15.6	J	39.7	J
Potassium	mg/Kg	2530	J	401	J	2860	J	570	J
Selenium	mg/Kg	2.9	=	1	U	3.1	=	1.2	U
Silver	mg/Kg	0.08	U	0.04	U	0.07	U	0.3	J
Sodium	mg/Kg	4940	=	230	J	2530	=	281	J
Thallium	mg/Kg	0.47	J	0.2	UJ	0.8	J	0.2	UJ
Tin (Sn)	mg/Kg	7.3	U	3.7	U	8.4	U	25	=
Vanadium	mg/Kg	71.9	J	20.2	J	75.6	J	20.2	J
Zinc	mg/Kg	101	J	21.6	J	142	J	403	J

	StationID	F613SB022		F613SB023		F613SB023		F613SB024	
	SampleID	613SB02202a (3-5ft)		613SB02301 (0-1ft)		613SB02302 (3-5ft)		613SB02401 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/18/1999		11/23/1999		11/23/1999		11/23/1999	
	SDGNumber	EN026		EN027		EN027		EN027	
Parameter	**Units**								
Aluminum	mg/Kg	16200	J	11700	J	31300	J	18800	J
Antimony	mg/Kg	0.7	J	0.88	R	1.4	R	0.82	R
Arsenic	mg/Kg	21.9	J	14	J	21.9	J	17.2	J
Barium	mg/Kg	33.3	J	29.6	J	44.3	J	32.8	J
Beryllium	mg/Kg	1.3	=	0.82	=	1.7	=	1.1	=
Cadmium	mg/Kg	0.04	UJ	0.03	UJ	0.04	UJ	0.03	UJ
Calcium	mg/Kg	29600	J	5750	J	6770	J	4150	J
Chromium, Total	mg/Kg	36.6	J	18.5	J	47.8	J	30.2	J
Cobalt	mg/Kg	7.8	=	4	J	10.1	J	6.1	J
Copper	mg/Kg	32.7	J	30.5	=	30.2	=	31.3	=
Iron	mg/Kg	24600	J	16000	J	31600	J	20700	J
Lead	mg/Kg	90.2	J	51.2	J	54.2	J	92.6	J
Magnesium	mg/Kg	4430	J	1510	J	4640	J	2560	J
Manganese	mg/Kg	404	J	240	J	449	J	234	J
Mercury	mg/Kg	0.49	J	0.3	=	0.31	=	0.64	=
Nickel	mg/Kg	14.2	J	7.8	J	17.2	J	10.6	J
Potassium	mg/Kg	2160	J	866	=	2660	=	1680	=
Selenium	mg/Kg	2.6	=	1.2	J	1.6	J	1.2	J
Silver	mg/Kg	0.07	U	0.06	U	0.06	U	0.05	U
Sodium	mg/Kg	1150	=	219	J	839	=	246	J
Thallium	mg/Kg	0.48	J	0.27	U	0.53	J	0.25	U
Tin (Sn)	mg/Kg	8.1	U	8.1	UJ	7.5	UJ	6.4	UJ
Vanadium	mg/Kg	58.6	J	28.1	J	77.2	J	44.3	J
Zinc	mg/Kg	128	J	72.2	J	106	J	109	J

	StationID	F613SB024		F613SB025		F613SB026		F613SB026	
	SampleID	613SB02402 (3-5ft)		613SB02501 (0-1ft)		613CB02602 (3-5ft)		613SB02601 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/17/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/23/1999		11/30/1999		11/23/1999		11/30/1999	
	SDGNumber	EN027		EN028		EN028		EN028	
Parameter	**Units**								
Aluminum	mg/Kg	39300	J	17600	J	28500	J	22500	J
Antimony	mg/Kg	1.7	R	1.2	R	1.2	R	1.2	R
Arsenic	mg/Kg	31.9	J	11.3	J	18.9	J	12.7	J
Barium	mg/Kg	50.2	J	38.6	J	42.9	J	40.4	J
Beryllium	mg/Kg	1.8	=	1.1	=	1.6	=	1.2	=
Cadmium	mg/Kg	0.06	UJ	0.03	UJ	0.04	UJ	0.03	UJ
Calcium	mg/Kg	10400	J	9450	J	7200	J	6580	J
Chromium, Total	mg/Kg	55.5	J	31.4	J	45.2	J	34.4	J
Cobalt	mg/Kg	11.3	J	6.2	J	9.1	J	7.8	J
Copper	mg/Kg	37.4	=	39.2	J	33	=	26.9	J
Iron	mg/Kg	42600	J	18200	J	31500	J	25700	J
Lead	mg/Kg	53.9	J	81	J	1690	J	52.6	J
Magnesium	mg/Kg	4850	J	2100	J	3900	J	2710	J
Manganese	mg/Kg	677	J	223	J	309	J	263	J
Mercury	mg/Kg	0.29	=	0.63	J	0.36	J	0.28	J
Nickel	mg/Kg	20.8	J	15.3	J	15.7	J	13	J
Potassium	mg/Kg	2970	=	1220	J	2530	=	1830	J
Selenium	mg/Kg	2.6	J	1.7	J	1.6	J	1.7	J
Silver	mg/Kg	0.11	U	0.05	U	0.06	U	0.05	U
Sodium	mg/Kg	645	J	204	J	525	J	426	J
Thallium	mg/Kg	0.51	U	0.97	J	0.29	UJ	0.25	UJ
Tin (Sn)	mg/Kg	10.6	UJ	6.1	UJ	7	UJ	5.9	UJ
Vanadium	mg/Kg	89.8	J	42.8	J	70.8	J	56.3	J
Zinc	mg/Kg	133	J	276	J	192	J	98.7	J

	StationID	F613SB026		F613SB027		F613SB027		F613SB028	
	SampleID	613SB02602 (3-5ft)		613SB02701 (0-1ft)		613SB02702 (3-5ft)		613SB02801 (0-1ft)	
	DateCollected	11/17/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/23/1999		11/30/1999		11/30/1999		11/30/1999	
	SDGNumber	EN028		EN028		EN028		EN028	
Parameter	**Units**								
Aluminum	mg/Kg	33600	J	28300	J	6770	J	30700	J
Antimony	mg/Kg	1.5	R	1.6	R	0.42	R	1.6	R
Arsenic	mg/Kg	21.1	J	23.1	J	2.1	J	24.1	J
Barium	mg/Kg	48.9	J	42.8	J	25.4	J	45.8	J
Beryllium	mg/Kg	1.7	=	1.6	=	0.48	=	1.8	=
Cadmium	mg/Kg	0.04	UJ	0.03	UJ	0.02	UJ	0.03	UJ
Calcium	mg/Kg	8410	J	11800	J	494	J	6240	J
Chromium, Total	mg/Kg	52.1	J	47.1	J	6	J	50.6	J
Cobalt	mg/Kg	9.5	J	9.8	J	2.5	J	10.5	J
Copper	mg/Kg	39.3	=	31.6	J	1.1	J	40.7	J
Iron	mg/Kg	34400	J	35000	J	3860	J	39600	J
Lead	mg/Kg	6620	J	47.5	J	5	J	64.4	J
Magnesium	mg/Kg	4460	J	4640	J	397	J	4210	J
Manganese	mg/Kg	270	J	350	J	27.4	J	467	J
Mercury	mg/Kg	0.36	J	0.34	J	0.04	UJ	0.5	J
Nickel	mg/Kg	18.1	J	16.4	J	4	J	17.9	J
Potassium	mg/Kg	2880	=	2720	J	176	J	2480	J
Selenium	mg/Kg	1.7	J	1.7	J	0.42	J	2.3	J
Silver	mg/Kg	0.07	U	0.05	U	0.04	U	0.05	U
Sodium	mg/Kg	575	J	441	J	90.6	J	460	J
Thallium	mg/Kg	0.82	J	0.25	UJ	0.18	UJ	0.47	J
Tin (Sn)	mg/Kg	8	UJ	6.8	UJ	3	UJ	7.3	UJ
Vanadium	mg/Kg	75.2	J	72.6	J	9	J	83.9	J
Zinc	mg/Kg	184	J	100	J	9.2	J	126	J

	StationID	F613SB028		F613SB029		F613SB029		F613SB030	
	SampleID	613SB02802 (3-5ft)		613SB02901 (0-1ft)		613SB02902 (3-5ft)		613SB03001 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		12/1/1999 12:00 AM		12/1/1999 12:00 AM		12/1/1999 12:00 AM	
	DateAnalyzed	11/30/1999		12/07/1999		12/07/1999		12/07/1999	
	SDGNumber	EN028		EN030		EN030		EN030	
Parameter	**Units**								
Aluminum	mg/Kg	6880	J	3790	J	4560	J	17400	J
Antimony	mg/Kg	0.57	R	0.38	J	0.45	J	0.72	J
Arsenic	mg/Kg	2.5	J	1.9	=	3.5	=	12	=
Barium	mg/Kg	22.9	J	12.5	J	9	J	25.9	=
Beryllium	mg/Kg	0.36	J	0.07	UJ	0.11	J	0.92	=
Cadmium	mg/Kg	0.02	UJ	0.04	UJ	0.03	UJ	0.03	UJ
Calcium	mg/Kg	483	J	34900	J	32500	J	8610	J
Chromium, Total	mg/Kg	9.4	J	5.5	=	7.9	=	32.6	=
Cobalt	mg/Kg	1.7	J	1.3	J	1.2	J	5	J
Copper	mg/Kg	0.94	J	1.7	J	2.3	=	43.4	=
Iron	mg/Kg	6680	J	2250	J	4290	J	22700	J
Lead	mg/Kg	4.1	J	5.7	J	4.1	J	28.8	J
Magnesium	mg/Kg	481	J	556	J	622	J	1970	J
Manganese	mg/Kg	24.3	J	39.5	J	28.4	J	167	J
Mercury	mg/Kg	0.04	UJ	0.05	U	0.04	U	0.17	=
Nickel	mg/Kg	3.9	J	2.4	J	3	J	9.2	J
Potassium	mg/Kg	242	J	173	J	282	J	1180	=
Selenium	mg/Kg	0.82	J	0.27	J	0.34	J	1.9	J
Silver	mg/Kg	0.04	U	0.04	U	0.04	U	0.05	U
Sodium	mg/Kg	106	J	174	J	218	J	212	J
Thallium	mg/Kg	0.18	UJ	0.2	UJ	0.21	UJ	0.26	UJ
Tin (Sn)	mg/Kg	3.2	UJ	3.5	U	3.8	U	5.6	U
Vanadium	mg/Kg	14.9	J	5.7	=	9.7	=	53.6	=
Zinc	mg/Kg	8.5	J	10	=	7.8	=	62.3	=

	StationID	F613SB030		F613SB031		F613SB031		F613SB032	
	SampleID	613SB03002 (3-5ft)		613SB03101 (0-1ft)		613SB03103 (-ft)		613CB03203 (-ft)	
	DateCollected	12/1/1999 12:00 AM		6/7/2001 12:00 AM		6/7/2001 12:00 AM		6/7/2001 12:00 AM	
	DateAnalyzed	12/07/1999		06/19/2001		06/19/2001		06/19/2001	
	SDGNumber	EN030		43557		43557		43557	
Parameter	**Units**								
Aluminum	mg/Kg	31300	J						
Antimony	mg/Kg	1.4	J						
Arsenic	mg/Kg	12.5	=	8.68	=	6.98	=	22.8	=
Barium	mg/Kg	47.2	=						
Beryllium	mg/Kg	1.6	=						
Cadmium	mg/Kg	0.05	UJ						
Calcium	mg/Kg	23500	J						
Chromium, Total	mg/Kg	53	=						
Cobalt	mg/Kg	9.1	=						
Copper	mg/Kg	42	=						
Iron	mg/Kg	30000	J						
Lead	mg/Kg	46.2	J						
Magnesium	mg/Kg	4220	J						
Manganese	mg/Kg	255	J						
Mercury	mg/Kg	0.31	=						
Nickel	mg/Kg	17.7	J						
Potassium	mg/Kg	2430	=						
Selenium	mg/Kg	2.1	J						
Silver	mg/Kg	0.08	U						
Sodium	mg/Kg	359	J						
Thallium	mg/Kg	0.36	UJ						
Tin (Sn)	mg/Kg	7.9	U						
Vanadium	mg/Kg	73.5	=						
Zinc	mg/Kg	129	=						

	StationID	F613SB032		F613SB032		F613SB035		F613SB035	
	SampleID	613SB03201 (0-1ft)		613SB03203 (-ft)		175SB03501 (0-1ft)		175SB03503 (2-3ft)	
	DateCollected	6/7/2001 12:00 AM		6/7/2001 12:00 AM		6/7/2001 12:00 AM		6/7/2001 12:00 AM	
	DateAnalyzed	06/19/2001		06/19/2001		06/19/2001		06/19/2001	
	SDGNumber	43557		43557		43574		43574	
Parameter	**Units**								
Aluminum	mg/Kg								
Antimony	mg/Kg								
Arsenic	mg/Kg	8.21	=	22.6	=				
Barium	mg/Kg								
Beryllium	mg/Kg								
Cadmium	mg/Kg								
Calcium	mg/Kg								
Chromium, Total	mg/Kg								
Cobalt	mg/Kg								
Copper	mg/Kg								
Iron	mg/Kg								
Lead	mg/Kg					55	=	22.3	=
Magnesium	mg/Kg								
Manganese	mg/Kg								
Mercury	mg/Kg								
Nickel	mg/Kg								
Potassium	mg/Kg								
Selenium	mg/Kg								
Silver	mg/Kg								
Sodium	mg/Kg								
Thallium	mg/Kg								
Tin (Sn)	mg/Kg								
Vanadium	mg/Kg								
Zinc	mg/Kg								

	StationID	F613SP022		F613SP022		F613SP027		F613SP027	
	SampleID	613SP022T1 (0-1ft)		613SP022T2 (3-5ft)		613SP027T1 (0-1ft)		613SP027T2 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/28/1999		10/28/1999		10/29/1999		10/29/1999	
	SDGNumber	EN019		EN019		EN020		EN020	
Parameter	**Units**								
Aluminum	mg/Kg	5620	=	25100	=	8780	=	14300	=
Antimony	mg/Kg	0.31	J	0.88	J	15.6	J	1.9	J
Arsenic	mg/Kg	3.8	=	31.5	=	69.9	J	9.3	J
Barium	mg/Kg	14.2	J	37.7	=	60.9	=	25.6	=
Beryllium	mg/Kg	0.12	J	1.2	=	1.2	=	0.56	=
Cadmium	mg/Kg	0.3	J	0.05	U	0.36	J	0.03	UJ
Calcium	mg/Kg	142000	=	15000	=	10900	J	8200	J
Chromium, Total	mg/Kg	10.1	=	40.9	=	45	J	28.1	J
Cobalt	mg/Kg	4.9	J	9	J	17.3	=	4.8	J
Copper	mg/Kg	10.1	J	28.5	J	325	=	35.6	=
Iron	mg/Kg	5720	=	35400	=	15400	=	16300	=
Lead	mg/Kg	13.1	J	52.5	J	395	=	42.7	=
Magnesium	mg/Kg	2320	=	4240	=	909	J	1730	J
Manganese	mg/Kg	153	=	799	=	149	=	246	=
Mercury	mg/Kg	0.06	=	0.46	=	1.1	=	0.16	=
Nickel	mg/Kg	9.3	=	14.2	=	79.1	=	15.4	=
Potassium	mg/Kg	839	J	2410	J	612	J	1080	J
Selenium	mg/Kg	0.22	J	2.9	=	1.6	=	1.7	=
Silver	mg/Kg	0.05	UJ	0.08	UJ	0.12	J	0.05	U
Sodium	mg/Kg	318	J	997	=	359	J	271	J
Thallium	mg/Kg	2.4	UJ	1.9	UJ	1	R	0.25	R
Tin (Sn)	mg/Kg	3.9	U	8.3	U	60.8	=	10.8	=
Vanadium	mg/Kg	14	=	76.9	=	24.1	=	34	=
Zinc	mg/Kg	34.9	J	110	J	1100	J	179	J

	StationID	F613SP051		F613SP051	
	SampleID	613SP051T1 (0-1ft)		613SP051T2 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/22/1999		10/22/1999	
	SDGNumber	EN023		EN023	
Parameter	**Units**				
Aluminum	mg/Kg	22600	=	35700	=
Antimony	mg/Kg	1.3	UJ	1.8	J
Arsenic	mg/Kg	16.2	=	20.1	=
Barium	mg/Kg	36.3	=	50.7	=
Beryllium	mg/Kg	0.69	=	1.2	=
Cadmium	mg/Kg	0.04	U	0.05	U
Calcium	mg/Kg	15000	J	30800	J
Chromium, Total	mg/Kg	34.7	J	52.6	J
Cobalt	mg/Kg	8	=	13.5	=
Copper	mg/Kg	22.5	J	35.1	J
Iron	mg/Kg	21900	J	40200	J
Lead	mg/Kg	33.8	J	68.6	J
Magnesium	mg/Kg	3440	J	6230	J
Manganese	mg/Kg	206	J	594	J
Mercury	mg/Kg	0.09	=	0.37	=
Nickel	mg/Kg	13.4	J	19.7	J
Potassium	mg/Kg	2260	J	4030	J
Selenium	mg/Kg	2	=	3	=
Silver	mg/Kg	0.06	U	0.09	U
Sodium	mg/Kg	1750	=	4110	=
Thallium	mg/Kg	0.29	UJ	0.41	UJ
Tin (Sn)	mg/Kg	6.4	U	10	J
Vanadium	mg/Kg	52.2	=	80.1	=
Zinc	mg/Kg	82.9	J	143	J

	StationID	F613SP022		F613SP022		F613SP027		F613SP027	
	SampleID	613SP022T1 (0-1ft)		613SP022T2 (3-5ft)		613SP027T1 (0-1ft)		613SP027T1DL (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/20/1999		10/23/1999		10/28/1999	
	SDGNumber	EN019		EN019		EN020		EN020	
Parameter	**Units**								
PCB-1016 (Arochlor 1016)	ug/Kg	37	U	61	U	38	U	1500	R
PCB-1221 (Arochlor 1221)	ug/Kg	74	U	120	U	77	U	3100	R
PCB-1232 (Arochlor 1232)	ug/Kg	37	U	61	U	38	U	1500	R
PCB-1242 (Arochlor 1242)	ug/Kg	37	U	61	U	38	U	1500	R
PCB-1248 (Arochlor 1248)	ug/Kg	37	U	61	U	38	U	1500	R
PCB-1254 (Arochlor 1254)	ug/Kg	37	U	61	U	38	U	1500	R
PCB-1260 (Arochlor 1260)	ug/Kg	37	U	61	U	72	=	1500	R

	StationID	F613SP027		F613SP027		F613SP051		F613SP051	
	SampleID	613SP027T2 (3-5ft)		613SP027T2DL (3-5ft)		613SP051T1 (0-1ft)		613SP051T2 (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/23/1999		10/22/1999		10/28/1999		10/28/1999	
	SDGNumber	EN020		EN020		EN023		EN023	
Parameter	**Units**								
PCB-1016 (Arochlor 1016)	ug/Kg	38	U	150	R	43	U	63	U
PCB-1221 (Arochlor 1221)	ug/Kg	75	U	300	R	87	U	130	U
PCB-1232 (Arochlor 1232)	ug/Kg	38	U	150	R	43	U	63	U
PCB-1242 (Arochlor 1242)	ug/Kg	38	U	150	R	43	U	63	U
PCB-1248 (Arochlor 1248)	ug/Kg	38	U	150	R	43	U	63	U
PCB-1254 (Arochlor 1254)	ug/Kg	38	U	150	R	43	U	63	U
PCB-1260 (Arochlor 1260)	ug/Kg	38	U	150	R	43	U	63	U

	StationID	F613SP022		F613SP022		F613SP027	
	SampleID	613SP022T1 (0-1ft)		613SP022T2 (3-5ft)		613SP027T1 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/20/1999		10/23/1999	
	SDGNumber	EN019		EN019		EN020	
Parameter	**Units**						
Aldrin	ug/Kg	1.9	U	3.1	U	2	U
Alpha BHC (Alpha Hexachlorocyclohexane)	ug/Kg	1.9	U	3.1	U	2	U
Alpha-chlordane	ug/Kg	5.4	=	3.1	U	14	J
Beta BHC (Beta Hexachlorocyclohexane)	ug/Kg	1.9	U	3.1	U	2	U
Delta BHC (Delta Hexachlorocyclohexane)	ug/Kg	1.9	U	3.1	U	2	U
Dieldrin	ug/Kg	3.7	U	6.1	U	3.8	U
Endosulfan I	ug/Kg	1.9	U	3.1	U	2	U
Endosulfan II	ug/Kg	3.7	U	6.1	U	3.8	U
Endosulfan Sulfate	ug/Kg	3.7	U	6.1	U	3.8	U
Endrin Aldehyde	ug/Kg	3.7	U	6.1	U	3.8	U
Endrin Ketone	ug/Kg	3.7	U	6.1	U	3.8	U
Endrin	ug/Kg	3.7	U	6.1	U	3.8	U
Gamma BHC (Lindane)	ug/Kg	1.9	U	3.1	U	2	U
Gamma-chlordane	ug/Kg	6.3	=	3.1	U	99	J
Heptachlor Epoxide	ug/Kg	1.9	U	3.1	U	2	U
Heptachlor	ug/Kg	1.9	U	3.1	U	2	U
Methoxychlor	ug/Kg	19	U	31	U	20	U
p,p'-DDD	ug/Kg	7.8	=	6.1	U	1600	=
p,p'-DDE	ug/Kg	3.7	U	6.1	U	1400	=
p,p'-DDT	ug/Kg	3.7	U	6.1	U	21	=
Toxaphene	ug/Kg	190	U	310	U	200	U

	StationID	F613SP027		F613SP027		F613SP027	
	SampleID	613SP027T1DL (0-1ft)		613SP027T2 (3-5ft)		613SP027T2DL (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/28/1999		10/23/1999		10/22/1999	
	SDGNumber	EN020		EN020		EN020	
Parameter	**Units**						
Aldrin	ug/Kg	79	R	1.9	U	7.7	R
Alpha BHC (Alpha Hexachlorocyclohexane)	ug/Kg	79	R	1.9	U	7.7	R
Alpha-chlordane	ug/Kg	79	R	1.9	U	7.7	R
Beta BHC (Beta Hexachlorocyclohexane)	ug/Kg	79	R	1.9	U	7.7	R
Delta BHC (Delta Hexachlorocyclohexane)	ug/Kg	79	R	1.9	U	7.7	R
Dieldrin	ug/Kg	150	R	3.8	U	15	R
Endosulfan I	ug/Kg	79	R	1.9	U	7.7	R
Endosulfan II	ug/Kg	150	R	3.8	U	15	R
Endosulfan Sulfate	ug/Kg	150	R	3.8	U	15	R
Endrin Aldehyde	ug/Kg	150	R	3.8	U	15	R
Endrin Ketone	ug/Kg	150	R	3.8	U	15	R
Endrin	ug/Kg	150	R	3.8	U	15	R
Gamma BHC (Lindane)	ug/Kg	79	R	1.9	U	7.7	R
Gamma-chlordane	ug/Kg	79	R	1.9	U	7.7	R
Heptachlor Epoxide	ug/Kg	79	R	1.9	U	7.7	R
Heptachlor	ug/Kg	79	R	1.9	U	7.7	R
Methoxychlor	ug/Kg	790	R	19	U	77	R
p,p'-DDD	ug/Kg	1600	R	150	J	150	R
p,p'-DDE	ug/Kg	1400	R	46	J	15	R
p,p'-DDT	ug/Kg	150	R	27	=	30	R
Toxaphene	ug/Kg	7900	R	190	U	770	R

	StationID	F613SP051		F613SP051	
	SampleID	613SP051T1 (0-1ft)		613SP051T2 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/28/1999		10/28/1999	
	SDGNumber	EN023		EN023	
Parameter	**Units**				
Aldrin	ug/Kg	2.2	U	3.3	U
Alpha BHC (Alpha Hexachlorocyclohexane)	ug/Kg	2.2	U	3.3	U
Alpha-chlordane	ug/Kg	2.2	U	3.3	U
Beta BHC (Beta Hexachlorocyclohexane)	ug/Kg	2.2	U	3.3	U
Delta BHC (Delta Hexachlorocyclohexane)	ug/Kg	2.2	U	3.3	U
Dieldrin	ug/Kg	4.3	U	6.3	U
Endosulfan I	ug/Kg	2.2	U	3.3	U
Endosulfan II	ug/Kg	4.3	U	6.3	U
Endosulfan Sulfate	ug/Kg	4.3	U	6.3	U
Endrin Aldehyde	ug/Kg	4.3	U	6.3	U
Endrin Ketone	ug/Kg	4.3	U	6.3	U
Endrin	ug/Kg	4.3	U	6.3	U
Gamma BHC (Lindane)	ug/Kg	2.2	U	3.3	U
Gamma-chlordane	ug/Kg	2.2	U	3.3	U
Heptachlor Epoxide	ug/Kg	2.2	U	3.3	U
Heptachlor	ug/Kg	2.2	U	3.3	U
Methoxychlor	ug/Kg	22	U	33	U
p,p'-DDD	ug/Kg	4.3	U	6.3	U
p,p'-DDE	ug/Kg	4.3	U	6.3	U
p,p'-DDT	ug/Kg	4.3	U	6.3	U
Toxaphene	ug/Kg	220	U	330	U

	StationID	F613SB001		F613SB001		F613SB001	
	SampleID	613SB00101 (0-1ft)		613SB00101DL (0-1ft)		613SB00102 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/21/1999		10/18/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	800	U	4000	R	620	U
1,3-Dichlorobenzene	ug/Kg	800	U	4000	R	620	U
1,4-Dichlorobenzene	ug/Kg	800	U	4000	R	620	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	800	U	4000	R	620	U
2,4,5-Trichlorophenol	ug/Kg	800	U	4000	R	620	U
2,4,6-Trichlorophenol	ug/Kg	800	U	4000	R	620	U
2,4-Dichlorophenol	ug/Kg	800	U	4000	R	620	U
2,4-Dimethylphenol	ug/Kg	800	U	4000	R	620	U
2,4-Dinitrophenol	ug/Kg	1600	U	8000	R	1200	U
2,4-Dinitrotoluene	ug/Kg	800	U	4000	R	620	U
2,6-Dinitrotoluene	ug/Kg	800	U	4000	R	620	U
2-Chloronaphthalene	ug/Kg	800	U	4000	R	620	U
2-Chlorophenol	ug/Kg	800	U	4000	R	620	U
2-Methylnaphthalene	ug/Kg	800	U	4000	R	620	U
2-Methylphenol (o-Cresol)	ug/Kg	800	U	4000	R	620	U
2-Nitroaniline	ug/Kg	800	U	4000	R	620	U
2-Nitrophenol	ug/Kg	800	U	4000	R	620	U
3,3'-Dichlorobenzidine	ug/Kg	1600	U	8000	R	1200	U
3-Nitroaniline	ug/Kg	800	U	4000	R	620	U
4,6-Dinitro-2-methylphenol	ug/Kg	1600	U	8000	R	1200	U
4-Bromophenyl Phenyl Ether	ug/Kg	800	U	4000	R	620	U
4-Chloro-3-methylphenol	ug/Kg	800	U	4000	R	620	U
4-Chloroaniline	ug/Kg	800	U	4000	R	620	U
4-Chlorophenyl Phenyl Ether	ug/Kg	800	U	4000	R	620	U
4-Methylphenol (p-Cresol)	ug/Kg	800	U	4000	R	620	U
4-Nitroaniline	ug/Kg	800	U	4000	R	620	U
4-Nitrophenol	ug/Kg	1600	U	8000	R	1200	U
Acenaphthene	ug/Kg	800	U	4000	R	620	U
Acenaphthylene	ug/Kg	800	U	4000	R	620	U
Anthracene	ug/Kg	360	J	4000	R	620	U
Benzo(a)Anthracene	ug/Kg	920	J	4000	R	620	U

	StationID	F613SB002		F613SB002		F613SB003	
	SampleID	613SB00201 (0-1ft)		613SB00202 (3-5ft)		613CB00301 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/27/1999		10/27/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	400	U	790	U	400	U
1,3-Dichlorobenzene	ug/Kg	400	U	790	U	400	U
1,4-Dichlorobenzene	ug/Kg	400	U	790	U	400	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	400	U	790	U	400	U
2,4,5-Trichlorophenol	ug/Kg	400	U	790	U	400	U
2,4,6-Trichlorophenol	ug/Kg	400	U	790	U	400	U
2,4-Dichlorophenol	ug/Kg	400	U	790	U	400	U
2,4-Dimethylphenol	ug/Kg	400	U	790	U	400	U
2,4-Dinitrophenol	ug/Kg	800	U	1600	U	800	U
2,4-Dinitrotoluene	ug/Kg	400	U	790	U	400	U
2,6-Dinitrotoluene	ug/Kg	400	U	790	U	400	U
2-Chloronaphthalene	ug/Kg	400	U	790	U	400	U
2-Chlorophenol	ug/Kg	400	U	790	U	400	U
2-Methylnaphthalene	ug/Kg	400	U	790	U	400	U
2-Methylphenol (o-Cresol)	ug/Kg	400	U	790	U	400	U
2-Nitroaniline	ug/Kg	400	U	790	U	400	U
2-Nitrophenol	ug/Kg	400	U	790	U	400	U
3,3'-Dichlorobenzidine	ug/Kg	800	U	1600	U	800	UJ
3-Nitroaniline	ug/Kg	400	U	790	U	400	U
4,6-Dinitro-2-methylphenol	ug/Kg	800	U	1600	U	800	U
4-Bromophenyl Phenyl Ether	ug/Kg	400	U	790	U	400	U
4-Chloro-3-methylphenol	ug/Kg	400	U	790	U	400	U
4-Chloroaniline	ug/Kg	400	U	790	U	400	U
4-Chlorophenyl Phenyl Ether	ug/Kg	400	U	790	U	400	U
4-Methylphenol (p-Cresol)	ug/Kg	400	U	790	U	400	U
4-Nitroaniline	ug/Kg	400	U	790	U	400	U
4-Nitrophenol	ug/Kg	800	U	1600	U	800	U
Acenaphthene	ug/Kg	400	U	790	U	580	=
Acenaphthylene	ug/Kg	400	U	790	U	400	U
Anthracene	ug/Kg	400	U	790	U	520	=
Benzo(a)Anthracene	ug/Kg	400	U	790	U	670	J

	StationID	F613SB003		F613SB003		F613SB003	
	SampleID	613CB00301DL (0-1ft)		613CB00302 (3-5ft)		613CB00302DL (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/27/1999		10/25/1999		10/27/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	1600	R	540	U	2200	R
1,3-Dichlorobenzene	ug/Kg	1600	R	540	U	2200	R
1,4-Dichlorobenzene	ug/Kg	1600	R	540	U	2200	R
2,2'-Oxybis(1-chloro)propane	ug/Kg	1600	R	540	U	2200	R
2,4,5-Trichlorophenol	ug/Kg	1600	R	540	U	2200	R
2,4,6-Trichlorophenol	ug/Kg	1600	R	540	U	2200	R
2;4-Dichlorophenol	ug/Kg	1600	R	540	U	2200	R
2,4-Dimethylphenol	ug/Kg	1600	R	540	U	2200	R
2,4-Dinitrophenol	ug/Kg	3200	R	1100	U	4300	R
2,4-Dinitrotoluene	ug/Kg	1600	R	540	U	2200	R
2,6-Dinitrotoluene	ug/Kg	1600	R	540	U	2200	R
2-Chloronaphthalene	ug/Kg	1600	R	540	U	2200	R
2-Chlorophenol	ug/Kg	1600	R	540	U	2200	R
2-Methylnaphthalene	ug/Kg	1600	R	540	U	2200	R
2-Methylphenol (o-Cresol)	ug/Kg	1600	R	540	U	2200	R
2-Nitroaniline	ug/Kg	1600	R	540	U	2200	R
2-Nitrophenol	ug/Kg	1600	R	540	U	2200	R
3,3'-Dichlorobenzidine	ug/Kg	3200	R	1100	U	4300	R
3-Nitroaniline	ug/Kg	1600	R	540	U	2200	R
4,6-Dinitro-2-methylphenol	ug/Kg	3200	R	1100	U	4300	R
4-Bromophenyl Phenyl Ether	ug/Kg	1600	R	540	U	2200	R
4-Chloro-3-methylphenol	ug/Kg	1600	R	540	U	2200	R
4-Chloroaniline	ug/Kg	1600	R	540	U	2200	R
4-Chlorophenyl Phenyl Ether	ug/Kg	1600	R	540	U	2200	R
4-Methylphenol (p-Cresol)	ug/Kg	1600	R	540	U	2200	R
4-Nitroaniline	ug/Kg	1600	R	540	U	2200	R
4-Nitrophenol	ug/Kg	3200	R	1100	U	4300	R
Acenaphthene	ug/Kg	520	R	540	U	2200	R
Acenaphthylene	ug/Kg	1600	R	540	U	2200	R
Anthracene	ug/Kg	440	R	540	U	2200	R
Benzo(a)Anthracene	ug/Kg	630	R	540	U	2200	R

	StationID	F613SB003		F613SB003		F613SB003	
	SampleID	613SB00301 (0-1ft)		613SB00301DL (0-1ft)		613SB00302 (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/25/1999		10/27/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	390	U	1600	R	540	U
1,3-Dichlorobenzene	ug/Kg	390	U	1600	R	540	U
1,4-Dichlorobenzene	ug/Kg	390	U	1600	R	540	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	390	U	1600	R	540	U
2,4,5-Trichlorophenol	ug/Kg	390	U	1600	R	540	U
2,4,6-Trichlorophenol	ug/Kg	390	U	1600	R	540	U
2,4-Dichlorophenol	ug/Kg	390	U	1600	R	540	U
2,4-Dimethylphenol	ug/Kg	390	U	1600	R	540	U
2,4-Dinitrophenol	ug/Kg	780	U	3100	R	1100	U
2,4-Dinitrotoluene	ug/Kg	390	U	1600	R	540	U
2,6-Dinitrotoluene	ug/Kg	390	U	1600	R	540	U
2-Chloronaphthalene	ug/Kg	390	U	1600	R	540	U
2-Chlorophenol	ug/Kg	390	U	1600	R	540	U
2-Methylnaphthalene	ug/Kg	390	U	1600	R	540	U
2-Methylphenol (o-Cresol)	ug/Kg	390	U	1600	R	540	U
2-Nitroaniline	ug/Kg	390	U	1600	R	540	U
2-Nitrophenol	ug/Kg	390	U	1600	R	540	U
3,3'-Dichlorobenzidine	ug/Kg	780	U	3100	R	1100	U
3-Nitroaniline	ug/Kg	390	U	1600	R	540	U
4,6-Dinitro-2-methylphenol	ug/Kg	780	U	3100	R	1100	U
4-Bromophenyl Phenyl Ether	ug/Kg	390	U	1600	R	540	U
4-Chloro-3-methylphenol	ug/Kg	390	U	1600	R	540	U
4-Chloroaniline	ug/Kg	390	U	1600	R	540	U
4-Chlorophenyl Phenyl Ether	ug/Kg	390	U	1600	R	540	U
4-Methylphenol (p-Cresol)	ug/Kg	390	U	1600	R	540	U
4-Nitroaniline	ug/Kg	390	U	1600	R	540	U
4-Nitrophenol	ug/Kg	780	U	3100	R	1100	U
Acenaphthene	ug/Kg	370	J	1600	R	540	U
Acenaphthylene	ug/Kg	390	U	1600	R	540	U
Anthracene	ug/Kg	390	J	320	R	540	U
Benzo(a)Anthracene	ug/Kg	750	=	700	R	540	U

	StationID	F613SB004		F613SB004		F613SB005	
	SampleID	613SB00401 (0-1ft)		613SB00402 (3-5ft)		613SB00501 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	Units						
1,2-Dichlorobenzene	ug/Kg	460	U	680	U	530	U
1,3-Dichlorobenzene	ug/Kg	460	U	680	U	530	U
1,4-Dichlorobenzene	ug/Kg	460	U	680	U	530	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	460	U	680	U	530	U
2,4,5-Trichlorophenol	ug/Kg	460	U	680	U	530	U
2,4,6-Trichlorophenol	ug/Kg	460	U	680	U	530	U
2,4-Dichlorophenol	ug/Kg	460	U	680	U	530	U
2,4-Dimethylphenol	ug/Kg	460	U	680	U	530	U
2,4-Dinitrophenol	ug/Kg	930	U	1400	U	1100	U
2,4-Dinitrotoluene	ug/Kg	460	U	680	U	530	U
2,6-Dinitrotoluene	ug/Kg	460	U	680	U	530	U
2-Chloronaphthalene	ug/Kg	460	U	680	U	530	U
2-Chlorophenol	ug/Kg	460	U	680	U	530	U
2-Methylnaphthalene	ug/Kg	460	U	680	U	530	U
2-Methylphenol (o-Cresol)	ug/Kg	460	U	680	U	530	U
2-Nitroaniline	ug/Kg	460	U	680	U	530	U
2-Nitrophenol	ug/Kg	460	U	680	U	530	U
3,3'-Dichlorobenzidine	ug/Kg	930	U	1400	U	1100	U
3-Nitroaniline	ug/Kg	460	U	680	U	530	U
4,6-Dinitro-2-methylphenol	ug/Kg	930	U	1400	U	1100	U
4-Bromophenyl Phenyl Ether	ug/Kg	460	U	680	U	530	U
4-Chloro-3-methylphenol	ug/Kg	460	U	680	U	530	U
4-Chloroaniline	ug/Kg	460	U	680	U	530	U
4-Chlorophenyl Phenyl Ether	ug/Kg	460	U	680	U	530	U
4-Methylphenol (p-Cresol)	ug/Kg	460	U	680	U	530	U
4-Nitroaniline	ug/Kg	460	U	680	U	530	U
4-Nitrophenol	ug/Kg	930	U	1400	U	1100	U
Acenaphthene	ug/Kg	460	U	680	U	530	U
Acenaphthylene	ug/Kg	460	U	680	U	530	U
Anthracene	ug/Kg	460	U	390	J	530	U
Benzo(a)Anthracene	ug/Kg	240	J	330	J	530	U

	StationID	F613SB005		F613SB006		F613SB006	
	SampleID	613SB00502 (3-5ft)		613SB00601 (0-1ft)		613SB00602 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	Units						
1,2-Dichlorobenzene	ug/Kg	530	U	410	U	540	U
1,3-Dichlorobenzene	ug/Kg	530	U	410	U	540	U
1,4-Dichlorobenzene	ug/Kg	530	U	410	U	540	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	530	U	410	U	540	U
2,4,5-Trichlorophenol	ug/Kg	530	U	410	U	540	U
2,4,6-Trichlorophenol	ug/Kg	530	U	410	U	540	U
2,4-Dichlorophenol	ug/Kg	530	U	410	U	540	U
2,4-Dimethylphenol	ug/Kg	530	U	410	U	540	U
2,4-Dinitrophenol	ug/Kg	1100	U	810	U	1100	U
2,4-Dinitrotoluene	ug/Kg	530	U	410	U	540	U
2,6-Dinitrotoluene	ug/Kg	530	U	410	U	540	U
2-Chloronaphthalene	ug/Kg	530	U	410	U	540	U
2-Chlorophenol	ug/Kg	530	U	410	U	540	U
2-Methylnaphthalene	ug/Kg	530	U	410	U	540	U
2-Methylphenol (o-Cresol)	ug/Kg	530	U	410	U	540	U
2-Nitroaniline	ug/Kg	530	U	410	U	540	U
2-Nitrophenol	ug/Kg	530	U	410	U	540	U
3,3'-Dichlorobenzidine	ug/Kg	1100	U	810	U	1100	U
3-Nitroaniline	ug/Kg	530	U	410	U	540	U
4,6-Dinitro-2-methylphenol	ug/Kg	1100	U	810	U	1100	U
4-Bromophenyl Phenyl Ether	ug/Kg	530	U	410	U	540	U
4-Chloro-3-methylphenol	ug/Kg	530	U	410	U	540	U
4-Chloroaniline	ug/Kg	530	U	410	U	540	U
4-Chlorophenyl Phenyl Ether	ug/Kg	530	U	410	U	540	U
4-Methylphenol (p-Cresol)	ug/Kg	530	U	410	U	540	U
4-Nitroaniline	ug/Kg	530	U	410	U	540	U
4-Nitrophenol	ug/Kg	1100	U	810	U	1100	U
Acenaphthene	ug/Kg	530	U	410	U	540	U
Acenaphthylene	ug/Kg	190	J	410	U	540	U
Anthracene	ug/Kg	190	J	410	U	540	U
Benzo(a)Anthracene	ug/Kg	1200	=	410	U	170	J

	StationID	F613SB007		F613SB007		F613SB008	
	SampleID	613SB00701 (0-1ft)		613SB00702 (3-5ft)		613SB00801 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/18/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	Units						
1,2-Dichlorobenzene	ug/Kg	370	U	690	U	400	U
1,3-Dichlorobenzene	ug/Kg	370	U	690	U	400	U
1,4-Dichlorobenzene	ug/Kg	370	U	690	U	400	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	370	U	690	U	400	U
2,4,5-Trichlorophenol	ug/Kg	370	U	690	U	400	U
2,4,6-Trichlorophenol	ug/Kg	370	U	690	U	400	U
2,4-Dichlorophenol	ug/Kg	370	U	690	U	400	U
2,4-Dimethylphenol	ug/Kg	370	U	690	U	400	U
2,4-Dinitrophenol	ug/Kg	740	U	1400	U	790	U
2,4-Dinitrotoluene	ug/Kg	370	U	690	U	400	U
2,6-Dinitrotoluene	ug/Kg	370	U	690	U	400	U
2-Chloronaphthalene	ug/Kg	370	U	690	U	400	U
2-Chlorophenol	ug/Kg	370	U	690	U	400	U
2-Methylnaphthalene	ug/Kg	370	U	690	U	900	=
2-Methylphenol (o-Cresol)	ug/Kg	370	U	690	U	400	U
2-Nitroaniline	ug/Kg	370	U	690	U	400	U
2-Nitrophenol	ug/Kg	370	U	690	U	400	U
3,3'-Dichlorobenzidine	ug/Kg	740	U	1400	U	790	UJ
3-Nitroaniline	ug/Kg	370	U	690	U	400	U
4,6-Dinitro-2-methylphenol	ug/Kg	740	U	1400	U	790	U
4-Bromophenyl Phenyl Ether	ug/Kg	370	U	690	U	400	U
4-Chloro-3-methylphenol	ug/Kg	370	U	690	U	400	U
4-Chloroaniline	ug/Kg	370	U	690	U	400	U
4-Chlorophenyl Phenyl Ether	ug/Kg	370	U	690	U	400	U
4-Methylphenol (p-Cresol)	ug/Kg	370	U	690	U	400	U
4-Nitroaniline	ug/Kg	370	U	690	U	400	U
4-Nitrophenol	ug/Kg	740	U	1400	U	790	U
Acenaphthene	ug/Kg	370	U	690	U	200	J
Acenaphthylene	ug/Kg	370	U	690	U	400	U
Anthracene	ug/Kg	370	U	690	U	230	J
Benzo(a)Anthracene	ug/Kg	370	U	690	U	240	J

	StationID	F613SB008		F613SB008		F613SB009	
	SampleID	613SB00801DL (0-1ft)		613SB00802 (3-5ft)		613SB00901 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	2000	R	670	U	1800	U
1,3-Dichlorobenzene	ug/Kg	2000	R	670	U	1800	U
1,4-Dichlorobenzene	ug/Kg	2000	R	670	U	1800	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	2000	R	670	U	1800	U
2,4,5-Trichlorophenol	ug/Kg	2000	R	670	U	1800	U
2,4,6-Trichlorophenol	ug/Kg	2000	R	670	U	1800	U
2,4-Dichlorophenol	ug/Kg	2000	R	670	U	1800	U
2,4-Dimethylphenol	ug/Kg	2000	R	670	U	1800	U
2,4-Dinitrophenol	ug/Kg	4000	R	1300	U	3600	U
2,4-Dinitrotoluene	ug/Kg	2000	R	670	U	1800	U
2,6-Dinitrotoluene	ug/Kg	2000	R	670	U	1800	U
2-Chloronaphthalene	ug/Kg	2000	R	670	U	1800	U
2-Chlorophenol	ug/Kg	2000	R	670	U	1800	U
2-Methylnaphthalene	ug/Kg	890	R	240	J	11000	=
2-Methylphenol (o-Cresol)	ug/Kg	2000	R	670	U	1800	U
2-Nitroaniline	ug/Kg	2000	R	670	U	1800	U
2-Nitrophenol	ug/Kg	2000	R	670	U	1800	U
3,3'-Dichlorobenzidine	ug/Kg	4000	R	1300	U	3600	UJ
3-Nitroaniline	ug/Kg	2000	R	670	U	1800	U
4,6-Dinitro-2-methylphenol	ug/Kg	4000	R	1300	U	3600	U
4-Bromophenyl Phenyl Ether	ug/Kg	2000	R	670	U	1800	U
4-Chloro-3-methylphenol	ug/Kg	2000	R	670	U	1800	U
4-Chloroaniline	ug/Kg	2000	R	670	U	1800	U
4-Chlorophenyl Phenyl Ether	ug/Kg	2000	R	670	U	1800	U
4-Methylphenol (p-Cresol)	ug/Kg	2000	R	670	U	1800	U
4-Nitroaniline	ug/Kg	2000	R	670	U	1800	U
4-Nitrophenol	ug/Kg	4000	R	1300	U	3600	U
Acenaphthene	ug/Kg	2000	R	670	U	1100	J
Acenaphthylene	ug/Kg	2000	R	670	U	1800	U
Anthracene	ug/Kg	2000	R	670	U	1000	J
Benzo(a)Anthracene	ug/Kg	2000	R	140	J	520	J

	StationID	F613SB009		F613SB009		F613SB010	
	SampleID	613SB00901DL (0-1ft)		613SB00902 (3-5ft)		613SB01001 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/20/1999		10/20/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	4400	R	530	U	420	U
1,3-Dichlorobenzene	ug/Kg	4400	R	530	U	420	U
1,4-Dichlorobenzene	ug/Kg	4400	R	530	U	420	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	4400	R	530	U	420	U
2,4,5-Trichlorophenol	ug/Kg	4400	R	530	U	420	U
2,4,6-Trichlorophenol	ug/Kg	4400	R	530	U	420	U
2,4-Dichlorophenol	ug/Kg	4400	R	530	U	420	U
2,4-Dimethylphenol	ug/Kg	4400	R	530	U	420	U
2,4-Dinitrophenol	ug/Kg	8900	R	1100	U	840	U
2,4-Dinitrotoluene	ug/Kg	4400	R	530	U	420	U
2,6-Dinitrotoluene	ug/Kg	4400	R	530	U	420	U
2-Chloronaphthalene	ug/Kg	4400	R	530	U	420	U
2-Chlorophenol	ug/Kg	4400	R	530	U	420	U
2-Methylnaphthalene	ug/Kg	12000	R	120	J	420	U
2-Methylphenol (o-Cresol)	ug/Kg	4400	R	530	U	420	U
2-Nitroaniline	ug/Kg	4400	R	530	U	420	U
2-Nitrophenol	ug/Kg	4400	R	530	U	420	U
3,3'-Dichlorobenzidine	ug/Kg	8900	R	1100	U	840	U
3-Nitroaniline	ug/Kg	4400	R	530	U	420	U
4,6-Dinitro-2-methylphenol	ug/Kg	8900	R	1100	U	840	U
4-Bromophenyl Phenyl Ether	ug/Kg	4400	R	530	U	420	U
4-Chloro-3-methylphenol	ug/Kg	4400	R	530	U	420	U
4-Chloroaniline	ug/Kg	4400	R	530	U	420	U
4-Chlorophenyl Phenyl Ether	ug/Kg	4400	R	530	U	420	U
4-Methylphenol (p-Cresol)	ug/Kg	4400	R	530	U	420	U
4-Nitroaniline	ug/Kg	4400	R	530	U	420	U
4-Nitrophenol	ug/Kg	8900	R	1100	U	840	U
Acenaphthene	ug/Kg	980	R	530	U	420	U
Acenaphthylene	ug/Kg	4400	R	530	U	420	U
Anthracene	ug/Kg	4400	R	530	U	420	U
Benzo(a)Anthracene	ug/Kg	4400	R	130	J	120	J

	StationID	F613SB010		F613SB011		F613SB011	
	SampleID	613SB01002 (3-5ft)		613SB01101 (0-1ft)		613SB01102 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/28/1999		10/29/1999	
	SDGNumber	EN019		EN023		EN023	
Parameter	Units						
1,2-Dichlorobenzene	ug/Kg	540	U	410	U	1600	U
1,3-Dichlorobenzene	ug/Kg	540	U	410	U	1600	U
1,4-Dichlorobenzene	ug/Kg	540	U	410	U	1600	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	540	U	410	U	1600	U
2,4,5-Trichlorophenol	ug/Kg	540	U	410	U	1600	U
2,4,6-Trichlorophenol	ug/Kg	540	U	410	U	1600	U
2,4-Dichlorophenol	ug/Kg	540	U	410	U	1600	U
2,4-Dimethylphenol	ug/Kg	540	U	410	U	1600	U
2,4-Dinitrophenol	ug/Kg	1100	U	810	U	3200	U
2,4-Dinitrotoluene	ug/Kg	540	U	410	U	1600	U
2,6-Dinitrotoluene	ug/Kg	540	U	410	U	1600	U
2-Chloronaphthalene	ug/Kg	540	U	410	U	1600	U
2-Chlorophenol	ug/Kg	540	U	410	U	1600	U
2-Methylnaphthalene	ug/Kg	540	U	410	U	400	J
2-Methylphenol (o-Cresol)	ug/Kg	540	U	410	U	1600	U
2-Nitroaniline	ug/Kg	540	U	410	U	1600	U
2-Nitrophenol	ug/Kg	540	U	410	U	1600	U
3,3'-Dichlorobenzidine	ug/Kg	1100	U	810	U	3200	UJ
3-Nitroaniline	ug/Kg	540	U	410	U	1600	U
4,6-Dinitro-2-methylphenol	ug/Kg	1100	U	810	U	3200	U
4-Bromophenyl Phenyl Ether	ug/Kg	540	U	410	U	1600	U
4-Chloro-3-methylphenol	ug/Kg	540	U	410	U	1600	U
4-Chloroaniline	ug/Kg	540	U	410	U	1600	U
4-Chlorophenyl Phenyl Ether	ug/Kg	540	U	410	U	1600	U
4-Methylphenol (p-Cresol)	ug/Kg	540	U	410	U	1600	U
4-Nitroaniline	ug/Kg	540	U	410	U	1600	U
4-Nitrophenol	ug/Kg	1100	U	810	U	3200	U
Acenaphthene	ug/Kg	540	U	410	U	1600	U
Acenaphthylene	ug/Kg	540	U	410	U	1600	U
Anthracene	ug/Kg	540	U	410	U	1600	U
Benzo(a)Anthracene	ug/Kg	180	J	410	U	1600	UJ

	StationID	F613SB011		F613SB012		F613SB012	
	SampleID	613SB01102DL (3-5ft)		613CB01201 (0-1ft)		613CB01202 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/29/1999		10/25/1999		10/25/1999	
	SDGNumber	EN023		EN021		EN021	
Parameter	Units						
1,2-Dichlorobenzene	ug/Kg	4000	R	380	U	640	U
1,3-Dichlorobenzene	ug/Kg	4000	R	380	U	640	U
1,4-Dichlorobenzene	ug/Kg	4000	R	380	U	640	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	4000	R	380	U	640	U
2,4,5-Trichlorophenol	ug/Kg	4000	R	380	U	640	U
2,4,6-Trichlorophenol	ug/Kg	4000	R	380	U	640	U
2,4-Dichlorophenol	ug/Kg	4000	R	380	U	640	U
2,4-Dimethylphenol	ug/Kg	4000	R	380	U	640	U
2,4-Dinitrophenol	ug/Kg	8000	R	770	U	1300	U
2,4-Dinitrotoluene	ug/Kg	4000	R	380	U	640	U
2,6-Dinitrotoluene	ug/Kg	4000	R	380	U	640	U
2-Chloronaphthalene	ug/Kg	4000	R	380	U	640	U
2-Chlorophenol	ug/Kg	4000	R	380	U	640	U
2-Methylnaphthalene	ug/Kg	4000	R	380	U	640	U
2-Methylphenol (o-Cresol)	ug/Kg	4000	R	380	U	640	U
2-Nitroaniline	ug/Kg	4000	R	380	U	640	U
2-Nitrophenol	ug/Kg	4000	R	380	U	640	U
3,3'-Dichlorobenzidine	ug/Kg	8000	R	770	U	1300	U
3-Nitroaniline	ug/Kg	4000	R	380	U	640	U
4,6-Dinitro-2-methylphenol	ug/Kg	8000	R	770	U	1300	U
4-Bromophenyl Phenyl Ether	ug/Kg	4000	R	380	U	640	U
4-Chloro-3-methylphenol	ug/Kg	4000	R	380	U	640	U
4-Chloroaniline	ug/Kg	4000	R	380	U	640	U
4-Chlorophenyl Phenyl Ether	ug/Kg	4000	R	380	U	640	U
4-Methylphenol (p-Cresol)	ug/Kg	4000	R	380	U	640	U
4-Nitroaniline	ug/Kg	4000	R	380	U	640	U
4-Nitrophenol	ug/Kg	8000	R	770	U	1300	U
Acenaphthene	ug/Kg	4000	R	380	U	640	U
Acenaphthylene	ug/Kg	4000	R	380	U	640	U
Anthracene	ug/Kg	4000	R	380	U	640	U
Benzo(a)Anthracene	ug/Kg	4000	R	79	J	640	U

	StationID	F613SB012		F613SB012		F613SB013	
	SampleID	613SB01201 (0-1ft)		613SB01202 (3-5ft)		613CB01301 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/22/1999		10/25/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	400	U	620	U	420	U
1,3-Dichlorobenzene	ug/Kg	400	U	620	U	420	U
1,4-Dichlorobenzene	ug/Kg	400	U	620	U	420	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	400	U	620	U	420	U
2,4,5-Trichlorophenol	ug/Kg	400	U	620	U	420	U
2,4,6-Trichlorophenol	ug/Kg	400	U	620	U	420	U
2,4-Dichlorophenol	ug/Kg	400	U	620	U	420	U
2,4-Dimethylphenol	ug/Kg	400	U	620	U	420	U
2,4-Dinitrophenol	ug/Kg	800	U	1200	U	830	U
2,4-Dinitrotoluene	ug/Kg	400	U	620	U	420	U
2,6-Dinitrotoluene	ug/Kg	400	U	620	U	420	U
2-Chloronaphthalene	ug/Kg	400	U	620	U	420	U
2-Chlorophenol	ug/Kg	400	U	620	U	420	U
2-Methylnaphthalene	ug/Kg	400	U	620	U	420	U
2-Methylphenol (o-Cresol)	ug/Kg	400	U	620	U	420	U
2-Nitroaniline	ug/Kg	400	U	620	U	420	U
2-Nitrophenol	ug/Kg	400	U	620	U	420	U
3,3'-Dichlorobenzidine	ug/Kg	800	U	1200	U	830	U
3-Nitroaniline	ug/Kg	400	U	620	U	420	U
4,6-Dinitro-2-methylphenol	ug/Kg	800	U	1200	U	830	U
4-Bromophenyl Phenyl Ether	ug/Kg	400	U	620	U	420	U
4-Chloro-3-methylphenol	ug/Kg	400	U	620	U	420	U
4-Chloroaniline	ug/Kg	400	U	620	U	420	U
4-Chlorophenyl Phenyl Ether	ug/Kg	400	U	620	U	420	U
4-Methylphenol (p-Cresol)	ug/Kg	400	U	620	U	420	U
4-Nitroaniline	ug/Kg	400	U	620	U	420	U
4-Nitrophenol	ug/Kg	800	U	1200	U	830	U
Acenaphthene	ug/Kg	400	U	620	U	120	J
Acenaphthylene	ug/Kg	400	U	620	U	420	U
Anthracene	ug/Kg	400	U	620	U	260	J
Benzo(a)Anthracene	ug/Kg	90	J	620	U	600	J

	StationID	F613SB013		F613SB013		F613SB013	
	SampleID	613CB01302 (3-5ft)		613SB01301 (0-1ft)		613SB01302 (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/25/1999		10/25/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	Units						
1,2-Dichlorobenzene	ug/Kg	460	U	400	U	450	U
1,3-Dichlorobenzene	ug/Kg	460	U	400	U	450	U
1,4-Dichlorobenzene	ug/Kg	460	U	400	U	450	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	460	U	400	U	450	U
2,4,5-Trichlorophenol	ug/Kg	460	U	400	U	450	U
2,4,6-Trichlorophenol	ug/Kg	460	U	400	U	450	U
2,4-Dichlorophenol	ug/Kg	460	U	400	U	450	U
2,4-Dimethylphenol	ug/Kg	460	U	400	U	450	U
2,4-Dinitrophenol	ug/Kg	910	U	800	U	900	U
2,4-Dinitrotoluene	ug/Kg	460	U	400	U	450	U
2,6-Dinitrotoluene	ug/Kg	460	U	400	U	450	U
2-Chloronaphthalene	ug/Kg	460	U	400	U	450	U
2-Chlorophenol	ug/Kg	460	U	400	U	450	U
2-Methylnaphthalene	ug/Kg	460	U	400	U	450	U
2-Methylphenol (o-Cresol)	ug/Kg	460	U	400	U	450	U
2-Nitroaniline	ug/Kg	460	U	400	U	450	U
2-Nitrophenol	ug/Kg	460	U	400	U	450	U
3,3'-Dichlorobenzidine	ug/Kg	910	U	800	U	900	U
3-Nitroaniline	ug/Kg	460	U	400	U	450	U
4,6-Dinitro-2-methylphenol	ug/Kg	910	U	800	U	900	U
4-Bromophenyl Phenyl Ether	ug/Kg	460	U	400	U	450	U
4-Chloro-3-methylphenol	ug/Kg	460	U	400	U	450	U
4-Chloroaniline	ug/Kg	460	U	400	U	450	U
4-Chlorophenyl Phenyl Ether	ug/Kg	460	U	400	U	450	U
4-Methylphenol (p-Cresol)	ug/Kg	460	U	400	U	450	U
4-Nitroaniline	ug/Kg	460	U	400	U	450	U
4-Nitrophenol	ug/Kg	910	U	800	U	900	U
Acenaphthene	ug/Kg	460	U	400	U	450	U
Acenaphthylene	ug/Kg	460	U	400	U	450	U
Anthracene	ug/Kg	460	U	400	U	450	U
Benzo(a)Anthracene	ug/Kg	460	U	140	J	140	J

	StationID	F613SB014		F613SB014		F613SB016	
	SampleID	613SB01401 (0-1ft)		613SB01402 (3-5ft)		613SB01601 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/20/1999		10/20/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	3900	U	410	U	390	U
1,3-Dichlorobenzene	ug/Kg	3900	U	410	U	390	U
1,4-Dichlorobenzene	ug/Kg	3900	U	410	U	390	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	3900	U	410	U	390	U
2,4,5-Trichlorophenol	ug/Kg	3900	U	410	U	390	U
2,4,6-Trichlorophenol	ug/Kg	3900	U	410	U	390	U
2,4-Dichlorophenol	ug/Kg	3900	U	410	U	390	U
2,4-Dimethylphenol	ug/Kg	3900	U	410	U	390	U
2,4-Dinitrophenol	ug/Kg	7800	U	810	U	780	U
2,4-Dinitrotoluene	ug/Kg	3900	U	410	U	390	U
2,6-Dinitrotoluene	ug/Kg	3900	U	410	U	390	U
2-Chloronaphthalene	ug/Kg	3900	U	410	U	390	U
2-Chlorophenol	ug/Kg	3900	U	410	U	390	U
2-Methylnaphthalene	ug/Kg	3900	U	540	=	390	U
2-Methylphenol (o-Cresol)	ug/Kg	3900	U	410	U	390	U
2-Nitroaniline	ug/Kg	3900	U	410	U	390	U
2-Nitrophenol	ug/Kg	3900	U	410	U	390	U
3,3'-Dichlorobenzidine	ug/Kg	7800	U	810	U	780	U
3-Nitroaniline	ug/Kg	3900	U	410	U	390	U
4,6-Dinitro-2-methylphenol	ug/Kg	7800	U	810	U	780	U
4-Bromophenyl Phenyl Ether	ug/Kg	3900	U	410	U	390	U
4-Chloro-3-methylphenol	ug/Kg	3900	U	410	U	390	U
4-Chloroaniline	ug/Kg	3900	U	410	U	390	U
4-Chlorophenyl Phenyl Ether	ug/Kg	3900	U	410	U	390	U
4-Methylphenol (p-Cresol)	ug/Kg	3900	U	410	U	390	U
4-Nitroaniline	ug/Kg	3900	U	410	U	390	U
4-Nitrophenol	ug/Kg	7800	U	810	U	780	U
Acenaphthene	ug/Kg	3900	U	410	U	390	U
Acenaphthylene	ug/Kg	3900	U	410	U	390	U
Anthracene	ug/Kg	3900	U	410	U	390	U
Benzo(a)Anthracene	ug/Kg	3900	U	410	U	390	U

	StationID	F613SB016		F613SB016		F613SB021	
	SampleID	613SB01602 (3-5ft)		613SB01602DL (3-5ft)		613SB02101b (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/21/1999		11/23/1999	
	SDGNumber	EN019		EN019		EN027	
Parameter	Units						
1,2-Dichlorobenzene	ug/Kg	620	U	6200	R	380	U
1,3-Dichlorobenzene	ug/Kg	620	U	6200	R	380	U
1,4-Dichlorobenzene	ug/Kg	620	U	6200	R	380	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	620	U	6200	R	380	U
2,4,5-Trichlorophenol	ug/Kg	620	UJ	6200	R	380	U
2,4,6-Trichlorophenol	ug/Kg	620	UJ	6200	R	380	U
2,4-Dichlorophenol	ug/Kg	620	U	6200	R	380	U
2,4-Dimethylphenol	ug/Kg	620	U	6200	R	380	U
2,4-Dinitrophenol	ug/Kg	1200	UJ	12000	R	770	U
2,4-Dinitrotoluene	ug/Kg	620	UJ	6200	R	380	U
2,6-Dinitrotoluene	ug/Kg	620	UJ	6200	R	380	U
2-Chloronaphthalene	ug/Kg	620	UJ	6200	R	380	U
2-Chlorophenol	ug/Kg	620	U	6200	R	380	U
2-Methylnaphthalene	ug/Kg	31000	=	31000	R	380	U
2-Methylphenol (o-Cresol)	ug/Kg	620	U	6200	R	380	U
2-Nitroaniline	ug/Kg	620	UJ	6200	R	380	U
2-Nitrophenol	ug/Kg	620	U	6200	R	380	U
3,3'-Dichlorobenzidine	ug/Kg	1200	U	12000	R	770	U
3-Nitroaniline	ug/Kg	620	UJ	6200	R	380	U
4,6-Dinitro-2-methylphenol	ug/Kg	1200	UJ	12000	R	770	U
4-Bromophenyl Phenyl Ether	ug/Kg	620	UJ	6200	R	380	U
4-Chloro-3-methylphenol	ug/Kg	620	U	6200	R	380	U
4-Chloroaniline	ug/Kg	620	U	6200	R	380	U
4-Chlorophenyl Phenyl Ether	ug/Kg	620	UJ	6200	R	380	U
4-Methylphenol (p-Cresol)	ug/Kg	620	U	6200	R	380	U
4-Nitroaniline	ug/Kg	620	UJ	6200	R	380	U
4-Nitrophenol	ug/Kg	1200	UJ	12000	R	770	U
Acenaphthene	ug/Kg	1400	J	1400	R	380	U
Acenaphthylene	ug/Kg	620	UJ	6200	R	380	U
Anthracene	ug/Kg	620	UJ	6200	R	380	U
Benzo(a)Anthracene	ug/Kg	290	J	6200	R	120	J

	StationID	F613SB021		F613SB021		F613SB022	
	SampleID	613SB02101bDL (0-1ft)		613SB02102b (3-5ft)		613SB02201b (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/23/1999		11/23/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	770	R	620	U	380	U
1,3-Dichlorobenzene	ug/Kg	770	R	620	U	380	U
1,4-Dichlorobenzene	ug/Kg	770	R	620	U	380	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	770	R	620	U	380	U
2,4,5-Trichlorophenol	ug/Kg	770	R	620	U	380	U
2,4,6-Trichlorophenol	ug/Kg	770	R	620	U	380	U
2,4-Dichlorophenol	ug/Kg	770	R	620	U	380	U
2,4-Dimethylphenol	ug/Kg	770	R	620	U	380	U
2,4-Dinitrophenol	ug/Kg	1500	R	1200	U	770	U
2,4-Dinitrotoluene	ug/Kg	770	R	620	U	380	U
2,6-Dinitrotoluene	ug/Kg	770	R	620	U	380	U
2-Chloronaphthalene	ug/Kg	770	R	620	U	380	U
2-Chlorophenol	ug/Kg	770	R	620	U	380	U
2-Methylnaphthalene	ug/Kg	770	R	620	U	380	U
2-Methylphenol (o-Cresol)	ug/Kg	770	R	620	U	380	U
2-Nitroaniline	ug/Kg	770	R	620	U	380	U
2-Nitrophenol	ug/Kg	770	R	620	U	380	U
3,3'-Dichlorobenzidine	ug/Kg	1500	R	1200	U	770	U
3-Nitroaniline	ug/Kg	770	R	620	U	380	U
4,6-Dinitro-2-methylphenol	ug/Kg	1500	R	1200	U	770	U
4-Bromophenyl Phenyl Ether	ug/Kg	770	R	620	U	380	U
4-Chloro-3-methylphenol	ug/Kg	770	R	620	U	380	U
4-Chloroaniline	ug/Kg	770	R	620	U	380	U
4-Chlorophenyl Phenyl Ether	ug/Kg	770	R	620	U	380	U
4-Methylphenol (p-Cresol)	ug/Kg	770	R	620	U	380	U
4-Nitroaniline	ug/Kg	770	R	620	U	380	U
4-Nitrophenol	ug/Kg	1500	R	1200	U	770	U
Acenaphthene	ug/Kg	770	R	620	U	140	J
Acenaphthylene	ug/Kg	770	R	620	U	380	U
Anthracene	ug/Kg	770	R	620	U	230	J
Benzo(a)Anthracene	ug/Kg	770	R	620	U	1200	=

	StationID	F613SB022		F613SB022		F613SB023	
	SampleID	613SB02201bDL (0-1ft)		613SB02202b (3-5ft)		613SB02301 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/24/1999		11/23/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	770	R	560	U	430	U
1,3-Dichlorobenzene	ug/Kg	770	R	560	U	430	U
1,4-Dichlorobenzene	ug/Kg	770	R	560	U	430	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	770	R	560	U	430	U
2,4,5-Trichlorophenol	ug/Kg	770	R	560	U	430	U
2,4,6-Trichlorophenol	ug/Kg	770	R	560	U	430	U
2,4-Dichlorophenol	ug/Kg	770	R	560	U	430	U
2,4-Dimethylphenol	ug/Kg	770	R	560	U	430	U
2,4-Dinitrophenol	ug/Kg	1500	R	1100	UJ	850	U
2,4-Dinitrotoluene	ug/Kg	770	R	560	U	430	U
2,6-Dinitrotoluene	ug/Kg	770	R	560	U	430	U
2-Chloronaphthalene	ug/Kg	770	R	560	U	430	U
2-Chlorophenol	ug/Kg	770	R	560	U	430	U
2-Methylnaphthalene	ug/Kg	770	R	560	U	430	U
2-Methylphenol (o-Cresol)	ug/Kg	770	R	560	U	430	U
2-Nitroaniline	ug/Kg	770	R	560	U	430	U
2-Nitrophenol	ug/Kg	770	R	560	U	430	U
3,3'-Dichlorobenzidine	ug/Kg	1500	R	1100	U	850	U
3-Nitroaniline	ug/Kg	770	R	560	U	430	U
4,6-Dinitro-2-methylphenol	ug/Kg	1500	R	1100	U	850	U
4-Bromophenyl Phenyl Ether	ug/Kg	770	R	560	U	430	U
4-Chloro-3-methylphenol	ug/Kg	770	R	560	U	430	U
4-Chloroaniline	ug/Kg	770	R	560	U	430	U
4-Chlorophenyl Phenyl Ether	ug/Kg	770	R	560	U	430	U
4-Methylphenol (p-Cresol)	ug/Kg	770	R	560	U	430	U
4-Nitroaniline	ug/Kg	770	R	560	U	430	U
4-Nitrophenol	ug/Kg	1500	R	1100	U	850	U
Acenaphthene	ug/Kg	770	R	560	U	430	U
Acenaphthylene	ug/Kg	770	R	560	U	430	U
Anthracene	ug/Kg	210	R	560	U	430	U
Benzo(a)Anthracene	ug/Kg	1100	R	560	U	430	U

	StationID	F613SB023		F613SB024		F613SB024	
	SampleID	613SB02302 (3-5ft)		613SB02401 (0-1ft)		613SB02402 (3-5ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/23/1999		11/23/1999		11/24/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	560	U	450	U	710	U
1,3-Dichlorobenzene	ug/Kg	560	U	450	U	710	U
1,4-Dichlorobenzene	ug/Kg	560	U	450	U	710	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	560	U	450	U	710	U
2,4,5-Trichlorophenol	ug/Kg	560	U	450	U	710	U
2,4,6-Trichlorophenol	ug/Kg	560	U	450	U	710	U
2,4-Dichlorophenol	ug/Kg	560	U	450	U	710	U
2,4-Dimethylphenol	ug/Kg	560	U	450	U	710	U
2,4-Dinitrophenol	ug/Kg	1100	U	900	U	1400	UJ
2,4-Dinitrotoluene	ug/Kg	560	U	450	U	710	U
2,6-Dinitrotoluene	ug/Kg	560	U	450	U	710	U
2-Chloronaphthalene	ug/Kg	560	U	450	U	710	U
2-Chlorophenol	ug/Kg	560	U	450	U	710	U
2-Methylnaphthalene	ug/Kg	560	U	450	U	710	U
2-Methylphenol (o-Cresol)	ug/Kg	560	U	450	U	710	U
2-Nitroaniline	ug/Kg	560	U	450	U	710	U
2-Nitrophenol	ug/Kg	560	U	450	U	710	U
3,3'-Dichlorobenzidine	ug/Kg	1100	U	900	U	1400	U
3-Nitroaniline	ug/Kg	560	U	450	U	710	U
4,6-Dinitro-2-methylphenol	ug/Kg	1100	U	900	U	1400	U
4-Bromophenyl Phenyl Ether	ug/Kg	560	U	450	U	710	U
4-Chloro-3-methylphenol	ug/Kg	560	U	450	U	710	U
4-Chloroaniline	ug/Kg	560	U	450	U	710	U
4-Chlorophenyl Phenyl Ether	ug/Kg	560	U	450	U	710	U
4-Methylphenol (p-Cresol)	ug/Kg	560	U	450	U	710	U
4-Nitroaniline	ug/Kg	560	U	450	U	710	U
4-Nitrophenol	ug/Kg	1100	U	900	U	1400	U
Acenaphthene	ug/Kg	560	U	450	U	710	U
Acenaphthylene	ug/Kg	560	U	450	U	710	U
Anthracene	ug/Kg	560	U	450	U	710	U
Benzo(a)Anthracene	ug/Kg	560	U	130	J	710	U

	StationID	F613SB025		F613SB026		F613SB026	
	SampleID	613SB02501 (0-1ft)		613CB02602 (3-5ft)		613SB02601 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/17/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/29/1999		11/24/1999	
	SDGNumber	EN028		EN028		EN028	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	480	U	540	U	490	U
1,3-Dichlorobenzene	ug/Kg	480	U	540	U	490	U
1,4-Dichlorobenzene	ug/Kg	480	U	540	U	490	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	480	U	540	U	490	U
2,4,5-Trichlorophenol	ug/Kg	480	U	540	U	490	U
2,4,6-Trichlorophenol	ug/Kg	480	U	540	U	490	U
2,4-Dichlorophenol	ug/Kg	480	U	540	U	490	U
2,4-Dimethylphenol	ug/Kg	480	U	540	U	490	U
2,4-Dinitrophenol	ug/Kg	950	UJ	1100	U	980	UJ
2,4-Dinitrotoluene	ug/Kg	480	U	540	U	490	U
2,6-Dinitrotoluene	ug/Kg	480	U	540	U	490	U
2-Chloronaphthalene	ug/Kg	480	U	540	U	490	U
2-Chlorophenol	ug/Kg	480	U	540	U	490	U
2-Methylnaphthalene	ug/Kg	200	J	540	U	490	U
2-Methylphenol (o-Cresol)	ug/Kg	480	U	540	U	490	U
2-Nitroaniline	ug/Kg	480	U	540	U	490	U
2-Nitrophenol	ug/Kg	480	U	540	U	490	U
3,3'-Dichlorobenzidine	ug/Kg	950	U	1100	U	980	U
3-Nitroaniline	ug/Kg	480	U	540	U	490	U
4,6-Dinitro-2-methylphenol	ug/Kg	950	U	1100	U	980	U
4-Bromophenyl Phenyl Ether	ug/Kg	480	U	540	U	490	U
4-Chloro-3-methylphenol	ug/Kg	480	U	540	U	490	U
4-Chloroaniline	ug/Kg	480	U	540	U	490	U
4-Chlorophenyl Phenyl Ether	ug/Kg	480	U	540	U	490	U
4-Methylphenol (p-Cresol)	ug/Kg	480	U	540	U	490	U
4-Nitroaniline	ug/Kg	480	U	540	U	490	U
4-Nitrophenol	ug/Kg	950	U	1100	U	980	U
Acenaphthene	ug/Kg	480	U	540	U	490	U
Acenaphthylene	ug/Kg	480	U	540	U	490	U
Anthracene	ug/Kg	480	U	540	U	490	U
Benzo(a)Anthracene	ug/Kg	480	U	540	U	490	U

	StationID	F613SB026		F613SB027		F613SB027	
	SampleID	613SB02602 (3-5ft)		613SB02701 (0-1ft)		613SB02702 (3-5ft)	
	DateCollected	11/17/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/29/1999		11/24/1999		11/24/1999	
	SDGNumber	EN028		EN028		EN028	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	530	U	510	U	360	U
1,3-Dichlorobenzene	ug/Kg	530	U	510	U	360	U
1,4-Dichlorobenzene	ug/Kg	530	U	510	U	360	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	530	U	510	U	360	U
2,4,5-Trichlorophenol	ug/Kg	530	U	510	U	360	U
2,4,6-Trichlorophenol	ug/Kg	530	U	510	U	360	U
2,4-Dichlorophenol	ug/Kg	530	U	510	U	360	U
2,4-Dimethylphenol	ug/Kg	530	U	510	U	360	U
2,4-Dinitrophenol	ug/Kg	1100	U	1000	UJ	720	UJ
2,4-Dinitrotoluene	ug/Kg	530	U	510	U	360	U
2,6-Dinitrotoluene	ug/Kg	530	U	510	U	360	U
2-Chloronaphthalene	ug/Kg	530	U	510	U	360	U
2-Chlorophenol	ug/Kg	530	U	510	U	360	U
2-Methylnaphthalene	ug/Kg	530	U	510	U	360	U
2-Methylphenol (o-Cresol)	ug/Kg	530	U	510	U	360	U
2-Nitroaniline	ug/Kg	530	U	510	U	360	U
2-Nitrophenol	ug/Kg	530	U	510	U	360	U
3,3'-Dichlorobenzidine	ug/Kg	1100	U	1000	U	720	U
3-Nitroaniline	ug/Kg	530	U	510	U	360	U
4,6-Dinitro-2-methylphenol	ug/Kg	1100	U	1000	U	720	U
4-Bromophenyl Phenyl Ether	ug/Kg	530	U	510	U	360	U
4-Chloro-3-methylphenol	ug/Kg	530	U	510	U	360	U
4-Chloroaniline	ug/Kg	530	U	510	U	360	U
4-Chlorophenyl Phenyl Ether	ug/Kg	530	U	510	U	360	U
4-Methylphenol (p-Cresol)	ug/Kg	530	U	510	U	360	U
4-Nitroaniline	ug/Kg	530	U	510	U	360	U
4-Nitrophenol	ug/Kg	1100	U	1000	U	720	U
Acenaphthene	ug/Kg	530	U	510	U	360	U
Acenaphthylene	ug/Kg	530	U	510	U	360	U
Anthracene	ug/Kg	530	U	510	U	360	U
Benzo(a)Anthracene	ug/Kg	190	J	510	U	360	U

	StationID	F613SB028		F613SB028		F613SB029	
	SampleID	613SB02801 (0-1ft)		613SB02802 (3-5ft)		613SB02901 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		12/1/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/24/1999		12/06/1999	
	SDGNumber	EN028		EN028		EN030	
Parameter	Units						
1,2-Dichlorobenzene	ug/Kg	530	U	370	U	370	U
1,3-Dichlorobenzene	ug/Kg	530	U	370	U	370	U
1,4-Dichlorobenzene	ug/Kg	530	U	370	U	370	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	530	U	370	U	370	U
2,4,5-Trichlorophenol	ug/Kg	530	U	370	U	370	U
2,4,6-Trichlorophenol	ug/Kg	530	U	370	U	370	U
2,4-Dichlorophenol	ug/Kg	530	U	370	U	370	U
2,4-Dimethylphenol	ug/Kg	530	U	370	U	370	U
2,4-Dinitrophenol	ug/Kg	1100	U	740	UJ	730	U
2,4-Dinitrotoluene	ug/Kg	530	U	370	U	370	U
2,6-Dinitrotoluene	ug/Kg	530	U	370	U	370	U
2-Chloronaphthalene	ug/Kg	530	U	370	U	370	U
2-Chlorophenol	ug/Kg	530	U	370	U	370	U
2-Methylnaphthalene	ug/Kg	530	U	370	U	370	U
2-Methylphenol (o-Cresol)	ug/Kg	530	U	370	U	370	U
2-Nitroaniline	ug/Kg	530	U	370	U	370	U
2-Nitrophenol	ug/Kg	530	U	370	U	370	U
3,3'-Dichlorobenzidine	ug/Kg	1100	U	740	U	730	U
3-Nitroaniline	ug/Kg	530	U	370	U	370	U
4,6-Dinitro-2-methylphenol	ug/Kg	1100	U	740	U	730	U
4-Bromophenyl Phenyl Ether	ug/Kg	530	U	370	U	370	U
4-Chloro-3-methylphenol	ug/Kg	530	U	370	U	370	U
4-Chloroaniline	ug/Kg	530	U	370	U	370	U
4-Chlorophenyl Phenyl Ether	ug/Kg	530	U	370	U	370	U
4-Methylphenol (p-Cresol)	ug/Kg	530	U	370	U	370	U
4-Nitroaniline	ug/Kg	530	U	370	U	370	U
4-Nitrophenol	ug/Kg	1100	U	740	U	730	U
Acenaphthene	ug/Kg	530	U	370	U	370	U
Acenaphthylene	ug/Kg	530	U	370	U	370	U
Anthracene	ug/Kg	530	U	370	U	370	U
Benzo(a)Anthracene	ug/Kg	530	U	370	U	370	U

	StationID	F613SB029		F613SB030		F613SB030	
	SampleID	613SB02902 (3-5ft)		613SB03001 (0-1ft)		613SB03002 (3-5ft)	
	DateCollected	12/1/1999 12:00 AM		12/1/1999 12:00 AM		12/1/1999 12:00 AM	
	DateAnalyzed	12/06/1999		12/07/1999		12/06/1999	
	SDGNumber	EN030		EN030		EN030	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	360	U	440	U	630	U
1,3-Dichlorobenzene	ug/Kg	360	U	440	U	630	U
1,4-Dichlorobenzene	ug/Kg	360	U	440	U	630	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	360	U	440	U	630	U
2,4,5-Trichlorophenol	ug/Kg	360	U	440	U	630	U
2,4,6-Trichlorophenol	ug/Kg	360	U	440	U	630	U
2,4-Dichlorophenol	ug/Kg	360	U	440	U	630	U
2,4-Dimethylphenol	ug/Kg	360	U	440	U	630	U
2,4-Dinitrophenol	ug/Kg	720	U	880	U	1300	U
2,4-Dinitrotoluene	ug/Kg	360	U	440	U	630	U
2,6-Dinitrotoluene	ug/Kg	360	U	440	U	630	U
2-Chloronaphthalene	ug/Kg	360	U	440	U	630	U
2-Chlorophenol	ug/Kg	360	U	440	U	630	U
2-Methylnaphthalene	ug/Kg	360	U	440	U	630	U
2-Methylphenol (o-Cresol)	ug/Kg	360	U	440	U	630	U
2-Nitroaniline	ug/Kg	360	U	440	U	630	U
2-Nitrophenol	ug/Kg	360	U	440	U	630	U
3,3'-Dichlorobenzidine	ug/Kg	720	U	880	U	1300	U
3-Nitroaniline	ug/Kg	360	U	440	U	630	U
4,6-Dinitro-2-methylphenol	ug/Kg	720	U	880	U	1300	U
4-Bromophenyl Phenyl Ether	ug/Kg	360	U	440	U	630	U
4-Chloro-3-methylphenol	ug/Kg	360	U	440	U	630	U
4-Chloroaniline	ug/Kg	360	U	440	U	630	U
4-Chlorophenyl Phenyl Ether	ug/Kg	360	U	440	U	630	U
4-Methylphenol (p-Cresol)	ug/Kg	360	U	440	U	630	U
4-Nitroaniline	ug/Kg	360	U	440	U	630	U
4-Nitrophenol	ug/Kg	720	U	880	U	1300	U
Acenaphthene	ug/Kg	360	U	440	U	630	U
Acenaphthylene	ug/Kg	360	U	440	U	630	U
Anthracene	ug/Kg	360	U	440	U	630	U
Benzo(a)Anthracene	ug/Kg	360	U	440	U	630	U

	StationID	F613SB033		F613SB034		F613SP022	
	SampleID	613SB03301 (0-1ft)		613SB03401 (0-1ft)		613SP022T1 (0-1ft)	
	DateCollected	6/7/2001 12:00 AM		6/7/2001 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	06/16/2001		06/16/2001		10/19/1999	
	SDGNumber	43557		43557		EN019	
Parameter	Units						
1,2-Dichlorobenzene	ug/Kg					370	U
1,3-Dichlorobenzene	ug/Kg					370	U
1,4-Dichlorobenzene	ug/Kg					370	U
2,2'-Oxybis(1-chloro)propane	ug/Kg					370	U
2,4,5-Trichlorophenol	ug/Kg					370	U
2,4,6-Trichlorophenol	ug/Kg					370	U
2,4-Dichlorophenol	ug/Kg					370	U
2,4-Dimethylphenol	ug/Kg					370	U
2,4-Dinitrophenol	ug/Kg					750	U
2,4-Dinitrotoluene	ug/Kg					370	U
2,6-Dinitrotoluene	ug/Kg					370	U
2-Chloronaphthalene	ug/Kg					370	U
2-Chlorophenol	ug/Kg					370	U
2-Methylnaphthalene	ug/Kg					370	U
2-Methylphenol (o-Cresol)	ug/Kg					370	U
2-Nitroaniline	ug/Kg					370	U
2-Nitrophenol	ug/Kg					370	U
3,3'-Dichlorobenzidine	ug/Kg					750	U
3-Nitroaniline	ug/Kg					370	U
4,6-Dinitro-2-methylphenol	ug/Kg					750	U
4-Bromophenyl Phenyl Ether	ug/Kg					370	U
4-Chloro-3-methylphenol	ug/Kg					370	U
4-Chloroaniline	ug/Kg					370	U
4-Chlorophenyl Phenyl Ether	ug/Kg					370	U
4-Methylphenol (p-Cresol)	ug/Kg					370	U
4-Nitroaniline	ug/Kg					370	U
4-Nitrophenol	ug/Kg					750	U
Acenaphthene	ug/Kg	16.9	J	22.4	J	370	U
Acenaphthylene	ug/Kg	5.2	J	42.1	U	370	U
Anthracene	ug/Kg	31.6	J	54.6	=	370	U
Benzo(a)Anthracene	ug/Kg	194	=	188	=	370	U

	StationID	F613SP022		F613SP027		F613SP027	
	SampleID	613SP022T2 (3-5ft)		613SP027T1 (0-1ft)		613SP027T1DL (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/24/1999		10/26/1999	
	SDGNumber	EN019		EN020		EN020	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/Kg	620	U	390	U	1600	R
1,3-Dichlorobenzene	ug/Kg	620	U	390	U	1600	R
1,4-Dichlorobenzene	ug/Kg	620	U	390	U	1600	R
2,2'-Oxybis(1-chloro)propane	ug/Kg	620	U	390	U	1600	R
2,4,5-Trichlorophenol	ug/Kg	620	U	390	U	1600	R
2,4,6-Trichlorophenol	ug/Kg	620	U	390	U	1600	R
2,4-Dichlorophenol	ug/Kg	620	U	390	U	1600	R
2,4-Dimethylphenol	ug/Kg	620	U	390	U	1600	R
2,4-Dinitrophenol	ug/Kg	1200	U	780	U	3100	R
2,4-Dinitrotoluene	ug/Kg	620	U	390	U	1600	R
2,6-Dinitrotoluene	ug/Kg	620	U	390	U	1600	R
2-Chloronaphthalene	ug/Kg	620	U	390	U	1600	R
2-Chlorophenol	ug/Kg	620	U	390	U	1600	R
2-Methylnaphthalene	ug/Kg	620	U	390	U	1600	R
2-Methylphenol (o-Cresol)	ug/Kg	620	U	390	U	1600	R
2-Nitroaniline	ug/Kg	620	U	390	U	1600	R
2-Nitrophenol	ug/Kg	620	U	390	U	1600	R
3,3'-Dichlorobenzidine	ug/Kg	1200	U	780	U	3100	R
3-Nitroaniline	ug/Kg	620	U	390	U	1600	R
4,6-Dinitro-2-methylphenol	ug/Kg	1200	U	780	U	3100	R
4-Bromophenyl Phenyl Ether	ug/Kg	620	U	390	U	1600	R
4-Chloro-3-methylphenol	ug/Kg	620	U	390	U	1600	R
4-Chloroaniline	ug/Kg	620	U	390	U	1600	R
4-Chlorophenyl Phenyl Ether	ug/Kg	620	U	390	U	1600	R
4-Methylphenol (p-Cresol)	ug/Kg	620	U	390	U	1600	R
4-Nitroaniline	ug/Kg	620	U	390	U	1600	R
4-Nitrophenol	ug/Kg	1200	U	780	U	3100	R
Acenaphthene	ug/Kg	620	U	390	U	1600	R
Acenaphthylene	ug/Kg	620	U	390	U	1600	R
Anthracene	ug/Kg	620	U	390	U	1600	R
Benzo(a)Anthracene	ug/Kg	620	U	100	J	1600	R

	StationID	F613SP027		F613SP027		F613SP051	
	SampleID	613SP027T2 (3-5ft)		613SP027T2DL (3-5ft)		613SP051T1 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/24/1999		10/26/1999		10/29/1999	
	SDGNumber	EN020		EN020		EN023	
Parameter	Units						
1,2-Dichlorobenzene	ug/Kg	380	U	1500	R	440	U
1,3-Dichlorobenzene	ug/Kg	380	U	1500	R	440	U
1,4-Dichlorobenzene	ug/Kg	380	U	1500	R	440	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	380	U	1500	R	440	U
2,4,5-Trichlorophenol	ug/Kg	380	U	1500	R	440	U
2,4,6-Trichlorophenol	ug/Kg	380	U	1500	R	440	U
2,4-Dichlorophenol	ug/Kg	380	U	1500	R	440	U
2,4-Dimethylphenol	ug/Kg	380	U	1500	R	440	U
2,4-Dinitrophenol	ug/Kg	760	U	3000	R	880	U
2,4-Dinitrotoluene	ug/Kg	380	U	1500	R	440	U
2,6-Dinitrotoluene	ug/Kg	380	U	1500	R	440	U
2-Chloronaphthalene	ug/Kg	380	U	1500	R	440	U
2-Chlorophenol	ug/Kg	380	U	1500	R	440	U
2-Methylnaphthalene	ug/Kg	380	U	1500	R	440	U
2-Methylphenol (o-Cresol)	ug/Kg	380	U	1500	R	440	U
2-Nitroaniline	ug/Kg	380	U	1500	R	440	U
2-Nitrophenol	ug/Kg	380	U	1500	R	440	U
3,3'-Dichlorobenzidine	ug/Kg	760	U	3000	R	880	U
3-Nitroaniline	ug/Kg	380	U	1500	R	440	U
4,6-Dinitro-2-methylphenol	ug/Kg	760	U	3000	R	880	U
4-Bromophenyl Phenyl Ether	ug/Kg	380	U	1500	R	440	U
4-Chloro-3-methylphenol	ug/Kg	380	U	1500	R	440	U
4-Chloroaniline	ug/Kg	380	U	1500	R	440	U
4-Chlorophenyl Phenyl Ether	ug/Kg	380	U	1500	R	440	U
4-Methylphenol (p-Cresol)	ug/Kg	380	U	1500	R	440	U
4-Nitroaniline	ug/Kg	380	U	1500	R	440	U
4-Nitrophenol	ug/Kg	760	U	3000	R	880	U
Acenaphthene	ug/Kg	380	U	1500	R	440	U
Acenaphthylene	ug/Kg	380	U	1500	R	440	U
Anthracene	ug/Kg	380	U	1500	R	440	U
Benzo(a)Anthracene	ug/Kg	380	U	1500	R	440	U

	StationID	F613SP051		F613SP051	
	SampleID	613SP051T1DL (0-1ft)		613SP051T2 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/29/1999		10/28/1999	
	SDGNumber	EN023		EN023	
Parameter	Units				
1,2-Dichlorobenzene	ug/Kg	1800	R	640	U
1,3-Dichlorobenzene	ug/Kg	1800	R	640	U
1,4-Dichlorobenzene	ug/Kg	1800	R	640	U
2,2'-Oxybis(1-chloro)propane	ug/Kg	1800	R	640	U
2,4,5-Trichlorophenol	ug/Kg	1800	R	640	U
2,4,6-Trichlorophenol	ug/Kg	1800	R	640	U
2,4-Dichlorophenol	ug/Kg	1800	R	640	U
2,4-Dimethylphenol	ug/Kg	1800	R	640	U
2,4-Dinitrophenol	ug/Kg	3500	R	1300	U
2,4-Dinitrotoluene	ug/Kg	1800	R	640	U
2,6-Dinitrotoluene	ug/Kg	1800	R	640	U
2-Chloronaphthalene	ug/Kg	1800	R	640	U
2-Chlorophenol	ug/Kg	1800	R	640	U
2-Methylnaphthalene	ug/Kg	1800	R	640	U
2-Methylphenol (o-Cresol)	ug/Kg	1800	R	640	U
2-Nitroaniline	ug/Kg	1800	R	640	U
2-Nitrophenol	ug/Kg	1800	R	640	U
3,3'-Dichlorobenzidine	ug/Kg	3500	R	1300	U
3-Nitroaniline	ug/Kg	1800	R	640	U
4,6-Dinitro-2-methylphenol	ug/Kg	3500	R	1300	U
4-Bromophenyl Phenyl Ether	ug/Kg	1800	R	640	U
4-Chloro-3-methylphenol	ug/Kg	1800	R	640	U
4-Chloroaniline	ug/Kg	1800	R	640	U
4-Chlorophenyl Phenyl Ether	ug/Kg	1800	R	640	U
4-Methylphenol (p-Cresol)	ug/Kg	1800	R	640	U
4-Nitroaniline	ug/Kg	1800	R	640	U
4-Nitrophenol	ug/Kg	3500	R	1300	U
Acenaphthene	ug/Kg	1800	R	640	U
Acenaphthylene	ug/Kg	1800	R	640	U
Anthracene	ug/Kg	1800	R	640	U
Benzo(a)Anthracene	ug/Kg	1800	R	640	U

	StationID	F613SB001		F613SB001		F613SB001	
	SampleID	613SB00101 (0-1ft)		613SB00101DL (0-1ft)		613SB00102 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/21/1999		10/18/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	910	J	4000	R	620	U
Benzo(b)Fluoranthene	ug/Kg	830	J	4000	R	620	U
Benzo(g,h,i)Perylene	ug/Kg	410	J	4000	R	620	U
Benzo(k)Fluoranthene	ug/Kg	920	J	4000	R	620	U
Benzoic acid	ug/Kg	4000	U	20000	R	3100	U
Benzyl alcohol	ug/Kg	800	U	4000	R	620	U
Benzyl Butyl Phthalate	ug/Kg	800	U	4000	R	620	U
bis(2-Chloroethoxy) Methane	ug/Kg	800	U	4000	R	620	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	800	U	4000	R	620	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	800	U	4000	R	620	U
Chrysene	ug/Kg	940	J	4000	R	620	U
Di-n-butyl Phthalate	ug/Kg	800	U	4000	R	620	U
Di-n-octylphthalate	ug/Kg	800	U	4000	R	620	U
Dibenz(a,h)anthracene	ug/Kg	800	UJ	4000	R	620	U
Dibenzofuran	ug/Kg	800	U	4000	R	620	U
Diethyl Phthalate	ug/Kg	800	U	4000	R	620	U
Dimethyl Phthalate	ug/Kg	800	U	4000	R	620	U
Flouranthene	ug/Kg	1700	J	1600	R	620	U
Fluorene	ug/Kg	800	U	4000	R	620	U
Hexachlorobenzene	ug/Kg	800	U	4000	R	620	U
Hexachlorobutadiene	ug/Kg	800	U	4000	R	620	U
Hexachlorocyclopentadiene	ug/Kg	800	U	4000	R	620	U
Hexachloroethane	ug/Kg	800	U	4000	R	620	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	440	J	4000	R	620	U
Isophorone	ug/Kg	800	U	4000	R	620	U
N-Nitrosodi-n-propylamine	ug/Kg	800	U	4000	R	620	U
N-Nitrosodiphenylamine	ug/Kg	800	U	4000	R	620	U
Naphthalene	ug/Kg	800	U	4000	R	620	U
Nitrobenzene	ug/Kg	800	U	4000	R	620	U
Pentachlorophenol	ug/Kg	1600	U	8000	R	1200	U
Phenanthrene	ug/Kg	630	J	4000	R	620	U

	StationID	F613SB002		F613SB002		F613SB003	
	SampleID	613SB00201 (0-1ft)		613SB00202 (3-5ft)		613CB00301 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/27/1999		10/27/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	400	U	790	U	620	J
Benzo(b)Fluoranthene	ug/Kg	400	U	790	U	750	J
Benzo(g,h,i)Perylene	ug/Kg	400	U	790	U	290	J
Benzo(k)Fluoranthene	ug/Kg	400	U	790	U	610	J
Benzoic acid	ug/Kg	2000	U	4000	U	2000	U
Benzyl alcohol	ug/Kg	400	U	790	U	400	U
Benzyl Butyl Phthalate	ug/Kg	400	U	790	U	400	UJ
bis(2-Chloroethoxy) Methane	ug/Kg	400	U	790	U	400	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	400	U	790	U	400	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	400	U	650	J	400	UJ
Chrysene	ug/Kg	400	U	790	U	710	J
Di-n-butyl Phthalate	ug/Kg	400	U	790	U	400	U
Di-n-octylphthalate	ug/Kg	400	U	790	U	400	UJ
Dibenz(a,h)anthracene	ug/Kg	400	U	790	U	190	J
Dibenzofuran	ug/Kg	400	U	790	U	250	J
Diethyl Phthalate	ug/Kg	400	U	790	U	400	U
Dimethyl Phthalate	ug/Kg	400	U	790	U	400	U
Flouranthene	ug/Kg	86	J	300	J	1500	=
Fluorene	ug/Kg	400	U	790	U	150	J
Hexachlorobenzene	ug/Kg	400	U	790	U	400	U
Hexachlorobutadiene	ug/Kg	400	U	790	U	400	U
Hexachlorocyclopentadiene	ug/Kg	400	U	790	U	400	U
Hexachloroethane	ug/Kg	400	U	790	U	400	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	400	U	790	U	260	J
Isophorone	ug/Kg	400	U	790	U	400	U
N-Nitrosodi-n-propylamine	ug/Kg	400	U	790	U	400	U
N-Nitrosodiphenylamine	ug/Kg	400	U	790	U	400	U
Naphthalene	ug/Kg	400	U	790	U	400	U
Nitrobenzene	ug/Kg	400	U	790	U	400	U
Pentachlorophenol	ug/Kg	800	U	1600	U	800	U
Phenanthrene	ug/Kg	99	J	790	U	1800	=

	StationID	F613SB003		F613SB003		F613SB003	
	SampleID	613CB00301DL (0-1ft)		613CB00302 (3-5ft)		613CB00302DL (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/27/1999		10/25/1999		10/27/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	540	R	540	UJ	2200	R
Benzo(b)Fluoranthene	ug/Kg	520	R	540	UJ	2200	R
Benzo(g,h,i)Perylene	ug/Kg	1600	R	540	UJ	2200	R
Benzo(k)Fluoranthene	ug/Kg	420	R	540	UJ	2200	R
Benzoic acid	ug/Kg	8000	R	2700	U	11000	R
Benzyl alcohol	ug/Kg	1600	R	540	U	2200	R
Benzyl Butyl Phthalate	ug/Kg	1600	R	540	U	2200	R
bis(2-Chloroethoxy) Methane	ug/Kg	1600	R	540	U	2200	R
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	1600	R	540	U	2200	R
bis(2-Ethylhexyl) Phthalate	ug/Kg	1600	R	540	U	2200	R
Chrysene	ug/Kg	640	R	540	U	2200	R
Di-n-butyl Phthalate	ug/Kg	1600	R	540	U	2200	R
Di-n-octylphthalate	ug/Kg	1600	R	540	UJ	2200	R
Dibenz(a,h)anthracene	ug/Kg	1600	R	540	UJ	2200	R
Dibenzofuran	ug/Kg	1600	R	540	U	2200	R
Diethyl Phthalate	ug/Kg	1600	R	540	U	2200	R
Dimethyl Phthalate	ug/Kg	1600	R	540	U	2200	R
Flouranthene	ug/Kg	1700	R	540	U	2200	R
Fluorene	ug/Kg	1600	R	540	U	2200	R
Hexachlorobenzene	ug/Kg	1600	R	540	U	2200	R
Hexachlorobutadiene	ug/Kg	1600	R	540	U	2200	R
Hexachlorocyclopentadiene	ug/Kg	1600	R	540	U	2200	R
Hexachloroethane	ug/Kg	1600	R	540	U	2200	R
Indeno(1,2,3-c,d)pyrene	ug/Kg	340	R	540	UJ	2200	R
Isophorone	ug/Kg	1600	R	540	U	2200	R
N-Nitrosodi-n-propylamine	ug/Kg	1600	R	540	U	2200	R
N-Nitrosodiphenylamine	ug/Kg	1600	R	540	U	2200	R
Naphthalene	ug/Kg	1600	R	540	U	2200	R
Nitrobenzene	ug/Kg	1600	R	540	U	2200	R
Pentachlorophenol	ug/Kg	3200	R	1100	U	4300	R
Phenanthrene	ug/Kg	1700	R	540	U	2200	R

	StationID	F613SB003		F613SB003		F613SB003	
	SampleID	613SB00301 (0-1ft)		613SB00301DL (0-1ft)		613SB00302 (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/25/1999		10/27/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	700	J	580	R	540	U
Benzo(b)Fluoranthene	ug/Kg	710	J	700	R	540	U
Benzo(g,h,i)Perylene	ug/Kg	250	J	370	R	540	U
Benzo(k)Fluoranthene	ug/Kg	770	J	510	R	540	U
Benzoic acid	ug/Kg	2000	U	7800	R	2700	U
Benzyl alcohol	ug/Kg	390	U	1600	R	540	U
Benzyl Butyl Phthalate	ug/Kg	390	U	1600	R	540	U
bis(2-Chloroethoxy) Methane	ug/Kg	390	U	1600	R	540	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	390	U	1600	R	540	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	390	U	1600	R	540	U
Chrysene	ug/Kg	870	=	680	R	540	U
Di-n-butyl Phthalate	ug/Kg	390	U	1600	R	540	U
Di-n-octylphthalate	ug/Kg	390	UJ	1600	R	540	U
Dibenz(a,h)anthracene	ug/Kg	170	J	1600	R	540	U
Dibenzofuran	ug/Kg	140	J	1600	R	540	U
Diethyl Phthalate	ug/Kg	390	U	1600	R	540	U
Dimethyl Phthalate	ug/Kg	390	U	1600	R	540	U
Flouranthene	ug/Kg	1600	=	1500	R	130	J
Fluorene	ug/Kg	96	J	1600	R	540	U
Hexachlorobenzene	ug/Kg	390	U	1600	R	540	U
Hexachlorobutadiene	ug/Kg	390	U	1600	R	540	U
Hexachlorocyclopentadiene	ug/Kg	390	U	1600	R	540	U
Hexachloroethane	ug/Kg	390	U	1600	R	540	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	280	J	320	R	540	U
Isophorone	ug/Kg	390	U	1600	R	540	U
N-Nitrosodi-n-propylamine	ug/Kg	390	U	1600	R	540	U
N-Nitrosodiphenylamine	ug/Kg	390	U	1600	R	540	U
Naphthalene	ug/Kg	390	U	1600	R	540	U
Nitrobenzene	ug/Kg	390	U	1600	R	540	U
Pentachlorophenol	ug/Kg	780	U	3100	R	1100	U
Phenanthrene	ug/Kg	1200	=	1100	R	540	U

	StationID	F613SB004		F613SB004		F613SB005	
	SampleID	613SB00401 (0-1ft)		613SB00402 (3-5ft)		613SB00501 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	220	J	320	J	120	J
Benzo(b)Fluoranthene	ug/Kg	240	J	290	J	130	J
Benzo(g,h,i)Perylene	ug/Kg	120	J	150	J	530	U
Benzo(k)Fluoranthene	ug/Kg	220	J	360	J	530	U
Benzoic acid	ug/Kg	2300	U	3400	U	110	J
Benzyl alcohol	ug/Kg	460	U	680	U	530	U
Benzyl Butyl Phthalate	ug/Kg	460	U	680	U	530	U
bis(2-Chloroethoxy) Methane	ug/Kg	460	U	680	U	530	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	460	U	680	U	530	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	460	U	680	U	530	U
Chrysene	ug/Kg	270	J	360	J	110	J
Di-n-butyl Phthalate	ug/Kg	460	U	680	U	530	U
Di-n-octylphthalate	ug/Kg	460	U	680	U	530	U
Dibenz(a,h)anthracene	ug/Kg	460	U	680	U	530	U
Dibenzofuran	ug/Kg	460	U	680	U	530	U
Diethyl Phthalate	ug/Kg	460	U	680	U	530	U
Dimethyl Phthalate	ug/Kg	460	U	680	U	530	U
Flouranthene	ug/Kg	480	=	950	=	180	J
Fluorene	ug/Kg	460	U	680	U	530	U
Hexachlorobenzene	ug/Kg	460	U	680	U	530	U
Hexachlorobutadiene	ug/Kg	460	U	680	U	530	U
Hexachlorocyclopentadiene	ug/Kg	460	U	680	U	530	U
Hexachloroethane	ug/Kg	460	U	680	U	530	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	110	J	140	J	530	U
Isophorone	ug/Kg	460	U	680	U	530	U
N-Nitrosodi-n-propylamine	ug/Kg	460	U	680	U	530	U
N-Nitrosodiphenylamine	ug/Kg	460	U	680	U	530	U
Naphthalene	ug/Kg	460	U	410	J	530	U
Nitrobenzene	ug/Kg	460	U	680	U	530	U
Pentachlorophenol	ug/Kg	930	U	1400	U	1100	U
Phenanthrene	ug/Kg	310	J	230	J	530	U

	StationID	F613SB005		F613SB006		F613SB006	
	SampleID	613SB00502 (3-5ft)		613SB00601 (0-1ft)		613SB00602 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	1000	=	410	U	190	J
Benzo(b)Fluoranthene	ug/Kg	1100	=	410	U	220	J
Benzo(g,h,i)Perylene	ug/Kg	430	J	410	U	140	J
Benzo(k)Fluoranthene	ug/Kg	870	=	410	U	210	J
Benzoic acid	ug/Kg	2600	U	2000	U	2700	U
Benzyl alcohol	ug/Kg	530	U	410	U	540	U
Benzyl Butyl Phthalate	ug/Kg	530	U	410	U	540	U
bis(2-Chloroethoxy) Methane	ug/Kg	530	U	410	U	540	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	530	U	410	U	540	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	530	U	410	U	540	U
Chrysene	ug/Kg	1200	=	410	U	230	J
Di-n-butyl Phthalate	ug/Kg	530	U	410	U	540	U
Di-n-octylphthalate	ug/Kg	530	U	410	U	540	U
Dibenz(a,h)anthracene	ug/Kg	260	J	410	U	540	U
Dibenzofuran	ug/Kg	530	U	410	U	540	U
Diethyl Phthalate	ug/Kg	530	U	410	U	540	U
Dimethyl Phthalate	ug/Kg	530	U	410	U	540	U
Flouranthene	ug/Kg	1400	=	410	U	200	J
Fluorene	ug/Kg	530	U	410	U	540	U
Hexachlorobenzene	ug/Kg	530	U	410	U	540	U
Hexachlorobutadiene	ug/Kg	530	U	410	U	540	U
Hexachlorocyclopentadiene	ug/Kg	530	U	410	U	540	U
Hexachloroethane	ug/Kg	530	U	410	U	540	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	460	J	410	U	140	J
Isophorone	ug/Kg	530	U	410	U	540	U
N-Nitrosodi-n-propylamine	ug/Kg	530	U	410	U	540	U
N-Nitrosodiphenylamine	ug/Kg	530	U	410	U	540	U
Naphthalene	ug/Kg	530	U	410	U	540	U
Nitrobenzene	ug/Kg	530	U	410	U	540	U
Pentachlorophenol	ug/Kg	1100	U	810	U	1100	U
Phenanthrene	ug/Kg	260	J	410	U	540	U

	StationID	F613SB007		F613SB007		F613SB008	
	SampleID	613SB00701 (0-1ft)		613SB00702 (3-5ft)		613SB00801 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/18/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	370	U	690	U	400	UJ
Benzo(b)Fluoranthene	ug/Kg	370	U	690	U	400	UJ
Benzo(g,h,i)Perylene	ug/Kg	370	U	690	U	400	UJ
Benzo(k)Fluoranthene	ug/Kg	370	U	690	U	400	UJ
Benzoic acid	ug/Kg	1900	U	3500	U	2000	U
Benzyl alcohol	ug/Kg	370	U	690	U	400	U
Benzyl Butyl Phthalate	ug/Kg	370	U	690	U	400	UJ
bis(2-Chloroethoxy) Methane	ug/Kg	370	U	690	U	400	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	370	U	690	U	400	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	370	U	690	U	400	UJ
Chrysene	ug/Kg	370	U	690	U	360	J
Di-n-butyl Phthalate	ug/Kg	370	U	690	U	240	J
Di-n-octylphthalate	ug/Kg	370	U	690	U	400	UJ
Dibenz(a,h)anthracene	ug/Kg	370	U	690	U	400	UJ
Dibenzofuran	ug/Kg	370	U	690	U	120	J
Diethyl Phthalate	ug/Kg	370	U	690	U	400	U
Dimethyl Phthalate	ug/Kg	370	U	690	U	400	U
Flouranthene	ug/Kg	370	U	690	U	400	=
Fluorene	ug/Kg	370	U	690	U	390	J
Hexachlorobenzene	ug/Kg	370	U	690	U	400	U
Hexachlorobutadiene	ug/Kg	370	U	690	U	400	U
Hexachlorocyclopentadiene	ug/Kg	370	U	690	U	400	U
Hexachloroethane	ug/Kg	370	U	690	U	400	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	370	U	690	U	400	UJ
Isophorone	ug/Kg	370	U	690	U	400	U
N-Nitrosodi-n-propylamine	ug/Kg	370	U	690	U	400	U
N-Nitrosodiphenylamine	ug/Kg	370	U	690	U	400	U
Naphthalene	ug/Kg	370	U	690	U	230	J
Nitrobenzene	ug/Kg	370	U	690	U	400	U
Pentachlorophenol	ug/Kg	740	U	1400	U	790	U
Phenanthrene	ug/Kg	370	U	690	U	770	=

	StationID	F613SB008		F613SB008		F613SB009	
	SampleID	613SB00801DL (0-1ft)		613SB00802 (3-5ft)		613SB00901 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	2000	R	150	J	1800	UJ
Benzo(b)Fluoranthene	ug/Kg	2000	R	140	J	1800	UJ
Benzo(g,h,i)Perylene	ug/Kg	2000	R	670	U	1800	UJ
Benzo(k)Fluoranthene	ug/Kg	2000	R	150	J	1800	UJ
Benzoic acid	ug/Kg	9900	R	3300	U	8900	U
Benzyl alcohol	ug/Kg	2000	R	670	U	1800	U
Benzyl Butyl Phthalate	ug/Kg	2000	R	670	U	1800	UJ
bis(2-Chloroethoxy) Methane	ug/Kg	2000	R	670	U	1800	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	2000	R	670	U	1800	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	2000	R	670	U	1800	UJ
Chrysene	ug/Kg	2000	R	170	J	1000	J
Di-n-butyl Phthalate	ug/Kg	2000	R	670	U	1800	U
Di-n-octylphthalate	ug/Kg	2000	R	670	U	1800	UJ
Dibenz(a,h)anthracene	ug/Kg	2000	R	670	U	1800	UJ
Dibenzofuran	ug/Kg	2000	R	670	U	760	J
Diethyl Phthalate	ug/Kg	2000	R	670	U	1800	U
Dimethyl Phthalate	ug/Kg	2000	R	670	U	1800	U
Flouranthene	ug/Kg	460	R	220	J	580	J
Fluorene	ug/Kg	2000	R	670	U	2200	=
Hexachlorobenzene	ug/Kg	2000	R	670	U	1800	U
Hexachlorobutadiene	ug/Kg	2000	R	670	U	1800	U
Hexachlorocyclopentadiene	ug/Kg	2000	R	670	U	1800	U
Hexachloroethane	ug/Kg	2000	R	670	U	1800	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	2000	R	670	U	1800	UJ
Isophorone	ug/Kg	2000	R	670	U	1800	U
N-Nitrosodi-n-propylamine	ug/Kg	2000	R	670	U	1800	U
N-Nitrosodiphenylamine	ug/Kg	2000	R	670	U	1800	U
Naphthalene	ug/Kg	2000	R	670	U	2400	=
Nitrobenzene	ug/Kg	2000	R	670	U	1800	U
Pentachlorophenol	ug/Kg	4000	R	1300	U	3600	U
Phenanthrene	ug/Kg	690	R	170	J	5000	=

	StationID	F613SB009		F613SB009		F613SB010	
	SampleID	613SB00901DL (0-1ft)		613SB00902 (3-5ft)		613SB01001 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/20/1999		10/20/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	4400	R	120	J	87	J
Benzo(b)Fluoranthene	ug/Kg	4400	R	120	J	99	J
Benzo(g,h,i)Perylene	ug/Kg	4400	R	530	U	420	U
Benzo(k)Fluoranthene	ug/Kg	4400	R	530	U	98	J
Benzoic acid	ug/Kg	22000	R	2600	U	2100	U
Benzyl alcohol	ug/Kg	4400	R	530	U	420	U
Benzyl Butyl Phthalate	ug/Kg	4400	R	530	U	420	U
bis(2-Chloroethoxy) Methane	ug/Kg	4400	R	530	U	420	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	4400	R	530	U	420	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	4400	R	530	U	420	U
Chrysene	ug/Kg	950	R	150	J	150	J
Di-n-butyl Phthalate	ug/Kg	4400	R	210	J	420	U
Di-n-octylphthalate	ug/Kg	4400	R	530	U	420	U
Dibenz(a,h)anthracene	ug/Kg	4400	R	530	U	420	U
Dibenzofuran	ug/Kg	4400	R	530	U	420	U
Diethyl Phthalate	ug/Kg	4400	R	530	U	420	U
Dimethyl Phthalate	ug/Kg	4400	R	530	U	420	U
Flouranthene	ug/Kg	4400	R	190	J	200	J
Fluorene	ug/Kg	2000	R	530	U	420	U
Hexachlorobenzene	ug/Kg	4400	R	530	U	420	U
Hexachlorobutadiene	ug/Kg	4400	R	530	U	420	U
Hexachlorocyclopentadiene	ug/Kg	4400	R	530	U	420	U
Hexachloroethane	ug/Kg	4400	R	530	U	420	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	4400	R	530	U	420	U
Isophorone	ug/Kg	4400	R	530	U	420	U
N-Nitrosodi-n-propylamine	ug/Kg	4400	R	530	U	420	U
N-Nitrosodiphenylamine	ug/Kg	4400	R	530	U	420	U
Naphthalene	ug/Kg	2600	R	530	U	420	U
Nitrobenzene	ug/Kg	4400	R	530	U	420	U
Pentachlorophenol	ug/Kg	8900	R	1100	U	840	U
Phenanthrene	ug/Kg	4800	R	270	J	420	U

	StationID	F613SB010		F613SB011		F613SB011	
	SampleID	613SB01002 (3-5ft)		613SB01101 (0-1ft)		613SB01102 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/28/1999		10/29/1999	
	SDGNumber	EN019		EN023		EN023	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	210	J	92	J	1600	UJ
Benzo(b)Fluoranthene	ug/Kg	210	J	110	J	1600	UJ
Benzo(g,h,i)Perylene	ug/Kg	540	U	410	U	1600	UJ
Benzo(k)Fluoranthene	ug/Kg	190	J	97	J	1600	UJ
Benzoic acid	ug/Kg	2700	U	2000	U	8000	U
Benzyl alcohol	ug/Kg	540	U	410	U	1600	U
Benzyl Butyl Phthalate	ug/Kg	540	U	410	U	1600	UJ
bis(2-Chloroethoxy) Methane	ug/Kg	540	U	410	U	1600	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	540	U	410	U	1600	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	540	U	410	U	1600	UJ
Chrysene	ug/Kg	210	J	110	J	1600	UJ
Di-n-butyl Phthalate	ug/Kg	540	U	410	U	1600	U
Di-n-octylphthalate	ug/Kg	540	U	410	U	1600	UJ
Dibenz(a,h)anthracene	ug/Kg	540	U	410	U	1600	UJ
Dibenzofuran	ug/Kg	540	U	410	U	1600	U
Diethyl Phthalate	ug/Kg	540	U	410	U	1600	U
Dimethyl Phthalate	ug/Kg	540	U	410	U	1600	U
Flouranthene	ug/Kg	300	J	170	J	1600	U
Fluorene	ug/Kg	540	U	410	U	1600	U
Hexachlorobenzene	ug/Kg	540	U	410	U	1600	U
Hexachlorobutadiene	ug/Kg	540	U	410	U	1600	U
Hexachlorocyclopentadiene	ug/Kg	540	U	410	U	1600	U
Hexachloroethane	ug/Kg	540	U	410	U	1600	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	540	U	410	U	1600	UJ
Isophorone	ug/Kg	540	U	410	U	1600	U
N-Nitrosodi-n-propylamine	ug/Kg	540	U	410	U	1600	U
N-Nitrosodiphenylamine	ug/Kg	540	U	410	U	1600	U
Naphthalene	ug/Kg	540	U	410	U	1600	U
Nitrobenzene	ug/Kg	540	U	410	U	1600	U
Pentachlorophenol	ug/Kg	1100	U	810	U	3200	U
Phenanthrene	ug/Kg	540	U	410	U	330	J

	StationID	F613SB011		F613SB012		F613SB012	
	SampleID	613SB01102DL (3-5ft)		613CB01201 (0-1ft)		613CB01202 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/29/1999		10/25/1999		10/25/1999	
	SDGNumber	EN023		EN021		EN021	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	4000	R	380	U	640	U
Benzo(b)Fluoranthene	ug/Kg	4000	R	380	U	640	U
Benzo(g,h,i)Perylene	ug/Kg	4000	R	380	U	640	U
Benzo(k)Fluoranthene	ug/Kg	4000	R	81	J	640	U
Benzoic acid	ug/Kg	20000	R	1900	U	3200	U
Benzyl alcohol	ug/Kg	4000	R	380	U	640	U
Benzyl Butyl Phthalate	ug/Kg	4000	R	380	U	640	U
bis(2-Chloroethoxy) Methane	ug/Kg	4000	R	380	U	640	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	4000	R	380	U	640	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	4000	R	380	U	640	U
Chrysene	ug/Kg	4000	R	90	J	640	U
Di-n-butyl Phthalate	ug/Kg	4000	R	380	U	640	U
Di-n-octylphthalate	ug/Kg	4000	R	380	U	640	U
Dibenz(a,h)anthracene	ug/Kg	4000	R	380	U	640	U
Dibenzofuran	ug/Kg	4000	R	380	U	640	U
Diethyl Phthalate	ug/Kg	4000	R	380	U	640	U
Dimethyl Phthalate	ug/Kg	4000	R	380	U	640	U
Flouranthene	ug/Kg	4000	R	140	J	640	U
Fluorene	ug/Kg	4000	R	380	U	640	U
Hexachlorobenzene	ug/Kg	4000	R	380	U	640	U
Hexachlorobutadiene	ug/Kg	4000	R	380	U	640	U
Hexachlorocyclopentadiene	ug/Kg	4000	R	380	U	640	U
Hexachloroethane	ug/Kg	4000	R	380	U	640	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	4000	R	380	U	640	U
Isophorone	ug/Kg	4000	R	380	U	640	U
N-Nitrosodi-n-propylamine	ug/Kg	4000	R	380	U	640	U
N-Nitrosodiphenylamine	ug/Kg	4000	R	380	U	640	U
Naphthalene	ug/Kg	4000	R	380	U	640	U
Nitrobenzene	ug/Kg	4000	R	380	U	640	U
Pentachlorophenol	ug/Kg	8000	R	770	U	1300	U
Phenanthrene	ug/Kg	4000	R	85	J	640	U

	StationID	F613SB012		F613SB012		F613SB013	
	SampleID	613SB01201 (0-1ft)		613SB01202 (3-5ft)		613CB01301 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/22/1999		10/25/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	84	J	620	U	530	J
Benzo(b)Fluoranthene	ug/Kg	110	J	620	U	670	J
Benzo(g,h,i)Perylene	ug/Kg	400	U	620	U	200	J
Benzo(k)Fluoranthene	ug/Kg	400	U	620	U	400	J
Benzoic acid	ug/Kg	2000	U	3100	U	2100	U
Benzyl alcohol	ug/Kg	400	U	620	U	420	U
Benzyl Butyl Phthalate	ug/Kg	400	U	620	U	420	U
bis(2-Chloroethoxy) Methane	ug/Kg	400	U	620	U	420	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	400	U	620	U	420	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	130	J	620	U	420	U
Chrysene	ug/Kg	100	J	620	U	650	J
Di-n-butyl Phthalate	ug/Kg	400	U	620	U	420	U
Di-n-octylphthalate	ug/Kg	400	U	620	U	420	U
Dibenz(a,h)anthracene	ug/Kg	400	U	620	U	95	J
Dibenzofuran	ug/Kg	400	U	620	U	420	U
Diethyl Phthalate	ug/Kg	400	U	620	U	420	U
Dimethyl Phthalate	ug/Kg	400	U	620	U	420	U
Flouranthene	ug/Kg	190	J	620	U	1400	J
Fluorene	ug/Kg	400	U	620	U	110	J
Hexachlorobenzene	ug/Kg	400	U	620	U	420	U
Hexachlorobutadiene	ug/Kg	400	U	620	U	420	U
Hexachlorocyclopentadiene	ug/Kg	400	U	620	U	420	U
Hexachloroethane	ug/Kg	400	U	620	U	420	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	400	U	620	U	180	J
Isophorone	ug/Kg	400	U	620	U	420	U
N-Nitrosodi-n-propylamine	ug/Kg	400	U	620	U	420	U
N-Nitrosodiphenylamine	ug/Kg	400	U	620	U	420	U
Naphthalene	ug/Kg	400	U	620	U	420	U
Nitrobenzene	ug/Kg	400	U	620	U	420	U
Pentachlorophenol	ug/Kg	800	U	1200	U	830	U
Phenanthrene	ug/Kg	110	J	620	U	1000	J

	StationID	F613SB013		F613SB013		F613SB013	
	SampleID	613CB01302 (3-5ft)		613SB01301 (0-1ft)		613SB01302 (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/25/1999		10/25/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	Units						
Benzo(a)Pyrene	ug/Kg	460	U	120	J	130	J
Benzo(b)Fluoranthene	ug/Kg	460	U	150	J	150	J
Benzo(g,h,i)Perylene	ug/Kg	460	U	400	U	450	U
Benzo(k)Fluoranthene	ug/Kg	460	U	150	J	130	J
Benzoic acid	ug/Kg	2300	U	2000	U	2300	U
Benzyl alcohol	ug/Kg	460	U	400	U	450	U
Benzyl Butyl Phthalate	ug/Kg	460	U	400	U	450	U
bis(2-Chloroethoxy) Methane	ug/Kg	460	U	400	U	450	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	460	U	400	U	450	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	460	U	400	U	110	J
Chrysene	ug/Kg	460	U	160	J	160	J
Di-n-butyl Phthalate	ug/Kg	460	U	400	U	450	U
Di-n-octylphthalate	ug/Kg	460	U	400	U	450	U
Dibenz(a,h)anthracene	ug/Kg	460	U	400	U	450	U
Dibenzofuran	ug/Kg	460	U	400	U	450	U
Diethyl Phthalate	ug/Kg	460	U	400	U	450	U
Dimethyl Phthalate	ug/Kg	460	U	400	U	450	U
Flouranthene	ug/Kg	110	J	230	J	280	J
Fluorene	ug/Kg	460	U	400	U	450	U
Hexachlorobenzene	ug/Kg	460	U	400	U	450	U
Hexachlorobutadiene	ug/Kg	460	U	400	U	450	U
Hexachlorocyclopentadiene	ug/Kg	460	U	400	U	450	U
Hexachloroethane	ug/Kg	460	U	400	U	450	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	460	U	400	U	450	U
Isophorone	ug/Kg	460	U	400	U	450	U
N-Nitrosodi-n-propylamine	ug/Kg	460	U	400	U	450	U
N-Nitrosodiphenylamine	ug/Kg	460	U	400	U	450	U
Naphthalene	ug/Kg	460	U	400	U	450	U
Nitrobenzene	ug/Kg	460	U	400	U	450	U
Pentachlorophenol	ug/Kg	910	U	800	U	900	U
Phenanthrene	ug/Kg	460	U	170	J	160	J

	StationID	F613SB014		F613SB014		F613SB016	
	SampleID	613SB01401 (0-1ft)		613SB01402 (3-5ft)		613SB01601 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/20/1999		10/20/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	3900	U	410	U	390	U
Benzo(b)Fluoranthene	ug/Kg	3900	U	410	U	390	U
Benzo(g,h,i)Perylene	ug/Kg	3900	U	410	U	390	U
Benzo(k)Fluoranthene	ug/Kg	3900	U	410	U	390	U
Benzoic acid	ug/Kg	19000	U	2000	U	1900	U
Benzyl alcohol	ug/Kg	3900	U	410	U	390	U
Benzyl Butyl Phthalate	ug/Kg	3900	U	410	U	390	U
bis(2-Chloroethoxy) Methane	ug/Kg	3900	U	410	U	390	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	3900	U	410	U	390	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	3900	U	410	U	390	U
Chrysene	ug/Kg	3900	U	410	U	390	U
Di-n-butyl Phthalate	ug/Kg	3900	U	410	U	390	U
Di-n-octylphthalate	ug/Kg	3900	U	410	U	390	U
Dibenz(a,h)anthracene	ug/Kg	3900	U	410	U	390	U
Dibenzofuran	ug/Kg	3900	U	410	U	390	U
Diethyl Phthalate	ug/Kg	3900	U	410	U	390	U
Dimethyl Phthalate	ug/Kg	3900	U	410	U	390	U
Flouranthene	ug/Kg	1200	J	81	J	390	U
Fluorene	ug/Kg	3900	U	110	J	390	U
Hexachlorobenzene	ug/Kg	3900	U	410	U	390	U
Hexachlorobutadiene	ug/Kg	3900	U	410	U	390	U
Hexachlorocyclopentadiene	ug/Kg	3900	U	410	U	390	U
Hexachloroethane	ug/Kg	3900	U	410	U	390	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	3900	U	410	U	390	U
Isophorone	ug/Kg	3900	U	410	U	390	U
N-Nitrosodi-n-propylamine	ug/Kg	3900	U	410	U	390	U
N-Nitrosodiphenylamine	ug/Kg	3900	U	410	U	390	U
Naphthalene	ug/Kg	3900	U	410	U	390	U
Nitrobenzene	ug/Kg	3900	U	410	U	390	U
Pentachlorophenol	ug/Kg	7800	U	810	U	780	U
Phenanthrene	ug/Kg	3900	U	190	J	86	J

	StationID	F613SB016		F613SB016		F613SB021	
	SampleID	613SB01602 (3-5ft)		613SB01602DL (3-5ft)		613SB02101b (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/21/1999		11/23/1999	
	SDGNumber	EN019		EN019		EN027	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	210	J	6200	R	130	J
Benzo(b)Fluoranthene	ug/Kg	260	J	6200	R	120	J
Benzo(g,h,i)Perylene	ug/Kg	620	U	6200	R	380	UJ
Benzo(k)Fluoranthene	ug/Kg	240	J	6200	R	130	J
Benzoic acid	ug/Kg	3100	U	31000	R	1900	U
Benzyl alcohol	ug/Kg	620	U	6200	R	380	U
Benzyl Butyl Phthalate	ug/Kg	620	U	6200	R	380	U
bis(2-Chloroethoxy) Methane	ug/Kg	620	U	6200	R	380	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	620	U	6200	R	380	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	620	U	6200	R	770	U
Chrysene	ug/Kg	310	J	6200	R	130	J
Di-n-butyl Phthalate	ug/Kg	620	UJ	6200	R	380	U
Di-n-octylphthalate	ug/Kg	620	U	6200	R	380	UJ
Dibenz(a,h)anthracene	ug/Kg	620	U	6200	R	380	UJ
Dibenzofuran	ug/Kg	1400	J	6200	R	380	U
Diethyl Phthalate	ug/Kg	620	UJ	6200	R	380	U
Dimethyl Phthalate	ug/Kg	620	UJ	6200	R	380	U
Flouranthene	ug/Kg	620	UJ	6200	R	240	J
Fluorene	ug/Kg	2800	J	3100	R	380	U
Hexachlorobenzene	ug/Kg	620	UJ	6200	R	380	U
Hexachlorobutadiene	ug/Kg	620	U	6200	R	380	U
Hexachlorocyclopentadiene	ug/Kg	620	UJ	6200	R	380	U
Hexachloroethane	ug/Kg	620	U	6200	R	380	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	620	U	6200	R	380	UJ
Isophorone	ug/Kg	620	U	6200	R	380	U
N-Nitrosodi-n-propylamine	ug/Kg	620	U	6200	R	380	U
N-Nitrosodiphenylamine	ug/Kg	620	UJ	6200	R	380	U
Naphthalene	ug/Kg	620	U	6200	R	380	U
Nitrobenzene	ug/Kg	620	U	6200	R	380	U
Pentachlorophenol	ug/Kg	1200	UJ	12000	R	770	U
Phenanthrene	ug/Kg	6500	J	6800	R	100	J

	StationID	F613SB021		F613SB021		F613SB022	
	SampleID	613SB02101bDL (0-1ft)		613SB02102b (3-5ft)		613SB02201b (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/23/1999		11/23/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	770	R	620	UJ	1200	J
Benzo(b)Fluoranthene	ug/Kg	770	R	620	UJ	1500	J
Benzo(g,h,i)Perylene	ug/Kg	770	R	620	UJ	460	J
Benzo(k)Fluoranthene	ug/Kg	770	R	620	UJ	1200	J
Benzoic acid	ug/Kg	3800	R	3100	U	1900	U
Benzyl alcohol	ug/Kg	770	R	620	U	380	U
Benzyl Butyl Phthalate	ug/Kg	770	R	620	U	380	U
bis(2-Chloroethoxy) Methane	ug/Kg	770	R	620	U	380	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	770	R	620	U	380	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	170	R	620	U	770	U
Chrysene	ug/Kg	770	R	620	U	1300	=
Di-n-butyl Phthalate	ug/Kg	770	R	620	U	380	U
Di-n-octylphthalate	ug/Kg	770	R	620	UJ	380	UJ
Dibenz(a,h)anthracene	ug/Kg	770	R	620	UJ	240	J
Dibenzofuran	ug/Kg	770	R	620	U	380	U
Diethyl Phthalate	ug/Kg	770	R	620	U	380	U
Dimethyl Phthalate	ug/Kg	770	R	620	U	380	U
Flouranthene	ug/Kg	210	R	620	U	2400	=
Fluorene	ug/Kg	770	R	620	U	84	J
Hexachlorobenzene	ug/Kg	770	R	620	U	380	U
Hexachlorobutadiene	ug/Kg	770	R	620	U	380	U
Hexachlorocyclopentadiene	ug/Kg	770	R	620	U	380	U
Hexachloroethane	ug/Kg	770	R	620	U	380	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	770	R	620	UJ	490	J
Isophorone	ug/Kg	770	R	260	J	380	U
N-Nitrosodi-n-propylamine	ug/Kg	770	R	620	U	380	U
N-Nitrosodiphenylamine	ug/Kg	770	R	620	U	380	U
Naphthalene	ug/Kg	770	R	620	U	380	U
Nitrobenzene	ug/Kg	770	R	620	U	380	U
Pentachlorophenol	ug/Kg	1500	R	1200	U	770	U
Phenanthrene	ug/Kg	770	R	620	U	1400	=

	StationID	F613SB022		F613SB022		F613SB023	
	SampleID	613SB02201bDL (0-1ft)		613SB02202b (3-5ft)		613SB02301 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/24/1999		11/23/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	1000	R	560	U	95	J
Benzo(b)Fluoranthene	ug/Kg	1300	R	560	U	130	J
Benzo(g,h,i)Perylene	ug/Kg	470	R	560	U	430	U
Benzo(k)Fluoranthene	ug/Kg	880	R	560	U	86	J
Benzoic acid	ug/Kg	3800	R	2800	U	2100	U
Benzyl alcohol	ug/Kg	770	R	560	U	430	U
Benzyl Butyl Phthalate	ug/Kg	770	R	560	U	430	U
bis(2-Chloroethoxy) Methane	ug/Kg	770	R	560	U	430	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	770	R	560	U	430	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	770	R	560	U	430	U
Chrysene	ug/Kg	1300	R	560	U	120	J
Di-n-butyl Phthalate	ug/Kg	770	R	560	U	170	J
Di-n-octylphthalate	ug/Kg	770	R	560	U	430	U
Dibenz(a,h)anthracene	ug/Kg	280	R	560	U	430	U
Dibenzofuran	ug/Kg	770	R	560	U	430	U
Diethyl Phthalate	ug/Kg	770	R	560	U	430	U
Dimethyl Phthalate	ug/Kg	770	R	560	U	430	U
Flouranthene	ug/Kg	2200	R	120	J	120	J
Fluorene	ug/Kg	770	R	560	U	430	U
Hexachlorobenzene	ug/Kg	770	R	560	U	430	U
Hexachlorobutadiene	ug/Kg	770	R	560	U	430	U
Hexachlorocyclopentadiene	ug/Kg	770	R	560	U	430	U
Hexachloroethane	ug/Kg	770	R	560	U	430	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	550	R	560	U	430	U
Isophorone	ug/Kg	770	R	560	U	430	U
N-Nitrosodi-n-propylamine	ug/Kg	770	R	560	U	430	U
N-Nitrosodiphenylamine	ug/Kg	770	R	560	U	430	U
Naphthalene	ug/Kg	770	R	560	U	430	U
Nitrobenzene	ug/Kg	770	R	560	U	430	U
Pentachlorophenol	ug/Kg	1500	R	1100	U	850	U
Phenanthrene	ug/Kg	1400	R	560	U	430	U

	StationID	F613SB023		F613SB024		F613SB024	
	SampleID	613SB02302 (3-5ft)		613SB02401 (0-1ft)		613SB02402 (3-5ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/23/1999		11/23/1999		11/24/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	560	U	110	J	710	U
Benzo(b)Fluoranthene	ug/Kg	560	U	130	J	710	U
Benzo(g,h,i)Perylene	ug/Kg	560	U	450	U	710	U
Benzo(k)Fluoranthene	ug/Kg	560	U	98	J	710	U
Benzoic acid	ug/Kg	2800	U	97	J	3500	U
Benzyl alcohol	ug/Kg	560	U	450	U	710	U
Benzyl Butyl Phthalate	ug/Kg	560	U	450	U	710	U
bis(2-Chloroethoxy) Methane	ug/Kg	560	U	450	U	710	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	560	U	450	U	710	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	560	U	450	U	710	U
Chrysene	ug/Kg	560	U	140	J	710	U
Di-n-butyl Phthalate	ug/Kg	560	U	450	U	710	U
Di-n-octylphthalate	ug/Kg	560	U	450	U	710	U
Dibenz(a,h)anthracene	ug/Kg	560	U	450	U	710	U
Dibenzofuran	ug/Kg	560	U	450	U	710	U
Diethyl Phthalate	ug/Kg	560	U	450	U	710	U
Dimethyl Phthalate	ug/Kg	560	U	450	U	710	U
Flouranthene	ug/Kg	560	U	190	J	710	U
Fluorene	ug/Kg	560	U	450	U	710	U
Hexachlorobenzene	ug/Kg	560	U	450	U	710	U
Hexachlorobutadiene	ug/Kg	560	U	450	U	710	U
Hexachlorocyclopentadiene	ug/Kg	560	U	450	U	710	U
Hexachloroethane	ug/Kg	560	U	450	U	710	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	560	U	450	U	710	U
Isophorone	ug/Kg	560	U	450	U	710	U
N-Nitrosodi-n-propylamine	ug/Kg	560	U	450	U	710	U
N-Nitrosodiphenylamine	ug/Kg	560	U	450	U	710	U
Naphthalene	ug/Kg	560	U	450	U	710	U
Nitrobenzene	ug/Kg	560	U	450	U	710	U
Pentachlorophenol	ug/Kg	1100	U	900	U	1400	U
Phenanthrene	ug/Kg	560	U	110	J	710	U

	StationID	F613SB025		F613SB026		F613SB026	
	SampleID	613SB02501 (0-1ft)		613CB02602 (3-5ft)		613SB02601 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/17/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/29/1999		11/24/1999	
	SDGNumber	EN028		EN028		EN028	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	480	U	540	U	490	U
Benzo(b)Fluoranthene	ug/Kg	480	U	540	U	490	U
Benzo(g,h,i)Perylene	ug/Kg	480	U	540	U	490	U
Benzo(k)Fluoranthene	ug/Kg	480	U	540	U	490	U
Benzoic acid	ug/Kg	2400	U	2700	U	2500	U
Benzyl alcohol	ug/Kg	480	U	540	U	490	U
Benzyl Butyl Phthalate	ug/Kg	480	U	540	U	490	U
bis(2-Chloroethoxy) Methane	ug/Kg	480	U	540	U	490	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	480	U	540	U	490	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	480	U	540	U	490	U
Chrysene	ug/Kg	480	U	540	U	490	U
Di-n-butyl Phthalate	ug/Kg	480	U	540	U	490	U
Di-n-octylphthalate	ug/Kg	480	U	540	U	490	U
Dibenz(a,h)anthracene	ug/Kg	480	U	540	U	490	U
Dibenzofuran	ug/Kg	480	U	540	U	490	U
Diethyl Phthalate	ug/Kg	480	U	540	U	490	U
Dimethyl Phthalate	ug/Kg	480	U	540	U	490	U
Flouranthene	ug/Kg	480	U	540	U	490	U
Fluorene	ug/Kg	480	U	540	U	490	U
Hexachlorobenzene	ug/Kg	480	U	540	U	490	U
Hexachlorobutadiene	ug/Kg	480	U	540	U	490	U
Hexachlorocyclopentadiene	ug/Kg	480	U	540	U	490	U
Hexachloroethane	ug/Kg	480	U	540	U	490	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	480	U	540	U	490	U
Isophorone	ug/Kg	480	U	540	U	180	J
N-Nitrosodi-n-propylamine	ug/Kg	480	U	540	U	490	U
N-Nitrosodiphenylamine	ug/Kg	480	U	540	U	490	U
Naphthalene	ug/Kg	110	J	540	U	490	U
Nitrobenzene	ug/Kg	480	U	540	U	490	U
Pentachlorophenol	ug/Kg	950	U	1100	U	980	U
Phenanthrene	ug/Kg	480	U	540	U	490	U

	StationID	F613SB026		F613SB027		F613SB027	
	SampleID	613SB02602 (3-5ft)		613SB02701 (0-1ft)		613SB02702 (3-5ft)	
	DateCollected	11/17/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/29/1999		11/24/1999		11/24/1999	
	SDGNumber	EN028		EN028		EN028	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	160	J	510	UJ	360	U
Benzo(b)Fluoranthene	ug/Kg	130	J	510	UJ	360	U
Benzo(g,h,i)Perylene	ug/Kg	530	U	510	UJ	360	U
Benzo(k)Fluoranthene	ug/Kg	150	J	510	UJ	360	U
Benzoic acid	ug/Kg	2600	U	110	J	1800	U
Benzyl alcohol	ug/Kg	530	U	510	U	360	U
Benzyl Butyl Phthalate	ug/Kg	530	U	510	U	360	U
bis(2-Chloroethoxy) Methane	ug/Kg	530	U	510	U	360	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	530	U	510	U	360	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	530	U	510	U	360	U
Chrysene	ug/Kg	190	J	510	U	360	U
Di-n-butyl Phthalate	ug/Kg	530	U	1500	J	360	U
Di-n-octylphthalate	ug/Kg	530	U	510	UJ	360	U
Dibenz(a,h)anthracene	ug/Kg	530	U	510	UJ	360	U
Dibenzofuran	ug/Kg	530	U	510	U	360	U
Diethyl Phthalate	ug/Kg	530	U	510	U	360	U
Dimethyl Phthalate	ug/Kg	530	U	510	U	360	U
Flouranthene	ug/Kg	360	J	510	U	360	U
Fluorene	ug/Kg	530	U	510	U	360	U
Hexachlorobenzene	ug/Kg	530	U	510	U	360	U
Hexachlorobutadiene	ug/Kg	530	U	510	U	360	U
Hexachlorocyclopentadiene	ug/Kg	530	U	510	U	360	U
Hexachloroethane	ug/Kg	530	U	510	U	360	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	530	U	510	UJ	360	U
Isophorone	ug/Kg	530	U	510	U	360	U
N-Nitrosodi-n-propylamine	ug/Kg	530	U	510	U	360	U
N-Nitrosodiphenylamine	ug/Kg	530	U	510	U	360	U
Naphthalene	ug/Kg	530	U	510	U	360	U
Nitrobenzene	ug/Kg	530	U	510	U	360	U
Pentachlorophenol	ug/Kg	1100	U	1000	U	720	U
Phenanthrene	ug/Kg	200	J	510	U	360	U

	StationID	F613SB028		F613SB028		F613SB029	
	SampleID	613SB02801 (0-1ft)		613SB02802 (3-5ft)		613SB02901 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		12/1/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/24/1999		12/06/1999	
	SDGNumber	EN028		EN028		EN030	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	530	U	370	U	370	U
Benzo(b)Fluoranthene	ug/Kg	530	U	370	U	370	U
Benzo(g,h,i)Perylene	ug/Kg	530	U	370	U	370	U
Benzo(k)Fluoranthene	ug/Kg	530	U	370	U	370	U
Benzoic acid	ug/Kg	2600	U	1900	U	1800	U
Benzyl alcohol	ug/Kg	530	U	370	U	370	U
Benzyl Butyl Phthalate	ug/Kg	530	U	370	U	370	U
bis(2-Chloroethoxy) Methane	ug/Kg	530	U	370	U	370	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	530	U	370	U	370	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	530	U	370	U	880	=
Chrysene	ug/Kg	530	U	370	U	370	U
Di-n-butyl Phthalate	ug/Kg	530	U	370	U	370	U
Di-n-octylphthalate	ug/Kg	530	U	370	U	370	U
Dibenz(a,h)anthracene	ug/Kg	530	U	370	U	370	U
Dibenzofuran	ug/Kg	530	U	370	U	370	U
Diethyl Phthalate	ug/Kg	530	U	370	U	370	U
Dimethyl Phthalate	ug/Kg	530	U	370	U	370	U
Flouranthene	ug/Kg	530	U	370	U	370	U
Fluorene	ug/Kg	530	U	370	U	370	U
Hexachlorobenzene	ug/Kg	530	U	370	U	370	U
Hexachlorobutadiene	ug/Kg	530	U	370	U	370	U
Hexachlorocyclopentadiene	ug/Kg	530	U	370	U	370	U
Hexachloroethane	ug/Kg	530	U	370	U	370	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	530	U	370	U	370	U
Isophorone	ug/Kg	530	U	370	U	370	U
N-Nitrosodi-n-propylamine	ug/Kg	530	U	370	U	370	U
N-Nitrosodiphenylamine	ug/Kg	530	U	370	U	370	U
Naphthalene	ug/Kg	530	U	370	U	370	U
Nitrobenzene	ug/Kg	530	U	370	U	370	U
Pentachlorophenol	ug/Kg	1100	U	740	U	730	U
Phenanthrene	ug/Kg	530	U	370	U	370	U

	StationID	F613SB029		F613SB030		F613SB030	
	SampleID	613SB02902 (3-5ft)		613SB03001 (0-1ft)		613SB03002 (3-5ft)	
	DateCollected	12/1/1999 12:00 AM		12/1/1999 12:00 AM		12/1/1999 12:00 AM	
	DateAnalyzed	12/06/1999		12/07/1999		12/06/1999	
	SDGNumber	EN030		EN030		EN030	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	360	U	440	U	630	U
Benzo(b)Fluoranthene	ug/Kg	360	U	440	U	630	U
Benzo(g,h,i)Perylene	ug/Kg	360	U	440	U	630	U
Benzo(k)Fluoranthene	ug/Kg	360	U	440	U	630	U
Benzoic acid	ug/Kg	1800	U	2200	U	3100	U
Benzyl alcohol	ug/Kg	360	U	440	U	630	U
Benzyl Butyl Phthalate	ug/Kg	360	U	440	U	630	U
bis(2-Chloroethoxy) Methane	ug/Kg	360	U	440	U	630	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	360	U	440	U	630	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	360	U	120	J	630	U
Chrysene	ug/Kg	360	U	440	U	630	U
Di-n-butyl Phthalate	ug/Kg	360	U	440	U	630	U
Di-n-octylphthalate	ug/Kg	360	U	440	U	630	U
Dibenz(a,h)anthracene	ug/Kg	360	U	440	U	630	U
Dibenzofuran	ug/Kg	360	U	440	U	630	U
Diethyl Phthalate	ug/Kg	360	U	440	U	630	U
Dimethyl Phthalate	ug/Kg	360	U	440	U	630	U
Flouranthene	ug/Kg	360	U	440	U	630	U
Fluorene	ug/Kg	360	U	440	U	630	U
Hexachlorobenzene	ug/Kg	360	U	440	U	630	U
Hexachlorobutadiene	ug/Kg	360	U	440	U	630	U
Hexachlorocyclopentadiene	ug/Kg	360	U	440	U	630	U
Hexachloroethane	ug/Kg	360	U	440	U	630	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	360	U	440	U	630	U
Isophorone	ug/Kg	360	U	440	U	630	U
N-Nitrosodi-n-propylamine	ug/Kg	360	U	440	U	630	U
N-Nitrosodiphenylamine	ug/Kg	360	U	440	U	630	U
Naphthalene	ug/Kg	360	U	440	U	630	U
Nitrobenzene	ug/Kg	360	U	440	U	630	U
Pentachlorophenol	ug/Kg	720	U	880	U	1300	U
Phenanthrene	ug/Kg	360	U	440	U	630	U

	StationID	F613SB033		F613SB034		F613SP022	
	SampleID	613SB03301 (0-1ft)		613SB03401 (0-1ft)		613SP022T1 (0-1ft)	
	DateCollected	6/7/2001 12:00 AM		6/7/2001 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	06/16/2001		06/16/2001		10/19/1999	
	SDGNumber	43557		43557		EN019	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	196	=	165	=	76	J
Benzo(b)Fluoranthene	ug/Kg	418	J	471	J	370	U
Benzo(g,h,i)Perylene	ug/Kg	101	J	88.4	J	370	U
Benzo(k)Fluoranthene	ug/Kg	170	J	42.1	U	370	U
Benzoic acid	ug/Kg					1900	U
Benzyl alcohol	ug/Kg					370	U
Benzyl Butyl Phthalate	ug/Kg					370	U
bis(2-Chloroethoxy) Methane	ug/Kg					370	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg					370	U
bis(2-Ethylhexyl) Phthalate	ug/Kg					370	U
Chrysene	ug/Kg	220	=	200	=	88	J
Di-n-butyl Phthalate	ug/Kg					370	U
Di-n-octylphthalate	ug/Kg					370	U
Dibenz(a,h)anthracene	ug/Kg	40.4	U	42.1	U	370	U
Dibenzofuran	ug/Kg					370	U
Diethyl Phthalate	ug/Kg					370	U
Dimethyl Phthalate	ug/Kg					370	U
Flouranthene	ug/Kg	353	=	367	=	150	J
Fluorene	ug/Kg	8.2	J	16.2	J	370	U
Hexachlorobenzene	ug/Kg					370	U
Hexachlorobutadiene	ug/Kg					370	U
Hexachlorocyclopentadiene	ug/Kg					370	U
Hexachloroethane	ug/Kg					370	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	99	=	70.6	=	370	U
Isophorone	ug/Kg					370	U
N-Nitrosodi-n-propylamine	ug/Kg					370	U
N-Nitrosodiphenylamine	ug/Kg					370	U
Naphthalene	ug/Kg	40.4	U	42.1	U	370	U
Nitrobenzene	ug/Kg					370	U
Pentachlorophenol	ug/Kg					750	U
Phenanthrene	ug/Kg	146	=	210	=	83	J

	StationID	F613SP022		F613SP027		F613SP027	
	SampleID	613SP022T2 (3-5ft)		613SP027T1 (0-1ft)		613SP027T1DL (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/24/1999		10/26/1999	
	SDGNumber	EN019		EN020		EN020	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	620	U	110	J	1600	R
Benzo(b)Fluoranthene	ug/Kg	620	U	160	J	1600	R
Benzo(g,h,i)Perylene	ug/Kg	620	U	390	UJ	1600	R
Benzo(k)Fluoranthene	ug/Kg	620	U	120	J	1600	R
Benzoic acid	ug/Kg	3100	U	1900	U	7800	R
Benzyl alcohol	ug/Kg	620	U	390	U	1600	R
Benzyl Butyl Phthalate	ug/Kg	620	U	390	U	1600	R
bis(2-Chloroethoxy) Methane	ug/Kg	620	U	390	U	1600	R
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	620	U	390	U	1600	R
bis(2-Ethylhexyl) Phthalate	ug/Kg	620	U	390	U	1600	R
Chrysene	ug/Kg	620	U	140	J	1600	R
Di-n-butyl Phthalate	ug/Kg	620	U	390	U	1600	R
Di-n-octylphthalate	ug/Kg	620	U	390	UJ	1600	R
Dibenz(a,h)anthracene	ug/Kg	620	U	390	UJ	1600	R
Dibenzofuran	ug/Kg	620	U	390	U	1600	R
Diethyl Phthalate	ug/Kg	620	U	390	U	1600	R
Dimethyl Phthalate	ug/Kg	620	U	390	U	1600	R
Flouranthene	ug/Kg	140	J	230	J	1600	R
Fluorene	ug/Kg	620	U	390	U	1600	R
Hexachlorobenzene	ug/Kg	620	U	390	U	1600	R
Hexachlorobutadiene	ug/Kg	620	U	390	U	1600	R
Hexachlorocyclopentadiene	ug/Kg	620	U	390	U	1600	R
Hexachloroethane	ug/Kg	620	U	390	U	1600	R
Indeno(1,2,3-c,d)pyrene	ug/Kg	620	U	390	UJ	1600	R
Isophorone	ug/Kg	620	U	390	U	1600	R
N-Nitrosodi-n-propylamine	ug/Kg	620	U	390	U	1600	R
N-Nitrosodiphenylamine	ug/Kg	620	U	390	U	1600	R
Naphthalene	ug/Kg	620	U	390	U	1600	R
Nitrobenzene	ug/Kg	620	U	390	U	1600	R
Pentachlorophenol	ug/Kg	1200	U	780	U	3100	R
Phenanthrene	ug/Kg	620	U	140	J	1600	R

	StationID	F613SP027		F613SP027		F613SP051	
	SampleID	613SP027T2 (3-5ft)		613SP027T2DL (3-5ft)		613SP051T1 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/24/1999		10/26/1999		10/29/1999	
	SDGNumber	EN020		EN020		EN023	
Parameter	**Units**						
Benzo(a)Pyrene	ug/Kg	380	UJ	1500	R	440	UJ
Benzo(b)Fluoranthene	ug/Kg	380	UJ	1500	R	110	J
Benzo(g,h,i)Perylene	ug/Kg	380	UJ	1500	R	440	UJ
Benzo(k)Fluoranthene	ug/Kg	94	J	1500	R	110	J
Benzoic acid	ug/Kg	1900	U	7600	R	2200	U
Benzyl alcohol	ug/Kg	380	U	1500	R	440	U
Benzyl Butyl Phthalate	ug/Kg	380	U	1500	R	440	U
bis(2-Chloroethoxy) Methane	ug/Kg	380	U	1500	R	440	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	380	U	1500	R	440	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	380	U	1500	R	440	U
Chrysene	ug/Kg	380	U	1500	R	100	J
Di-n-butyl Phthalate	ug/Kg	380	U	1500	R	440	U
Di-n-octylphthalate	ug/Kg	380	UJ	1500	R	440	UJ
Dibenz(a,h)anthracene	ug/Kg	380	UJ	1500	R	440	UJ
Dibenzofuran	ug/Kg	380	U	1500	R	440	U
Diethyl Phthalate	ug/Kg	380	U	1500	R	440	U
Dimethyl Phthalate	ug/Kg	380	U	1500	R	440	U
Flouranthene	ug/Kg	92	J	1500	R	180	J
Fluorene	ug/Kg	380	U	1500	R	440	U
Hexachlorobenzene	ug/Kg	380	U	1500	R	440	U
Hexachlorobutadiene	ug/Kg	380	U	1500	R	440	U
Hexachlorocyclopentadiene	ug/Kg	380	U	1500	R	440	U
Hexachloroethane	ug/Kg	380	U	1500	R	440	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	380	UJ	1500	R	440	UJ
Isophorone	ug/Kg	380	U	1500	R	440	U
N-Nitrosodi-n-propylamine	ug/Kg	380	U	1500	R	440	U
N-Nitrosodiphenylamine	ug/Kg	380	U	1500	R	440	U
Naphthalene	ug/Kg	380	U	1500	R	440	U
Nitrobenzene	ug/Kg	380	U	1500	R	440	U
Pentachlorophenol	ug/Kg	760	U	3000	R	880	U
Phenanthrene	ug/Kg	380	U	1500	R	98	J

	StationID	F613SP051		F613SP051	
	SampleID	613SP051T1DL (0-1ft)		613SP051T2 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/29/1999		10/28/1999	
	SDGNumber	EN023		EN023	
Parameter	**Units**				
Benzo(a)Pyrene	ug/Kg	1800	R	640	U
Benzo(b)Fluoranthene	ug/Kg	1800	R	640	U
Benzo(g,h,i)Perylene	ug/Kg	1800	R	640	U
Benzo(k)Fluoranthene	ug/Kg	1800	R	640	U
Benzoic acid	ug/Kg	8800	R	3200	U
Benzyl alcohol	ug/Kg	1800	R	640	U
Benzyl Butyl Phthalate	ug/Kg	1800	R	640	U
bis(2-Chloroethoxy) Methane	ug/Kg	1800	R	640	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/Kg	1800	R	640	U
bis(2-Ethylhexyl) Phthalate	ug/Kg	1800	R	640	U
Chrysene	ug/Kg	1800	R	640	U
Di-n-butyl Phthalate	ug/Kg	1800	R	640	U
Di-n-octylphthalate	ug/Kg	1800	R	640	U
Dibenz(a,h)anthracene	ug/Kg	1800	R	640	U
Dibenzofuran	ug/Kg	1800	R	640	U
Diethyl Phthalate	ug/Kg	1800	R	640	U
Dimethyl Phthalate	ug/Kg	1800	R	640	U
Flouranthene	ug/Kg	1800	R	640	U
Fluorene	ug/Kg	1800	R	640	U
Hexachlorobenzene	ug/Kg	1800	R	640	U
Hexachlorobutadiene	ug/Kg	1800	R	640	U
Hexachlorocyclopentadiene	ug/Kg	1800	R	640	U
Hexachloroethane	ug/Kg	1800	R	640	U
Indeno(1,2,3-c,d)pyrene	ug/Kg	1800	R	640	U
Isophorone	ug/Kg	1800	R	640	U
N-Nitrosodi-n-propylamine	ug/Kg	1800	R	640	U
N-Nitrosodiphenylamine	ug/Kg	1800	R	640	U
Naphthalene	ug/Kg	1800	R	640	U
Nitrobenzene	ug/Kg	1800	R	640	U
Pentachlorophenol	ug/Kg	3500	R	1300	U
Phenanthrene	ug/Kg	1800	R	640	U

	StationID	F613SB001		F613SB001		F613SB001	
	SampleID	613SB00101 (0-1ft)		613SB00101DL (0-1ft)		613SB00102 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/21/1999		10/18/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Phenol	ug/Kg	800	U	4000	R	620	U
Pyrene	ug/Kg	2000	J	1100	R	620	U

	StationID	F613SB002		F613SB002		F613SB003	
	SampleID	613SB00201 (0-1ft)		613SB00202 (3-5ft)		613CB00301 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/27/1999		10/27/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
Phenol	ug/Kg	400	U	790	U	400	U
Pyrene	ug/Kg	92	J	350	J	1900	J

	StationID	F613SB003		F613SB003		F613SB003	
	SampleID	613CB00301DL (0-1ft)		613CB00302 (3-5ft)		613CB00302DL (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/27/1999		10/25/1999		10/27/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
Phenol	ug/Kg	1600	R	540	U	2200	R
Pyrene	ug/Kg	1300	R	540	U	2200	R

	StationID	F613SB003		F613SB003		F613SB003	
	SampleID	613SB00301 (0-1ft)		613SB00301DL (0-1ft)		613SB00302 (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/25/1999		10/27/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
Phenol	ug/Kg	390	U	1600	R	540	U
Pyrene	ug/Kg	1500	=	1200	R	110	J

	StationID	F613SB004		F613SB004		F613SB005	
	SampleID	613SB00401 (0-1ft)		613SB00402 (3-5ft)		613SB00501 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Phenol	ug/Kg	460	U	680	U	530	U
Pyrene	ug/Kg	420	J	1100	=	200	J

	StationID	F613SB005		F613SB006		F613SB006	
	SampleID	613SB00502 (3-5ft)		613SB00601 (0-1ft)		613SB00602 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Phenol	ug/Kg	530	U	410	U	540	U
Pyrene	ug/Kg	1400	=	410	U	210	J

	StationID	F613SB007		F613SB007		F613SB008	
	SampleID	613SB00701 (0-1ft)		613SB00702 (3-5ft)		613SB00801 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/18/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Phenol	ug/Kg	370	U	690	U	400	U
Pyrene	ug/Kg	370	U	260	J	1100	J

	StationID	F613SB008		F613SB008		F613SB009	
	SampleID	613SB00801DL (0-1ft)		613SB00802 (3-5ft)		613SB00901 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Phenol	ug/Kg	2000	R	670	U	1800	U
Pyrene	ug/Kg	800	R	310	J	2400	J

	StationID	F613SB009		F613SB009		F613SB010	
	SampleID	613SB00901DL (0-1ft)		613SB00902 (3-5ft)		613SB01001 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/20/1999		10/20/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Phenol	ug/Kg	4400	R	530	U	420	U
Pyrene	ug/Kg	2200	R	250	J	200	J

	StationID	F613SB010		F613SB011		F613SB011	
	SampleID	613SB01002 (3-5ft)		613SB01101 (0-1ft)		613SB01102 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/28/1999		10/29/1999	
	SDGNumber	EN019		EN023		EN023	
Parameter	**Units**						
Phenol	ug/Kg	540	U	410	U	1600	U
Pyrene	ug/Kg	300	J	270	J	2200	J

	StationID	F613SB011		F613SB012		F613SB012	
	SampleID	613SB01102DL (3-5ft)		613CB01201 (0-1ft)		613CB01202 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/29/1999		10/25/1999		10/25/1999	
	SDGNumber	EN023		EN021		EN021	
Parameter	**Units**						
Phenol	ug/Kg	4000	R	380	U	640	U
Pyrene	ug/Kg	1600	R	130	J	640	U

	StationID	F613SB012		F613SB012		F613SB013	
	SampleID	613SB01201 (0-1ft)		613SB01202 (3-5ft)		613CB01301 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/22/1999		10/25/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
Phenol	ug/Kg	400	U	620	U	420	U
Pyrene	ug/Kg	150	J	130	J	1100	J

	StationID	F613SB013		F613SB013		F613SB013	
	SampleID	613CB01302 (3-5ft)		613SB01301 (0-1ft)		613SB01302 (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/25/1999		10/25/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
Phenol	ug/Kg	460	U	400	U	450	U
Pyrene	ug/Kg	110	J	210	J	210	J

	StationID	F613SB014		F613SB014		F613SB016	
	SampleID	613SB01401 (0-1ft)		613SB01402 (3-5ft)		613SB01601 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/20/1999		10/20/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Phenol	ug/Kg	3900	U	410	U	390	U
Pyrene	ug/Kg	960	J	410	U	390	U

	StationID	F613SB016		F613SB016		F613SB021	
	SampleID	613SB01602 (3-5ft)		613SB01602DL (3-5ft)		613SB02101b (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/21/1999		11/23/1999	
	SDGNumber	EN019		EN019		EN027	
Parameter	**Units**						
Phenol	ug/Kg	620	U	6200	R	380	U
Pyrene	ug/Kg	680	=	6200	R	250	J

	StationID	F613SB021		F613SB021		F613SB022	
	SampleID	613SB02101bDL (0-1ft)		613SB02102b (3-5ft)		613SB02201b (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/23/1999		11/23/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	Units						
Phenol	ug/Kg	770	R	620	U	380	U
Pyrene	ug/Kg	230	R	620	U	2700	=

	StationID	F613SB022		F613SB022		F613SB023	
	SampleID	613SB02201bDL (0-1ft)		613SB02202b (3-5ft)		613SB02301 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/24/1999		11/23/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	**Units**						
Phenol	ug/Kg	770	R	560	U	430	U
Pyrene	ug/Kg	2500	R	560	U	150	J

	StationID	F613SB023		F613SB024		F613SB024	
	SampleID	613SB02302 (3-5ft)		613SB02401 (0-1ft)		613SB02402 (3-5ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/23/1999		11/23/1999		11/24/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	**Units**						
Phenol	ug/Kg	560	U	450	U	710	U
Pyrene	ug/Kg	560	U	250	J	710	U

	StationID	F613SB025		F613SB026		F613SB026	
	SampleID	613SB02501 (0-1ft)		613CB02602 (3-5ft)		613SB02601 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/17/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/29/1999		11/24/1999	
	SDGNumber	EN028		EN028		EN028	
Parameter	**Units**						
Phenol	ug/Kg	480	U	540	U	490	U
Pyrene	ug/Kg	480	U	540	U	490	U

	StationID	F613SB026		F613SB027		F613SB027	
	SampleID	613SB02602 (3-5ft)		613SB02701 (0-1ft)		613SB02702 (3-5ft)	
	DateCollected	11/17/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/29/1999		11/24/1999		11/24/1999	
	SDGNumber	EN028		EN028		EN028	
Parameter	**Units**						
Phenol	ug/Kg	530	U	510	U	360	U
Pyrene	ug/Kg	290	J	510	U	360	U

	StationID	F613SB028		F613SB028		F613SB029	
	SampleID	613SB02801 (0-1ft)		613SB02802 (3-5ft)		613SB02901 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		12/1/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/24/1999		12/06/1999	
	SDGNumber	EN028		EN028		EN030	
Parameter	**Units**						
Phenol	ug/Kg	530	U	370	U	370	U
Pyrene	ug/Kg	530	U	370	U	370	U

	StationID	F613SB029		F613SB030		F613SB030	
	SampleID	613SB02902 (3-5ft)		613SB03001 (0-1ft)		613SB03002 (3-5ft)	
	DateCollected	12/1/1999 12:00 AM		12/1/1999 12:00 AM		12/1/1999 12:00 AM	
	DateAnalyzed	12/06/1999		12/07/1999		12/06/1999	
	SDGNumber	EN030		EN030		EN030	
Parameter	**Units**						
Phenol	ug/Kg	360	U	440	U	630	U
Pyrene	ug/Kg	360	U	440	U	630	U

	StationID	F613SB033		F613SB034		F613SP022	
	SampleID	613SB03301 (0-1ft)		613SB03401 (0-1ft)		613SP022T1 (0-1ft)	
	DateCollected	6/7/2001 12:00 AM		6/7/2001 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	06/16/2001		06/16/2001		10/19/1999	
	SDGNumber	43557		43557		EN019	
Parameter	**Units**						
Phenol	ug/Kg					370	U
Pyrene	ug/Kg	308	=	311	=	120	J

	StationID	F613SP022		F613SP027		F613SP027	
	SampleID	613SP022T2 (3-5ft)		613SP027T1 (0-1ft)		613SP027T1DL (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/24/1999		10/26/1999	
	SDGNumber	EN019		EN020		EN020	
Parameter	**Units**						
Phenol	ug/Kg	620	U	390	U	1600	R
Pyrene	ug/Kg	160	J	230	J	1600	R

	StationID	F613SP027		F613SP027		F613SP051	
	SampleID	613SP027T2 (3-5ft)		613SP027T2DL (3-5ft)		613SP051T1 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/24/1999		10/26/1999		10/29/1999	
	SDGNumber	EN020		EN020		EN023	
Parameter	**Units**						
Phenol	ug/Kg	380	U	1500	R	440	U
Pyrene	ug/Kg	130	J	1500	R	270	J

	StationID	F613SP051		F613SP051	
	SampleID	613SP051T1DL (0-1ft)		613SP051T2 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/29/1999		10/28/1999	
	SDGNumber	EN023		EN023	
Parameter	**Units**				
Phenol	ug/Kg	1800	R	640	U
Pyrene	ug/Kg	1800	R	180	J

	StationID	F613SB001		F613SB001		F613SB001	
	SampleID	613SB00101 (0-1ft)		613SB00101DL (0-1ft)		613SB00102 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/21/1999		10/18/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	800	U	4000	R	620	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB002		F613SB002		F613SB003	
	SampleID	613SB00201 (0-1ft)		613SB00202 (3-5ft)		613CB00301 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/27/1999		10/27/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	400	U	790	U	400	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB003		F613SB003		F613SB003	
	SampleID	613CB00301DL (0-1ft)		613CB00302 (3-5ft)		613CB00302DL (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/27/1999		10/25/1999		10/27/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	1600	R	540	U	2200	R
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB003		F613SB003		F613SB003	
	SampleID	613SB00301 (0-1ft)		613SB00301DL (0-1ft)		613SB00302 (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/25/1999		10/27/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	390	U	1600	R	540	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB004		F613SB004		F613SB005	
	SampleID	613SB00401 (0-1ft)		613SB00402 (3-5ft)		613SB00501 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	460	U	680	U	530	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB005		F613SB006		F613SB006	
	SampleID	613SB00502 (3-5ft)		613SB00601 (0-1ft)		613SB00602 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	530	U	410	U	540	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB007		F613SB007		F613SB008	
	SampleID	613SB00701 (0-1ft)		613SB00702 (3-5ft)		613SB00801 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/18/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	370	U	690	U	400	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB008		F613SB008		F613SB009	
	SampleID	613SB00801DL (0-1ft)		613SB00802 (3-5ft)		613SB00901 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	2000	R	670	U	1800	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB009		F613SB009		F613SB010	
	SampleID	613SB00901DL (0-1ft)		613SB00902 (3-5ft)		613SB01001 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/20/1999		10/20/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	4400	R	530	U	420	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB010		F613SB011		F613SB011	
	SampleID	613SB01002 (3-5ft)		613SB01101 (0-1ft)		613SB01102 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/28/1999		10/29/1999	
	SDGNumber	EN019		EN023		EN023	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	540	U	410	U	1600	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB011		F613SB012		F613SB012	
	SampleID	613SB01102DL (3-5ft)		613CB01201 (0-1ft)		613CB01202 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/29/1999		10/25/1999		10/25/1999	
	SDGNumber	EN023		EN021		EN021	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	4000	R	380	U	640	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB012		F613SB012		F613SB013	
	SampleID	613SB01201 (0-1ft)		613SB01202 (3-5ft)		613CB01301 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/22/1999		10/25/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	400	U	620	U	420	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB013		F613SB013		F613SB013	
	SampleID	613CB01302 (3-5ft)		613SB01301 (0-1ft)		613SB01302 (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/25/1999		10/25/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	460	U	400	U	450	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB014		F613SB014		F613SB016	
	SampleID	613SB01401 (0-1ft)		613SB01402 (3-5ft)		613SB01601 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/20/1999		10/20/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	3900	U	410	U	390	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB016		F613SB016		F613SB021	
	SampleID	613SB01602 (3-5ft)		613SB01602DL (3-5ft)		613SB02101b (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/21/1999		11/23/1999	
	SDGNumber	EN019		EN019		EN027	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	620	U	6200	R	380	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB021		F613SB021		F613SB022	
	SampleID	613SB02101bDL (0-1ft)		613SB02102b (3-5ft)		613SB02201b (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/23/1999		11/23/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	770	R	620	U	380	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB022		F613SB022		F613SB023	
	SampleID	613SB02201bDL (0-1ft)		613SB02202b (3-5ft)		613SB02301 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/24/1999		11/23/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	770	R	560	U	430	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB023		F613SB024		F613SB024	
	SampleID	613SB02302 (3-5ft)		613SB02401 (0-1ft)		613SB02402 (3-5ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/23/1999		11/23/1999		11/24/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	560	U	450	U	710	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB025		F613SB026		F613SB026	
	SampleID	613SB02501 (0-1ft)		613CB02602 (3-5ft)		613SB02601 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/17/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/29/1999		11/24/1999	
	SDGNumber	EN028		EN028		EN028	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	480	U	540	U	490	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB026		F613SB027		F613SB027	
	SampleID	613SB02602 (3-5ft)		613SB02701 (0-1ft)		613SB02702 (3-5ft)	
	DateCollected	11/17/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/29/1999		11/24/1999		11/24/1999	
	SDGNumber	EN028		EN028		EN028	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	530	U	510	U	360	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB028		F613SB028		F613SB029	
	SampleID	613SB02801 (0-1ft)		613SB02802 (3-5ft)		613SB02901 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		12/1/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/24/1999		12/06/1999	
	SDGNumber	EN028		EN028		EN030	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	530	U	370	U	370	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SB029		F613SB030		F613SB030	
	SampleID	613SB02902 (3-5ft)		613SB03001 (0-1ft)		613SB03002 (3-5ft)	
	DateCollected	12/1/1999 12:00 AM		12/1/1999 12:00 AM		12/1/1999 12:00 AM	
	DateAnalyzed	12/06/1999		12/07/1999		12/06/1999	
	SDGNumber	EN030		EN030		EN030	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg						
1,1,2,2-Tetrachloroethane	ug/Kg						
1,1,2-Trichloroethane	ug/Kg						
1,1-Dichloroethane	ug/Kg						
1,1-Dichloroethene	ug/Kg						
1,2,4--Trichlorobenzene	ug/Kg	360	U	440	U	630	U
1,2-Dichloroethane	ug/Kg						
1,2-Dichloroethene (total)	ug/Kg						
1,2-Dichloropropane	ug/Kg						
2-Chloroethyl vinyl ether	ug/Kg						
2-Hexanone	ug/Kg						
Acetone	ug/Kg						
Benzene	ug/Kg						
Bromodichloromethane	ug/Kg						
Bromoform	ug/Kg						
Bromomethane	ug/Kg						
Carbon Disulfide	ug/Kg						
Carbon Tetrachloride	ug/Kg						
Chlorobenzene	ug/Kg						
Chloroethane	ug/Kg						
Chloroform	ug/Kg						
Chloromethane	ug/Kg						
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg						
Dibromochloromethane	ug/Kg						
Ethylbenzene	ug/Kg						
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg						
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg						
Methylene Chloride	ug/Kg						
o-Xylene	ug/Kg						

	StationID	F613SP022		F613SP022		F613SP022	
	SampleID	613SP022T1 (0-1ft)		613SP022T1 (0-1ft)		613SP022T1RE (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/14/1999		10/19/1999		10/14/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg	3	UJ			3	R
1,1,2,2-Tetrachloroethane	ug/Kg	3	UJ			3	R
1,1,2-Trichloroethane	ug/Kg	3	UJ			3	R
1,1-Dichloroethane	ug/Kg	3	UJ			3	R
1,1-Dichloroethene	ug/Kg	3	UJ			3	R
1,2,4--Trichlorobenzene	ug/Kg			370	U		
1,2-Dichloroethane	ug/Kg	3	UJ			3	R
1,2-Dichloroethene (total)	ug/Kg	3	U			3	U
1,2-Dichloropropane	ug/Kg	3	UJ			3	R
2-Chloroethyl vinyl ether	ug/Kg	9	UJ			10	R
2-Hexanone	ug/Kg	4	UJ			5	R
Acetone	ug/Kg	19	J			30	R
Benzene	ug/Kg	3	UJ			3	R
Bromodichloromethane	ug/Kg	3	UJ			3	R
Bromoform	ug/Kg	3	UJ			3	R
Bromomethane	ug/Kg	3	UJ			3	R
Carbon Disulfide	ug/Kg	2	J			2	R
Carbon Tetrachloride	ug/Kg	3	UJ			3	R
Chlorobenzene	ug/Kg	3	UJ			3	R
Chloroethane	ug/Kg	3	UJ			3	R
Chloroform	ug/Kg	3	UJ			3	R
Chloromethane	ug/Kg	3	UJ			3	R
cis-1,2-Dichloroethylene	ug/Kg	3	UJ			3	R
cis-1,3-Dichloropropene	ug/Kg	3	UJ			3	R
Dibromochloromethane	ug/Kg	3	UJ			3	R
Ethylbenzene	ug/Kg	3	UJ			3	R
m+p Xylene	ug/Kg	3	UJ			3	R
Methyl ethyl ketone (2-Butanone)	ug/Kg	4	UJ			5	R
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg	4	UJ			5	R
Methylene Chloride	ug/Kg	10	UJ			11	R
o-Xylene	ug/Kg	3	UJ			3	R

	StationID	F613SP022		F613SP022		F613SP027	
	SampleID	613SP022T2 (3-5ft)		613SP022T2 (3-5ft)		613SP027T1 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/14/1999		10/19/1999		10/18/1999	
	SDGNumber	EN019		EN019		EN020	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg	8	U			4	UJ
1,1,2,2-Tetrachloroethane	ug/Kg	8	U			4	UJ
1,1,2-Trichloroethane	ug/Kg	8	U			4	UJ
1,1-Dichloroethane	ug/Kg	8	U			4	UJ
1,1-Dichloroethene	ug/Kg	8	U			4	UJ
1,2,4--Trichlorobenzene	ug/Kg			620	U		
1,2-Dichloroethane	ug/Kg	8	U			4	UJ
1,2-Dichloroethene (total)	ug/Kg	8	U			4	UJ
1,2-Dichloropropane	ug/Kg	8	U			4	UJ
2-Chloroethyl vinyl ether	ug/Kg	26	U			13	UJ
2-Hexanone	ug/Kg	13	U			7	UJ
Acetone	ug/Kg	70	=			170	J
Benzene	ug/Kg	8	U			4	UJ
Bromodichloromethane	ug/Kg	8	U			4	UJ
Bromoform	ug/Kg	8	U			4	UJ
Bromomethane	ug/Kg	8	U			4	UJ
Carbon Disulfide	ug/Kg	3	J			5	J
Carbon Tetrachloride	ug/Kg	8	U			4	UJ
Chlorobenzene	ug/Kg	8	U			4	UJ
Chloroethane	ug/Kg	8	U			4	UJ
Chloroform	ug/Kg	8	U			4	UJ
Chloromethane	ug/Kg	8	U			4	UJ
cis-1,2-Dichloroethylene	ug/Kg	8	U				
cis-1,3-Dichloropropene	ug/Kg	8	U			4	UJ
Dibromochloromethane	ug/Kg	8	U			4	UJ
Ethylbenzene	ug/Kg	8	U			4	UJ
m+p Xylene	ug/Kg	8	U				
Methyl ethyl ketone (2-Butanone)	ug/Kg	3	J			7	UJ
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg	13	U			7	UJ
Methylene Chloride	ug/Kg	14	U			24	UJ
o-Xylene	ug/Kg	8	U				

	StationID	F613SP027		F613SP027		F613SP027	
	SampleID	613SP027T1 (0-1ft)		613SP027T1DL (0-1ft)		613SP027T1RE (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/24/1999		10/26/1999		10/20/1999	
	SDGNumber	EN020		EN020		EN020	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg					3	R
1,1,2,2-Tetrachloroethane	ug/Kg					3	R
1,1,2-Trichloroethane	ug/Kg					3	R
1,1-Dichloroethane	ug/Kg					3	R
1,1-Dichloroethene	ug/Kg					3	R
1,2,4--Trichlorobenzene	ug/Kg	390	U	1600	R		
1,2-Dichloroethane	ug/Kg					3	R
1,2-Dichloroethene (total)	ug/Kg					3	R
1,2-Dichloropropane	ug/Kg					3	R
2-Chloroethyl vinyl ether	ug/Kg					10	R
2-Hexanone	ug/Kg					5	R
Acetone	ug/Kg					110	R
Benzene	ug/Kg					3	R
Bromodichloromethane	ug/Kg					3	R
Bromoform	ug/Kg					3	R
Bromomethane	ug/Kg					3	R
Carbon Disulfide	ug/Kg					4	R
Carbon Tetrachloride	ug/Kg					3	R
Chlorobenzene	ug/Kg					3	R
Chloroethane	ug/Kg					3	R
Chloroform	ug/Kg					3	R
Chloromethane	ug/Kg					3	R
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg					3	R
Dibromochloromethane	ug/Kg					3	R
Ethylbenzene	ug/Kg					3	R
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg					21	R
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg					5	R
Methylene Chloride	ug/Kg					7	R
o-Xylene	ug/Kg						

	StationID	F613SP027		F613SP027		F613SP027	
	SampleID	613SP027T2 (3-5ft)		613SP027T2 (3-5ft)		613SP027T2DL (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/18/1999		10/24/1999		10/26/1999	
	SDGNumber	EN020		EN020		EN020	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg	4	U				
1,1,2,2-Tetrachloroethane	ug/Kg	4	UJ				
1,1,2-Trichloroethane	ug/Kg	4	U				
1,1-Dichloroethane	ug/Kg	4	U				
1,1-Dichloroethene	ug/Kg	4	U				
1,2,4--Trichlorobenzene	ug/Kg			380	U	1500	R
1,2-Dichloroethane	ug/Kg	4	U				
1,2-Dichloroethene (total)	ug/Kg	4	U				
1,2-Dichloropropane	ug/Kg	4	U				
2-Chloroethyl vinyl ether	ug/Kg	13	U				
2-Hexanone	ug/Kg	7	U				
Acetone	ug/Kg	55	J				
Benzene	ug/Kg	4	U				
Bromodichloromethane	ug/Kg	4	U				
Bromoform	ug/Kg	4	U				
Bromomethane	ug/Kg	4	U				
Carbon Disulfide	ug/Kg	2	J				
Carbon Tetrachloride	ug/Kg	4	U				
Chlorobenzene	ug/Kg	4	U				
Chloroethane	ug/Kg	4	U				
Chloroform	ug/Kg	4	U				
Chloromethane	ug/Kg	4	U				
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg	4	U				
Dibromochloromethane	ug/Kg	4	U				
Ethylbenzene	ug/Kg	4	U				
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg	2	J				
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg	7	U				
Methylene Chloride	ug/Kg	10	U				
o-Xylene	ug/Kg						

	StationID	F613SP027		F613SP051		F613SP051	
	SampleID	613SP027T2RE (3-5ft)		613SP051T1 (0-1ft)		613SP051T1 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/19/1999		10/29/1999	
	SDGNumber	EN020		EN023		EN023	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg	4	R	5	U		
1,1,2,2-Tetrachloroethane	ug/Kg	4	R	5	UJ		
1,1,2-Trichloroethane	ug/Kg	4	R	5	U		
1,1-Dichloroethane	ug/Kg	4	R	5	U		
1,1-Dichloroethene	ug/Kg	4	R	5	U		
1,2,4--Trichlorobenzene	ug/Kg					440	U
1,2-Dichloroethane	ug/Kg	4	R	5	U		
1,2-Dichloroethene (total)	ug/Kg	4	R	5	U		
1,2-Dichloropropane	ug/Kg	4	R	5	U		
2-Chloroethyl vinyl ether	ug/Kg	13	R	16	U		
2-Hexanone	ug/Kg	6	R	8	U		
Acetone	ug/Kg	39	R	53	=		
Benzene	ug/Kg	4	R	5	U		
Bromodichloromethane	ug/Kg	4	R	5	U		
Bromoform	ug/Kg	4	R	5	U		
Bromomethane	ug/Kg	4	R	5	U		
Carbon Disulfide	ug/Kg	4	R	5	J		
Carbon Tetrachloride	ug/Kg	4	R	5	U		
Chlorobenzene	ug/Kg	4	R	5	U		
Chloroethane	ug/Kg	4	R	5	U		
Chloroform	ug/Kg	4	R	5	U		
Chloromethane	ug/Kg	4	R	5	U		
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg	4	R	5	U		
Dibromochloromethane	ug/Kg	4	R	5	U		
Ethylbenzene	ug/Kg	4	R	5	U		
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg	6	R	15	=		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg	6	R	8	U		
Methylene Chloride	ug/Kg	12	R	13	U		
o-Xylene	ug/Kg						

	StationID	F613SP051		F613SP051		F613SP051	
	SampleID	613SP051T1DL (0-1ft)		613SP051T1RE (0-1ft)		613SP051T2 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM		10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/29/1999		10/21/1999		10/19/1999	
	SDGNumber	EN023		EN023		EN023	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/Kg			4	R	10	U
1,1,2,2-Tetrachloroethane	ug/Kg			4	R	10	U
1,1,2-Trichloroethane	ug/Kg			4	R	10	U
1,1-Dichloroethane	ug/Kg			4	R	10	U
1,1-Dichloroethene	ug/Kg			4	R	10	U
1,2,4--Trichlorobenzene	ug/Kg	1800	R				
1,2-Dichloroethane	ug/Kg			4	R	10	U
1,2-Dichloroethene (total)	ug/Kg			4	R	10	U
1,2-Dichloropropane	ug/Kg			4	R	10	U
2-Chloroethyl vinyl ether	ug/Kg			12	R	33	U
2-Hexanone	ug/Kg			6	R	17	U
Acetone	ug/Kg			24	R	130	=
Benzene	ug/Kg			4	R	10	U
Bromodichloromethane	ug/Kg			4	R	10	U
Bromoform	ug/Kg			4	R	10	U
Bromomethane	ug/Kg			4	R	10	U
Carbon Disulfide	ug/Kg			2	R	17	J
Carbon Tetrachloride	ug/Kg			4	R	10	U
Chlorobenzene	ug/Kg			4	R	10	U
Chloroethane	ug/Kg			4	R	10	U
Chloroform	ug/Kg			4	R	10	U
Chloromethane	ug/Kg			4	R	10	U
cis-1,2-Dichloroethylene	ug/Kg						
cis-1,3-Dichloropropene	ug/Kg			4	R	10	U
Dibromochloromethane	ug/Kg			4	R	10	U
Ethylbenzene	ug/Kg			4	R	10	U
m+p Xylene	ug/Kg						
Methyl ethyl ketone (2-Butanone)	ug/Kg			6	R	17	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg			6	R	17	U
Methylene Chloride	ug/Kg			5	R	25	U
o-Xylene	ug/Kg						

	StationID	F613SP051	
	SampleID	613SP051T2 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM	
	DateAnalyzed	10/28/1999	
	SDGNumber	EN023	
Parameter	**Units**		
1,1,1-Trichloroethane	ug/Kg		
1,1,2,2-Tetrachloroethane	ug/Kg		
1,1,2-Trichloroethane	ug/Kg		
1,1-Dichloroethane	ug/Kg		
1,1-Dichloroethene	ug/Kg		
1,2,4--Trichlorobenzene	ug/Kg	640	U
1,2-Dichloroethane	ug/Kg		
1,2-Dichloroethene (total)	ug/Kg		
1,2-Dichloropropane	ug/Kg		
2-Chloroethyl vinyl ether	ug/Kg		
2-Hexanone	ug/Kg		
Acetone	ug/Kg		
Benzene	ug/Kg		
Bromodichloromethane	ug/Kg		
Bromoform	ug/Kg		
Bromomethane	ug/Kg		
Carbon Disulfide	ug/Kg		
Carbon Tetrachloride	ug/Kg		
Chlorobenzene	ug/Kg		
Chloroethane	ug/Kg		
Chloroform	ug/Kg		
Chloromethane	ug/Kg		
cis-1,2-Dichloroethylene	ug/Kg		
cis-1,3-Dichloropropene	ug/Kg		
Dibromochloromethane	ug/Kg		
Ethylbenzene	ug/Kg		
m+p Xylene	ug/Kg		
Methyl ethyl ketone (2-Butanone)	ug/Kg		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/Kg		
Methylene Chloride	ug/Kg		
o-Xylene	ug/Kg		

	StationID	F613SB001		F613SB001		F613SB001	
	SampleID	613SB00101 (0-1ft)		613SB00101DL (0-1ft)		613SB00102 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/21/1999		10/18/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB002		F613SB002		F613SB003	
	SampleID	613SB00201 (0-1ft)		613SB00202 (3-5ft)		613CB00301 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/27/1999		10/27/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB003		F613SB003		F613SB003	
	SampleID	613CB00301DL (0-1ft)		613CB00302 (3-5ft)		613CB00302DL (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/27/1999		10/25/1999		10/27/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB003		F613SB003		F613SB003	
	SampleID	613SB00301 (0-1ft)		613SB00301DL (0-1ft)		613SB00302 (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/25/1999		10/27/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB004		F613SB004		F613SB005	
	SampleID	613SB00401 (0-1ft)		613SB00402 (3-5ft)		613SB00501 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB005		F613SB006		F613SB006	
	SampleID	613SB00502 (3-5ft)		613SB00601 (0-1ft)		613SB00602 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB007		F613SB007		F613SB008	
	SampleID	613SB00701 (0-1ft)		613SB00702 (3-5ft)		613SB00801 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/18/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB008		F613SB008		F613SB009	
	SampleID	613SB00801DL (0-1ft)		613SB00802 (3-5ft)		613SB00901 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/19/1999		10/19/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB009		F613SB009		F613SB010	
	SampleID	613SB00901DL (0-1ft)		613SB00902 (3-5ft)		613SB01001 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/20/1999		10/20/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB010		F613SB011		F613SB011	
	SampleID	613SB01002 (3-5ft)		613SB01101 (0-1ft)		613SB01102 (3-5ft)	
	DateCollected	10/13/1999 12:00 AM		10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/28/1999		10/29/1999	
	SDGNumber	EN019		EN023		EN023	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB011		F613SB012		F613SB012	
	SampleID	613SB01102DL (3-5ft)		613CB01201 (0-1ft)		613CB01202 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/29/1999		10/25/1999		10/25/1999	
	SDGNumber	EN023		EN021		EN021	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB012		F613SB012		F613SB013	
	SampleID	613SB01201 (0-1ft)		613SB01202 (3-5ft)		613CB01301 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/22/1999		10/25/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB013		F613SB013		F613SB013	
	SampleID	613CB01302 (3-5ft)		613SB01301 (0-1ft)		613SB01302 (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/25/1999		10/25/1999		10/25/1999	
	SDGNumber	EN021		EN021		EN021	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB014		F613SB014		F613SB016	
	SampleID	613SB01401 (0-1ft)		613SB01402 (3-5ft)		613SB01601 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/20/1999		10/20/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB016		F613SB016		F613SB021	
	SampleID	613SB01602 (3-5ft)		613SB01602DL (3-5ft)		613SB02101b (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/21/1999		11/23/1999	
	SDGNumber	EN019		EN019		EN027	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB021		F613SB021		F613SB022	
	SampleID	613SB02101bDL (0-1ft)		613SB02102b (3-5ft)		613SB02201b (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/23/1999		11/23/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB022		F613SB022		F613SB023	
	SampleID	613SB02201bDL (0-1ft)		613SB02202b (3-5ft)		613SB02301 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/24/1999		11/23/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB023		F613SB024		F613SB024	
	SampleID	613SB02302 (3-5ft)		613SB02401 (0-1ft)		613SB02402 (3-5ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/23/1999		11/23/1999		11/24/1999	
	SDGNumber	EN027		EN027		EN027	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB025		F613SB026		F613SB026	
	SampleID	613SB02501 (0-1ft)		613CB02602 (3-5ft)		613SB02601 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/17/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/29/1999		11/24/1999	
	SDGNumber	EN028		EN028		EN028	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB026		F613SB027		F613SB027	
	SampleID	613SB02602 (3-5ft)		613SB02701 (0-1ft)		613SB02702 (3-5ft)	
	DateCollected	11/17/1999 12:00 AM		11/16/1999 12:00 AM		11/16/1999 12:00 AM	
	DateAnalyzed	11/29/1999		11/24/1999		11/24/1999	
	SDGNumber	EN028		EN028		EN028	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB028		F613SB028		F613SB029	
	SampleID	613SB02801 (0-1ft)		613SB02802 (3-5ft)		613SB02901 (0-1ft)	
	DateCollected	11/16/1999 12:00 AM		11/16/1999 12:00 AM		12/1/1999 12:00 AM	
	DateAnalyzed	11/24/1999		11/24/1999		12/06/1999	
	SDGNumber	EN028		EN028		EN030	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SB029		F613SB030		F613SB030	
	SampleID	613SB02902 (3-5ft)		613SB03001 (0-1ft)		613SB03002 (3-5ft)	
	DateCollected	12/1/1999 12:00 AM		12/1/1999 12:00 AM		12/1/1999 12:00 AM	
	DateAnalyzed	12/06/1999		12/07/1999		12/06/1999	
	SDGNumber	EN030		EN030		EN030	
Parameter	**Units**						
Styrene	ug/Kg						
Tetrachloroethylene (PCE)	ug/Kg						
Toluene	ug/Kg						
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg						
Trichloroethylene (TCE)	ug/Kg						
Vinyl acetate	ug/Kg						
Vinyl chloride	ug/Kg						
Xylenes, Total	ug/Kg						

	StationID	F613SP022		F613SP022		F613SP022	
	SampleID	613SP022T1 (0-1ft)		613SP022T1 (0-1ft)		613SP022T1RE (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/13/1999 12:00 AM	
	DateAnalyzed	10/14/1999		10/19/1999		10/14/1999	
	SDGNumber	EN019		EN019		EN019	
Parameter	**Units**						
Styrene	ug/Kg	3	UJ			3	R
Tetrachloroethylene (PCE)	ug/Kg	3	UJ			3	R
Toluene	ug/Kg	3	UJ			3	R
trans-1,2-Dichloroethene	ug/Kg	3	UJ			3	R
trans-1,3-Dichloropropene	ug/Kg	3	UJ			3	R
Trichloroethylene (TCE)	ug/Kg	3	UJ			3	R
Vinyl acetate	ug/Kg	3	UJ			3	R
Vinyl chloride	ug/Kg	3	UJ			3	R
Xylenes, Total	ug/Kg	3	U			3	U

	StationID	F613SP022		F613SP022		F613SP027	
	SampleID	613SP022T2 (3-5ft)		613SP022T2 (3-5ft)		613SP027T1 (0-1ft)	
	DateCollected	10/13/1999 12:00 AM		10/13/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/14/1999		10/19/1999		10/18/1999	
	SDGNumber	EN019		EN019		EN020	
Parameter	**Units**						
Styrene	ug/Kg	8	U			4	UJ
Tetrachloroethylene (PCE)	ug/Kg	8	U			4	UJ
Toluene	ug/Kg	8	U			4	J
trans-1,2-Dichloroethene	ug/Kg	8	U				
trans-1,3-Dichloropropene	ug/Kg	8	U			4	UJ
Trichloroethylene (TCE)	ug/Kg	8	U			4	UJ
Vinyl acetate	ug/Kg	8	U			4	UJ
Vinyl chloride	ug/Kg	8	U			4	UJ
Xylenes, Total	ug/Kg	8	U			4	UJ

	StationID	F613SP027		F613SP027		F613SP027	
	SampleID	613SP027T1 (0-1ft)		613SP027T1DL (0-1ft)		613SP027T1RE (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/24/1999		10/26/1999		10/20/1999	
	SDGNumber	EN020		EN020		EN020	
Parameter	**Units**						
Styrene	ug/Kg					3	R
Tetrachloroethylene (PCE)	ug/Kg					3	R
Toluene	ug/Kg					3	R
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg					3	R
Trichloroethylene (TCE)	ug/Kg					3	R
Vinyl acetate	ug/Kg					3	R
Vinyl chloride	ug/Kg					3	R
Xylenes, Total	ug/Kg					3	R

	StationID	F613SP027		F613SP027		F613SP027	
	SampleID	613SP027T2 (3-5ft)		613SP027T2 (3-5ft)		613SP027T2DL (3-5ft)	
	DateCollected	10/14/1999 12:00 AM		10/14/1999 12:00 AM		10/14/1999 12:00 AM	
	DateAnalyzed	10/18/1999		10/24/1999		10/26/1999	
	SDGNumber	EN020		EN020		EN020	
Parameter	**Units**						
Styrene	ug/Kg	4	U				
Tetrachloroethylene (PCE)	ug/Kg	4	U				
Toluene	ug/Kg	4	U				
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg	4	U				
Trichloroethylene (TCE)	ug/Kg	4	U				
Vinyl acetate	ug/Kg	4	U				
Vinyl chloride	ug/Kg	4	U				
Xylenes, Total	ug/Kg	4	U				

	StationID	F613SP027		F613SP051		F613SP051	
	SampleID	613SP027T2RE (3-5ft)		613SP051T1 (0-1ft)		613SP051T1 (0-1ft)	
	DateCollected	10/14/1999 12:00 AM		10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/20/1999		10/19/1999		10/29/1999	
	SDGNumber	EN020		EN023		EN023	
Parameter	**Units**						
Styrene	ug/Kg	4	R	5	U		
Tetrachloroethylene (PCE)	ug/Kg	4	R	5	U		
Toluene	ug/Kg	4	R	5	U		
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg	4	R	5	U		
Trichloroethylene (TCE)	ug/Kg	4	R	5	U		
Vinyl acetate	ug/Kg	4	R	5	U		
Vinyl chloride	ug/Kg	4	R	5	U		
Xylenes, Total	ug/Kg	4	R	5	U		

	StationID	F613SP051		F613SP051		F613SP051	
	SampleID	613SP051T1DL (0-1ft)		613SP051T1RE (0-1ft)		613SP051T2 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM		10/15/1999 12:00 AM		10/15/1999 12:00 AM	
	DateAnalyzed	10/29/1999		10/21/1999		10/19/1999	
	SDGNumber	EN023		EN023		EN023	
Parameter	**Units**						
Styrene	ug/Kg			4	R	10	U
Tetrachloroethylene (PCE)	ug/Kg			4	R	10	U
Toluene	ug/Kg			4	R	10	U
trans-1,2-Dichloroethene	ug/Kg						
trans-1,3-Dichloropropene	ug/Kg			4	R	10	U
Trichloroethylene (TCE)	ug/Kg			4	R	10	U
Vinyl acetate	ug/Kg			4	R	10	U
Vinyl chloride	ug/Kg			4	R	10	U
Xylenes, Total	ug/Kg			4	R	10	U

	StationID	F613SP051	
	SampleID	613SP051T2 (3-5ft)	
	DateCollected	10/15/1999 12:00 AM	
	DateAnalyzed	10/28/1999	
	SDGNumber	EN023	
Parameter	**Units**		
Styrene	ug/Kg		
Tetrachloroethylene (PCE)	ug/Kg		
Toluene	ug/Kg		
trans-1,2-Dichloroethene	ug/Kg		
trans-1,3-Dichloropropene	ug/Kg		
Trichloroethylene (TCE)	ug/Kg		
Vinyl acetate	ug/Kg		
Vinyl chloride	ug/Kg		
Xylenes, Total	ug/Kg		

Analytical Data Summary

	StationID	F613GW006		FFDSGW17A		FFDSGW17B	
	SampleID	613GW00602		FDSGW17A01		FDSGW17B01	
	DateCollected	6/18/99 12:00 AM		1/28/97 12:00 AM		1/28/97 12:00 AM	
	DateAnalyzed	06/23/1999		02/01/1997		02/01/1997	
	SDGNumber	39074		28308		28308	
Parameter	**Units**						
Cyanide	ug/L	2.3	U	3.8	J	2.1	J

	StationID	FFDSGW17B	
	SampleID	FDSGW17B05	
	DateCollected	1/15/99 12:00 AM	
	DateAnalyzed	01/21/1999	
	SDGNumber	37108	
Parameter	**Units**		
Total Suspended Solids (TSS)	mg/L	4	=

	StationID	F240GW003		F613GW001		F613GW001		F613GW003	
	SampleID	240GW00304		613GW00104		613HW00104		613GW00304	
	DateCollected	11/12/97 12:00 AM		11/6/97 12:00 AM		11/6/97 12:00 AM		11/7/97 12:00 AM	
	DateAnalyzed	12/11/1997		12/02/1997		12/02/1997		12/02/1997	
	SDGNumber	31821		31703		31703		31703	
Parameter	**Units**								
Aluminum	ug/L	561	J	64.4	J	690	J	8	U
Antimony	ug/L	1.6	U	5.8	U	2.2	U	1.6	U
Arsenic	ug/L	9.5	J	2.1	U	7.4	J	2.1	U
Barium	ug/L	47.1	=	15.7	=	44.1	=	245	=
Beryllium	ug/L	0.21	U	0.2	U	0.2	U	1.1	J
Cadmium	ug/L	0.3	U	0.3	U	0.3	U	0.3	U
Calcium	ug/L	44800	=	52100	=	56100	=	267000	=
Chromium, Total	ug/L	1.2	J	1	U	1	U	1.2	U
Cobalt	ug/L	0.8	U	0.8	U	4.1	J	0.8	U
Copper	ug/L	2.8	J	1.4	U	2.8	J	2.4	J
Iron	ug/L	17600	=	62.1	U	8960	J	20	U
Lead	ug/L	2.2	U	0.9	U	0.9	U	0.9	U
Magnesium	ug/L	22700	=	25400	=	19600	=	772000	=
Manganese	ug/L	131	=	51.5	J	396	J	163	=
Mercury	ug/L	0.13	U	0.1	U	1.1	=	0.1	U
Nickel	ug/L	1.1	U	0.7	U	2.8	U	5.2	U
Potassium	ug/L	29200	=	12800	J	18700	J	164000	=
Selenium	ug/L	3.4	U	3.4	U	3.4	U	3.4	U
Silver	ug/L	1	U	1	U	1	U	1	U
Sodium	ug/L	247000	=	229000	J	457000	J	5520000	=
Thallium	ug/L	5	U	5	U	5	U	5	U
Tin (Sn)	ug/L	14	U	14	U	14	U	14	U
Vanadium	ug/L	2.5	J	1.4	J	1.7	J	1.1	U
Zinc	ug/L	21.4	U	5.8	U	15.4	U	5.8	U

	StationID	F613GW004		F613GW005		F613GW006		F613GW006	
	SampleID	613GW00404		613GW00504		613GW00601		613GW00602	
	DateCollected	11/6/97 12:00 AM		11/25/97 12:00 AM		10/20/98 12:00 AM		6/18/99 12:00 AM	
	DateAnalyzed	12/02/1997		12/10/1997		11/10/1998		06/23/1999	
	SDGNumber	31703		31975		EN013		39074	
Parameter	**Units**								
Aluminum	ug/L	637	=	226	=	2690	=	32.1	U
Antimony	ug/L	2.7	U	1.7	U	18	U	5	U
Arsenic	ug/L	10.5	=	34.4	=	27.3	=	207	=
Barium	ug/L	21.4	=	26.3	=	34.3	J	21.2	J
Beryllium	ug/L	0.24	J	0.52	U	0.3	U	0.3	U
Cadmium	ug/L	0.3	U	0.3	U	1.6	U	0.3	U
Calcium	ug/L	20400	=	97900	=	32300	=	31600	=
Chromium, Total	ug/L	2.6	U	1	U	5.8	U	0.5	U
Cobalt	ug/L	0.8	U	4.2	J	8.5	J	1.7	U
Copper	ug/L	3.8	J	1.7	J	87.3	=	20.6	J
Iron	ug/L	577	=	30000	=	42200	=	44900	=
Lead	ug/L	0.9	U	0.9	UJ	1.7	U	2.1	U
Magnesium	ug/L	7570	=	197000	=	45700	=	22300	=
Manganese	ug/L	26.8	=	336	=	689	=	535	=
Mercury	ug/L	0.1	U	0.1	U	0.2	U	0.17	J
Nickel	ug/L	2.4	U	2	J	5.7	J	0.8	U
Potassium	ug/L	7320	=	77200	=	9260	=	8950	=
Selenium	ug/L	3.4	U	3.4	U	5	R	3	U
Silver	ug/L	1	U	1	U	4.5	U	2	U
Sodium	ug/L	223000	=	3120000	=	793000	=	146000	=
Thallium	ug/L	5	U	5	U	1.6	UJ	2.4	J
Tin (Sn)	ug/L	14	U	4.5	U	1000	U	29.5	U
Vanadium	ug/L	5.4	J	3.8	J	11.6	U	1.3	J
Zinc	ug/L	10.8	U	5.8	U	27.1	U	69.7	=

	StationID	F613GW006		F613GW006		F613GW007		F613GW02D	
	SampleID	613GW00603		613HW00603		613GW00701		613GW02D04	
	DateCollected	10/12/99 12:00 AM		10/12/99 12:00 AM		11/19/99 12:00 AM		11/7/97 12:00 AM	
	DateAnalyzed	10/19/1999		10/19/1999		11/30/1999		12/02/1997	
	SDGNumber	EN018		EN018		EN029		31703	
Parameter	**Units**								
Aluminum	ug/L	58.7	UJ	58.7	UJ	66.6	J	57.6	J
Antimony	ug/L	2.4	U	2.4	U	2.4	U	2.6	U
Arsenic	ug/L	211	=	207	=	4.3	U	7.9	J
Barium	ug/L	35.2	J	35.2	J	87.6	J	25.9	=
Beryllium	ug/L	0.9	U	0.9	U	0.9	U	0.2	U
Cadmium	ug/L	0.3	U	0.3	U	0.3	U	0.3	U
Calcium	ug/L	73900	=	72900	=	100000	=	148000	=
Chromium, Total	ug/L	0.6	UJ	0.6	UJ	0.6	J	1	U
Cobalt	ug/L	1.3	J	0.8	J	1.7	J	0.86	J
Copper	ug/L	0.7	J	0.6	J	2	J	1.8	J
Iron	ug/L	35200	=	34800	=	38	U	25100	=
Lead	ug/L	2.1	U	2.1	U	2.1	U	0.9	U
Magnesium	ug/L	22900	=	22400	=	87400	=	52800	=
Manganese	ug/L	464	=	461	=	181	=	2930	=
Mercury	ug/L	0.2	U	0.2	U	0.2	UJ	0.1	U
Nickel	ug/L	1.1	UJ	1.1	UJ	6.4	J	2.7	U
Potassium	ug/L	18900	J	18400	J	88900	=	42000	=
Selenium	ug/L	2.1	J	2.8	J	1.7	U	3.4	U
Silver	ug/L	0.5	U	0.5	U	0.5	U	1	U
Sodium	ug/L	194000	J	189000	J	840000	=	282000	=
Thallium	ug/L	2.4	U	2.4	U	2.4	UJ	5	U
Tin (Sn)	ug/L	2.7	U	2.7	U	2.8	J	14	U
Vanadium	ug/L	1.6	J	1.5	J	7.8	J	2.2	J
Zinc	ug/L	2.3	U	4	U	4.1	U	19.6	U

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17A		FFDSGW17A	
	SampleID	FDSGW17A01		FDSGW17A02		FDSGW17A03		FDSGW17A04	
	DateCollected	1/28/97 12:00 AM		6/17/97 12:00 AM		4/24/98 12:00 AM		10/20/98 12:00 AM	
	DateAnalyzed	01/31/1997		07/02/1997		05/14/1998		11/10/1998	
	SDGNumber	28308		29707		ECZG03		EN013	
Parameter	**Units**								
Aluminum	ug/L	249	=	218	=	4290	=	161	J
Antimony	ug/L	2.9	J	1.8	U	5	U	18	U
Arsenic	ug/L	2.5	U	5.5	J	7.4	J	12.3	=
Barium	ug/L	16	J	7.4	J	14.7	=	7.5	U
Beryllium	ug/L	0.33	U	0.26	U	0.37	U	0.3	U
Cadmium	ug/L	0.5	U	0.3	U	0.3	U	1.6	U
Calcium	ug/L	15400	J	5810	=	6400	=	13600	=
Chromium, Total	ug/L	1.2	J	1	U	7.7	J	5.8	U
Cobalt	ug/L	2	J	0.83	J	1.3	J	4.5	U
Copper	ug/L	1.8	U	1.4	U	2.8	U	2.1	U
Iron	ug/L	2960	J	5500	=	7070	=	6110	=
Lead	ug/L	1.7	U	1.9	J	2.4	J	1.2	U
Magnesium	ug/L	14400	J	8450	=	9290	=	10800	=
Manganese	ug/L	130	J	69.4	=	90.7	=	154	=
Mercury	ug/L	0.1	U	0.1	U	0.1	U	0.2	U
Nickel	ug/L	4.2	J	1.1	J	2.3	J	5.7	U
Potassium	ug/L	12500	=	8130	=	9550	=	9390	=
Selenium	ug/L	2.8	U	3.4	U	4.1	U	5	R
Silver	ug/L	1.2	U	1	U	1.1	U	4.5	U
Sodium	ug/L	497000	=	351000	=	367000	=	343000	=
Thallium	ug/L	2.7	U	5.6	U	5.5	U	1.6	UJ
Tin (Sn)	ug/L	2.6	U	14	U	3.4	U	1000	U
Vanadium	ug/L	1.2	J	1.6	J	10	J	4.4	U
Zinc	ug/L	9.7	U	7.7	U	6.3	J	5.9	U

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17B		FFDSGW17B	
	SampleID	FDSGW17A05		FDSHW17A04		FDSGW17B01		FDSGW17B02	
	DateCollected	10/12/99 12:00 AM		10/20/98 12:00 AM		1/28/97 12:00 AM		6/17/97 12:00 AM	
	DateAnalyzed	10/19/1999		11/10/1998		01/31/1997		07/02/1997	
	SDGNumber	EN018		EN013		28308		29707	
Parameter	**Units**								
Aluminum	ug/L	58.7	UJ	166	J	205	=	85.8	J
Antimony	ug/L	2.4	U	18	U	3	J	1.6	U
Arsenic	ug/L	12.9	=	12.4	=	51.5	=	58	=
Barium	ug/L	5.2	J	7.8	U	7.8	J	3.4	J
Beryllium	ug/L	0.9	U	0.4	J	0.44	U	0.32	U
Cadmium	ug/L	0.3	U	1.6	U	0.5	U	0.3	U
Calcium	ug/L	12500	=	13900	=	13300	J	7840	=
Chromium, Total	ug/L	0.6	UJ	5.8	U	1.7	J	1	U
Cobalt	ug/L	0.5	U	4.5	U	1.8	J	1.2	J
Copper	ug/L	0.6	U	2.1	U	2.8	U	1.4	U
Iron	ug/L	4850	=	6280	=	2890	J	6070	=
Lead	ug/L	2.1	U	1.2	U	1.7	U	0.9	U
Magnesium	ug/L	9100	=	11300	=	12100	J	9480	=
Manganese	ug/L	133	=	160	=	88.2	J	66	=
Mercury	ug/L	0.2	U	0.2	U	0.1	U	0.1	U
Nickel	ug/L	1.1	UJ	5.7	U	4	J	0.87	J
Potassium	ug/L	13500	J	9650	=	11000	=	8920	=
Selenium	ug/L	1.7	U	5	R	2.8	U	3.4	U
Silver	ug/L	0.5	U	4.5	U	1.2	U	1	U
Sodium	ug/L	234000	J	359000	=	310000	=	280000	=
Thallium	ug/L	2.4	U	1.6	UJ	2.7	U	5.4	U
Tin (Sn)	ug/L	2.7	U	1000	U	2.6	U	14	U
Vanadium	ug/L	0.6	J	5.8	U	1.6	J	1.1	U
Zinc	ug/L	3.5	U	7	U	33.6	U	5.8	U

	StationID	FFDSGW17B		FFDSGW17B		FFDSGW17B		FFDSGW17B	
	SampleID	FDSGW17B03		FDSGW17B04		FDSGW17B06		FDSGW17BF5	
	DateCollected	4/24/98 12:00 AM		10/20/98 12:00 AM		10/12/99 12:00 AM		1/15/99 12:00 AM	
	DateAnalyzed	05/14/1998		11/10/1998		10/19/1999		01/20/1999	
	SDGNumber	ECZG03		EN013		EN018		37108	
Parameter	**Units**								
Aluminum	ug/L	2580	=	68	U	58.7	UJ		
Antimony	ug/L	5	U	18	U	2.4	U	2.7	U
Arsenic	ug/L	58.5	=	63.8	=	66	=	63	J
Barium	ug/L	7.4	J	2.9	U	3	J		
Beryllium	ug/L	0.32	U	0.3	U	0.9	U	0.1	U
Cadmium	ug/L	0.3	U	1.6	J	0.3	U		
Calcium	ug/L	5540	=	6630	=	10500	=		
Chromium, Total	ug/L	6.1	J	5.8	U	0.6	UJ	0.76	J
Cobalt	ug/L	1.6	J	4.5	U	0.5	U		
Copper	ug/L	0.61	U	2.1	U	0.6	U		
Iron	ug/L	7130	=	4350	=	4990	=		
Lead	ug/L	1.7	U	1.2	U	2.1	U	1.5	U
Magnesium	ug/L	9450	=	7920	=	8990	=		
Manganese	ug/L	62.6	=	49.5	=	57.9	=		
Mercury	ug/L	0.1	U	0.2	U	0.2	U	0.1	U
Nickel	ug/L	1.1	UJ	5.7	U	1.1	UJ		
Potassium	ug/L	8390	=	7460	=	11000	J		
Selenium	ug/L	4.1	U	5	R	1.7	U		
Silver	ug/L	1.1	U	4.5	U	0.5	U		
Sodium	ug/L	246000	=	240000	=	181000	J		
Thallium	ug/L	5.5	U	1.6	UJ	2.4	U	3.1	U
Tin (Sn)	ug/L	3.4	U	1000	U	2.7	U		
Vanadium	ug/L	4.8	J	3.2	U	0.5	U		
Zinc	ug/L	2.8	J	6	U	4.6	U		

	StationID	FFDSGW17B		FGELGW005		FGELGW006		FGELGW007	
	SampleID	FDSGW17BU5		GELGW00504		GELGW00604		GELGW00704	
	DateCollected	1/15/99 12:00 AM		11/12/97 12:00 AM		11/14/97 12:00 AM		11/12/97 12:00 AM	
	DateAnalyzed	01/20/1999		12/11/1997		12/11/1997		12/11/1997	
	SDGNumber	37108		31821		31821		31821	
Parameter	**Units**								
Aluminum	ug/L			5500	J	130	U	71.8	U
Antimony	ug/L	2.7	U	3.6	U	1.6	U	1.8	U
Arsenic	ug/L	62.1	J	8	U	2.1	U	7.1	J
Barium	ug/L			71.7	=	26.9	=	119	=
Beryllium	ug/L	0.1	U	0.62	U	0.41	U	0.36	U
Cadmium	ug/L			0.3	U	0.3	U	0.83	J
Calcium	ug/L			266000	=	9920	=	271000	=
Chromium, Total	ug/L	1	J	9.4	J	1	U	1	U
Cobalt	ug/L			1.1	J	1.3	J	30.6	=
Copper	ug/L			4.6	J	1.4	U	1.4	U
Iron	ug/L			7450	=	2930	=	6020	=
Lead	ug/L	1.5	U	5.4	U	2.8	U	0.9	U
Magnesium	ug/L			45800	=	2890	=	53200	=
Manganese	ug/L			493	=	43	U	1710	=
Mercury	ug/L	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	ug/L			3.9	U	1.6	U	18.7	J
Potassium	ug/L			28600	=	2350	J	12300	=
Selenium	ug/L			3.4	U	3.4	U	3.4	U
Silver	ug/L			1	U	1	U	1	U
Sodium	ug/L			198000	=	148000	=	627000	=
Thallium	ug/L	3.1	U	5	U	5	U	5	U
Tin (Sn)	ug/L			14	U	14	U	14	U
Vanadium	ug/L			27.3	=	1.1	U	1.1	U
Zinc	ug/L			38.7	U	7.1	U	61.4	U

	StationID	FGELGW008		FGELGW011		FGELGW012		FGELGW012	
	SampleID	GELGW00804		GELGW01104		GELGW01204		GELHW01204	
	DateCollected	11/14/97 12:00 AM		11/12/97 12:00 AM		11/13/97 12:00 AM		11/13/97 12:00 AM	
	DateAnalyzed	12/11/1997		12/11/1997		12/11/1997		12/11/1997	
	SDGNumber	31821		31821		31821		31821	
Parameter	**Units**								
Aluminum	ug/L	60.4	U	323	J	439	J	359	J
Antimony	ug/L	1.6	U	2.6	U	1.6	U	2.5	U
Arsenic	ug/L	9.7	J	4.9	J	2.1	U	2.1	U
Barium	ug/L	93	=	44.3	=	39.7	=	39.6	=
Beryllium	ug/L	0.49	U	0.56	U	0.37	U	0.42	U
Cadmium	ug/L	0.3	U	0.3	U	0.3	U	0.3	U
Calcium	ug/L	182000	=	177000	=	40000	=	42400	=
Chromium, Total	ug/L	1	U	1	U	1	U	1	U
Cobalt	ug/L	1.2	J	39.6	=	9.8	J	10	J
Copper	ug/L	4	J	3.1	J	1.4	U	1.4	U
Iron	ug/L	3400	=	23900	=	11000	=	11400	=
Lead	ug/L	1.8	U	2.4	U	1.3	U	0.94	U
Magnesium	ug/L	196000	=	149000	=	30800	=	32300	=
Manganese	ug/L	833	=	1080	=	251	=	265	=
Mercury	ug/L	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	ug/L	4.7	U	15	J	3.7	U	4.1	U
Potassium	ug/L	95200	=	46100	J	6980	=	7110	=
Selenium	ug/L	3.4	U	3.4	U	3.4	U	3.4	U
Silver	ug/L	1	U	1	U	1	U	1	U
Sodium	ug/L	1810000	=	1890000	=	562000	=	617000	=
Thallium	ug/L	5	U	5	U	5	U	5	U
Tin (Sn)	ug/L	14	U	14	U	14	U	14	U
Vanadium	ug/L	9.8	J	2.2	J	1.9	J	1.9	J
Zinc	ug/L	17	U	45	U	16	U	13.3	U

	StationID	FGELGW013		FGELGW014		FGELGW014		FGELGW014	
	SampleID	GELGW01304		GELGW01404		GELGW01405a		GELGW01405b	
	DateCollected	11/14/97 12:00 AM		12/1/97 12:00 AM		10/20/98 12:00 AM		4/22/98 12:00 AM	
	DateAnalyzed	12/11/1997		12/10/1997		11/10/1998		05/14/1998	
	SDGNumber	31821		31975		EN013		ECZG02	
Parameter	**Units**								
Aluminum	ug/L	213	J	89.1	=	68	U	1970	=
Antimony	ug/L	2.8	U	1.6	U	18	U	5	U
Arsenic	ug/L	11.1	=	47.4	=	36.9	=	41.8	=
Barium	ug/L	36.8	=	23.9	=	31.8	J	43.6	=
Beryllium	ug/L	0.41	U	0.39	U	0.3	U	0.36	U
Cadmium	ug/L	0.3	U	1.9	J	1.6	U	1.3	J
Calcium	ug/L	197000	=	64700	=	50600	=	122000	=
Chromium, Total	ug/L	1	U	1.5	J	5.8	U	5.4	J
Cobalt	ug/L	0.8	U	3	J	4.5	U	5	J
Copper	ug/L	1.4	U	3	J	2.1	U	3.7	U
Iron	ug/L	5400	=	25300	=	23200	=	33300	=
Lead	ug/L	2.6	U	1.9	J	1.2	U	3.9	J
Magnesium	ug/L	81900	=	29200	=	36000	=	41900	=
Manganese	ug/L	832	=	426	=	356	=	689	=
Mercury	ug/L	0.1	U	0.1	U	0.2	U	0.1	U
Nickel	ug/L	3	U	3.6	U	5.7	U	1.4	J
Potassium	ug/L	56400	=	21800	=	25400	=	25700	=
Selenium	ug/L	3.4	U	3.4	U	5	R	4.1	U
Silver	ug/L	1	U	1	U	4.5	U	1.1	UJ
Sodium	ug/L	579000	=	169000	=	335000	=	156000	=
Thallium	ug/L	5	U	5	U	1.6	UJ	5.5	U
Tin (Sn)	ug/L	14	U	4.5	U	1000	U	3.4	U
Vanadium	ug/L	8.3	J	3.7	J	5.1	U	5.7	U
Zinc	ug/L	5.8	U	97.4	=	8.9	U	39	=

	StationID	FGELGW014	
	SampleID	GELGW01406	
	DateCollected	10/12/99 12:00 AM	
	DateAnalyzed	10/19/1999	
	SDGNumber	EN018	
Parameter	**Units**		
Aluminum	ug/L	58.7	UJ
Antimony	ug/L	2.4	U
Arsenic	ug/L	18	=
Barium	ug/L	40.9	J
Beryllium	ug/L	0.9	U
Cadmium	ug/L	0.3	J
Calcium	ug/L	90500	=
Chromium, Total	ug/L	0.6	UJ
Cobalt	ug/L	2	J
Copper	ug/L	1	J
Iron	ug/L	29000	=
Lead	ug/L	2.1	U
Magnesium	ug/L	45200	=
Manganese	ug/L	469	=
Mercury	ug/L	0.2	U
Nickel	ug/L	1.1	UJ
Potassium	ug/L	39000	J
Selenium	ug/L	1.7	U
Silver	ug/L	0.5	U
Sodium	ug/L	225000	J
Thallium	ug/L	2.4	U
Tin (Sn)	ug/L	2.7	U
Vanadium	ug/L	2.1	J
Zinc	ug/L	16.4	U

	StationID	F613GW006		FFDSGW17A		FFDSGW17A		FFDSGW17B	
	SampleID	613GW00602		FDSGW17A01		FDSGW17A02		FDSGW17B01	
	DateCollected	6/18/1999 12:00 AM		1/28/1997 12:00 AM		6/17/1997 12:00 AM		1/28/1997 12:00 AM	
	DateAnalyzed	06/24/1999		01/31/1997		06/27/1997		01/31/1997	
	SDGNumber	39074		28308		29707		28308	
Parameter	**Units**								
PCB-1016 (Arochlor 1016)	ug/L	1	U	1	U	1	U	1	U
PCB-1221 (Arochlor 1221)	ug/L	1	U	1	U	1	U	1	U
PCB-1232 (Arochlor 1232)	ug/L	1	U	1	U	1	U	1	U
PCB-1242 (Arochlor 1242)	ug/L	1	U	1	U	1	U	1	U
PCB-1248 (Arochlor 1248)	ug/L	1	U	1	U	1	U	1	U
PCB-1254 (Arochlor 1254)	ug/L	2	U	2	U	2	U	2	U
PCB-1260 (Arochlor 1260)	ug/L	2	U	2	U	2	U	2	U

	StationID	FFDSGW17B	
	SampleID	FDSGW17B02	
	DateCollected	6/17/1997 12:00 AM	
	DateAnalyzed	06/27/1997	
	SDGNumber	29707	
Parameter	**Units**		
PCB-1016 (Arochlor 1016)	ug/L	1	U
PCB-1221 (Arochlor 1221)	ug/L	1	U
PCB-1232 (Arochlor 1232)	ug/L	1	U
PCB-1242 (Arochlor 1242)	ug/L	1	U
PCB-1248 (Arochlor 1248)	ug/L	1	U
PCB-1254 (Arochlor 1254)	ug/L	2	U
PCB-1260 (Arochlor 1260)	ug/L	2	U

	StationID	F613GW006		FFDSGW17A		FFDSGW17A	
	SampleID	613GW00602		FDSGW17A01		FDSGW17A02	
	DateCollected	6/18/1999 12:00 AM		1/28/1997 12:00 AM		6/17/1997 12:00 AM	
	DateAnalyzed	06/24/1999		01/31/1997		06/27/1997	
	SDGNumber	39074		28308		29707	
Parameter	**Units**						
Aldrin	ug/L	0.04	U	0.04	U	0.04	U
Alpha BHC (Alpha Hexachlorocyclohexane)	ug/L	0.04	U	0.04	U	0.04	U
Alpha-chlordane	ug/L	0.04	U	0.04	U	0.04	U
Beta BHC (Beta Hexachlorocyclohexane)	ug/L	0.04	U	0.04	U	0.04	U
Delta BHC (Delta Hexachlorocyclohexane)	ug/L	0.04	U	0.04	U	0.04	U
Dieldrin	ug/L	0.08	U	0.08	U	0.08	U
Endosulfan I	ug/L	0.04	U	0.04	U	0.04	U
Endosulfan II	ug/L	0.08	U	0.08	U	0.08	U
Endosulfan Sulfate	ug/L	0.08	U	0.08	U	0.08	U
Endrin Aldehyde	ug/L	0.08	U	0.08	U	0.08	U
Endrin Ketone	ug/L	0.08	U	0.08	U	0.08	U
Endrin	ug/L	0.17	U	0.08	U	0.08	U
Gamma BHC (Lindane)	ug/L	0.074	J	0.04	U	0.04	U
Gamma-chlordane	ug/L	0.04	U	0.04	U	0.04	U
Heptachlor Epoxide	ug/L	0.04	U	0.04	U	0.04	U
Heptachlor	ug/L	0.04	U	0.04	U	0.04	U
Methoxychlor	ug/L	0.38	U	0.38	U	0.38	U
p,p'-DDD	ug/L	0.08	U	0.08	U	0.08	U
p,p'-DDE	ug/L	0.08	U	0.08	U	0.08	U
p,p'-DDT	ug/L	0.08	U	0.08	U	0.08	U
Toxaphene	ug/L	2.5	U	2.5	U	2.5	U

	StationID	FFDSGW17B		FFDSGW17B	
	SampleID	FDSGW17B01		FDSGW17B02	
	DateCollected	1/28/1997 12:00 AM		6/17/1997 12:00 AM	
	DateAnalyzed	01/31/1997		06/27/1997	
	SDGNumber	28308		29707	
Parameter	**Units**				
Aldrin	ug/L	0.04	U	0.04	U
Alpha BHC (Alpha Hexachlorocyclohexane)	ug/L	0.04	U	0.04	U
Alpha-chlordane	ug/L	0.04	U	0.04	U
Beta BHC (Beta Hexachlorocyclohexane)	ug/L	0.04	U	0.04	U
Delta BHC (Delta Hexachlorocyclohexane)	ug/L	0.04	U	0.04	U
Dieldrin	ug/L	0.08	U	0.08	U
Endosulfan I	ug/L	0.04	U	0.04	U
Endosulfan II	ug/L	0.08	U	0.08	U
Endosulfan Sulfate	ug/L	0.08	U	0.08	U
Endrin Aldehyde	ug/L	0.08	U	0.08	U
Endrin Ketone	ug/L	0.08	U	0.08	U
Endrin	ug/L	0.08	U	0.08	U
Gamma BHC (Lindane)	ug/L	0.04	U	0.04	U
Gamma-chlordane	ug/L	0.04	U	0.04	U
Heptachlor Epoxide	ug/L	0.04	U	0.04	U
Heptachlor	ug/L	0.04	U	0.04	U
Methoxychlor	ug/L	0.38	U	0.38	U
p,p'-DDD	ug/L	0.08	U	0.08	U
p,p'-DDE	ug/L	0.08	U	0.08	U
p,p'-DDT	ug/L	0.08	U	0.08	U
Toxaphene	ug/L	2.5	U	2.5	U

	StationID	F240GW003		F613GW001		F613GW001	
	SampleID	240GW00304		613GW00104		613HW00104	
	DateCollected	11/12/97 12:00 AM		11/6/97 12:00 AM		11/6/97 12:00 AM	
	DateAnalyzed	11/19/1997		11/14/1997		11/14/1997	
	SDGNumber	31821		31703		31703	
Parameter	Units						
1,2-Dichlorobenzene	ug/L	11	U	12	U	12	U
1,3-Dichlorobenzene	ug/L	11	U	12	U	12	U
1,4-Dichlorobenzene	ug/L	11	U	12	U	12	U
2,2'-Oxybis(1-chloro)propane	ug/L	11	U	12	U	12	U
2,4,5-Trichlorophenol	ug/L	54	U	58	U	60	U
2,4,6-Trichlorophenol	ug/L	11	U	12	U	12	U
2,4-Dichlorophenol	ug/L	11	U	12	U	12	U
2,4-Dimethylphenol	ug/L	11	U	12	U	12	U
2,4-Dinitrophenol	ug/L	54	U	58	U	60	U
2,4-Dinitrotoluene	ug/L	11	U	12	U	12	U
2,6-Dinitrotoluene	ug/L	11	U	12	U	12	U
2-Chloronaphthalene	ug/L	11	U	12	U	12	U
2-Chlorophenol	ug/L	11	U	12	U	12	U
2-Methylnaphthalene	ug/L	11	U	12	U	12	U
2-Methylphenol (o-Cresol)	ug/L	11	U	12	U	12	U
2-Nitroaniline	ug/L	54	U	58	U	60	U
2-Nitrophenol	ug/L	11	U	12	U	12	U
3,3'-Dichlorobenzidine	ug/L	22	U	23	U	24	U
3-Nitroaniline	ug/L	54	U	58	U	60	U
4,6-Dinitro-2-methylphenol	ug/L	54	U	58	U	60	U
4-Bromophenyl Phenyl Ether	ug/L	11	U	12	U	12	U
4-Chloro-3-methylphenol	ug/L	11	U	12	U	12	U
4-Chloroaniline	ug/L	11	U	12	U	12	U
4-Chlorophenyl Phenyl Ether	ug/L	11	U	12	U	12	U
4-Methylphenol (p-Cresol)	ug/L	11	U	12	U	12	U
4-Nitroaniline	ug/L	54	U	58	U	60	U
4-Nitrophenol	ug/L	54	U	58	U	60	U
Acenaphthene	ug/L	11	U	12	U	12	U
Acenaphthylene	ug/L	11	U	12	U	12	U
Anthracene	ug/L	11	U	12	U	12	U
Benzo(a)Anthracene	ug/L	11	U	12	U	12	U

	StationID	F613GW003		F613GW004		F613GW005	
	SampleID	613GW00304		613GW00404		613GW00504	
	DateCollected	11/7/97 12:00 AM		11/6/97 12:00 AM		11/25/97 12:00 AM	
	DateAnalyzed	11/14/1997		11/14/1997		12/08/1997	
	SDGNumber	31703		31703		31975	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/L	11	U	11	U	10	U
1,3-Dichlorobenzene	ug/L	11	U	11	U	10	U
1,4-Dichlorobenzene	ug/L	11	U	11	U	10	U
2,2'-Oxybis(1-chloro)propane	ug/L	11	U	11	U	10	U
2,4,5-Trichlorophenol	ug/L	57	U	55	U	50	U
2,4,6-Trichlorophenol	ug/L	11	U	11	U	10	U
2,4-Dichlorophenol	ug/L	11	U	11	U	10	U
2,4-Dimethylphenol	ug/L	11	U	11	U	10	U
2,4-Dinitrophenol	ug/L	57	U	55	U	50	U
2,4-Dinitrotoluene	ug/L	11	U	11	U	10	U
2,6-Dinitrotoluene	ug/L	11	U	11	U	10	U
2-Chloronaphthalene	ug/L	11	U	11	U	10	U
2-Chlorophenol	ug/L	11	U	11	U	10	U
2-Methylnaphthalene	ug/L	11	U	11	U	10	U
2-Methylphenol (o-Cresol)	ug/L	11	U	11	U	10	U
2-Nitroaniline	ug/L	57	U	55	U	50	U
2-Nitrophenol	ug/L	11	U	11	U	10	U
3,3'-Dichlorobenzidine	ug/L	23	U	22	U	20	U
3-Nitroaniline	ug/L	57	U	55	U	50	U
4,6-Dinitro-2-methylphenol	ug/L	57	U	55	U	50	U
4-Bromophenyl Phenyl Ether	ug/L	11	U	11	U	10	U
4-Chloro-3-methylphenol	ug/L	11	U	11	U	10	U
4-Chloroaniline	ug/L	11	U	11	U	10	U
4-Chlorophenyl Phenyl Ether	ug/L	11	U	11	U	10	U
4-Methylphenol (p-Cresol)	ug/L	11	U	11	U	10	U
4-Nitroaniline	ug/L	57	U	55	U	50	U
4-Nitrophenol	ug/L	57	U	55	U	50	U
Acenaphthene	ug/L	11	U	11	U	10	U
Acenaphthylene	ug/L	11	U	11	U	10	U
Anthracene	ug/L	11	U	11	U	10	U
Benzo(a)Anthracene	ug/L	11	U	11	U	10	U

	StationID	F613GW006		F613GW006		F613GW006	
	SampleID	613GW00601		613GW00602		613GW00603	
	DateCollected	10/20/98 12:00 AM		6/18/99 12:00 AM		10/12/99 12:00 AM	
	DateAnalyzed	11/20/1998		06/25/1999		10/22/1999	
	SDGNumber	EN013		39074		EN018	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/L	5	U	10	U	5	U
1,3-Dichlorobenzene	ug/L	5	U	10	U	5	U
1,4-Dichlorobenzene	ug/L	5	U	10	U	5	U
2,2'-Oxybis(1-chloro)propane	ug/L	5	U	10	U	5	U
2,4,5-Trichlorophenol	ug/L	5	U	25	U	5	U
2,4,6-Trichlorophenol	ug/L	5	U	10	U	5	U
2,4-Dichlorophenol	ug/L	5	U	10	U	5	U
2,4-Dimethylphenol	ug/L	5	U	10	U	5	U
2,4-Dinitrophenol	ug/L	10	U	25	U	10	U
2,4-Dinitrotoluene	ug/L	5	U	10	U	5	U
2,6-Dinitrotoluene	ug/L	5	U	10	U	5	U
2-Chloronaphthalene	ug/L	5	U	10	U	5	U
2-Chlorophenol	ug/L	5	U	10	U	5	U
2-Methylnaphthalene	ug/L	14	=	36	=	31	=
2-Methylphenol (o-Cresol)	ug/L	5	U	10	U	5	U
2-Nitroaniline	ug/L	5	U	25	U	5	U
2-Nitrophenol	ug/L	5	U	10	U	5	U
3,3'-Dichlorobenzidine	ug/L	5	U	10	U	10	U
3-Nitroaniline	ug/L	5	U	25	U	5	U
4,6-Dinitro-2-methylphenol	ug/L	10	U	25	U	10	U
4-Bromophenyl Phenyl Ether	ug/L	5	U	10	U	5	U
4-Chloro-3-methylphenol	ug/L	5	U	10	U	5	U
4-Chloroaniline	ug/L	5	U	10	U	5	U
4-Chlorophenyl Phenyl Ether	ug/L	5	U	10	U	5	U
4-Methylphenol (p-Cresol)	ug/L	5	U	10	U	5	U
4-Nitroaniline	ug/L	5	U	25	UJ	5	U
4-Nitrophenol	ug/L	10	U	25	U	10	U
Acenaphthene	ug/L	2	J	10	U	3	J
Acenaphthylene	ug/L	5	U	10	U	5	U
Anthracene	ug/L	5	U	10	U	5	U
Benzo(a)Anthracene	ug/L	5	U	10	U	5	U

	StationID	F613GW006		F613GW007		F613GW02D	
	SampleID	613HW00603		613GW00701		613GW02D04	
	DateCollected	10/12/99 12:00 AM		11/19/99 12:00 AM		11/7/97 12:00 AM	
	DateAnalyzed	10/22/1999		11/30/1999		11/14/1997	
	SDGNumber	EN018		EN029		31703	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/L	5	U	5	U	10	U
1,3-Dichlorobenzene	ug/L	5	U	5	U	10	U
1,4-Dichlorobenzene	ug/L	5	U	5	U	10	U
2,2'-Oxybis(1-chloro)propane	ug/L	5	U	5	U	10	U
2,4,5-Trichlorophenol	ug/L	5	U	5	U	50	U
2,4,6-Trichlorophenol	ug/L	5	U	5	U	10	U
2,4-Dichlorophenol	ug/L	5	U	5	U	10	U
2,4-Dimethylphenol	ug/L	5	U	5	U	10	U
2,4-Dinitrophenol	ug/L	10	U	10	U	50	U
2,4-Dinitrotoluene	ug/L	5	U	5	U	10	U
2,6-Dinitrotoluene	ug/L	5	U	5	U	10	U
2-Chloronaphthalene	ug/L	5	U	5	U	10	U
2-Chlorophenol	ug/L	5	U	5	U	10	U
2-Methylnaphthalene	ug/L	33	=	5	U	10	U
2-Methylphenol (o-Cresol)	ug/L	5	U	5	U	10	U
2-Nitroaniline	ug/L	5	U	5	U	50	U
2-Nitrophenol	ug/L	5	U	5	U	10	U
3,3'-Dichlorobenzidine	ug/L	10	U	10	U	20	U
3-Nitroaniline	ug/L	5	U	5	U	50	U
4,6-Dinitro-2-methylphenol	ug/L	10	U	10	U	50	U
4-Bromophenyl Phenyl Ether	ug/L	5	U	5	U	10	U
4-Chloro-3-methylphenol	ug/L	5	U	5	U	10	U
4-Chloroaniline	ug/L	5	U	5	U	10	U
4-Chlorophenyl Phenyl Ether	ug/L	5	U	5	U	10	U
4-Methylphenol (p-Cresol)	ug/L	5	U	5	U	10	U
4-Nitroaniline	ug/L	5	U	5	U	50	U
4-Nitrophenol	ug/L	10	U	10	U	50	U
Acenaphthene	ug/L	4	J	5	U	10	U
Acenaphthylene	ug/L	5	U	5	U	10	U
Anthracene	ug/L	5	U	5	U	10	U
Benzo(a)Anthracene	ug/L	5	U	5	U	10	U

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17A	
	SampleID	FDSGW17A01		FDSGW17A02		FDSGW17A03	
	DateCollected	1/28/97 12:00 AM		6/17/97 12:00 AM		4/24/98 12:00 AM	
	DateAnalyzed	01/31/1997		06/25/1997		05/19/1998	
	SDGNumber	28308		29707		ECZG03	
Parameter	Units						
1,2-Dichlorobenzene	ug/L	10	U	10	U	10	U
1,3-Dichlorobenzene	ug/L	10	U	10	U	10	U
1,4-Dichlorobenzene	ug/L	10	U	10	U	10	U
2,2'-Oxybis(1-chloro)propane	ug/L	10	U	10	U	10	U
2,4,5-Trichlorophenol	ug/L	50	U	50	U	50	U
2,4,6-Trichlorophenol	ug/L	10	U	10	U	10	U
2,4-Dichlorophenol	ug/L	10	U	10	U	10	U
2,4-Dimethylphenol	ug/L	10	U	10	U	10	U
2,4-Dinitrophenol	ug/L	50	U	50	U	50	U
2,4-Dinitrotoluene	ug/L	10	U	10	U	10	U
2,6-Dinitrotoluene	ug/L	10	U	10	U	10	U
2-Chloronaphthalene	ug/L	10	U	10	U	10	U
2-Chlorophenol	ug/L	10	U	10	U	10	U
2-Methylnaphthalene	ug/L	10	U	10	U	10	U
2-Methylphenol (o-Cresol)	ug/L	10	U	10	U	10	U
2-Nitroaniline	ug/L	50	U	50	U	50	U
2-Nitrophenol	ug/L	10	U	10	U	10	U
3,3'-Dichlorobenzidine	ug/L	20	U	20	U	20	U
3-Nitroaniline	ug/L	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol	ug/L	50	U	50	U	50	U
4-Bromophenyl Phenyl Ether	ug/L	10	U	10	U	10	U
4-Chloro-3-methylphenol	ug/L	10	U	10	U	10	U
4-Chloroaniline	ug/L	10	U	10	U	10	U
4-Chlorophenyl Phenyl Ether	ug/L	10	U	10	U	10	U
4-Methylphenol (p-Cresol)	ug/L	10	U	10	U	10	U
4-Nitroaniline	ug/L	50	U	50	U	50	U
4-Nitrophenol	ug/L	50	U	50	U	50	U
Acenaphthene	ug/L	10	U	10	U	10	U
Acenaphthylene	ug/L	10	U	10	U	10	U
Anthracene	ug/L	10	U	10	U	10	U
Benzo(a)Anthracene	ug/L	10	U	10	U	10	U

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17A	
	SampleID	FDSGW17A04		FDSGW17A05		FDSHW17A04	
	DateCollected	10/20/98 12:00 AM		10/12/99 12:00 AM		10/20/98 12:00 AM	
	DateAnalyzed	11/20/1998		10/22/1999		11/20/1998	
	SDGNumber	EN013		EN018		EN013	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,3-Dichlorobenzene	ug/L	5	U	5	U	5	U
1,4-Dichlorobenzene	ug/L	5	U	5	U	5	U
2,2'-Oxybis(1-chloro)propane	ug/L	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/L	5	U	5	U	5	R
2,4,6-Trichlorophenol	ug/L	5	U	5	U	5	R
2,4-Dichlorophenol	ug/L	5	U	5	U	5	R
2,4-Dimethylphenol	ug/L	5	U	5	U	5	R
2,4-Dinitrophenol	ug/L	10	U	11	U	10	R
2,4-Dinitrotoluene	ug/L	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/L	5	U	5	U	5	U
2-Chloronaphthalene	ug/L	5	U	5	U	5	U
2-Chlorophenol	ug/L	5	U	5	U	5	R
2-Methylnaphthalene	ug/L	1	J	5	U	1	J
2-Methylphenol (o-Cresol)	ug/L	5	U	5	U	5	R
2-Nitroaniline	ug/L	5	U	5	U	5	U
2-Nitrophenol	ug/L	5	U	5	U	5	R
3,3'-Dichlorobenzidine	ug/L	5	U	11	U	5	U
3-Nitroaniline	ug/L	5	U	5	U	5	U
4,6-Dinitro-2-methylphenol	ug/L	10	U	11	U	10	R
4-Bromophenyl Phenyl Ether	ug/L	5	U	5	U	5	U
4-Chloro-3-methylphenol	ug/L	5	U	5	U	5	R
4-Chloroaniline	ug/L	5	U	5	U	5	U
4-Chlorophenyl Phenyl Ether	ug/L	5	U	5	U	5	U
4-Methylphenol (p-Cresol)	ug/L	5	U	5	U	5	R
4-Nitroaniline	ug/L	5	U	5	U	5	U
4-Nitrophenol	ug/L	10	U	11	U	10	R
Acenaphthene	ug/L	2	J	5	U	2	J
Acenaphthylene	ug/L	5	U	5	U	5	U
Anthracene	ug/L	5	U	5	U	5	U
Benzo(a)Anthracene	ug/L	5	U	5	U	5	U

	StationID	FFDSGW17A		FFDSGW17B		FFDSGW17B	
	SampleID	FDSHW17A04RE		FDSGW17B01		FDSGW17B02	
	DateCollected	10/20/98 12:00 AM		1/28/97 12:00 AM		6/17/97 12:00 AM	
	DateAnalyzed	11/29/1998		01/31/1997		06/25/1997	
	SDGNumber	EN013		28308		29707	
Parameter	Units						
1,2-Dichlorobenzene	ug/L	5	R	10	U	10	U
1,3-Dichlorobenzene	ug/L	5	R	10	U	10	U
1,4-Dichlorobenzene	ug/L	5	R	10	U	10	U
2,2'-Oxybis(1-chloro)propane	ug/L	5	R	10	U	10	U
2,4,5-Trichlorophenol	ug/L	5	R	50	U	50	U
2,4,6-Trichlorophenol	ug/L	5	R	10	U	10	U
2,4-Dichlorophenol	ug/L	5	R	10	U	10	U
2,4-Dimethylphenol	ug/L	5	R	10	U	10	U
2,4-Dinitrophenol	ug/L	10	R	50	U	50	U
2,4-Dinitrotoluene	ug/L	5	R	10	U	10	U
2,6-Dinitrotoluene	ug/L	5	R	10	U	10	U
2-Chloronaphthalene	ug/L	5	R	10	U	10	U
2-Chlorophenol	ug/L	5	R	10	U	10	U
2-Methylnaphthalene	ug/L	1	R	10	U	10	U
2-Methylphenol (o-Cresol)	ug/L	5	R	10	U	10	U
2-Nitroaniline	ug/L	5	R	50	U	50	U
2-Nitrophenol	ug/L	5	R	10	U	10	U
3,3'-Dichlorobenzidine	ug/L	5	R	20	U	20	U
3-Nitroaniline	ug/L	5	R	50	U	50	U
4,6-Dinitro-2-methylphenol	ug/L	10	R	50	U	50	U
4-Bromophenyl Phenyl Ether	ug/L	5	R	10	U	10	U
4-Chloro-3-methylphenol	ug/L	5	R	10	U	10	U
4-Chloroaniline	ug/L	5	R	10	U	10	U
4-Chlorophenyl Phenyl Ether	ug/L	5	R	10	U	10	U
4-Methylphenol (p-Cresol)	ug/L	5	R	10	U	10	U
4-Nitroaniline	ug/L	5	R	50	U	50	U
4-Nitrophenol	ug/L	10	R	50	U	50	U
Acenaphthene	ug/L	3	R	10	U	10	U
Acenaphthylene	ug/L	5	R	10	U	10	U
Anthracene	ug/L	5	R	10	U	10	U
Benzo(a)Anthracene	ug/L	5	R	10	U	10	U

	StationID	FFDSGW17B		FFDSGW17B		FFDSGW17B	
	SampleID	FDSGW17B03		FDSGW17B04		FDSGW17B06	
	DateCollected	4/24/98 12:00 AM		10/20/98 12:00 AM		10/12/99 12:00 AM	
	DateAnalyzed	05/19/1998		11/20/1998		10/22/1999	
	SDGNumber	ECZG03		EN013		EN018	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/L	10	U	5	U	6	U
1,3-Dichlorobenzene	ug/L	10	U	5	U	6	U
1,4-Dichlorobenzene	ug/L	10	U	5	U	6	U
2,2'-Oxybis(1-chloro)propane	ug/L	10	U	5	U	6	U
2,4,5-Trichlorophenol	ug/L	50	U	5	U	6	U
2,4,6-Trichlorophenol	ug/L	10	U	5	U	6	U
2,4-Dichlorophenol	ug/L	10	U	5	U	6	U
2,4-Dimethylphenol	ug/L	10	U	5	U	6	U
2,4-Dinitrophenol	ug/L	50	U	10	U	11	U
2,4-Dinitrotoluene	ug/L	10	U	5	U	6	U
2,6-Dinitrotoluene	ug/L	10	U	5	U	6	U
2-Chloronaphthalene	ug/L	10	U	5	U	6	U
2-Chlorophenol	ug/L	10	U	5	U	6	U
2-Methylnaphthalene	ug/L	10	U	5	U	6	U
2-Methylphenol (o-Cresol)	ug/L	10	U	5	U	6	U
2-Nitroaniline	ug/L	50	U	5	U	6	U
2-Nitrophenol	ug/L	10	U	5	U	6	U
3,3'-Dichlorobenzidine	ug/L	20	U	5	U	11	U
3-Nitroaniline	ug/L	50	U	5	U	6	U
4,6-Dinitro-2-methylphenol	ug/L	50	U	10	U	11	U
4-Bromophenyl Phenyl Ether	ug/L	10	U	5	U	6	U
4-Chloro-3-methylphenol	ug/L	10	U	5	U	6	U
4-Chloroaniline	ug/L	10	U	5	U	6	U
4-Chlorophenyl Phenyl Ether	ug/L	10	U	5	U	6	U
4-Methylphenol (p-Cresol)	ug/L	10	U	5	U	6	U
4-Nitroaniline	ug/L	50	U	5	U	6	U
4-Nitrophenol	ug/L	50	U	10	U	11	U
Acenaphthene	ug/L	10	U	5	U	6	U
Acenaphthylene	ug/L	10	U	5	U	6	U
Anthracene	ug/L	10	U	5	U	6	U
Benzo(a)Anthracene	ug/L	10	U	5	U	6	U

	StationID	FGELGW005		FGELGW006		FGELGW007	
	SampleID	GELGW00504		GELGW00604		GELGW00704	
	DateCollected	11/12/97 12:00 AM		11/14/97 12:00 AM		11/12/97 12:00 AM	
	DateAnalyzed	11/19/1997		12/04/1997		11/20/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/L	11	U	11	U	10	U
1,3-Dichlorobenzene	ug/L	11	U	11	U	10	U
1,4-Dichlorobenzene	ug/L	11	U	11	U	10	U
2,2'-Oxybis(1-chloro)propane	ug/L	11	U	11	U	10	U
2,4,5-Trichlorophenol	ug/L	55	U	56	U	51	U
2,4,6-Trichlorophenol	ug/L	11	U	11	U	10	U
2,4-Dichlorophenol	ug/L	11	U	11	U	10	U
2,4-Dimethylphenol	ug/L	11	U	11	U	10	U
2,4-Dinitrophenol	ug/L	55	U	56	U	51	U
2,4-Dinitrotoluene	ug/L	11	U	11	U	10	U
2,6-Dinitrotoluene	ug/L	11	U	11	U	10	U
2-Chloronaphthalene	ug/L	11	U	11	U	10	U
2-Chlorophenol	ug/L	11	U	11	U	10	U
2-Methylnaphthalene	ug/L	11	U	11	U	10	U
2-Methylphenol (o-Cresol)	ug/L	11	U	11	U	10	U
2-Nitroaniline	ug/L	55	U	56	U	51	U
2-Nitrophenol	ug/L	11	U	11	U	10	U
3,3'-Dichlorobenzidine	ug/L	22	U	22	U	20	U
3-Nitroaniline	ug/L	55	U	56	U	51	U
4,6-Dinitro-2-methylphenol	ug/L	55	U	56	U	51	U
4-Bromophenyl Phenyl Ether	ug/L	11	U	11	U	10	U
4-Chloro-3-methylphenol	ug/L	11	U	11	U	10	U
4-Chloroaniline	ug/L	11	U	11	U	10	U
4-Chlorophenyl Phenyl Ether	ug/L	11	U	11	U	10	U
4-Methylphenol (p-Cresol)	ug/L	11	U	11	U	10	U
4-Nitroaniline	ug/L	55	U	56	U	51	U
4-Nitrophenol	ug/L	55	U	56	U	51	U
Acenaphthene	ug/L	11	U	11	U	10	U
Acenaphthylene	ug/L	11	U	11	U	10	U
Anthracene	ug/L	11	U	11	U	10	U
Benzo(a)Anthracene	ug/L	11	U	11	U	10	U

	StationID	FGELGW008		FGELGW011		FGELGW011	
	SampleID	GELGW00804		GELGW01104		GELGW01104RE	
	DateCollected	11/14/97 12:00 AM		11/12/97 12:00 AM		11/12/97 12:00 AM	
	DateAnalyzed	12/04/1997		11/20/1997		11/27/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/L	11	U	11	U	12	R
1,3-Dichlorobenzene	ug/L	11	U	11	U	12	R
1,4-Dichlorobenzene	ug/L	11	U	11	U	12	R
2,2'-Oxybis(1-chloro)propane	ug/L	11	U	11	U	12	R
2,4,5-Trichlorophenol	ug/L	54	U	56	R	58	R
2,4,6-Trichlorophenol	ug/L	11	U	11	R	12	R
2,4-Dichlorophenol	ug/L	11	U	11	R	12	R
2,4-Dimethylphenol	ug/L	11	U	11	R	12	R
2,4-Dinitrophenol	ug/L	54	U	56	R	58	R
2,4-Dinitrotoluene	ug/L	11	U	11	U	12	R
2,6-Dinitrotoluene	ug/L	11	U	11	U	12	R
2-Chloronaphthalene	ug/L	11	U	11	U	12	R
2-Chlorophenol	ug/L	11	U	11	R	12	R
2-Methylnaphthalene	ug/L	11	U	11	U	12	R
2-Methylphenol (o-Cresol)	ug/L	11	U	11	R	12	R
2-Nitroaniline	ug/L	54	U	56	U	58	R
2-Nitrophenol	ug/L	11	U	11	R	12	R
3,3'-Dichlorobenzidine	ug/L	22	U	22	U	23	R
3-Nitroaniline	ug/L	54	U	56	U	58	R
4,6-Dinitro-2-methylphenol	ug/L	54	U	56	R	58	R
4-Bromophenyl Phenyl Ether	ug/L	11	U	11	U	12	R
4-Chloro-3-methylphenol	ug/L	11	U	11	R	12	R
4-Chloroaniline	ug/L	11	U	11	U	12	R
4-Chlorophenyl Phenyl Ether	ug/L	11	U	11	U	12	R
4-Methylphenol (p-Cresol)	ug/L	11	U	11	R	12	R
4-Nitroaniline	ug/L	54	U	56	U	58	R
4-Nitrophenol	ug/L	54	U	56	R	58	R
Acenaphthene	ug/L	11	U	11	U	12	R
Acenaphthylene	ug/L	11	U	11	U	12	R
Anthracene	ug/L	11	U	11	U	12	R
Benzo(a)Anthracene	ug/L	11	U	11	U	12	R

	StationID	FGELGW012		FGELGW012		FGELGW013	
	SampleID	GELGW01204		GELHW01204		GELGW01304	
	DateCollected	11/13/97 12:00 AM		11/13/97 12:00 AM		11/14/97 12:00 AM	
	DateAnalyzed	11/24/1997		12/04/1997		12/04/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/L	11	U	11	U	11	U
1,3-Dichlorobenzene	ug/L	11	U	11	U	11	U
1,4-Dichlorobenzene	ug/L	11	U	11	U	11	U
2,2'-Oxybis(1-chloro)propane	ug/L	11	U	11	U	11	U
2,4,5-Trichlorophenol	ug/L	56	U	57	U	54	U
2,4,6-Trichlorophenol	ug/L	11	U	11	U	11	U
2,4-Dichlorophenol	ug/L	11	U	11	U	11	U
2,4-Dimethylphenol	ug/L	11	U	11	U	11	U
2,4-Dinitrophenol	ug/L	56	U	57	U	54	U
2,4-Dinitrotoluene	ug/L	11	U	11	U	11	U
2,6-Dinitrotoluene	ug/L	11	U	11	U	11	U
2-Chloronaphthalene	ug/L	11	U	11	U	11	U
2-Chlorophenol	ug/L	11	U	11	U	11	U
2-Methylnaphthalene	ug/L	11	U	11	U	11	U
2-Methylphenol (o-Cresol)	ug/L	11	U	11	U	11	U
2-Nitroaniline	ug/L	56	U	57	U	54	U
2-Nitrophenol	ug/L	11	U	11	U	11	U
3,3'-Dichlorobenzidine	ug/L	22	U	23	U	22	U
3-Nitroaniline	ug/L	56	U	57	U	54	U
4,6-Dinitro-2-methylphenol	ug/L	56	U	57	U	54	U
4-Bromophenyl Phenyl Ether	ug/L	11	U	11	U	11	U
4-Chloro-3-methylphenol	ug/L	11	U	11	U	11	U
4-Chloroaniline	ug/L	11	U	11	U	11	U
4-Chlorophenyl Phenyl Ether	ug/L	11	U	11	U	11	U
4-Methylphenol (p-Cresol)	ug/L	11	U	11	U	11	U
4-Nitroaniline	ug/L	56	U	57	U	54	U
4-Nitrophenol	ug/L	56	U	57	U	54	U
Acenaphthene	ug/L	11	U	11	U	11	U
Acenaphthylene	ug/L	11	U	11	U	11	U
Anthracene	ug/L	11	U	11	U	11	U
Benzo(a)Anthracene	ug/L	11	U	11	U	11	U

	StationID	FGELGW014		FGELGW014		FGELGW014	
	SampleID	GELGW01404		GELGW01405a		GELGW01405b	
	DateCollected	12/1/97 12:00 AM		10/20/98 12:00 AM		4/22/98 12:00 AM	
	DateAnalyzed	12/10/1997		11/20/1998		05/09/1998	
	SDGNumber	31975		EN013		ECZG02	
Parameter	**Units**						
1,2-Dichlorobenzene	ug/L	10	U	5	U	10	U
1,3-Dichlorobenzene	ug/L	10	U	5	U	10	U
1,4-Dichlorobenzene	ug/L	10	U	5	U	10	U
2,2'-Oxybis(1-chloro)propane	ug/L	10	U	5	U	10	U
2,4,5-Trichlorophenol	ug/L	50	U	5	U	50	U
2,4,6-Trichlorophenol	ug/L	10	U	5	U	10	U
2,4-Dichlorophenol	ug/L	10	U	5	U	10	U
2,4-Dimethylphenol	ug/L	10	U	5	U	10	U
2,4-Dinitrophenol	ug/L	50	U	10	U	50	UJ
2,4-Dinitrotoluene	ug/L	10	U	5	U	10	U
2,6-Dinitrotoluene	ug/L	10	U	5	U	10	U
2-Chloronaphthalene	ug/L	10	U	5	U	10	U
2-Chlorophenol	ug/L	10	U	5	U	10	U
2-Methylnaphthalene	ug/L	26	=	3	J	16	=
2-Methylphenol (o-Cresol)	ug/L	10	U	5	U	10	U
2-Nitroaniline	ug/L	50	U	5	U	50	U
2-Nitrophenol	ug/L	10	U	5	U	10	U
3,3'-Dichlorobenzidine	ug/L	20	U	5	U	20	U
3-Nitroaniline	ug/L	50	U	5	U	50	U
4,6-Dinitro-2-methylphenol	ug/L	50	U	10	U	50	UJ
4-Bromophenyl Phenyl Ether	ug/L	10	U	5	U	10	U
4-Chloro-3-methylphenol	ug/L	10	U	5	U	10	U
4-Chloroaniline	ug/L	10	U	5	U	10	U
4-Chlorophenyl Phenyl Ether	ug/L	10	U	5	U	10	U
4-Methylphenol (p-Cresol)	ug/L	10	U	5	U	10	U
4-Nitroaniline	ug/L	50	U	5	U	50	U
4-Nitrophenol	ug/L	50	U	10	U	50	U
Acenaphthene	ug/L	6	J	5	J	10	U
Acenaphthylene	ug/L	10	U	5	U	10	U
Anthracene	ug/L	10	U	5	U	10	U
Benzo(a)Anthracene	ug/L	10	U	5	U	10	U

	StationID	FGELGW014		FGELGW014	
	SampleID	GELGW01406		GELGW01406RE	
	DateCollected	10/12/99 12:00 AM		10/12/99 12:00 AM	
	DateAnalyzed	10/22/1999		10/22/1999	
	SDGNumber	EN018		EN018	
Parameter	Units				
1,2-Dichlorobenzene	ug/L	5	R	5	U
1,3-Dichlorobenzene	ug/L	5	R	5	U
1,4-Dichlorobenzene	ug/L	5	R	5	U
2,2'-Oxybis(1-chloro)propane	ug/L	5	R	5	U
2,4,5-Trichlorophenol	ug/L	5	R	5	U
2,4,6-Trichlorophenol	ug/L	5	R	5	U
2,4-Dichlorophenol	ug/L	5	R	5	U
2,4-Dimethylphenol	ug/L	5	R	5	U
2,4-Dinitrophenol	ug/L	11	R	11	U
2,4-Dinitrotoluene	ug/L	5	R	5	U
2,6-Dinitrotoluene	ug/L	5	R	5	U
2-Chloronaphthalene	ug/L	5	R	5	U
2-Chlorophenol	ug/L	5	R	5	U
2-Methylnaphthalene	ug/L	3	R	3	J
2-Methylphenol (o-Cresol)	ug/L	5	R	5	U
2-Nitroaniline	ug/L	5	R	5	U
2-Nitrophenol	ug/L	5	R	5	U
3,3'-Dichlorobenzidine	ug/L	11	R	11	U
3-Nitroaniline	ug/L	5	R	5	U
4,6-Dinitro-2-methylphenol	ug/L	11	R	11	U
4-Bromophenyl Phenyl Ether	ug/L	5	R	5	U
4-Chloro-3-methylphenol	ug/L	5	R	5	U
4-Chloroaniline	ug/L	5	R	5	U
4-Chlorophenyl Phenyl Ether	ug/L	5	R	5	U
4-Methylphenol (p-Cresol)	ug/L	5	R	5	U
4-Nitroaniline	ug/L	5	R	5	U
4-Nitrophenol	ug/L	11	R	11	U
Acenaphthene	ug/L	5	R	6	=
Acenaphthylene	ug/L	5	R	5	U
Anthracene	ug/L	5	R	5	U
Benzo(a)Anthracene	ug/L	5	R	5	U

	StationID	F240GW003		F613GW001		F613GW001	
	SampleID	240GW00304		613GW00104		613HW00104	
	DateCollected	11/12/97 12:00 AM		11/6/97 12:00 AM		11/6/97 12:00 AM	
	DateAnalyzed	11/19/1997		11/14/1997		11/14/1997	
	SDGNumber	31821		31703		31703	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	11	U	12	U	12	U
Benzo(b)Fluoranthene	ug/L	11	U	12	U	12	U
Benzo(g,h,i)Perylene	ug/L	11	U	12	U	12	U
Benzo(k)Fluoranthene	ug/L	11	U	12	U	12	U
Benzoic acid	ug/L	54	U	58	U	2	J
Benzyl alcohol	ug/L	11	U	12	U	12	U
Benzyl Butyl Phthalate	ug/L	11	U	12	U	12	U
bis(2-Chloroethoxy) Methane	ug/L	11	U	12	U	12	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	11	U	12	U	12	U
bis(2-Ethylhexyl) Phthalate	ug/L	11	U	12	U	12	U
Chrysene	ug/L	11	U	12	U	12	U
Di-n-butyl Phthalate	ug/L	11	U	12	U	12	U
Di-n-octylphthalate	ug/L	11	U	12	U	12	U
Dibenz(a,h)anthracene	ug/L	11	U	12	U	12	U
Dibenzofuran	ug/L	11	U	12	U	12	U
Diethyl Phthalate	ug/L	11	U	12	U	12	U
Dimethyl Phthalate	ug/L	11	U	12	U	12	U
Flouranthene	ug/L	11	U	12	U	12	U
Fluorene	ug/L	11	U	12	U	12	U
Hexachlorobenzene	ug/L	11	U	12	U	12	U
Hexachlorobutadiene	ug/L	11	U	12	U	12	U
Hexachlorocyclopentadiene	ug/L	11	U	12	U	12	U
Hexachloroethane	ug/L	11	U	12	U	12	U
Indeno(1,2,3-c,d)pyrene	ug/L	11	U	12	U	12	U
Isophorone	ug/L	11	U	12	U	12	U
N-Nitrosodi-n-propylamine	ug/L	11	U	12	U	12	U
N-Nitrosodiphenylamine	ug/L	11	U	12	U	12	U
Naphthalene	ug/L	11	U	12	U	12	U
Nitrobenzene	ug/L	11	U	12	U	12	U
Pentachlorophenol	ug/L	54	U	58	U	60	U
Phenanthrene	ug/L	11	U	12	U	12	U

	StationID	F613GW003		F613GW004		F613GW005	
	SampleID	613GW00304		613GW00404		613GW00504	
	DateCollected	11/7/97 12:00 AM		11/6/97 12:00 AM		11/25/97 12:00 AM	
	DateAnalyzed	11/14/1997		11/14/1997		12/08/1997	
	SDGNumber	31703		31703		31975	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	11	U	11	U	10	U
Benzo(b)Fluoranthene	ug/L	11	U	11	U	10	U
Benzo(g,h,i)Perylene	ug/L	11	U	11	U	10	U
Benzo(k)Fluoranthene	ug/L	11	U	11	U	10	U
Benzoic acid	ug/L	2	J	55	U	50	U
Benzyl alcohol	ug/L	11	U	11	U	10	U
Benzyl Butyl Phthalate	ug/L	11	U	11	U	10	U
bis(2-Chloroethoxy) Methane	ug/L	11	U	11	U	10	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	11	U	11	U	10	U
bis(2-Ethylhexyl) Phthalate	ug/L	11	U	11	U	10	U
Chrysene	ug/L	11	U	11	U	10	U
Di-n-butyl Phthalate	ug/L	11	U	11	U	10	U
Di-n-octylphthalate	ug/L	11	U	11	U	10	U
Dibenz(a,h)anthracene	ug/L	11	U	11	U	10	U
Dibenzofuran	ug/L	11	U	11	U	10	U
Diethyl Phthalate	ug/L	11	U	11	U	10	U
Dimethyl Phthalate	ug/L	11	U	11	U	10	U
Flouranthene	ug/L	11	U	11	U	10	U
Fluorene	ug/L	11	U	11	U	10	U
Hexachlorobenzene	ug/L	11	U	11	U	10	U
Hexachlorobutadiene	ug/L	11	U	11	U	10	U
Hexachlorocyclopentadiene	ug/L	11	U	11	U	10	U
Hexachloroethane	ug/L	11	U	11	U	10	U
Indeno(1,2,3-c,d)pyrene	ug/L	11	U	11	U	10	U
Isophorone	ug/L	11	U	11	U	10	U
N-Nitrosodi-n-propylamine	ug/L	11	U	11	U	10	U
N-Nitrosodiphenylamine	ug/L	11	U	11	U	10	U
Naphthalene	ug/L	11	U	11	U	10	U
Nitrobenzene	ug/L	11	U	11	U	10	U
Pentachlorophenol	ug/L	57	U	55	U	50	U
Phenanthrene	ug/L	11	U	11	U	10	U

	StationID	F613GW006		F613GW006		F613GW006	
	SampleID	613GW00601		613GW00602		613GW00603	
	DateCollected	10/20/98 12:00 AM		6/18/99 12:00 AM		10/12/99 12:00 AM	
	DateAnalyzed	11/20/1998		06/25/1999		10/22/1999	
	SDGNumber	EN013		39074		EN018	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	5	U	10	U	5	UJ
Benzo(b)Fluoranthene	ug/L	5	U	10	U	5	UJ
Benzo(g,h,i)Perylene	ug/L	5	U	10	U	5	UJ
Benzo(k)Fluoranthene	ug/L	5	U	10	U	5	UJ
Benzoic acid	ug/L	26	U	10	J	25	U
Benzyl alcohol	ug/L	5	U	10	U	5	U
Benzyl Butyl Phthalate	ug/L	5	U	10	U	5	U
bis(2-Chloroethoxy) Methane	ug/L	5	U	10	U	5	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	5	U	10	U	5	U
bis(2-Ethylhexyl) Phthalate	ug/L	4	J	10	U	5	U
Chrysene	ug/L	5	U	10	U	5	U
Di-n-butyl Phthalate	ug/L	5	U	10	U	5	U
Di-n-octylphthalate	ug/L	5	U	10	U	5	UJ
Dibenz(a,h)anthracene	ug/L	5	U	10	U	5	UJ
Dibenzofuran	ug/L	1	J	3	J	4	J
Diethyl Phthalate	ug/L	5	U	10	U	5	U
Dimethyl Phthalate	ug/L	5	U	10	U	5	U
Flouranthene	ug/L	5	U	10	U	5	U
Fluorene	ug/L	2	J	4	J	6	=
Hexachlorobenzene	ug/L	5	U	10	U	5	U
Hexachlorobutadiene	ug/L	5	U	10	U	5	U
Hexachlorocyclopentadiene	ug/L	5	U	10	U	5	U
Hexachloroethane	ug/L	5	U	10	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/L	5	U	10	U	5	UJ
Isophorone	ug/L	5	U	10	U	5	U
N-Nitrosodi-n-propylamine	ug/L	5	U	10	U	5	U
N-Nitrosodiphenylamine	ug/L	5	U	10	U	5	U
Naphthalene	ug/L	5	=	10	U	2	J
Nitrobenzene	ug/L	5	U	10	U	5	U
Pentachlorophenol	ug/L	10	U	25	U	10	U
Phenanthrene	ug/L	1	J	4	J	4	J

	StationID	F613GW006		F613GW007		F613GW02D	
	SampleID	613HW00603		613GW00701		613GW02D04	
	DateCollected	10/12/99 12:00 AM		11/19/99 12:00 AM		11/7/97 12:00 AM	
	DateAnalyzed	10/22/1999		11/30/1999		11/14/1997	
	SDGNumber	EN018		EN029		31703	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	5	UJ	5	U	10	U
Benzo(b)Fluoranthene	ug/L	5	UJ	5	U	10	U
Benzo(g,h,i)Perylene	ug/L	5	UJ	5	U	10	U
Benzo(k)Fluoranthene	ug/L	5	UJ	5	U	10	U
Benzoic acid	ug/L	25	U	25	U	1	J
Benzyl alcohol	ug/L	5	U	5	U	10	U
Benzyl Butyl Phthalate	ug/L	5	U	5	U	10	U
bis(2-Chloroethoxy) Methane	ug/L	5	U	5	U	10	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	5	U	5	U	10	U
bis(2-Ethylhexyl) Phthalate	ug/L	5	U	5	U	10	U
Chrysene	ug/L	5	U	5	U	10	U
Di-n-butyl Phthalate	ug/L	5	U	5	U	10	U
Di-n-octylphthalate	ug/L	5	UJ	5	U	10	U
Dibenz(a,h)anthracene	ug/L	5	UJ	5	U	10	U
Dibenzofuran	ug/L	4	J	5	U	10	U
Diethyl Phthalate	ug/L	5	U	5	U	10	U
Dimethyl Phthalate	ug/L	5	U	5	U	10	U
Flouranthene	ug/L	5	U	5	U	10	U
Fluorene	ug/L	6	=	5	U	10	U
Hexachlorobenzene	ug/L	5	U	5	U	10	U
Hexachlorobutadiene	ug/L	5	U	5	U	10	U
Hexachlorocyclopentadiene	ug/L	5	U	5	U	10	U
Hexachloroethane	ug/L	5	U	5	U	10	U
Indeno(1,2,3-c,d)pyrene	ug/L	5	UJ	5	U	10	U
Isophorone	ug/L	5	U	5	U	10	U
N-Nitrosodi-n-propylamine	ug/L	5	U	5	U	10	U
N-Nitrosodiphenylamine	ug/L	5	U	5	U	10	U
Naphthalene	ug/L	2	J	5	U	10	U
Nitrobenzene	ug/L	5	U	5	U	10	U
Pentachlorophenol	ug/L	10	U	10	U	50	U
Phenanthrene	ug/L	4	J	5	U	10	U

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17A	
	SampleID	FDSGW17A01		FDSGW17A02		FDSGW17A03	
	DateCollected	1/28/97 12:00 AM		6/17/97 12:00 AM		4/24/98 12:00 AM	
	DateAnalyzed	01/31/1997		06/25/1997		05/19/1998	
	SDGNumber	28308		29707		ECZG03	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	10	U	10	U	10	U
Benzo(b)Fluoranthene	ug/L	10	U	10	U	10	U
Benzo(g,h,i)Perylene	ug/L	10	U	10	U	10	U
Benzo(k)Fluoranthene	ug/L	10	U	10	U	10	U
Benzoic acid	ug/L	50	U	1	J	50	U
Benzyl alcohol	ug/L	10	U	10	U	10	U
Benzyl Butyl Phthalate	ug/L	10	U	10	U	10	U
bis(2-Chloroethoxy) Methane	ug/L	10	U	10	U	10	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	10	U	10	U	10	U
bis(2-Ethylhexyl) Phthalate	ug/L	10	U	10	U	10	U
Chrysene	ug/L	10	U	10	U	10	U
Di-n-butyl Phthalate	ug/L	1	J	2	J	10	U
Di-n-octylphthalate	ug/L	10	U	10	U	10	U
Dibenz(a,h)anthracene	ug/L	10	U	10	U	10	U
Dibenzofuran	ug/L	10	U	10	U	10	U
Diethyl Phthalate	ug/L	10	U	1	J	10	U
Dimethyl Phthalate	ug/L	10	U	10	U	10	U
Flouranthene	ug/L	10	U	10	U	10	U
Fluorene	ug/L	10	U	10	U	10	U
Hexachlorobenzene	ug/L	10	U	10	U	10	U
Hexachlorobutadiene	ug/L	10	U	10	U	10	U
Hexachlorocyclopentadiene	ug/L	10	U	10	U	10	U
Hexachloroethane	ug/L	10	U	10	U	10	U
Indeno(1,2,3-c,d)pyrene	ug/L	10	U	10	U	10	U
Isophorone	ug/L	10	U	10	U	10	U
N-Nitrosodi-n-propylamine	ug/L	10	U	10	U	10	U
N-Nitrosodiphenylamine	ug/L	10	U	10	U	10	U
Naphthalene	ug/L	10	U	10	U	10	U
Nitrobenzene	ug/L	10	U	10	U	10	U
Pentachlorophenol	ug/L	50	U	50	U	50	U
Phenanthrene	ug/L	10	U	10	U	10	U

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17A	
	SampleID	FDSGW17A04		FDSGW17A05		FDSHW17A04	
	DateCollected	10/20/98 12:00 AM		10/12/99 12:00 AM		10/20/98 12:00 AM	
	DateAnalyzed	11/20/1998		10/22/1999		11/20/1998	
	SDGNumber	EN013		EN018		EN013	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	5	U	5	U	5	U
Benzo(b)Fluoranthene	ug/L	5	U	5	U	5	U
Benzo(g,h,i)Perylene	ug/L	5	U	5	U	5	U
Benzo(k)Fluoranthene	ug/L	5	U	5	U	5	U
Benzoic acid	ug/L	26	U	27	U	25	U
Benzyl alcohol	ug/L	5	U	5	U	5	R
Benzyl Butyl Phthalate	ug/L	5	U	5	U	5	U
bis(2-Chloroethoxy) Methane	ug/L	5	U	5	U	5	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	5	U	5	U	5	U
bis(2-Ethylhexyl) Phthalate	ug/L	5	U	5	U	5	U
Chrysene	ug/L	5	U	5	U	5	U
Di-n-butyl Phthalate	ug/L	5	U	5	U	5	U
Di-n-octylphthalate	ug/L	5	U	5	U	5	U
Dibenz(a,h)anthracene	ug/L	5	U	5	U	5	U
Dibenzofuran	ug/L	4	J	5	U	3	J
Diethyl Phthalate	ug/L	5	U	5	U	5	U
Dimethyl Phthalate	ug/L	5	U	5	U	5	U
Flouranthene	ug/L	5	U	5	U	5	U
Fluorene	ug/L	4	J	5	U	3	J
Hexachlorobenzene	ug/L	5	U	5	U	5	U
Hexachlorobutadiene	ug/L	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/L	5	U	5	U	5	U
Hexachloroethane	ug/L	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/L	5	U	5	U	5	U
Isophorone	ug/L	5	U	5	U	5	U
N-Nitrosodi-n-propylamine	ug/L	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/L	5	U	5	U	5	U
Naphthalene	ug/L	5	U	5	U	5	U
Nitrobenzene	ug/L	5	U	5	U	5	U
Pentachlorophenol	ug/L	10	U	11	U	10	R
Phenanthrene	ug/L	5	U	5	U	5	U

	StationID	FFDSGW17A		FFDSGW17B		FFDSGW17B	
	SampleID	FDSHW17A04RE		FDSGW17B01		FDSGW17B02	
	DateCollected	10/20/98 12:00 AM		1/28/97 12:00 AM		6/17/97 12:00 AM	
	DateAnalyzed	11/29/1998		01/31/1997		06/25/1997	
	SDGNumber	EN013		28308		29707	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	5	R	10	U	10	U
Benzo(b)Fluoranthene	ug/L	5	R	10	U	10	U
Benzo(g,h,i)Perylene	ug/L	5	R	10	U	10	U
Benzo(k)Fluoranthene	ug/L	5	R	10	U	10	U
Benzoic acid	ug/L	25	R	50	U	50	U
Benzyl alcohol	ug/L	5	R	10	U	10	U
Benzyl Butyl Phthalate	ug/L	5	R	10	U	10	U
bis(2-Chloroethoxy) Methane	ug/L	5	R	10	U	10	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	5	R	10	U	10	U
bis(2-Ethylhexyl) Phthalate	ug/L	1	R	10	U	10	U
Chrysene	ug/L	5	R	10	U	10	U
Di-n-butyl Phthalate	ug/L	5	R	10	U	10	U
Di-n-octylphthalate	ug/L	5	R	10	U	10	U
Dibenz(a,h)anthracene	ug/L	5	R	10	U	10	U
Dibenzofuran	ug/L	4	R	10	U	10	U
Diethyl Phthalate	ug/L	5	R	10	U	1	J
Dimethyl Phthalate	ug/L	5	R	10	U	10	U
Flouranthene	ug/L	5	R	10	U	10	U
Fluorene	ug/L	5	R	10	U	10	U
Hexachlorobenzene	ug/L	5	R	10	U	10	U
Hexachlorobutadiene	ug/L	5	R	10	U	10	U
Hexachlorocyclopentadiene	ug/L	5	R	10	U	10	U
Hexachloroethane	ug/L	5	R	10	U	10	U
Indeno(1,2,3-c,d)pyrene	ug/L	5	R	10	U	10	U
Isophorone	ug/L	5	R	10	U	10	U
N-Nitrosodi-n-propylamine	ug/L	5	R	10	U	10	U
N-Nitrosodiphenylamine	ug/L	5	R	10	U	10	U
Naphthalene	ug/L	5	R	10	U	10	U
Nitrobenzene	ug/L	5	R	10	U	10	U
Pentachlorophenol	ug/L	10	R	50	U	50	U
Phenanthrene	ug/L	5	R	10	U	10	U

	StationID	FFDSGW17B		FFDSGW17B		FFDSGW17B	
	SampleID	FDSGW17B03		FDSGW17B04		FDSGW17B06	
	DateCollected	4/24/98 12:00 AM		10/20/98 12:00 AM		10/12/99 12:00 AM	
	DateAnalyzed	05/19/1998		11/20/1998		10/22/1999	
	SDGNumber	ECZG03		EN013		EN018	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	10	U	5	U	6	U
Benzo(b)Fluoranthene	ug/L	10	U	5	U	6	U
Benzo(g,h,i)Perylene	ug/L	10	U	5	U	6	U
Benzo(k)Fluoranthene	ug/L	10	U	5	U	6	U
Benzoic acid	ug/L	50	U	26	U	27	U
Benzyl alcohol	ug/L	10	U	5	U	6	U
Benzyl Butyl Phthalate	ug/L	10	U	5	U	6	U
bis(2-Chloroethoxy) Methane	ug/L	10	U	5	U	6	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	10	U	5	U	6	U
bis(2-Ethylhexyl) Phthalate	ug/L	10	U	10	J	8	U
Chrysene	ug/L	10	U	5	U	6	U
Di-n-butyl Phthalate	ug/L	10	U	5	U	6	U
Di-n-octylphthalate	ug/L	10	U	5	U	6	U
Dibenz(a,h)anthracene	ug/L	10	U	5	U	6	U
Dibenzofuran	ug/L	10	U	5	U	6	U
Diethyl Phthalate	ug/L	10	U	5	U	6	U
Dimethyl Phthalate	ug/L	10	U	5	U	6	U
Flouranthene	ug/L	10	U	5	U	6	U
Fluorene	ug/L	10	U	5	U	6	U
Hexachlorobenzene	ug/L	10	U	5	U	6	U
Hexachlorobutadiene	ug/L	10	U	5	U	6	U
Hexachlorocyclopentadiene	ug/L	10	U	5	U	6	U
Hexachloroethane	ug/L	10	U	5	U	6	U
Indeno(1,2,3-c,d)pyrene	ug/L	10	U	5	U	6	U
Isophorone	ug/L	10	U	5	U	6	U
N-Nitrosodi-n-propylamine	ug/L	10	U	5	U	6	U
N-Nitrosodiphenylamine	ug/L	10	U	5	U	6	U
Naphthalene	ug/L	10	U	5	U	6	U
Nitrobenzene	ug/L	10	U	5	U	6	U
Pentachlorophenol	ug/L	50	U	10	U	11	U
Phenanthrene	ug/L	10	U	5	U	6	U

	StationID	FGELGW005		FGELGW006		FGELGW007	
	SampleID	GELGW00504		GELGW00604		GELGW00704	
	DateCollected	11/12/97 12:00 AM		11/14/97 12:00 AM		11/12/97 12:00 AM	
	DateAnalyzed	11/19/1997		12/04/1997		11/20/1997	
	SDGNumber	31821		31821		31821	
Parameter	Units						
Benzo(a)Pyrene	ug/L	11	U	11	U	10	U
Benzo(b)Fluoranthene	ug/L	11	U	11	U	10	U
Benzo(g,h,i)Perylene	ug/L	11	U	11	U	10	U
Benzo(k)Fluoranthene	ug/L	11	U	11	U	10	U
Benzoic acid	ug/L	55	U	56	U	51	U
Benzyl alcohol	ug/L	11	U	11	U	10	U
Benzyl Butyl Phthalate	ug/L	11	U	11	U	10	U
bis(2-Chloroethoxy) Methane	ug/L	11	U	11	U	10	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	11	U	11	U	10	U
bis(2-Ethylhexyl) Phthalate	ug/L	11	U	11	U	10	U
Chrysene	ug/L	11	U	11	U	10	U
Di-n-butyl Phthalate	ug/L	11	U	11	U	10	U
Di-n-octylphthalate	ug/L	11	U	11	U	10	U
Dibenz(a,h)anthracene	ug/L	11	U	11	U	10	U
Dibenzofuran	ug/L	11	U	11	U	10	U
Diethyl Phthalate	ug/L	11	U	11	U	10	U
Dimethyl Phthalate	ug/L	11	U	11	U	10	U
Flouranthene	ug/L	11	U	11	U	10	U
Fluorene	ug/L	11	U	11	U	10	U
Hexachlorobenzene	ug/L	11	U	11	U	10	U
Hexachlorobutadiene	ug/L	11	U	11	U	10	U
Hexachlorocyclopentadiene	ug/L	11	U	11	U	10	U
Hexachloroethane	ug/L	11	U	11	U	10	U
Indeno(1,2,3-c,d)pyrene	ug/L	11	U	11	U	10	U
Isophorone	ug/L	11	U	11	U	10	U
N-Nitrosodi-n-propylamine	ug/L	11	U	11	U	10	U
N-Nitrosodiphenylamine	ug/L	11	U	11	U	10	U
Naphthalene	ug/L	11	U	11	U	10	U
Nitrobenzene	ug/L	11	U	11	U	10	U
Pentachlorophenol	ug/L	55	U	56	U	51	U
Phenanthrene	ug/L	11	U	11	U	10	U

	StationID	FGELGW008		FGELGW011		FGELGW011	
	SampleID	GELGW00804		GELGW01104		GELGW01104RE	
	DateCollected	11/14/97 12:00 AM		11/12/97 12:00 AM		11/12/97 12:00 AM	
	DateAnalyzed	12/04/1997		11/20/1997		11/27/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	11	U	11	U	12	R
Benzo(b)Fluoranthene	ug/L	11	U	11	U	12	R
Benzo(g,h,i)Perylene	ug/L	11	U	11	U	12	R
Benzo(k)Fluoranthene	ug/L	11	U	11	U	12	R
Benzoic acid	ug/L	1	J	56	R	58	R
Benzyl alcohol	ug/L	11	U	11	U	12	R
Benzyl Butyl Phthalate	ug/L	11	U	11	U	12	R
bis(2-Chloroethoxy) Methane	ug/L	11	U	11	U	12	R
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	11	U	11	U	12	R
bis(2-Ethylhexyl) Phthalate	ug/L	11	U	11	R	12	R
Chrysene	ug/L	11	U	11	U	12	R
Di-n-butyl Phthalate	ug/L	11	U	11	U	12	R
Di-n-octylphthalate	ug/L	11	U	11	U	12	R
Dibenz(a,h)anthracene	ug/L	11	U	11	U	12	R
Dibenzofuran	ug/L	11	U	11	U	12	R
Diethyl Phthalate	ug/L	11	U	11	U	12	R
Dimethyl Phthalate	ug/L	11	U	11	U	12	R
Flouranthene	ug/L	11	U	11	U	12	R
Fluorene	ug/L	11	U	11	U	12	R
Hexachlorobenzene	ug/L	11	U	11	U	12	R
Hexachlorobutadiene	ug/L	11	U	11	U	12	R
Hexachlorocyclopentadiene	ug/L	11	U	11	U	12	R
Hexachloroethane	ug/L	11	U	11	U	12	R
Indeno(1,2,3-c,d)pyrene	ug/L	11	U	11	U	12	R
Isophorone	ug/L	11	U	11	U	12	R
N-Nitrosodi-n-propylamine	ug/L	11	U	11	U	12	R
N-Nitrosodiphenylamine	ug/L	11	U	11	U	12	R
Naphthalene	ug/L	11	U	11	U	12	R
Nitrobenzene	ug/L	11	U	11	U	12	R
Pentachlorophenol	ug/L	54	U	56	R	58	R
Phenanthrene	ug/L	11	U	11	U	12	R

	StationID	FGELGW012		FGELGW012		FGELGW013	
	SampleID	GELGW01204		GELHW01204		GELGW01304	
	DateCollected	11/13/97 12:00 AM		11/13/97 12:00 AM		11/14/97 12:00 AM	
	DateAnalyzed	11/24/1997		12/04/1997		12/04/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	11	U	11	U	11	U
Benzo(b)Fluoranthene	ug/L	11	U	11	U	11	U
Benzo(g,h,i)Perylene	ug/L	11	U	11	U	11	U
Benzo(k)Fluoranthene	ug/L	11	U	11	U	11	U
Benzoic acid	ug/L	56	U	57	U	2	J
Benzyl alcohol	ug/L	11	U	11	U	11	U
Benzyl Butyl Phthalate	ug/L	11	U	11	U	11	U
bis(2-Chloroethoxy) Methane	ug/L	11	U	11	U	11	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	11	U	11	U	11	U
bis(2-Ethylhexyl) Phthalate	ug/L	11	U	11	U	12	U
Chrysene	ug/L	11	U	11	U	11	U
Di-n-butyl Phthalate	ug/L	11	U	11	U	11	U
Di-n-octylphthalate	ug/L	11	U	11	U	11	U
Dibenz(a,h)anthracene	ug/L	11	U	11	U	11	U
Dibenzofuran	ug/L	11	U	11	U	11	U
Diethyl Phthalate	ug/L	11	U	11	U	11	U
Dimethyl Phthalate	ug/L	11	U	11	U	11	U
Flouranthene	ug/L	11	U	11	U	11	U
Fluorene	ug/L	11	U	11	U	11	U
Hexachlorobenzene	ug/L	11	U	11	U	11	U
Hexachlorobutadiene	ug/L	11	U	11	U	11	U
Hexachlorocyclopentadiene	ug/L	11	U	11	U	11	U
Hexachloroethane	ug/L	11	U	11	U	11	U
Indeno(1,2,3-c,d)pyrene	ug/L	11	U	11	U	11	U
Isophorone	ug/L	11	U	11	U	11	U
N-Nitrosodi-n-propylamine	ug/L	11	U	11	U	11	U
N-Nitrosodiphenylamine	ug/L	11	U	11	U	11	U
Naphthalene	ug/L	11	U	11	U	11	U
Nitrobenzene	ug/L	11	U	11	U	11	U
Pentachlorophenol	ug/L	56	U	57	U	54	U
Phenanthrene	ug/L	11	U	11	U	11	U

	StationID	FGELGW014		FGELGW014		FGELGW014	
	SampleID	GELGW01404		GELGW01405a		GELGW01405b	
	DateCollected	12/1/97 12:00 AM		10/20/98 12:00 AM		4/22/98 12:00 AM	
	DateAnalyzed	12/10/1997		11/20/1998		05/09/1998	
	SDGNumber	31975		EN013		ECZG02	
Parameter	**Units**						
Benzo(a)Pyrene	ug/L	10	U	5	U	10	U
Benzo(b)Fluoranthene	ug/L	10	U	5	U	10	U
Benzo(g,h,i)Perylene	ug/L	10	U	5	U	10	U
Benzo(k)Fluoranthene	ug/L	10	U	5	U	10	U
Benzoic acid	ug/L	50	U	26	U	50	U
Benzyl alcohol	ug/L	10	U	5	U	10	U
Benzyl Butyl Phthalate	ug/L	10	U	5	U	10	U
bis(2-Chloroethoxy) Methane	ug/L	10	U	5	U	10	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	10	U	5	U	10	U
bis(2-Ethylhexyl) Phthalate	ug/L	22	R	1	J	7.7	J
Chrysene	ug/L	10	U	5	U	10	U
Di-n-butyl Phthalate	ug/L	10	U	5	U	10	U
Di-n-octylphthalate	ug/L	10	U	5	U	10	U
Dibenz(a,h)anthracene	ug/L	10	U	5	U	10	U
Dibenzofuran	ug/L	4	J	4	J	10	U
Diethyl Phthalate	ug/L	10	U	5	U	10	U
Dimethyl Phthalate	ug/L	10	U	5	U	10	U
Flouranthene	ug/L	10	U	5	U	10	U
Fluorene	ug/L	10	=	10	=	11	=
Hexachlorobenzene	ug/L	10	U	5	U	10	U
Hexachlorobutadiene	ug/L	10	U	5	U	10	U
Hexachlorocyclopentadiene	ug/L	10	U	5	U	10	U
Hexachloroethane	ug/L	10	U	5	U	10	U
Indeno(1,2,3-c,d)pyrene	ug/L	10	U	5	U	10	U
Isophorone	ug/L	10	U	5	U	10	U
N-Nitrosodi-n-propylamine	ug/L	10	U	5	U	10	U
N-Nitrosodiphenylamine	ug/L	10	U	5	U	10	U
Naphthalene	ug/L	10	U	5	U	10	U
Nitrobenzene	ug/L	10	U	5	U	10	U
Pentachlorophenol	ug/L	50	U	10	U	50	U
Phenanthrene	ug/L	13	=	2	J	7.3	J

	StationID	FGELGW014		FGELGW014	
	SampleID	GELGW01406		GELGW01406RE	
	DateCollected	10/12/99 12:00 AM		10/12/99 12:00 AM	
	DateAnalyzed	10/22/1999		10/22/1999	
	SDGNumber	EN018		EN018	
Parameter	**Units**				
Benzo(a)Pyrene	ug/L	5	R	5	UJ
Benzo(b)Fluoranthene	ug/L	5	R	5	UJ
Benzo(g,h,i)Perylene	ug/L	5	R	5	UJ
Benzo(k)Fluoranthene	ug/L	5	R	5	UJ
Benzoic acid	ug/L	27	R	27	U
Benzyl alcohol	ug/L	5	R	5	U
Benzyl Butyl Phthalate	ug/L	5	R	5	U
bis(2-Chloroethoxy) Methane	ug/L	5	R	5	U
bis(2-Chloroethyl) ether (2-Chloroethyl Ether)	ug/L	5	R	5	U
bis(2-Ethylhexyl) Phthalate	ug/L	3	R	3	J
Chrysene	ug/L	5	R	5	U
Di-n-butyl Phthalate	ug/L	5	R	5	U
Di-n-octylphthalate	ug/L	5	R	5	UJ
Dibenz(a,h)anthracene	ug/L	5	R	5	UJ
Dibenzofuran	ug/L	4	R	6	=
Diethyl Phthalate	ug/L	5	R	5	U
Dimethyl Phthalate	ug/L	5	R	5	U
Flouranthene	ug/L	5	R	5	U
Fluorene	ug/L	10	R	13	=
Hexachlorobenzene	ug/L	5	R	5	U
Hexachlorobutadiene	ug/L	5	R	5	U
Hexachlorocyclopentadiene	ug/L	5	R	5	U
Hexachloroethane	ug/L	5	R	5	U
Indeno(1,2,3-c,d)pyrene	ug/L	5	R	5	UJ
Isophorone	ug/L	5	R	5	U
N-Nitrosodi-n-propylamine	ug/L	5	R	5	U
N-Nitrosodiphenylamine	ug/L	5	R	5	U
Naphthalene	ug/L	5	R	5	U
Nitrobenzene	ug/L	5	R	5	U
Pentachlorophenol	ug/L	11	R	11	U
Phenanthrene	ug/L	12	R	14	=

	StationID	F240GW003		F613GW001		F613GW001	
	SampleID	240GW00304		613GW00104		613HW00104	
	DateCollected	11/12/97 12:00 AM		11/6/97 12:00 AM		11/6/97 12:00 AM	
	DateAnalyzed	11/19/1997		11/14/1997		11/14/1997	
	SDGNumber	31821		31703		31703	
Parameter	**Units**						
Phenol	ug/L	11	U	12	U	12	U
Pyrene	ug/L	11	U	12	U	12	U

	StationID	F613GW003		F613GW004		F613GW005	
	SampleID	613GW00304		613GW00404		613GW00504	
	DateCollected	11/7/97 12:00 AM		11/6/97 12:00 AM		11/25/97 12:00 AM	
	DateAnalyzed	11/14/1997		11/14/1997		12/08/1997	
	SDGNumber	31703		31703		31975	
Parameter	**Units**						
Phenol	ug/L	11	U	11	U	10	U
Pyrene	ug/L	11	U	11	U	10	U

	StationID	F613GW006		F613GW006		F613GW006	
	SampleID	613GW00601		613GW00602		613GW00603	
	DateCollected	10/20/98 12:00 AM		6/18/99 12:00 AM		10/12/99 12:00 AM	
	DateAnalyzed	11/20/1998		06/25/1999		10/22/1999	
	SDGNumber	EN013		39074		EN018	
Parameter	**Units**						
Phenol	ug/L	5	U	10	U	5	U
Pyrene	ug/L	5	U	10	U	5	U

	StationID	F613GW006		F613GW007		F613GW02D	
	SampleID	613HW00603		613GW00701		613GW02D04	
	DateCollected	10/12/99 12:00 AM		11/19/99 12:00 AM		11/7/97 12:00 AM	
	DateAnalyzed	10/22/1999		11/30/1999		11/14/1997	
	SDGNumber	EN018		EN029		31703	
Parameter	**Units**						
Phenol	ug/L	5	U	5	U	10	U
Pyrene	ug/L	5	U	5	U	10	U

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17A	
	SampleID	FDSGW17A01		FDSGW17A02		FDSGW17A03	
	DateCollected	1/28/97 12:00 AM		6/17/97 12:00 AM		4/24/98 12:00 AM	
	DateAnalyzed	01/31/1997		06/25/1997		05/19/1998	
	SDGNumber	28308		29707		ECZG03	
Parameter	**Units**						
Phenol	ug/L	10	U	10	U	10	U
Pyrene	ug/L	10	U	10	U	10	U

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17A	
	SampleID	FDSGW17A04		FDSGW17A05		FDSHW17A04	
	DateCollected	10/20/98 12:00 AM		10/12/99 12:00 AM		10/20/98 12:00 AM	
	DateAnalyzed	11/20/1998		10/22/1999		11/20/1998	
	SDGNumber	EN013		EN018		EN013	
Parameter	**Units**						
Phenol	ug/L	5	U	5	U	5	R
Pyrene	ug/L	5	U	5	U	5	U

	StationID	FFDSGW17A		FFDSGW17B		FFDSGW17B	
	SampleID	FDSHW17A04RE		FDSGW17B01		FDSGW17B02	
	DateCollected	10/20/98 12:00 AM		1/28/97 12:00 AM		6/17/97 12:00 AM	
	DateAnalyzed	11/29/1998		01/31/1997		06/25/1997	
	SDGNumber	EN013		28308		29707	
Parameter	**Units**						
Phenol	ug/L	5	R	10	U	10	U
Pyrene	ug/L	5	R	10	U	10	U

	StationID	FFDSGW17B		FFDSGW17B		FFDSGW17B	
	SampleID	FDSGW17B03		FDSGW17B04		FDSGW17B06	
	DateCollected	4/24/98 12:00 AM		10/20/98 12:00 AM		10/12/99 12:00 AM	
	DateAnalyzed	05/19/1998		11/20/1998		10/22/1999	
	SDGNumber	ECZG03		EN013		EN018	
Parameter	**Units**						
Phenol	ug/L	10	U	5	U	6	U
Pyrene	ug/L	10	U	5	U	6	U

	StationID	FGELGW005		FGELGW006		FGELGW007	
	SampleID	GELGW00504		GELGW00604		GELGW00704	
	DateCollected	11/12/97 12:00 AM		11/14/97 12:00 AM		11/12/97 12:00 AM	
	DateAnalyzed	11/19/1997		12/04/1997		11/20/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
Phenol	ug/L	11	U	11	U	10	U
Pyrene	ug/L	11	U	11	U	10	U

	StationID	FGELGW008		FGELGW011		FGELGW011	
	SampleID	GELGW00804		GELGW01104		GELGW01104RE	
	DateCollected	11/14/97 12:00 AM		11/12/97 12:00 AM		11/12/97 12:00 AM	
	DateAnalyzed	12/04/1997		11/20/1997		11/27/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
Phenol	ug/L	11	U	11	R	12	R
Pyrene	ug/L	11	U	11	U	12	R

	StationID	FGELGW012		FGELGW012		FGELGW013	
	SampleID	GELGW01204		GELHW01204		GELGW01304	
	DateCollected	11/13/97 12:00 AM		11/13/97 12:00 AM		11/14/97 12:00 AM	
	DateAnalyzed	11/24/1997		12/04/1997		12/04/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
Phenol	ug/L	11	U	11	U	11	U
Pyrene	ug/L	11	U	11	U	11	U

	StationID	FGELGW014		FGELGW014		FGELGW014	
	SampleID	GELGW01404		GELGW01405a		GELGW01405b	
	DateCollected	12/1/97 12:00 AM		10/20/98 12:00 AM		4/22/98 12:00 AM	
	DateAnalyzed	12/10/1997		11/20/1998		05/09/1998	
	SDGNumber	31975		EN013		ECZG02	
Parameter	**Units**						
Phenol	ug/L	10	U	5	U	10	U
Pyrene	ug/L	10	U	5	U	10	U

	StationID	FGELGW014		FGELGW014	
	SampleID	GELGW01406		GELGW01406RE	
	DateCollected	10/12/99 12:00 AM		10/12/99 12:00 AM	
	DateAnalyzed	10/22/1999		10/22/1999	
	SDGNumber	EN018		EN018	
Parameter	**Units**				
Phenol	ug/L	5	R	5	U
Pyrene	ug/L	5	R	5	U

	StationID	F240GW003		F240GW003		F613GW001	
	SampleID	240GW00304		240GW00304		613GW00104	
	DateCollected	11/12/1997 12:00 AM		11/12/1997 12:00 AM		11/6/1997 12:00 AM	
	DateAnalyzed	11/14/1997		11/19/1997		11/07/1997	
	SDGNumber	31821		31821		31703	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L	5	U			5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U			5	U
1,1,2-Trichloroethane	ug/L	5	U			5	U
1,1-Dichloroethane	ug/L	5	U			5	U
1,1-Dichloroethene	ug/L	5	U			5	U
1,2,4--Trichlorobenzene	ug/L			11	U		
1,2-Dichloroethane	ug/L	5	U			5	U
1,2-Dichloroethene (total)	ug/L	5	U			5	UJ
1,2-Dichloropropane	ug/L	5	U			5	U
2-Chloroethyl vinyl ether	ug/L	10	U			10	U
2-Hexanone	ug/L	10	U			10	U
Acetone	ug/L	10	U			10	U
Benzene	ug/L	5	U			5	U
Bromodichloromethane	ug/L	5	U			5	U
Bromoform	ug/L	5	U			5	U
Bromomethane	ug/L	10	U			10	U
Carbon Disulfide	ug/L	5	U			5	U
Carbon Tetrachloride	ug/L	5	U			5	U
Chlorobenzene	ug/L	5	U			5	U
Chloroethane	ug/L	10	U			10	U
Chloroform	ug/L	5	U			5	U
Chloromethane	ug/L	10	U			10	U
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L	5	U			5	U
Dibromochloromethane	ug/L	5	U			5	U
Ethylbenzene	ug/L	5	U			5	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U			10	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U			10	U
Methylene Chloride	ug/L	5	U			5	U
Styrene	ug/L	5	U			5	U
Tetrachloroethylene (PCE)	ug/L	5	U			5	U

	StationID	F613GW001		F613GW001		F613GW001	
	SampleID	613GW00104		613HW00104		613HW00104	
	DateCollected	11/6/1997 12:00 AM		11/6/1997 12:00 AM		11/6/1997 12:00 AM	
	DateAnalyzed	11/14/1997		11/07/1997		11/14/1997	
	SDGNumber	31703		31703		31703	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L			5	U		
1,1,2,2-Tetrachloroethane	ug/L			5	U		
1,1,2-Trichloroethane	ug/L			5	U		
1,1-Dichloroethane	ug/L			5	U		
1,1-Dichloroethene	ug/L			5	U		
1,2,4--Trichlorobenzene	ug/L	12	U			12	U
1,2-Dichloroethane	ug/L			5	U		
1,2-Dichloroethene (total)	ug/L			34	J		
1,2-Dichloropropane	ug/L			5	U		
2-Chloroethyl vinyl ether	ug/L			10	U		
2-Hexanone	ug/L			10	U		
Acetone	ug/L			10	U		
Benzene	ug/L			5	U		
Bromodichloromethane	ug/L			5	U		
Bromoform	ug/L			5	U		
Bromomethane	ug/L			10	U		
Carbon Disulfide	ug/L			5	U		
Carbon Tetrachloride	ug/L			5	U		
Chlorobenzene	ug/L			5	U		
Chloroethane	ug/L			10	U		
Chloroform	ug/L			5	U		
Chloromethane	ug/L			10	U		
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L			5	U		
Dibromochloromethane	ug/L			5	U		
Ethylbenzene	ug/L			5	U		
Methyl ethyl ketone (2-Butanone)	ug/L			10	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			10	U		
Methylene Chloride	ug/L			5	U		
Styrene	ug/L			5	U		
Tetrachloroethylene (PCE)	ug/L			5	U		

	StationID	F613GW003		F613GW003		F613GW003	
	SampleID	613GW00304		613GW00304		613GW003LA	
	DateCollected	11/7/1997 12:00 AM		11/7/1997 12:00 AM		6/22/2001 12:00 AM	
	DateAnalyzed	11/10/1997		11/14/1997		06/28/2001	
	SDGNumber	31703		31703		44685	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L	5	U			5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U				
1,1,2-Trichloroethane	ug/L	5	U				
1,1-Dichloroethane	ug/L	5	U			5	U
1,1-Dichloroethene	ug/L	5	U			5	U
1,2,4--Trichlorobenzene	ug/L			11	U		
1,2-Dichloroethane	ug/L	5	U				
1,2-Dichloroethene (total)	ug/L	5	U				
1,2-Dichloropropane	ug/L	5	U				
2-Chloroethyl vinyl ether	ug/L	10	U				
2-Hexanone	ug/L	10	U				
Acetone	ug/L	10	U				
Benzene	ug/L	5	U				
Bromodichloromethane	ug/L	5	U				
Bromoform	ug/L	5	U				
Bromomethane	ug/L	10	U				
Carbon Disulfide	ug/L	5	U				
Carbon Tetrachloride	ug/L	5	U				
Chlorobenzene	ug/L	5	U				
Chloroethane	ug/L	10	U				
Chloroform	ug/L	5	U				
Chloromethane	ug/L	10	U				
cis-1,2-Dichloroethylene	ug/L					5	U
cis-1,3-Dichloropropene	ug/L	5	U				
Dibromochloromethane	ug/L	5	U				
Ethylbenzene	ug/L	5	U				
Methyl ethyl ketone (2-Butanone)	ug/L	10	U				
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U				
Methylene Chloride	ug/L	5	U				
Styrene	ug/L	5	U				
Tetrachloroethylene (PCE)	ug/L	5	U			5	U

	StationID	F613GW004		F613GW004		F613GW004	
	SampleID	613GW00404		613GW00404		613GW004LA	
	DateCollected	11/6/1997 12:00 AM		11/6/1997 12:00 AM		6/22/2001 12:00 AM	
	DateAnalyzed	11/07/1997		11/14/1997		06/28/2001	
	SDGNumber	31703		31703		44685	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L	5	U			5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U				
1,1,2-Trichloroethane	ug/L	5	U				
1,1-Dichloroethane	ug/L	5	U			5	U
1,1-Dichloroethene	ug/L	5	U			5	U
1,2,4--Trichlorobenzene	ug/L			11	U		
1,2-Dichloroethane	ug/L	5	U				
1,2-Dichloroethene (total)	ug/L	5	U				
1,2-Dichloropropane	ug/L	5	U				
2-Chloroethyl vinyl ether	ug/L	10	U				
2-Hexanone	ug/L	10	U				
Acetone	ug/L	10	U				
Benzene	ug/L	5	U				
Bromodichloromethane	ug/L	5	U				
Bromoform	ug/L	5	U				
Bromomethane	ug/L	10	U				
Carbon Disulfide	ug/L	5	U				
Carbon Tetrachloride	ug/L	5	U				
Chlorobenzene	ug/L	5	U				
Chloroethane	ug/L	10	U				
Chloroform	ug/L	5	U				
Chloromethane	ug/L	10	U				
cis-1,2-Dichloroethylene	ug/L					83.6	=
cis-1,3-Dichloropropene	ug/L	5	U				
Dibromochloromethane	ug/L	5	U				
Ethylbenzene	ug/L	5	U				
Methyl ethyl ketone (2-Butanone)	ug/L	10	U				
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U				
Methylene Chloride	ug/L	5	U				
Styrene	ug/L	5	U				
Tetrachloroethylene (PCE)	ug/L	5	U			0.35	J

	StationID	F613GW005		F613GW005		F613GW006	
	SampleID	613GW00504		613GW00504		613GW00601	
	DateCollected	11/25/1997 12:00 AM		11/25/1997 12:00 AM		10/20/1998 12:00 AM	
	DateAnalyzed	12/03/1997		12/08/1997		10/22/1998	
	SDGNumber	31975		31975		36036	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L	5	U			5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U			5	U
1,1,2-Trichloroethane	ug/L	5	U			5	U
1,1-Dichloroethane	ug/L	5	U			5	U
1,1-Dichloroethene	ug/L	5	U			5	U
1,2,4--Trichlorobenzene	ug/L			10	U		
1,2-Dichloroethane	ug/L	5	U			5	U
1,2-Dichloroethene (total)	ug/L	5	U			5	U
1,2-Dichloropropane	ug/L	5	U			5	U
2-Chloroethyl vinyl ether	ug/L	5	U			5	R
2-Hexanone	ug/L	5	U			5	U
Acetone	ug/L	5	U			58	J
Benzene	ug/L	5	U			2	J
Bromodichloromethane	ug/L	5	U			5	U
Bromoform	ug/L	5	U			5	U
Bromomethane	ug/L	5	U			5	U
Carbon Disulfide	ug/L	5	U			6	=
Carbon Tetrachloride	ug/L	5	U			5	U
Chlorobenzene	ug/L	5	U			5	U
Chloroethane	ug/L	5	U			5	U
Chloroform	ug/L	5	U			5	U
Chloromethane	ug/L	5	U			5	U
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L	5	U			5	U
Dibromochloromethane	ug/L	5	U			5	U
Ethylbenzene	ug/L	5	U			5	U
Methyl ethyl ketone (2-Butanone)	ug/L	5	U			5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	5	U			5	U
Methylene Chloride	ug/L	5	U			5	U
Styrene	ug/L	5	U			5	U
Tetrachloroethylene (PCE)	ug/L	5	U			5	U

	StationID	F613GW006		F613GW006		F613GW006	
	SampleID	613GW00601		613GW00602		613GW00602	
	DateCollected	10/20/1998 12:00 AM		6/18/1999 12:00 AM		6/18/1999 12:00 AM	
	DateAnalyzed	11/20/1998		06/23/1999		06/25/1999	
	SDGNumber	EN013		39074		39074	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L			5	U		
1,1,2,2-Tetrachloroethane	ug/L			5	U		
1,1,2-Trichloroethane	ug/L			5	U		
1,1-Dichloroethane	ug/L			5	U		
1,1-Dichloroethene	ug/L			5	U		
1,2,4--Trichlorobenzene	ug/L	5	U			10	U
1,2-Dichloroethane	ug/L			5	U		
1,2-Dichloroethene (total)	ug/L			33	=		
1,2-Dichloropropane	ug/L			5	U		
2-Chloroethyl vinyl ether	ug/L			5	U		
2-Hexanone	ug/L			5	U		
Acetone	ug/L			10	=		
Benzene	ug/L			5	U		
Bromodichloromethane	ug/L			5	U		
Bromoform	ug/L			5	U		
Bromomethane	ug/L			5	U		
Carbon Disulfide	ug/L			5	U		
Carbon Tetrachloride	ug/L			5	U		
Chlorobenzene	ug/L			5	U		
Chloroethane	ug/L			5	R		
Chloroform	ug/L			5	U		
Chloromethane	ug/L			5	U		
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L			5	U		
Dibromochloromethane	ug/L			5	U		
Ethylbenzene	ug/L			5	U		
Methyl ethyl ketone (2-Butanone)	ug/L			5	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			5	U		
Methylene Chloride	ug/L			5	U		
Styrene	ug/L			5	U		
Tetrachloroethylene (PCE)	ug/L			5	U		

	StationID	F613GW006		F613GW006		F613GW006	
	SampleID	613GW00603		613GW00603		613HW00603	
	DateCollected	10/12/1999 12:00 AM		10/12/1999 12:00 AM		10/12/1999 12:00 AM	
	DateAnalyzed	10/18/1999		10/22/1999		10/18/1999	
	SDGNumber	EN018		EN018		EN018	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L	3	U			3	U
1,1,2,2-Tetrachloroethane	ug/L	3	U			3	U
1,1,2-Trichloroethane	ug/L	3	U			3	U
1,1-Dichloroethane	ug/L	3	U			3	U
1,1-Dichloroethene	ug/L	3	U			3	U
1,2,4--Trichlorobenzene	ug/L			5	U		
1,2-Dichloroethane	ug/L	3	U			3	U
1,2-Dichloroethene (total)	ug/L	3	U			3	U
1,2-Dichloropropane	ug/L	3	U			3	U
2-Chloroethyl vinyl ether	ug/L	10	U			10	U
2-Hexanone	ug/L	5	U			5	U
Acetone	ug/L	5	R			5	R
Benzene	ug/L	4	=			4	=
Bromodichloromethane	ug/L	3	U			3	U
Bromoform	ug/L	3	U			3	U
Bromomethane	ug/L	3	U			3	U
Carbon Disulfide	ug/L	3	U			3	U
Carbon Tetrachloride	ug/L	3	U			3	U
Chlorobenzene	ug/L	3	U			3	U
Chloroethane	ug/L	3	U			3	U
Chloroform	ug/L	3	U			3	U
Chloromethane	ug/L	3	U			3	U
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L	3	U			3	U
Dibromochloromethane	ug/L	3	U			3	U
Ethylbenzene	ug/L	3	U			3	U
Methyl ethyl ketone (2-Butanone)	ug/L	5	U			5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	5	U			5	U
Methylene Chloride	ug/L	3	U			3	U
Styrene	ug/L	3	U			3	U
Tetrachloroethylene (PCE)	ug/L	3	U			3	U

	StationID	F613GW006		F613GW007		F613GW007	
	SampleID	613HW00603		613GW00701		613GW00701	
	DateCollected	10/12/1999 12:00 AM		11/19/1999 12:00 AM		11/19/1999 12:00 AM	
	DateAnalyzed	10/22/1999		11/23/1999		11/30/1999	
	SDGNumber	EN018		EN029		EN029	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L			3	U		
1,1,2,2-Tetrachloroethane	ug/L			3	U		
1,1,2-Trichloroethane	ug/L			3	U		
1,1-Dichloroethane	ug/L			3	U		
1,1-Dichloroethene	ug/L			3	U		
1,2,4--Trichlorobenzene	ug/L	5	U			5	U
1,2-Dichloroethane	ug/L			3	U		
1,2-Dichloroethene (total)	ug/L			3	U		
1,2-Dichloropropane	ug/L			3	U		
2-Chloroethyl vinyl ether	ug/L			10	U		
2-Hexanone	ug/L			5	U		
Acetone	ug/L			6	J		
Benzene	ug/L			3	U		
Bromodichloromethane	ug/L			3	U		
Bromoform	ug/L			3	U		
Bromomethane	ug/L			3	U		
Carbon Disulfide	ug/L			2	J		
Carbon Tetrachloride	ug/L			3	U		
Chlorobenzene	ug/L			3	U		
Chloroethane	ug/L			3	U		
Chloroform	ug/L			3	U		
Chloromethane	ug/L			3	U		
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L			3	U		
Dibromochloromethane	ug/L			3	U		
Ethylbenzene	ug/L			3	U		
Methyl ethyl ketone (2-Butanone)	ug/L			5	R		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			5	U		
Methylene Chloride	ug/L			3	U		
Styrene	ug/L			3	U		
Tetrachloroethylene (PCE)	ug/L			3	U		

	StationID	F613GW008		F613GW009		F613GW02D	
	SampleID	613GW00801		613GW009LA		613GW02D04	
	DateCollected	11/19/1999 12:00 AM		6/22/2001 12:00 AM		11/7/1997 12:00 AM	
	DateAnalyzed	11/23/1999		06/28/2001		11/10/1997	
	SDGNumber	EN029		44685		31703	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L	3	U	5	U	5	U
1,1,2,2-Tetrachloroethane	ug/L	3	U			5	U
1,1,2-Trichloroethane	ug/L	3	U			5	U
1,1-Dichloroethane	ug/L	3	U	5	U	5	U
1,1-Dichloroethene	ug/L	3	U	5	U	5	U
1,2,4--Trichlorobenzene	ug/L						
1,2-Dichloroethane	ug/L	3	U			5	U
1,2-Dichloroethene (total)	ug/L	3	U			5	U
1,2-Dichloropropane	ug/L	3	U			5	U
2-Chloroethyl vinyl ether	ug/L	10	U			10	U
2-Hexanone	ug/L	5	U			10	U
Acetone	ug/L	6	J			10	U
Benzene	ug/L	3	U			5	U
Bromodichloromethane	ug/L	3	U			5	U
Bromoform	ug/L	3	U			5	U
Bromomethane	ug/L	3	U			10	U
Carbon Disulfide	ug/L	3	U			5	U
Carbon Tetrachloride	ug/L	3	U			5	U
Chlorobenzene	ug/L	3	U			5	U
Chloroethane	ug/L	3	U			10	U
Chloroform	ug/L	3	U			5	U
Chloromethane	ug/L	3	U			10	U
cis-1,2-Dichloroethylene	ug/L			5	U		
cis-1,3-Dichloropropene	ug/L	3	U			5	U
Dibromochloromethane	ug/L	3	U			5	U
Ethylbenzene	ug/L	3	U			5	U
Methyl ethyl ketone (2-Butanone)	ug/L	5	R			10	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	5	U			10	U
Methylene Chloride	ug/L	3	U			5	U
Styrene	ug/L	3	U			5	U
Tetrachloroethylene (PCE)	ug/L	3	U	5	U	5	U

	StationID	F613GW02D		FFDSGW17A		FFDSGW17A	
	SampleID	613GW02D04		FDSGW17A01		FDSGW17A01	
	DateCollected	11/7/1997 12:00 AM		1/28/1997 12:00 AM		1/28/1997 12:00 AM	
	DateAnalyzed	11/14/1997		01/30/1997		01/31/1997	
	SDGNumber	31703		28308		28308	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L			5	U		
1,1,2,2-Tetrachloroethane	ug/L			5	U		
1,1,2-Trichloroethane	ug/L			5	U		
1,1-Dichloroethane	ug/L			5	U		
1,1-Dichloroethene	ug/L			5	U		
1,2,4--Trichlorobenzene	ug/L	10	U			10	U
1,2-Dichloroethane	ug/L			5	U		
1,2-Dichloroethene (total)	ug/L			5	U		
1,2-Dichloropropane	ug/L			5	U		
2-Chloroethyl vinyl ether	ug/L			10	U		
2-Hexanone	ug/L			10	U		
Acetone	ug/L			10	U		
Benzene	ug/L			5	U		
Bromodichloromethane	ug/L			5	U		
Bromoform	ug/L			5	U		
Bromomethane	ug/L			10	U		
Carbon Disulfide	ug/L			5	U		
Carbon Tetrachloride	ug/L			5	U		
Chlorobenzene	ug/L			5	U		
Chloroethane	ug/L			10	U		
Chloroform	ug/L			5	U		
Chloromethane	ug/L			10	U		
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L			5	U		
Dibromochloromethane	ug/L			5	U		
Ethylbenzene	ug/L			5	U		
Methyl ethyl ketone (2-Butanone)	ug/L			10	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			10	U		
Methylene Chloride	ug/L			5	U		
Styrene	ug/L			5	U		
Tetrachloroethylene (PCE)	ug/L			5	U		

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17A	
	SampleID	FDSGW17A02		FDSGW17A02		FDSGW17A03	
	DateCollected	6/17/1997 12:00 AM		6/17/1997 12:00 AM		4/24/1998 12:00 AM	
	DateAnalyzed	06/19/1997		06/25/1997		04/28/1998	
	SDGNumber	29707		29707		ECZG03	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L	5	U			1	U
1,1,2,2-Tetrachloroethane	ug/L	5	U			1	U
1,1,2-Trichloroethane	ug/L	5	U			1	U
1,1-Dichloroethane	ug/L	5	U			1	U
1,1-Dichloroethene	ug/L	5	U			1	U
1,2,4--Trichlorobenzene	ug/L			10	U		
1,2-Dichloroethane	ug/L	5	U			1	U
1,2-Dichloroethene (total)	ug/L	5	U			1	U
1,2-Dichloropropane	ug/L	5	U			1	U
2-Chloroethyl vinyl ether	ug/L	10	U			10	U
2-Hexanone	ug/L	10	U			10	U
Acetone	ug/L	10	U			10	U
Benzene	ug/L	5	U			1	U
Bromodichloromethane	ug/L	5	U			1	U
Bromoform	ug/L	5	U			1	U
Bromomethane	ug/L	10	U			1	U
Carbon Disulfide	ug/L	5	U			1	R
Carbon Tetrachloride	ug/L	5	U			1	U
Chlorobenzene	ug/L	5	U			1	U
Chloroethane	ug/L	10	U			1	U
Chloroform	ug/L	5	U			1	U
Chloromethane	ug/L	10	U			1	U
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L	5	U			1	U
Dibromochloromethane	ug/L	5	U			1	U
Ethylbenzene	ug/L	5	U			1	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U			10	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U			10	U
Methylene Chloride	ug/L	5	U			5	U
Styrene	ug/L	5	U			1	U
Tetrachloroethylene (PCE)	ug/L	5	U			1	U

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17A	
	SampleID	FDSGW17A03		FDSGW17A04		FDSGW17A04	
	DateCollected	4/24/1998 12:00 AM		10/20/1998 12:00 AM		10/20/1998 12:00 AM	
	DateAnalyzed	05/19/1998		10/22/1998		11/20/1998	
	SDGNumber	ECZG03		36036		EN013	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L			5	U		
1,1,2,2-Tetrachloroethane	ug/L			5	U		
1,1,2-Trichloroethane	ug/L			5	U		
1,1-Dichloroethane	ug/L			5	U		
1,1-Dichloroethene	ug/L			5	U		
1,2,4--Trichlorobenzene	ug/L	10	U			5	U
1,2-Dichloroethane	ug/L			5	U		
1,2-Dichloroethene (total)	ug/L			5	U		
1,2-Dichloropropane	ug/L			5	U		
2-Chloroethyl vinyl ether	ug/L			5	U		
2-Hexanone	ug/L			5	U		
Acetone	ug/L			5	R		
Benzene	ug/L			5	U		
Bromodichloromethane	ug/L			5	U		
Bromoform	ug/L			5	U		
Bromomethane	ug/L			5	U		
Carbon Disulfide	ug/L			5	U		
Carbon Tetrachloride	ug/L			5	U		
Chlorobenzene	ug/L			5	U		
Chloroethane	ug/L			5	U		
Chloroform	ug/L			5	U		
Chloromethane	ug/L			5	U		
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L			5	U		
Dibromochloromethane	ug/L			5	U		
Ethylbenzene	ug/L			5	U		
Methyl ethyl ketone (2-Butanone)	ug/L			5	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			5	U		
Methylene Chloride	ug/L			5	U		
Styrene	ug/L			5	U		
Tetrachloroethylene (PCE)	ug/L			5	U		

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17A	
	SampleID	FDSGW17A05		FDSGW17A05		FDSHW17A04	
	DateCollected	10/12/1999 12:00 AM		10/12/1999 12:00 AM		10/20/1998 12:00 AM	
	DateAnalyzed	10/18/1999		10/22/1999		10/22/1998	
	SDGNumber	EN018		EN018		36036	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L	3	U			5	U
1,1,2,2-Tetrachloroethane	ug/L	3	U			5	U
1,1,2-Trichloroethane	ug/L	3	U			5	U
1,1-Dichloroethane	ug/L	3	U			5	U
1,1-Dichloroethene	ug/L	3	U			5	U
1,2,4--Trichlorobenzene	ug/L			5	U		
1,2-Dichloroethane	ug/L	3	U			5	U
1,2-Dichloroethene (total)	ug/L	3	U			5	U
1,2-Dichloropropane	ug/L	3	U			5	U
2-Chloroethyl vinyl ether	ug/L	10	U			5	U
2-Hexanone	ug/L	5	U			5	U
Acetone	ug/L	3	U			5	R
Benzene	ug/L	3	U			5	U
Bromodichloromethane	ug/L	3	U			5	U
Bromoform	ug/L	3	U			5	U
Bromomethane	ug/L	3	U			5	U
Carbon Disulfide	ug/L	3	U			5	U
Carbon Tetrachloride	ug/L	3	U			5	U
Chlorobenzene	ug/L	3	U			5	U
Chloroethane	ug/L	3	U			5	U
Chloroform	ug/L	3	U			5	U
Chloromethane	ug/L	3	U			5	U
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L	3	U			5	U
Dibromochloromethane	ug/L	3	U			5	U
Ethylbenzene	ug/L	3	U			5	U
Methyl ethyl ketone (2-Butanone)	ug/L	5	U			5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	5	U			5	U
Methylene Chloride	ug/L	3	U			5	U
Styrene	ug/L	3	U			5	U
Tetrachloroethylene (PCE)	ug/L	3	U			5	U

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17B	
	SampleID	FDSHW17A04		FDSHW17A04RE		FDSGW17B01	
	DateCollected	10/20/1998 12:00 AM		10/20/1998 12:00 AM		1/28/1997 12:00 AM	
	DateAnalyzed	11/20/1998		11/29/1998		01/30/1997	
	SDGNumber	EN013		EN013		28308	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L					5	U
1,1,2,2-Tetrachloroethane	ug/L					5	U
1,1,2-Trichloroethane	ug/L					5	U
1,1-Dichloroethane	ug/L					5	U
1,1-Dichloroethene	ug/L					5	U
1,2,4--Trichlorobenzene	ug/L	5	U	5	R		
1,2-Dichloroethane	ug/L					5	U
1,2-Dichloroethene (total)	ug/L					5	U
1,2-Dichloropropane	ug/L					5	U
2-Chloroethyl vinyl ether	ug/L					10	U
2-Hexanone	ug/L					10	U
Acetone	ug/L					10	U
Benzene	ug/L					5	U
Bromodichloromethane	ug/L					5	U
Bromoform	ug/L					5	U
Bromomethane	ug/L					10	U
Carbon Disulfide	ug/L					5	U
Carbon Tetrachloride	ug/L					5	U
Chlorobenzene	ug/L					5	U
Chloroethane	ug/L					10	U
Chloroform	ug/L					5	U
Chloromethane	ug/L					10	U
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L					5	U
Dibromochloromethane	ug/L					5	U
Ethylbenzene	ug/L					5	U
Methyl ethyl ketone (2-Butanone)	ug/L					10	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L					10	U
Methylene Chloride	ug/L					5	U
Styrene	ug/L					5	U
Tetrachloroethylene (PCE)	ug/L					5	U

	StationID	FFDSGW17B		FFDSGW17B		FFDSGW17B	
	SampleID	FDSGW17B01		FDSGW17B02		FDSGW17B02	
	DateCollected	1/28/1997 12:00 AM		6/17/1997 12:00 AM		6/17/1997 12:00 AM	
	DateAnalyzed	01/31/1997		06/19/1997		06/25/1997	
	SDGNumber	28308		29707		29707	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L			5	U		
1,1,2,2-Tetrachloroethane	ug/L			5	U		
1,1,2-Trichloroethane	ug/L			5	U		
1,1-Dichloroethane	ug/L			5	U		
1,1-Dichloroethene	ug/L			5	U		
1,2,4--Trichlorobenzene	ug/L	10	U			10	U
1,2-Dichloroethane	ug/L			5	U		
1,2-Dichloroethene (total)	ug/L			5	U		
1,2-Dichloropropane	ug/L			5	U		
2-Chloroethyl vinyl ether	ug/L			10	U		
2-Hexanone	ug/L			10	U		
Acetone	ug/L			10	U		
Benzene	ug/L			5	U		
Bromodichloromethane	ug/L			5	U		
Bromoform	ug/L			5	U		
Bromomethane	ug/L			10	U		
Carbon Disulfide	ug/L			5	U		
Carbon Tetrachloride	ug/L			5	U		
Chlorobenzene	ug/L			5	U		
Chloroethane	ug/L			10	U		
Chloroform	ug/L			5	U		
Chloromethane	ug/L			10	U		
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L			5	U		
Dibromochloromethane	ug/L			5	U		
Ethylbenzene	ug/L			5	U		
Methyl ethyl ketone (2-Butanone)	ug/L			10	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			10	U		
Methylene Chloride	ug/L			5	U		
Styrene	ug/L			5	U		
Tetrachloroethylene (PCE)	ug/L			5	U		

	StationID	FFDSGW17B		FFDSGW17B		FFDSGW17B	
	SampleID	FDSGW17B03		FDSGW17B03		FDSGW17B04	
	DateCollected	4/24/1998 12:00 AM		4/24/1998 12:00 AM		10/20/1998 12:00 AM	
	DateAnalyzed	04/28/1998		05/19/1998		10/22/1998	
	SDGNumber	ECZG03		ECZG03		36036	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L	1	U			5	U
1,1,2,2-Tetrachloroethane	ug/L	1	U			5	U
1,1,2-Trichloroethane	ug/L	1	U			5	U
1,1-Dichloroethane	ug/L	1	U			5	U
1,1-Dichloroethene	ug/L	1	U			5	U
1,2,4--Trichlorobenzene	ug/L			10	U		
1,2-Dichloroethane	ug/L	1	U			5	U
1,2-Dichloroethene (total)	ug/L	1	U			5	U
1,2-Dichloropropane	ug/L	1	U			5	U
2-Chloroethyl vinyl ether	ug/L	10	U			5	U
2-Hexanone	ug/L	10	U			5	U
Acetone	ug/L	10	U			5	R
Benzene	ug/L	1	U			5	U
Bromodichloromethane	ug/L	1	U			5	U
Bromoform	ug/L	1	U			5	U
Bromomethane	ug/L	1	U			5	U
Carbon Disulfide	ug/L	1	R			5	U
Carbon Tetrachloride	ug/L	1	U			5	U
Chlorobenzene	ug/L	1	U			5	U
Chloroethane	ug/L	1	U			5	U
Chloroform	ug/L	1	U			5	U
Chloromethane	ug/L	1	U			5	U
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L	1	U			5	U
Dibromochloromethane	ug/L	1	U			5	U
Ethylbenzene	ug/L	1	U			5	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U			5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U			5	U
Methylene Chloride	ug/L	5	U			5	U
Styrene	ug/L	1	U			5	U
Tetrachloroethylene (PCE)	ug/L	1	U			5	U

	StationID	FFDSGW17B		FFDSGW17B		FFDSGW17B	
	SampleID	FDSGW17B04		FDSGW17B06		FDSGW17B06	
	DateCollected	10/20/1998 12:00 AM		10/12/1999 12:00 AM		10/12/1999 12:00 AM	
	DateAnalyzed	11/20/1998		10/18/1999		10/22/1999	
	SDGNumber	EN013		EN018		EN018	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L			3	U		
1,1,2,2-Tetrachloroethane	ug/L			3	U		
1,1,2-Trichloroethane	ug/L			3	U		
1,1-Dichloroethane	ug/L			3	U		
1,1-Dichloroethene	ug/L			3	U		
1,2,4--Trichlorobenzene	ug/L	5	U			6	U
1,2-Dichloroethane	ug/L			3	U		
1,2-Dichloroethene (total)	ug/L			3	U		
1,2-Dichloropropane	ug/L			3	U		
2-Chloroethyl vinyl ether	ug/L			10	U		
2-Hexanone	ug/L			5	U		
Acetone	ug/L			5	R		
Benzene	ug/L			3	U		
Bromodichloromethane	ug/L			3	U		
Bromoform	ug/L			3	U		
Bromomethane	ug/L			3	U		
Carbon Disulfide	ug/L			3	U		
Carbon Tetrachloride	ug/L			3	U		
Chlorobenzene	ug/L			3	U		
Chloroethane	ug/L			3	U		
Chloroform	ug/L			3	U		
Chloromethane	ug/L			3	U		
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L			3	U		
Dibromochloromethane	ug/L			3	U		
Ethylbenzene	ug/L			3	U		
Methyl ethyl ketone (2-Butanone)	ug/L			5	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			5	U		
Methylene Chloride	ug/L			3	U		
Styrene	ug/L			3	U		
Tetrachloroethylene (PCE)	ug/L			3	U		

	StationID	FGELGW005		FGELGW005		FGELGW006	
	SampleID	GELGW00504		GELGW00504		GELGW00604	
	DateCollected	11/12/1997 12:00 AM		11/12/1997 12:00 AM		11/14/1997 12:00 AM	
	DateAnalyzed	11/14/1997		11/19/1997		11/19/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L	5	U			5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U			5	U
1,1,2-Trichloroethane	ug/L	5	U			5	U
1,1-Dichloroethane	ug/L	5	U			5	U
1,1-Dichloroethene	ug/L	5	U			5	U
1,2,4--Trichlorobenzene	ug/L			11	U		
1,2-Dichloroethane	ug/L	5	U			5	U
1,2-Dichloroethene (total)	ug/L	5	U			5	U
1,2-Dichloropropane	ug/L	5	U			5	U
2-Chloroethyl vinyl ether	ug/L	10	U			10	U
2-Hexanone	ug/L	10	U			10	U
Acetone	ug/L	10	U			10	U
Benzene	ug/L	5	U			5	U
Bromodichloromethane	ug/L	5	U			5	U
Bromoform	ug/L	5	U			5	U
Bromomethane	ug/L	10	U			10	U
Carbon Disulfide	ug/L	5	U			5	U
Carbon Tetrachloride	ug/L	5	U			5	U
Chlorobenzene	ug/L	5	U			5	U
Chloroethane	ug/L	10	U			10	U
Chloroform	ug/L	5	U			5	U
Chloromethane	ug/L	10	U			10	U
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L	5	U			5	U
Dibromochloromethane	ug/L	5	U			5	U
Ethylbenzene	ug/L	5	U			5	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U			10	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U			10	U
Methylene Chloride	ug/L	5	U			5	U
Styrene	ug/L	5	U			5	U
Tetrachloroethylene (PCE)	ug/L	5	U			5	U

	StationID	FGELGW006		FGELGW007		FGELGW007	
	SampleID	GELGW00604		GELGW00704		GELGW00704	
	DateCollected	11/14/1997 12:00 AM		11/12/1997 12:00 AM		11/12/1997 12:00 AM	
	DateAnalyzed	12/04/1997		11/14/1997		11/20/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L			5	U		
1,1,2,2-Tetrachloroethane	ug/L			5	U		
1,1,2-Trichloroethane	ug/L			5	U		
1,1-Dichloroethane	ug/L			5	U		
1,1-Dichloroethene	ug/L			5	U		
1,2,4--Trichlorobenzene	ug/L	11	U			10	U
1,2-Dichloroethane	ug/L			5	U		
1,2-Dichloroethene (total)	ug/L			5	U		
1,2-Dichloropropane	ug/L			5	U		
2-Chloroethyl vinyl ether	ug/L			10	U		
2-Hexanone	ug/L			10	U		
Acetone	ug/L			10	U		
Benzene	ug/L			5	U		
Bromodichloromethane	ug/L			5	U		
Bromoform	ug/L			5	U		
Bromomethane	ug/L			10	U		
Carbon Disulfide	ug/L			5	U		
Carbon Tetrachloride	ug/L			5	U		
Chlorobenzene	ug/L			5	U		
Chloroethane	ug/L			10	U		
Chloroform	ug/L			5	U		
Chloromethane	ug/L			10	U		
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L			5	U		
Dibromochloromethane	ug/L			5	U		
Ethylbenzene	ug/L			5	U		
Methyl ethyl ketone (2-Butanone)	ug/L			10	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			10	U		
Methylene Chloride	ug/L			5	U		
Styrene	ug/L			5	U		
Tetrachloroethylene (PCE)	ug/L			5	U		

	StationID	FGELGW008		FGELGW008		FGELGW011	
	SampleID	GELGW00804		GELGW00804		GELGW01104	
	DateCollected	11/14/1997 12:00 AM		11/14/1997 12:00 AM		11/12/1997 12:00 AM	
	DateAnalyzed	11/19/1997		12/04/1997		11/14/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L	5	U			5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U			5	U
1,1,2-Trichloroethane	ug/L	5	U			5	U
1,1-Dichloroethane	ug/L	5	U			5	U
1,1-Dichloroethene	ug/L	5	U			5	U
1,2,4--Trichlorobenzene	ug/L			11	U		
1,2-Dichloroethane	ug/L	5	U			5	U
1,2-Dichloroethene (total)	ug/L	5	U			5	U
1,2-Dichloropropane	ug/L	5	U			5	U
2-Chloroethyl vinyl ether	ug/L	10	U			10	U
2-Hexanone	ug/L	10	U			10	U
Acetone	ug/L	10	U			10	U
Benzene	ug/L	5	U			5	U
Bromodichloromethane	ug/L	5	U			5	U
Bromoform	ug/L	5	U			5	U
Bromomethane	ug/L	10	U			10	U
Carbon Disulfide	ug/L	5	U			5	U
Carbon Tetrachloride	ug/L	5	U			5	U
Chlorobenzene	ug/L	5	U			5	U
Chloroethane	ug/L	10	U			10	U
Chloroform	ug/L	5	U			5	U
Chloromethane	ug/L	10	U			10	U
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L	5	U			5	U
Dibromochloromethane	ug/L	5	U			5	U
Ethylbenzene	ug/L	5	U			5	U
Methyl ethyl ketone (2-Butanone)	ug/L	10	U			10	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	10	U			10	U
Methylene Chloride	ug/L	5	U			5	U
Styrene	ug/L	5	U			5	U
Tetrachloroethylene (PCE)	ug/L	5	U			5	U

	StationID	FGELGW011		FGELGW011		FGELGW012	
	SampleID	GELGW01104		GELGW01104RE		GELGW01204	
	DateCollected	11/12/1997 12:00 AM		11/12/1997 12:00 AM		11/13/1997 12:00 AM	
	DateAnalyzed	11/20/1997		11/27/1997		11/17/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L					5	U
1,1,2,2-Tetrachloroethane	ug/L					5	U
1,1,2-Trichloroethane	ug/L					5	U
1,1-Dichloroethane	ug/L					5	U
1,1-Dichloroethene	ug/L					5	U
1,2,4--Trichlorobenzene	ug/L	11	U	12	R		
1,2-Dichloroethane	ug/L					5	U
1,2-Dichloroethene (total)	ug/L					5	U
1,2-Dichloropropane	ug/L					5	U
2-Chloroethyl vinyl ether	ug/L					10	U
2-Hexanone	ug/L					10	U
Acetone	ug/L					10	U
Benzene	ug/L					5	U
Bromodichloromethane	ug/L					5	U
Bromoform	ug/L					5	U
Bromomethane	ug/L					10	U
Carbon Disulfide	ug/L					5	U
Carbon Tetrachloride	ug/L					5	U
Chlorobenzene	ug/L					5	U
Chloroethane	ug/L					10	U
Chloroform	ug/L					5	U
Chloromethane	ug/L					10	U
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L					5	U
Dibromochloromethane	ug/L					5	U
Ethylbenzene	ug/L					5	U
Methyl ethyl ketone (2-Butanone)	ug/L					10	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L					10	U
Methylene Chloride	ug/L					5	U
Styrene	ug/L					5	U
Tetrachloroethylene (PCE)	ug/L					5	U

	StationID	FGELGW012		FGELGW012		FGELGW012	
	SampleID	GELGW01204		GELGW012LA		GELHW01204	
	DateCollected	11/13/1997 12:00 AM		6/22/2001 12:00 AM		11/13/1997 12:00 AM	
	DateAnalyzed	11/24/1997		06/28/2001		11/17/1997	
	SDGNumber	31821		44685		31821	
Parameter	Units						
1,1,1-Trichloroethane	ug/L			5	U	5	U
1,1,2,2-Tetrachloroethane	ug/L					5	U
1,1,2-Trichloroethane	ug/L					5	U
1,1-Dichloroethane	ug/L			5	U	5	U
1,1-Dichloroethene	ug/L			5	U	5	U
1,2,4--Trichlorobenzene	ug/L	11	U				
1,2-Dichloroethane	ug/L					5	U
1,2-Dichloroethene (total)	ug/L					5	U
1,2-Dichloropropane	ug/L					5	U
2-Chloroethyl vinyl ether	ug/L					10	U
2-Hexanone	ug/L					10	U
Acetone	ug/L					10	U
Benzene	ug/L					5	U
Bromodichloromethane	ug/L					5	U
Bromoform	ug/L					5	U
Bromomethane	ug/L					10	U
Carbon Disulfide	ug/L					5	U
Carbon Tetrachloride	ug/L					5	U
Chlorobenzene	ug/L					5	U
Chloroethane	ug/L					10	U
Chloroform	ug/L					5	U
Chloromethane	ug/L					10	U
cis-1,2-Dichloroethylene	ug/L			1.8	J		
cis-1,3-Dichloropropene	ug/L					5	U
Dibromochloromethane	ug/L					5	U
Ethylbenzene	ug/L					5	U
Methyl ethyl ketone (2-Butanone)	ug/L					10	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L					10	U
Methylene Chloride	ug/L					5	U
Styrene	ug/L					5	U
Tetrachloroethylene (PCE)	ug/L			5	U	5	U

	StationID	FGELGW012		FGELGW013		FGELGW013	
	SampleID	GELHW01204		GELGW01304		GELGW01304	
	DateCollected	11/13/1997 12:00 AM		11/14/1997 12:00 AM		11/14/1997 12:00 AM	
	DateAnalyzed	12/04/1997		11/19/1997		12/04/1997	
	SDGNumber	31821		31821		31821	
Parameter	Units						
1,1,1-Trichloroethane	ug/L			5	U		
1,1,2,2-Tetrachloroethane	ug/L			5	U		
1,1,2-Trichloroethane	ug/L			5	U		
1,1-Dichloroethane	ug/L			5	U		
1,1-Dichloroethene	ug/L			5	U		
1,2,4--Trichlorobenzene	ug/L	11	U			11	U
1,2-Dichloroethane	ug/L			5	U		
1,2-Dichloroethene (total)	ug/L			5	U		
1,2-Dichloropropane	ug/L			5	U		
2-Chloroethyl vinyl ether	ug/L			10	U		
2-Hexanone	ug/L			10	U		
Acetone	ug/L			10	U		
Benzene	ug/L			5	U		
Bromodichloromethane	ug/L			5	U		
Bromoform	ug/L			5	U		
Bromomethane	ug/L			10	U		
Carbon Disulfide	ug/L			5	U		
Carbon Tetrachloride	ug/L			5	U		
Chlorobenzene	ug/L			5	U		
Chloroethane	ug/L			10	U		
Chloroform	ug/L			5	U		
Chloromethane	ug/L			10	U		
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L			5	U		
Dibromochloromethane	ug/L			5	U		
Ethylbenzene	ug/L			5	U		
Methyl ethyl ketone (2-Butanone)	ug/L			10	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			10	U		
Methylene Chloride	ug/L			5	U		
Styrene	ug/L			5	U		
Tetrachloroethylene (PCE)	ug/L			5	U		

	StationID	FGELGW014		FGELGW014		FGELGW014	
	SampleID	GELGW01404		GELGW01404		GELGW01405a	
	DateCollected	12/1/1997 12:00 AM		12/1/1997 12:00 AM		10/20/1998 12:00 AM	
	DateAnalyzed	12/03/1997		12/10/1997		10/23/1998	
	SDGNumber	31975		31975		36036	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L	5	U			5	U
1,1,2,2-Tetrachloroethane	ug/L	5	U			5	U
1,1,2-Trichloroethane	ug/L	5	U			5	U
1,1-Dichloroethane	ug/L	5	U			5	U
1,1-Dichloroethene	ug/L	5	U			5	U
1,2,4--Trichlorobenzene	ug/L			10	U		
1,2-Dichloroethane	ug/L	5	U			5	U
1,2-Dichloroethene (total)	ug/L	5	U			5	U
1,2-Dichloropropane	ug/L	5	U			5	U
2-Chloroethyl vinyl ether	ug/L	5	U			5	R
2-Hexanone	ug/L	5	U			5	U
Acetone	ug/L	5	U			5	R
Benzene	ug/L	3	J			5	U
Bromodichloromethane	ug/L	5	U			5	U
Bromoform	ug/L	5	U			5	U
Bromomethane	ug/L	5	U			5	U
Carbon Disulfide	ug/L	5	U			5	U
Carbon Tetrachloride	ug/L	5	U			5	U
Chlorobenzene	ug/L	5	U			5	U
Chloroethane	ug/L	5	U			5	U
Chloroform	ug/L	5	U			5	U
Chloromethane	ug/L	5	U			5	U
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L	5	U			5	U
Dibromochloromethane	ug/L	5	U			5	U
Ethylbenzene	ug/L	5	U			5	U
Methyl ethyl ketone (2-Butanone)	ug/L	5	U			5	U
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	5	U			5	U
Methylene Chloride	ug/L	5	U			5	U
Styrene	ug/L	5	U			5	U
Tetrachloroethylene (PCE)	ug/L	5	U			5	U

	StationID	FGELGW014		FGELGW014		FGELGW014	
	SampleID	GELGW01405a		GELGW01405b		GELGW01405b	
	DateCollected	10/20/1998 12:00 AM		4/22/1998 12:00 AM		4/22/1998 12:00 AM	
	DateAnalyzed	11/20/1998		04/27/1998		05/09/1998	
	SDGNumber	EN013		ECZG02		ECZG02	
Parameter	Units						
1,1,1-Trichloroethane	ug/L			1	U		
1,1,2,2-Tetrachloroethane	ug/L			1	U		
1,1,2-Trichloroethane	ug/L			1	U		
1,1-Dichloroethane	ug/L			1	U		
1,1-Dichloroethene	ug/L			1	U		
1,2,4--Trichlorobenzene	ug/L	5	U			10	U
1,2-Dichloroethane	ug/L			1	U		
1,2-Dichloroethene (total)	ug/L			1	U		
1,2-Dichloropropane	ug/L			1	U		
2-Chloroethyl vinyl ether	ug/L			10	U		
2-Hexanone	ug/L			10	U		
Acetone	ug/L			10	U		
Benzene	ug/L			1	U		
Bromodichloromethane	ug/L			1	U		
Bromoform	ug/L			1	U		
Bromomethane	ug/L			1	U		
Carbon Disulfide	ug/L			1	UJ		
Carbon Tetrachloride	ug/L			1	U		
Chlorobenzene	ug/L			1	U		
Chloroethane	ug/L			1	U		
Chloroform	ug/L			1	U		
Chloromethane	ug/L			1	U		
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L			1	U		
Dibromochloromethane	ug/L			1	U		
Ethylbenzene	ug/L			1	U		
Methyl ethyl ketone (2-Butanone)	ug/L			10	U		
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L			10	U		
Methylene Chloride	ug/L			5	U		
Styrene	ug/L			1	U		
Tetrachloroethylene (PCE)	ug/L			1	U		

	StationID	FGELGW014		FGELGW014		FGELGW014	
	SampleID	GELGW01406		GELGW01406		GELGW01406RE	
	DateCollected	10/12/1999 12:00 AM		10/12/1999 12:00 AM		10/12/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/22/1999		10/22/1999	
	SDGNumber	EN018		EN018		EN018	
Parameter	**Units**						
1,1,1-Trichloroethane	ug/L	150	U				
1,1,2,2-Tetrachloroethane	ug/L	150	U				
1,1,2-Trichloroethane	ug/L	150	U				
1,1-Dichloroethane	ug/L	150	U				
1,1-Dichloroethene	ug/L	150	U				
1,2,4--Trichlorobenzene	ug/L			5	R	5	U
1,2-Dichloroethane	ug/L	150	U				
1,2-Dichloroethene (total)	ug/L	150	U				
1,2-Dichloropropane	ug/L	150	U				
2-Chloroethyl vinyl ether	ug/L	500	U				
2-Hexanone	ug/L	250	U				
Acetone	ug/L	250	R				
Benzene	ug/L	150	U				
Bromodichloromethane	ug/L	150	U				
Bromoform	ug/L	150	U				
Bromomethane	ug/L	150	U				
Carbon Disulfide	ug/L	150	U				
Carbon Tetrachloride	ug/L	150	U				
Chlorobenzene	ug/L	150	U				
Chloroethane	ug/L	150	U				
Chloroform	ug/L	150	U				
Chloromethane	ug/L	150	U				
cis-1,2-Dichloroethylene	ug/L						
cis-1,3-Dichloropropene	ug/L	150	U				
Dibromochloromethane	ug/L	150	U				
Ethylbenzene	ug/L	150	U				
Methyl ethyl ketone (2-Butanone)	ug/L	250	U				
Methyl isobutyl ketone (4-Methyl-2-pentanone)	ug/L	250	U				
Methylene Chloride	ug/L	83	J				
Styrene	ug/L	150	U				
Tetrachloroethylene (PCE)	ug/L	150	U				

	StationID	F240GW003		F240GW003		F613GW001	
	SampleID	240GW00304		240GW00304		613GW00104	
	DateCollected	11/12/1997 12:00 AM		11/12/1997 12:00 AM		11/6/1997 12:00 AM	
	DateAnalyzed	11/14/1997		11/19/1997		11/07/1997	
	SDGNumber	31821		31821		31703	
Parameter	**Units**						
Toluene	ug/L	5	U			5	U
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L	5	U			5	U
Trichloroethylene (TCE)	ug/L	5	U			5	U
Vinyl acetate	ug/L	10	U			10	U
Vinyl chloride	ug/L	10	U			10	U
Xylenes, Total	ug/L	5	U			5	U

	StationID	F613GW001		F613GW001		F613GW001	
	SampleID	613GW00104		613HW00104		613HW00104	
	DateCollected	11/6/1997 12:00 AM		11/6/1997 12:00 AM		11/6/1997 12:00 AM	
	DateAnalyzed	11/14/1997		11/07/1997		11/14/1997	
	SDGNumber	31703		31703		31703	
Parameter	**Units**						
Toluene	ug/L			5	U		
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L			5	U		
Trichloroethylene (TCE)	ug/L			2	J		
Vinyl acetate	ug/L			10	U		
Vinyl chloride	ug/L			10	U		
Xylenes, Total	ug/L			5	U		

	StationID	F613GW003		F613GW003		F613GW003	
	SampleID	613GW00304		613GW00304		613GW003LA	
	DateCollected	11/7/1997 12:00 AM		11/7/1997 12:00 AM		6/22/2001 12:00 AM	
	DateAnalyzed	11/10/1997		11/14/1997		06/28/2001	
	SDGNumber	31703		31703		44685	
Parameter	**Units**						
Toluene	ug/L	5	U				
trans-1,2-Dichloroethene	ug/L					5	U
trans-1,3-Dichloropropene	ug/L	5	U				
Trichloroethylene (TCE)	ug/L	5	U			5	U
Vinyl acetate	ug/L	10	U				
Vinyl chloride	ug/L	10	U			10	U
Xylenes, Total	ug/L	5	U				

	StationID	F613GW004		F613GW004		F613GW004	
	SampleID	613GW00404		613GW00404		613GW004LA	
	DateCollected	11/6/1997 12:00 AM		11/6/1997 12:00 AM		6/22/2001 12:00 AM	
	DateAnalyzed	11/07/1997		11/14/1997		06/28/2001	
	SDGNumber	31703		31703		44685	
Parameter	**Units**						
Toluene	ug/L	5	U				
trans-1,2-Dichloroethene	ug/L					0.9	J
trans-1,3-Dichloropropene	ug/L	5	U				
Trichloroethylene (TCE)	ug/L	5	U			4	J
Vinyl acetate	ug/L	10	U				
Vinyl chloride	ug/L	10	U			10.8	=
Xylenes, Total	ug/L	5	U				

	StationID	F613GW005		F613GW005		F613GW006	
	SampleID	613GW00504		613GW00504		613GW00601	
	DateCollected	11/25/1997 12:00 AM		11/25/1997 12:00 AM		10/20/1998 12:00 AM	
	DateAnalyzed	12/03/1997		12/08/1997		10/22/1998	
	SDGNumber	31975		31975		36036	
Parameter	**Units**						
Toluene	ug/L	5	U			5	U
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L	5	U			5	U
Trichloroethylene (TCE)	ug/L	5	U			5	U
Vinyl acetate	ug/L	5	U			5	U
Vinyl chloride	ug/L	5	U			5	U
Xylenes, Total	ug/L	5	U			5	U

	StationID	F613GW006		F613GW006		F613GW006	
	SampleID	613GW00601		613GW00602		613GW00602	
	DateCollected	10/20/1998 12:00 AM		6/18/1999 12:00 AM		6/18/1999 12:00 AM	
	DateAnalyzed	11/20/1998		06/23/1999		06/25/1999	
	SDGNumber	EN013		39074		39074	
Parameter	**Units**						
Toluene	ug/L			5	U		
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L			5	U		
Trichloroethylene (TCE)	ug/L			5	U		
Vinyl acetate	ug/L			5	U		
Vinyl chloride	ug/L			5	U		
Xylenes, Total	ug/L			5	U		

	StationID	F613GW006		F613GW006		F613GW006	
	SampleID	613GW00603		613GW00603		613HW00603	
	DateCollected	10/12/1999 12:00 AM		10/12/1999 12:00 AM		10/12/1999 12:00 AM	
	DateAnalyzed	10/18/1999		10/22/1999		10/18/1999	
	SDGNumber	EN018		EN018		EN018	
Parameter	**Units**						
Toluene	ug/L	3	U			3	U
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L	3	U			3	U
Trichloroethylene (TCE)	ug/L	3	U			3	U
Vinyl acetate	ug/L	3	U			3	U
Vinyl chloride	ug/L	3	U			3	U
Xylenes, Total	ug/L	3	U			3	U

	StationID	F613GW006		F613GW007		F613GW007	
	SampleID	613HW00603		613GW00701		613GW00701	
	DateCollected	10/12/1999 12:00 AM		11/19/1999 12:00 AM		11/19/1999 12:00 AM	
	DateAnalyzed	10/22/1999		11/23/1999		11/30/1999	
	SDGNumber	EN018		EN029		EN029	
Parameter	**Units**						
Toluene	ug/L			3	U		
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L			3	U		
Trichloroethylene (TCE)	ug/L			3	U		
Vinyl acetate	ug/L			3	U		
Vinyl chloride	ug/L			3	U		
Xylenes, Total	ug/L			3	U		

	StationID	F613GW008		F613GW009		F613GW02D	
	SampleID	613GW00801		613GW009LA		613GW02D04	
	DateCollected	11/19/1999 12:00 AM		6/22/2001 12:00 AM		11/7/1997 12:00 AM	
	DateAnalyzed	11/23/1999		06/28/2001		11/10/1997	
	SDGNumber	EN029		44685		31703	
Parameter	**Units**						
Toluene	ug/L	3	U			4	J
trans-1,2-Dichloroethene	ug/L			5	U		
trans-1,3-Dichloropropene	ug/L	3	U			5	U
Trichloroethylene (TCE)	ug/L	3	U	5	U	5	U
Vinyl acetate	ug/L	3	U			10	U
Vinyl chloride	ug/L	3	U	10	U	10	U
Xylenes, Total	ug/L	3	U			5	U

	StationID	F613GW02D		FFDSGW17A		FFDSGW17A	
	SampleID	613GW02D04		FDSGW17A01		FDSGW17A01	
	DateCollected	11/7/1997 12:00 AM		1/28/1997 12:00 AM		1/28/1997 12:00 AM	
	DateAnalyzed	11/14/1997		01/30/1997		01/31/1997	
	SDGNumber	31703		28308		28308	
Parameter	**Units**						
Toluene	ug/L			5	U		
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L			5	U		
Trichloroethylene (TCE)	ug/L			5	U		
Vinyl acetate	ug/L			10	U		
Vinyl chloride	ug/L			10	U		
Xylenes, Total	ug/L			5	U		

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17A	
	SampleID	FDSGW17A02		FDSGW17A02		FDSGW17A03	
	DateCollected	6/17/1997 12:00 AM		6/17/1997 12:00 AM		4/24/1998 12:00 AM	
	DateAnalyzed	06/19/1997		06/25/1997		04/28/1998	
	SDGNumber	29707		29707		ECZG03	
Parameter	**Units**						
Toluene	ug/L	5	U			1	U
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L	5	U			1	U
Trichloroethylene (TCE)	ug/L	5	U			1	U
Vinyl acetate	ug/L	10	U			2	U
Vinyl chloride	ug/L	10	U			1	U
Xylenes, Total	ug/L	5	U			2	U

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17A	
	SampleID	FDSGW17A03		FDSGW17A04		FDSGW17A04	
	DateCollected	4/24/1998 12:00 AM		10/20/1998 12:00 AM		10/20/1998 12:00 AM	
	DateAnalyzed	05/19/1998		10/22/1998		11/20/1998	
	SDGNumber	ECZG03		36036		EN013	
Parameter	**Units**						
Toluene	ug/L			5	U		
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L			5	U		
Trichloroethylene (TCE)	ug/L			5	U		
Vinyl acetate	ug/L			5	U		
Vinyl chloride	ug/L			5	U		
Xylenes, Total	ug/L			5	U		

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17A	
	SampleID	FDSGW17A05		FDSGW17A05		FDSHW17A04	
	DateCollected	10/12/1999 12:00 AM		10/12/1999 12:00 AM		10/20/1998 12:00 AM	
	DateAnalyzed	10/18/1999		10/22/1999		10/22/1998	
	SDGNumber	EN018		EN018		36036	
Parameter	**Units**						
Toluene	ug/L	3	U			5	U
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L	3	U			5	U
Trichloroethylene (TCE)	ug/L	3	U			5	U
Vinyl acetate	ug/L	3	U			5	U
Vinyl chloride	ug/L	3	U			5	U
Xylenes, Total	ug/L	3	U			5	U

	StationID	FFDSGW17A		FFDSGW17A		FFDSGW17B	
	SampleID	FDSHW17A04		FDSHW17A04RE		FDSGW17B01	
	DateCollected	10/20/1998 12:00 AM		10/20/1998 12:00 AM		1/28/1997 12:00 AM	
	DateAnalyzed	11/20/1998		11/29/1998		01/30/1997	
	SDGNumber	EN013		EN013		28308	
Parameter	**Units**						
Toluene	ug/L					5	U
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L					5	U
Trichloroethylene (TCE)	ug/L					5	U
Vinyl acetate	ug/L					10	U
Vinyl chloride	ug/L					10	U
Xylenes, Total	ug/L					5	U

	StationID	FFDSGW17B		FFDSGW17B		FFDSGW17B	
	SampleID	FDSGW17B01		FDSGW17B02		FDSGW17B02	
	DateCollected	1/28/1997 12:00 AM		6/17/1997 12:00 AM		6/17/1997 12:00 AM	
	DateAnalyzed	01/31/1997		06/19/1997		06/25/1997	
	SDGNumber	28308		29707		29707	
Parameter	**Units**						
Toluene	ug/L			5	U		
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L			5	U		
Trichloroethylene (TCE)	ug/L			5	U		
Vinyl acetate	ug/L			10	U		
Vinyl chloride	ug/L			10	U		
Xylenes, Total	ug/L			5	U		

	StationID	FFDSGW17B		FFDSGW17B		FFDSGW17B	
	SampleID	FDSGW17B03		FDSGW17B03		FDSGW17B04	
	DateCollected	4/24/1998 12:00 AM		4/24/1998 12:00 AM		10/20/1998 12:00 AM	
	DateAnalyzed	04/28/1998		05/19/1998		10/22/1998	
	SDGNumber	ECZG03		ECZG03		36036	
Parameter	**Units**						
Toluene	ug/L	1	U			5	U
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L	1	U			5	U
Trichloroethylene (TCE)	ug/L	1	U			5	U
Vinyl acetate	ug/L	2	U			5	U
Vinyl chloride	ug/L	1	U			5	U
Xylenes, Total	ug/L	2	U			5	U

	StationID	FFDSGW17B		FFDSGW17B		FFDSGW17B	
	SampleID	FDSGW17B04		FDSGW17B06		FDSGW17B06	
	DateCollected	10/20/1998 12:00 AM		10/12/1999 12:00 AM		10/12/1999 12:00 AM	
	DateAnalyzed	11/20/1998		10/18/1999		10/22/1999	
	SDGNumber	EN013		EN018		EN018	
Parameter	**Units**						
Toluene	ug/L			3	U		
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L			3	U		
Trichloroethylene (TCE)	ug/L			3	U		
Vinyl acetate	ug/L			3	U		
Vinyl chloride	ug/L			3	U		
Xylenes, Total	ug/L			3	U		

	StationID	FGELGW005		FGELGW005		FGELGW006	
	SampleID	GELGW00504		GELGW00504		GELGW00604	
	DateCollected	11/12/1997 12:00 AM		11/12/1997 12:00 AM		11/14/1997 12:00 AM	
	DateAnalyzed	11/14/1997		11/19/1997		11/19/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
Toluene	ug/L	5	U			5	U
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L	5	U			5	U
Trichloroethylene (TCE)	ug/L	5	U			5	U
Vinyl acetate	ug/L	10	U			10	U
Vinyl chloride	ug/L	10	U			10	U
Xylenes, Total	ug/L	5	U			5	U

	StationID	FGELGW006		FGELGW007		FGELGW007	
	SampleID	GELGW00604		GELGW00704		GELGW00704	
	DateCollected	11/14/1997 12:00 AM		11/12/1997 12:00 AM		11/12/1997 12:00 AM	
	DateAnalyzed	12/04/1997		11/14/1997		11/20/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
Toluene	ug/L			5	U		
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L			5	U		
Trichloroethylene (TCE)	ug/L			5	U		
Vinyl acetate	ug/L			10	U		
Vinyl chloride	ug/L			10	U		
Xylenes, Total	ug/L			5	U		

	StationID	FGELGW008		FGELGW008		FGELGW011	
	SampleID	GELGW00804		GELGW00804		GELGW01104	
	DateCollected	11/14/1997 12:00 AM		11/14/1997 12:00 AM		11/12/1997 12:00 AM	
	DateAnalyzed	11/19/1997		12/04/1997		11/14/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
Toluene	ug/L	5	U			5	U
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L	5	U			5	U
Trichloroethylene (TCE)	ug/L	5	U			5	U
Vinyl acetate	ug/L	10	U			10	U
Vinyl chloride	ug/L	10	U			10	U
Xylenes, Total	ug/L	5	U			5	U

	StationID	FGELGW011		FGELGW011		FGELGW012	
	SampleID	GELGW01104		GELGW01104RE		GELGW01204	
	DateCollected	11/12/1997 12:00 AM		11/12/1997 12:00 AM		11/13/1997 12:00 AM	
	DateAnalyzed	11/20/1997		11/27/1997		11/17/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
Toluene	ug/L					5	U
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L					5	U
Trichloroethylene (TCE)	ug/L					5	U
Vinyl acetate	ug/L					10	U
Vinyl chloride	ug/L					10	U
Xylenes, Total	ug/L					5	U

	StationID	FGELGW012		FGELGW012		FGELGW012	
	SampleID	GELGW01204		GELGW012LA		GELHW01204	
	DateCollected	11/13/1997 12:00 AM		6/22/2001 12:00 AM		11/13/1997 12:00 AM	
	DateAnalyzed	11/24/1997		06/28/2001		11/17/1997	
	SDGNumber	31821		44685		31821	
Parameter	**Units**						
Toluene	ug/L					5	U
trans-1,2-Dichloroethene	ug/L			5	U		
trans-1,3-Dichloropropene	ug/L					5	U
Trichloroethylene (TCE)	ug/L			5	U	5	U
Vinyl acetate	ug/L					10	U
Vinyl chloride	ug/L			10	U	10	U
Xylenes, Total	ug/L					5	U

	StationID	FGELGW012		FGELGW013		FGELGW013	
	SampleID	GELHW01204		GELGW01304		GELGW01304	
	DateCollected	11/13/1997 12:00 AM		11/14/1997 12:00 AM		11/14/1997 12:00 AM	
	DateAnalyzed	12/04/1997		11/19/1997		12/04/1997	
	SDGNumber	31821		31821		31821	
Parameter	**Units**						
Toluene	ug/L			5	U		
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L			5	U		
Trichloroethylene (TCE)	ug/L			5	U		
Vinyl acetate	ug/L			10	U		
Vinyl chloride	ug/L			10	U		
Xylenes, Total	ug/L			5	U		

	StationID	FGELGW014		FGELGW014		FGELGW014	
	SampleID	GELGW01404		GELGW01404		GELGW01405a	
	DateCollected	12/1/1997 12:00 AM		12/1/1997 12:00 AM		10/20/1998 12:00 AM	
	DateAnalyzed	12/03/1997		12/10/1997		10/23/1998	
	SDGNumber	31975		31975		36036	
Parameter	**Units**						
Toluene	ug/L	5	U			5	U
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L	5	U			5	U
Trichloroethylene (TCE)	ug/L	5	U			5	U
Vinyl acetate	ug/L	5	U			5	U
Vinyl chloride	ug/L	5	U			5	U
Xylenes, Total	ug/L	5	U			5	U

	StationID	FGELGW014		FGELGW014		FGELGW014	
	SampleID	GELGW01405a		GELGW01405b		GELGW01405b	
	DateCollected	10/20/1998 12:00 AM		4/22/1998 12:00 AM		4/22/1998 12:00 AM	
	DateAnalyzed	11/20/1998		04/27/1998		05/09/1998	
	SDGNumber	EN013		ECZG02		ECZG02	
Parameter	**Units**						
Toluene	ug/L			1	U		
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L			1	U		
Trichloroethylene (TCE)	ug/L			1	U		
Vinyl acetate	ug/L			2	U		
Vinyl chloride	ug/L			1	U		
Xylenes, Total	ug/L			2	U		

	StationID	FGELGW014		FGELGW014		FGELGW014	
	SampleID	GELGW01406		GELGW01406		GELGW01406RE	
	DateCollected	10/12/1999 12:00 AM		10/12/1999 12:00 AM		10/12/1999 12:00 AM	
	DateAnalyzed	10/19/1999		10/22/1999		10/22/1999	
	SDGNumber	EN018		EN018		EN018	
Parameter	**Units**						
Toluene	ug/L	150	U				
trans-1,2-Dichloroethene	ug/L						
trans-1,3-Dichloropropene	ug/L	150	U				
Trichloroethylene (TCE)	ug/L	150	U				
Vinyl acetate	ug/L	150	U				
Vinyl chloride	ug/L	150	U				
Xylenes, Total	ug/L	150	U				

Appendix C
SPLP Leachate Results, Metals
AOC 613/615/SWMU 175

Location	**F613SP022**		**F613SP027**		**F613SP051**	
Date Sampled	10/13/1999		10/14/1999		10/15/1999	
Sample Depth, ft	0 - 1	3 - 5	0 - 1	3 - 5	0 - 1	3 - 5
Parameter	**Conc, ug/L**	**Conc, ug/L**	**Conc, ug/L**	**Conc, ug/L**	**Conc, ug/L**	**Conc, ug/L**
Aluminum, SPLP	71.2 J	58.7 U	10900.0 =	6870.0 =	27900.0 J	20200.0 J
Antimony, SPLP	2.6 J	3.2 J	101.0 =	6.3 J	2.4 U	2.4 U
Arsenic,SPLP	2.0 U	2.0 U	76.1 J	4.6 J	14.8 =	7.8 J
Barium, SPLP	206.0 =	201.0 =	490.0 =	1110.0 =	1330.0 =	1010.0 =
Beryllium, SPLP	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U
Cadmium, SPLP	0.3 UJ	0.3 UJ	0.3 UJ	0.3 UJ	3.0 J	0.3 U
Calcium, SPLP	27900.0 =	27400.0 =	14600.0 =	19000.0 =	10300.0 =	7930.0 =
Chromium, Total, SPLP	11.5 J	7.1 J	26.6 J	10.9 J	41.9 =	26.1 =
Cobalt, SPLP	0.5 U	0.5 U	2.1 J	0.5 U	7.0 J	2.1 J
Copper, SPLP	1.4 J	1.1 J	90.9 =	6.1 J	33.5 =	15.6 J
Iron, SPLP	122.0 J	104.0 J	11800.0 J	5310.0 J	22900.0 J	12700.0 J
Lead, SPLP	2.1 U	2.1 U	108.0 =	10.1 =	48.1 =	14.9 =
Magnesium, SPLP	1150.0 J	1120.0 J	1730.0 J	3000.0 J	5230.0 =	5760.0 =
Manganese, SPLP	2.1 J	1.8 J	48.6 =	35.1 =	84.2 =	83.4 =
Mercury, SPLP	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Nickel, SPLP	5.1 J	3.7 J	14.4 J	3.9 J	13.8 J	12.6 J
Potassium, SPLP	663.0 J	614.0 J	2230.0 J	5000.0 J	8560.0 J	14500.0 J
Selenium, SPLP	1.7 U	1.7 U	2.4 J	1.7 U	4.4 U	2.6 U
Silver, SPLP	0.5 J	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U
Sodium, SPLP	1320.0 J	1180.0 J	1590.0 J	7700.0 =	28200.0 =	76300.0 =
Thallium, SPLP	2.4 UJ	2.4 UJ	2.4 U	2.4 U	2.4 UJ	2.4 UJ
Tin (Sn), SPLP	2.7 U	2.7 U	8.2 J	4.3 J	5.4 J	3.0 J
Vanadium, SPLP	2.8 J	2.8 J	25.4 J	16.8 J	59.2 =	35.4 J
Zinc, SPLP	42.6 =	38.4 =	394.0 J	157.0 J	696.0 =	389.0 =

U = parameter not detected; reporting limit presented
J = estimated concentration
UJ = parameter not detected; detection limit estimated

Appendix C
Non-metal Analytes Detected in SPLP Leachate
AOC 613/615/SWMU 175

Sample Location	Sample Name	Date Sampled	Parameter	Leachate Concentration	Data Qualifier	Units	Sample depth, ft
Semivolatile Organic Compounds							
F613SP022	613SP022S2	10/13/1999	Benzoic acid, SPLP	2.0	J	ug/L	3 - 5
F613SP027	613SP027S2	10/14/1999	Benzyl butyl phthalate, SPLP	3.0	J	ug/L	3 - 5
F613SP051	613SP051S1	10/15/1999	Benzoic acid, SPLP	2.0	J	ug/L	0 - 1
F613SP051	613SP051S2	10/15/1999	Benzoic acid, SPLP	1.0	J	ug/L	3 - 5
Pesticides							
F613SP027	613SP027S1	10/14/1999	p,p'-DDD, SPLP	0.12	=	ug/L	0 - 1
F613SP027	613SP027S1	10/14/1999	p,p'-DDE, SPLP	0.12	=	ug/L	0 - 1

J = estimated concentration

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	28308A
Date:	February 18, 1997
Client Name:	Ensafe/ Allen & Hoshall
Project/Site Name:	Charleston - Zone G
Date Sampled:	January 28, 1997
Number of Samples:	2 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Southwest Laboratory of Oklahoma
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, June 1991 and February, 1994, respectively
QA/QC Level:	EPA DQO Level IV
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, Semivolatiles, Pesticide/PCB's, Organophosphorus Pesticides, Herbicides, Dioxin/Furans, Hexavalent Chromium, Metals, Cyanide

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user in urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

for Kimberly S. Shopp — 21 February 1997

Paul B. Humburg, President — Date

4127 Plaza 94 South · St. Charles, MO 63304
(314) 936-1332 · Fax (314) 936-1335

SDG# 28308A

Samples and Fractions Reviewed

Sample Identifications | Analytical Fractions

ENSAFE ID	MATRIX	VOA		SVOA		P/P		OPP		HERB		D/F		HCR		TAL		CN	
FDSEW11A01	WATER	X		X		X		X		X		X		X		X		X	
FDSHW11C01	WATER	X		X		X		X		X		X		X		X		X	
Total Billable Samples (Water/Soil)		2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0

VOA= SW846 Volatiles
SVOA= SW846 Semivolatiles
P/P= SW846 Pesticide/PCB's
OPP= SW846 Organophosphorus Pesticides
HERB= SW846 Herbicides
D/F= SW846 Dioxin/Furans
HCR= SW846 Hexavalent Chromium
TAL= SW846 Metals
CN= SW846 Cyanide

DATA ASSESSMENT NARRATIVES

DATA ASSESSMENT NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results; surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8240; the National Functional Guidelines for Organic Data Validation, June 1991, and DQO Level IV requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 28308A

A validation was performed on the Volatile Data from SDG 28308A. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Calibration
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
	•	Field Duplicates
*	•	Internal Standard Performance
*	•	Compound Identification
*	•	Compound Quantitation

* - All criteria were met for this parameter.

Continuing Calibrations

The continuing calibration standard associated with the samples exhibited non-compliant %Ds and RRFs. Qualifications were required.

Continuing Calibrations, continued

Specific Findings

The continuing calibration standard N24894.D contained three (3) compounds with RRFs less than 0.05. For the samples and non-compliant compound listed below, positive results are qualified as estimated, J, and non-detect results are rejected, UR.

FDSHW11C01	acetonitrile (0.032)
	Isobutyl alcohol (0.008)
	1,4-dioxane (0.002)

The continuing calibration standard N24894.D contained one (1) compound with a %D greater than 50% but less than 90%. For the samples and non-compliant compound listed below, positive results are qualified as estimated, J, and non-detect results are qualified as estimated, UJ.

FDSHW11C01	acrolein (55.3%)

Field Duplicates

The field duplicate pair of samples FDSGW11C01/FDSHW11C01 exhibited non-compliant precision for acetone (RPD 31%).

Specific Finding

The positive result reported for acetone in the field duplicate sample FDSHW11C01 is qualified as estimated, J, due to non-compliant field duplicate precision.

System Performance and Overall Assessment

The data reviewer estimates that less than 10% of the data required qualifications/rejections.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
FDSHW11C01	acetonitrile (0.032) Isobutyl alcohol (0.008) 1,4-dioxane (0.002)	+/-	J/UR
FDSHW11C01	acrolein (55.3%)	+/-	J/UJ
FDSHW11C01	acetone	+	J

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8270 for the Appendix IX List; the National Functional Guidelines for Organic Data Validation, June 1991, and DQO Level IV requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 28308A

A validation was performed on the Semivolatile Data from SDG 28308A. The data was evaluated based on the following parameters:

- * Data Completeness
- * Holding Times
- * GC/MS Tuning
- Calibration
- Blanks
- * Surrogate Recoveries
- * Matrix Spike/Matrix Spike Duplicates
- * Field Duplicates
- * Internal Standard Performance
- * Compound Identification
- * Compound Quantitation

* - All criteria were met for this parameter.

Initial Calibrations

The laboratory did not calibrate the instrument for three (3) compounds which were reported as target compounds. Therefore, the results for these compounds required rejection.

Initial Calibrations, continued

Specific Finding

The results for the following compounds are rejected, UR, in all samples, because there was no calibration analyzed for them.

Carbazole
1,2-Dibromo-3-chloropropane
3-Methyl cholanthrene

Continuing Calibrations

The continuing calibrations that were analyzed by the laboratory for these samples were not acceptable for all compound %Ds. The continuing calibration standards that were analyzed did not all meet the minimum RRF criteria.

Specific Findings

The continuing calibrations on analyzed on 01/30/97 on instrument A.I contained compounds with average RRFs less than 0.05. For the samples and non-compliant compounds listed below, the positive results are qualified as estimated, J, and the non-detect results are rejected, UR.

FDSHW11C01	aramite (0.045)
	hexachlorophene (0.034)

The continuing calibration on 01/30/97 on instrument A.I contained compounds with %Ds greater than 50% but less than 90%. For the samples and non-compliant compounds listed below, all positive and non-detect results are qualified as estimated, J/UJ.

FDSHW11C01	2,6-dichlorophenol (52.7)
	1,2,4,5-tetrachlorobenzene (78.2)
	Pentachlorobenzene (69.6)
	N-nitrosomethylethylamine (51.5)
	N-nitrosodiethylamine (63.2)
	1-nitroso-piperidine (57.0)
	o,o,o-triethylphosphorothio (55.6)
	N-nitrosodi-n-butylamine (52.3)

Continuing Calibrations, continued

Specific Finding

The continuing calibration on 01/30/97 on instrument A.I contained compounds with %Ds greater than 50% but less than 90%. For the samples and non-compliant compounds listed below, all positive and non-detect results are qualified as estimated, J/UJ.

FDSHW11C01	Safrole (57.3)
	Isosafrole (64.1)
	1,4-naphthoquinone (52.7)
	1-naphthylamine (61.6)
	2-naphthylamine (55.2)
	2-methyl-5-nitroaniline (63.4)
	4-aminobiphenyl (58.8)
	Pronamide (66.4)
	Pentachloronitrobenzene (68.0)
	Parathion (53.4)
	Isodrin (53.1)
	Diphenylamine (54.6)
	Kepone (70.9)

Field QC Blanks

One (1) field blank exhibited contamination which resulted in the qualification of field samples.

	FDSFW13A01
bis(2-ethylhexyl)phthalate	2 μg/L

Specific Findings

Blank	Samples	Compound	Action Level	Qualification
FDSFW13A01	FDSHW11C01	bis(2-ethylhexyl)phthalate	20 μg/L	CRQL

System Performance and Overall Assessment

The data reviewer estimates less than 15% of data required qualifications/rejections.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
FDSHW11C01	Carbazole	+/-	UR
	1,2-Dibromo-3-chloropropane		
	3-Methyl cholanthrene		
FDSHW11C01	aramite (0.045)	+/-	J/UR
	hexachlorophene (0.034)		
FDSHW11C01	2,6-dichlorophenol (52.7)	+/-	J/UJ
	1,2,4,5-tetrachlorobenzene (78.2)		
	Pentachlorobenzene (69.6)		
	N-nitrosomethylethylamine (51.5)		
	N-nitrosodiethylamine (63.2)		
	1-nitroso-piperidine (57.0)		
	o,o,o-triethylphosphorothio (55.6)		
	N-nitrosodi-n-butylamine (52.3)		
	Safrole (57.3)		
	Isosafrole (64.1)		
	1,4-naphthoquinone (52.7)		
	1-naphthylamine (61.6)		
	2-naphthylamine (55.2)		
	2-methyl-5-nitroaniline (63.4)		
	4-aminobiphenyl (58.8)		
	Pronamide (66.4)		
	Pentachloronitrobenzene (68.0)		
	Parathion (53.4)		
	Isodrin (53.1)		
	Diphenylamine (54.6)		
	Kepone (70.9)		
FDSHW11C01	bis(2-ethylhexyl)phthalate	+	CRQL

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLORS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8080A; the National Functional Guidelines for Organic Data Validation, June 1991; and DQO Level IV requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 28308A

A validation was performed on the Pesticide/Aroclor Data from SDG 28308A. The data was evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • GC Performance
* • Calibration
* • Blanks
* • Surrogate Recoveries
* • Matrix Spike/Matrix Spike Duplicates
* • Field Duplicates
* • Compound Identification
* • Compound Quantitation

* - All criteria were met for this parameter.

Contractual Non-Compliance

The method requires that all target compounds, including the multi-component compounds, be analyzed with a five (5) point calibration curve. The laboratory analyzed a single point curve for the aroclors and toxaphene. No positive results were reported for the aroclors or toxaphene, therefore the data did not require qualification.

System Performance and Overall Assessment

The data did not require qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

NJ = Result is considered presumptively present at an estimated concentration

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL

NO QUALIFICATIONS WERE REQUIRED.

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE

ORGANOPHOSPHORUS PESTICIDES

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8140; the National Functional Guidelines for Organic Data Validation, June 1991; and DQO Level IV requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 28308A

A validation was performed on the Organophosphorus Pesticide Data from SDG 28308A. The data was evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • GC Performance
* • Calibration
* • Blanks
* • Surrogate Recoveries
* • Matrix Spike/Matrix Spike Duplicates
* • Field Duplicates
* • Compound Identification
* • Compound Quantitation

* - All criteria were met for this parameter.

System Performance and Overall Assessment

The data did not require qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL

NO QUALIFICATIONS WERE REQUIRED.

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE

CHLORINATED HERBICIDES

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8150; the National Functional Guidelines for Organic Data Validation, June 1991; and DQO Level IV requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 28308A

A validation was performed on the Herbicide Data from SDG 28308A. The data was evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • GC Performance
* • Calibration
* • Blanks
* • Surrogate Recoveries
* • Matrix Spike/Matrix Spike Duplicates
* • Field Duplicates
* • Compound Identification
* • Compound Quantitation

* - All criteria were met for this parameter.

System Performance and Overall Assessment

The data did not require qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL

NO QUALIFICATIONS WERE REQUIRED.

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE
METALS, HEXAVALENT CHROMIUM AND CYANIDE

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results; matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW 846 Methods; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level IV requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 28308B

A validation was performed on the Metals, Hexavalent Chromium and Cyanide Data from SDG 28308B. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Calibrations
	•	Blanks
*	•	Interferences
*	•	Matrix Spike Recovery
*	•	Matrix Duplicates
*	•	Field Duplicates
*	•	Laboratory Control Samples
*	•	Serial Dilutions
*	•	Post Digestion Spiking

* - All criteria were met for this parameter.

Preparation and Field Blanks

Specific Finding

The preparation blank exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Calcium	29.5 ug/l	no impact
Zinc	5.97 ug/l	all water samples below 29.9 ug/l

The equipment blank exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Barium	0.37 ug/l	no impact
Beryllium	0.44 ug/l	all water samples below 2.2 ug/l
Copper	0.6 ug/l	all water samples below 3.0 ug/l
Zinc	7.8 ug/l	all water samples below 39.0 ug/l

The USEPA requires that all sample values below five times the preparation, field, DI or calibration blank contamination be qualified as non-detect, "U".

Specific Finding

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B" per Ensafe's request.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
All water samples below 39.0 ug/l	Zn.	+	U
All water samples below 16.6 ug/l	Sn.		
All water samples below 2.2 ug/l	Be.		
All water samples below 3.0 ug/l	Cu.		
All "B" results	all analytes	B	J

DATA ASSESSMENT AND NARRATIVE

Dioxin/Furans

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA SW846, Method 8290; National Functional Guidelines for Organic Data Review, and DQO Level IV. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 28308

A validation was performed on the Dioxin/Furans Data from SDG 28308. The data was evaluated based on the following parameters.

* • Data Completeness
* • Holding Times
* • Mass Resolution Checks
* • Column Performance
* • Calibrations
* • Internal Standard Performance
* • Blanks
* • Matrix Spike/Matrix Spike Duplicate
* • Field Duplicates
* • Congener Identification /Quantitation

* - All criteria were met for this parameter

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data did not require qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D= Result value is based on the dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	CONGENER	DL	QL

No qualifications are required.

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

PAGE 1 OF 1

CTO-TASK: 2907-08440
COC #:
BPA/SO: 0345/916 P04 R17

NAVY CLEAN
ENSAFE/ALLEN&HOSHALL
(901) 383-9115

CHAIN OF CUSTODY RECORD

CLIENT: Naval Base Charleston
ADDRESS: Zone G / Fds
PROJECT NAME/NUMBER: 2907-08440
SAMPLERS: (SIGNATURE) Henry D. Sinks

PROJECT MANAGER: Charlie Verney
TELEPHONE NO. (803) 884-0029
FAX. NO.

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	VOA	SVOA/pesticides	metals	CN				REMARKS
NBCG/FDSGW101B01	1-29-97	1200	H2O	1 Liter 1L poly HDPE VOA	4°C	X	8	X	X	X	X				14 Day Turn
NBCG/FDSGW16A01		11.30				X	8	X	X	X	X				
NBCG/FDSGW16B01		1020				X	8	X	X	X	X				
NBCG/FDSGW16C01		11.40				X	8	X	X	X	X				
NBCG/FDSGW19A01		10.15				X	8	X	X	X	X				
NBCG/GDGGW002A1		10.40		1L Poly		HNO3	1			X					7 Day Turn
NBCG/FDST318A01						HCL	1	X							

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE Henry D. Sinks	1-29-97	SIGNATURE [signature]	1/30/97	SIGNATURE		SIGNATURE	
PRINTED Henry D. Sinks		PRINTED M. McCamber		PRINTED		PRINTED	
COMPANY EnSafe	TIME	COMPANY SWLO	TIME	COMPANY	TIME	COMPANY	TIME
REASON Analysis	1700	REASON	0945	REASON		REASON	

METHOD OF SHIPMENT: Fedex
SHIPMENT NO. 0904034924
SPECIAL INSTRUCTION:

COMMENTS: ALL DQO3 - 2 week turn around
note: NBCG/GDGGW002A1 is 7 day turnaround sample

AFTER ANALYSIS, SAMPLES ARE TO BE:
- [x] DISPOSED OF
- [ ] STORED (90 DAYS MAX)
- [ ] STORED OVER 90 DAYS
- [ ] RETURNED TO CUSTOMER

3°C, 3°C, 3°C

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CLNCOCR1

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PAGE 1 OF 1

NAVY CLEAN
ENSAFE/ALLEN&HOSHALL
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2907-08440
COC #:
BPA/SO: 0345/96 P04 Rel7

CLIENT: Naval Base Charleston
ADDRESS: Zone G/Fds
PROJECT NAME/NUMBER: 2907-08440
SAMPLERS: (SIGNATURE) Henry D. Surles

PROJECT MANAGER: Charlie Vernoy
TELEPHONE NO. (803)-884-0029
FAX. NO.

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	VOA	SVOA/Pesticide	Metals	CN				REMARKS
NBCG/Fds GW07A01	1-29-97	1515	H2O	1L Amber/1L poly 40mL VOA	4°C	~~HCl~~	8	X	X	X	X				14 Day Turn
NBCG/Fds TB01A01	↓	—	H2O	2-40 ↓ mL		HCl	2								

Henry D. Surles

Henry D. Surles

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE Henry D. Surles	1-29-97	SIGNATURE [illegible]	1/31/97	SIGNATURE		SIGNATURE	
PRINTED Henry D. Surles		PRINTED M. McCombs		PRINTED		PRINTED	
COMPANY EnSafe	TIME	COMPANY SWLO	TIME	COMPANY	TIME	COMPANY	TIME
REASON Analysis	11:00	REASON	1025	REASON		REASON	

METHOD OF SHIPMENT: Fedex
SHIPMENT NO. 0904034891
SPECIAL INSTRUCTION: None

COMMENTS: All DQO3 - 2 Week turnaround

AFTER ANALYSIS, SAMPLES ARE TO BE:
- [x] DISPOSED OF
- [ ] STORED (90 DAYS MAX)
- [ ] STORED OVER 90 DAYS
- [ ] RETURNED TO CUSTOMER

VOA - HCL CN - NAOH - 5°C
Ms - HNO3

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

NCCRI

NAVY CLEAN
ENSAFE/ALLEN&HOSHALL
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CTO-TASK: 2907-08440
COC #:
BPA/SO: 0345/96 PO 4/R017

CLIENT: NAVBASE CHAR
ADDRESS: Zone G/ FDS
PROJECT NAME/NUMBER: 2907-08440
SAMPLERS: (SIGNATURE) PB Hardy

PROJECT MANAGER: Charlie Vernay
TELEPHONE NO. (803) 884-0029
FAX. NO.

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	VOA	SVOA/Pest/PCBs	Metals	CN	Dioxin	Herbs/Organ Pests	Hex Chrome	REMARKS
NBCG/FDSGW15A01	1-28-97	1135	H2O	1 amber 1 poly 40 ml VOA	4°C	*	8	X	X	X	X				
NBCG/FDSGW15B01		1020						X	X	X	X				
NBCG/FDSGW15C01		1010						X	X	X	X				
NBCG/FDSGW13E01		1100						X	X	X	X				
NBCG/FDSGW17A01		1030						X	X	X	X				
NBCG/FDSGW17B01		1030						X	X	X	X				
NBCG/FDSGW11A01		1437						X	X	X	X				
NBCG/FDSGW11B01		1500						X	X	X	X				
NBCG/FDSGW11C01		1520					8	X	X	X	X				
NBCG/FDS HW11C01		1520					13	X	X	X	X	X	X	X	Duplicate Appx IX

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE PB Hardy	1-28-97	SIGNATURE K Willison	1/29/97	SIGNATURE		SIGNATURE	
PRINTED PB Hardy		PRINTED K Willison		PRINTED		PRINTED	
COMPANY E/A+H	TIME 1700	COMPANY SWCO	TIME 0955	COMPANY	TIME	COMPANY	TIME
REASON Analyses		REASON		REASON		REASON	

METHOD OF SHIPMENT: FEDEX
SHIPMENT NO. 3002522600
SPECIAL INSTRUCTION:

COMMENTS: All samples DQO III, except Appx IX - these are DQO IV
2 Week turnaround

AFTER ANALYSIS, SAMPLES ARE TO BE:
- [x] DISPOSED OF
- [ ] STORED (90 DAYS MAX)
- [ ] STORED OVER 90 DAYS
- [ ] RETURNED TO CUSTOMER

* VOA - HCL Cyanide - NAOH
Metals - HNO3

3", 3", 2", 3", 5"

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CLNCDCR1

NAVY CLEAN
ENSAFE/ALLEN&HOSHALL
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2907-08440
COC #:
BPA/SO: 0345/96 P04/Rel7

CLIENT: NAVBASE CHAR
ADDRESS: Zone G/FDS
PROJECT NAME/NUMBER: 2907-08440
SAMPLERS: (SIGNATURE) PB Hardy

PROJECT MANAGER: Charlie Vernoy
TELEPHONE NO. (803) 884-0029
FAX. NO.

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	VOA	SVOA/Pests/PCBs	Metals	CN	Dioxin	Herbs/OP Pests	Hex Chrome	REMARKS
NBCG/FDSEW11A01	1-28-97	1430	H2O	1 amber 1 poly 40 ml VOA	4°C	*	13	X	X	X	X	X	X	X	~~Rinseate~~ Appx IX Rinseate Blank
NBCG/FDSTW11C01	↓		↓	40 ml VOA	↓	↓	2	X							trip Blank

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE PB Hardy	1-28-97	SIGNATURE [signature]	1/29/97	SIGNATURE		SIGNATURE	
PRINTED PB Hardy		PRINTED KWillison		PRINTED		PRINTED	
COMPANY E/A+H	TIME	COMPANY SWXU	TIME	COMPANY	TIME	COMPANY	TIME
REASON Analyses	1700	REASON	0955	REASON		REASON	

METHOD OF SHIPMENT: FEDEX
SHIPMENT NO. 3002522600
SPECIAL INSTRUCTION:

COMMENTS: All Samples DQO III, except Appx ~~IX~~ - these are DQO IV
2 Week turnaround

AFTER ANALYSIS, SAMPLES ARE TO BE:
- ☒ DISPOSED OF
- ☐ STORED (90 DAYS MAX)
- ☐ STORED OVER 90 DAYS
- ☐ RETURNED TO CUSTOMER

* VOA - HCl Cyanide - NaOH 3i, 3i, 2i, 3i, 5i, 5i
Metals - HNO_3

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CLNCOCR1

AMENDED CHAIN OF CUSTODY 1-30-97

PAGE 1 OF 1 2

NAVY CLEAN
ENSAFE/ALLEN&HOSHALL
(901) 383-9115

CHAIN OF CUSTODY RECORD

CTO-TASK: 2907-08440
COC #:
BPA/SO: 0345/96 DO4 Rel 7

CLIENT: Naval Base charleston
PROJECT MANAGER: Charlie vernoy
ADDRESS: Zone G / FDS
TELEPHONE NO. (803) 884-0029
PROJECT NAME/NUMBER: 2907-08440
FAX. NO.
SAMPLERS: (SIGNATURE) Henry D. Sinkes

ANALYSIS REQUIRED

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	VOA	SVOA/PAH's	metals	CN				REMARKS
NBCG/FDSGW01E01	1-29-97	1200	H2O	1 Amber 1L Poly 40mL VOA	4°C	*	8	X	X	X	X				14 Day Turn
NBCG/FDSGW16A01		11.30				*	8	X	X	X	X				
NBCG/FDSGW16B01		1020				*	8	X	X	X	X				
NBCG/FDSGW16C01		11.40				*	8	X	X	X	X				
NBCG/FDSGW18A01		10.15				*	8	X	X	X	X				
NBCG/GDGGW002A1		10.40		1L Poly		HNO3	1			X					7 Day Turn
NBCG/FDST018A01				2-40 ML		HCL	1	X							

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE Henry D. Sinkes	1-29-97	SIGNATURE		SIGNATURE		SIGNATURE	
PRINTED Henry D. Sinkes		PRINTED		PRINTED		PRINTED	
COMPANY EnSafe	TIME	COMPANY	TIME	COMPANY	TIME	COMPANY	TIME
REASON Analysis	1700	REASON		REASON		REASON	

METHOD OF SHIPMENT: Fedex
SHIPMENT NO. 0904034924
SPECIAL INSTRUCTION:

COMMENTS: ALL DQ03 - 2 Week turn around
note! NBCG/GDGGW002A1 is 7 day turnaround sample

AFTER ANALYSIS, SAMPLES ARE TO BE:
- [x] DISPOSED OF
- [ ] STORED (90 DAYS MAX)
- [ ] STORED OVER 90 DAYS
- [ ] RETURNED TO CUSTOMER

* VOA - HCL CN - NAOH
Metals - HNO3

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CLNCOC

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	31703
Date:	December 11, 1997
Client Name:	EnSafe
Project/Site Name:	Charleston - Zone F
Date Sampled:	November 3-7, 1997
Number of Samples:	22 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Southwest Laboratory of Oklahoma
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	EPA DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, Semivolatiles, Metals

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Seaybo
Paul R. Humburg, President

12/12/97.
Date

4127 Plaza 94 South · St. Charles, MO 63304
(314) 936-1332 · Fax (314) 936-1335

SDG# 31703

Samples and Fractions Reviewed

Sample Identifications — Analytical Fractions

ENSAFE ID	MATRIX	VOA		SVOA		TAL	
607GW00404	WATER	X		X		X	
607DW00404	WATER	X		X		X	
607EW00404	WATER	X		X		X	
607FW00404	WATER	X		X		X	
607GW04I04	WATER	X		X		X	
607TW00404	WATER	X					
607GW04D04	WATER	X		X		X	
607GW008A3	WATER	X		X		X	
607TW008A3	WATER	X					
607GW06DA3	WATER	X		X		X	
607GW00704	WATER	X		X		X	
607GW009A3	WATER	X		X		X	
607TW009A3	WATER	X					
607GW03D04	WATER	X		X		X	
607GW05D04	WATER	X		X		X	
613GW00104	WATER	X		X		X	
613HW00104	WATER	X		X		X	
613GW00404	WATER	X		X		X	
613TW00104	WATER	X					
613GW00304	WATER	X		X		X	
613GW02D04	WATER	X		X		X	
613TW02D04	WATER	X					
Total Billable Samples (Water/Soil)		22	0	17	0	17	0

VOA= SW846 Volatiles
SVOA= SW846 Semivolatiles
TAL= SW846 Metals

DATA ASSESSMENT AND NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA SW846 Method 8260 with CLP deliverables; National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 31703

A validation was performed on the Volatile Data from SDG 31703. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibrations
*	•	Internal Standard Performance
	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicate
	•	Field Duplicates
*	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

Method Blanks

The method blanks associated with these samples exhibited contamination and the samples required qualifications. The end-user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes, dilution factors, or percent moisture as the associated samples. These factors must be taken into consideration when applying the 5X or 10X criteria to field samples.

Method Blanks (continued)

Associated Blank	Compound	Concentration	Action Level
SBLK1	tetrachloroethene	2J	10

Sample ID	Compound	Qualification
607GW00404	tetrachloroethene	CRQL

QC Blanks

The QC blanks associated with these samples exhibited contamination and the samples required qualifications. The end-user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes, dilution factors, or percent moisture as the associated samples. These factors must be taken into consideration when applying the 5X or 10X criteria to field samples.

Associated Blank	Compound	Concentration	Action Level
607TW00404	chloroform	6B	30
607TW008A3	chloroform	7B	35
	bromodichloromethane	2J	10

Sample ID	Compound	Qualification
607GW00704	chloroform	U
607GW00704	bromodichloromethane	CRQL

Field Duplicates

The field duplicate samples 613GW0104 and 613HW0104, exhibited a high RPD for 1,2-dichloroethene (total) of 200%. For the samples 613GW0104 and 613HW0104, qualify all positive results for 1,2-dichloroethene (total) as estimated (J) and all non detects as estimated (UJ).

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data as presented requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
607GW00404	tetrachloroethene	+	CRQL
607GW00704	chloroform	+	U
607GW00704	bromodichloromethane	+	CRQL
613GW0104 613HW0104	1,2-dichloroethene (total)	+/-	J/UJ

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA SW846 Method 8270 with CLP deliverables; National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 31703

A validation was performed on the Semivolatile Data from SDG 31703. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibrations
*	•	Internal Standard Performance
	•	Blanks
	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Field Duplicates
	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

Method Blanks

The method blanks associated with these samples exhibited contamination and the samples required qualifications. The end-user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes,dilution factors, or percent moisture as the assocoiated samples. These factors must be taken into consideration when applying the 5X or 10X criteria to field samples.

Method Blank (continued)

Associated Blank	Compound	Concentration	Action Level
SBLK2	bis(2-ethylhexyl)phthalate	3J	30
SBLK3	bis(2-ethylhexyl)phthalate	10	100

Sample ID	Compound	Qualification
607GW06DA3	bis(2-ethylhexyl)phthalate	CRQL
607GW00704		
607GW009A3		
607GW008A3		
607GW03D04		
607GW05D04		
613GW00104		
613HW00104		
613GW00304		
613GW02D04		

QC Blanks

The QC blanks associated with these samples exhibited contamination and the samples required qualifications. The end-user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes, dilution factors, or percent moisture as the associated samples. These factors must be taken into consideration when applying the 5X or 10X criteria to field samples.

Associated Blank	Compound	Concentration	Action Level
607EW00404	bis(2-ethylhexyl)phthalate	7J	70
607FW00404	bis(2-ethylhexyl)phthalate	7J	70
607DW00404	bis(2-ethylhexyl)phthalate	100	1000

Sample ID	Compound	Qualification
607GW00404	bis(2-ethylhexyl)phthalate	CRQL
607GW04I04		
607GW04D04	bis(2-ethylhexyl)phthalate	U

Surrogates

The samples listed below, exhibited surrogate recoveries that were less than 10%. Qualify all positive results for the acid fraction as estimated (J) and reject all non detects (UR).

607GW03D04	phenol (0%) 2-fluorophenol (2%) 2,4,6-tribromophenol (1%)
607GW05D04	phenol (0%) 2-fluorophenol (1%) 2,4,6-tribromophenol (1%)

Compound Identification/Quantitation

Do not use the results for the re-analyzed samples 607GW03D04RE and 607GW05D04RE, in favor of the original sample analysis due to similar non compliant surrogate recoveries and exceeding the extraction holding time.

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data as presented requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
607GW06DA3	bis(2-ethylhexyl)phthalate	+	CRQL
607GW00704			
607GW009A3			
607GW008A3			
607GW03D04			
607GW05D04			
613GW00104			
613HW00104			
613GW00304			
613GW02D04			
607GW00404	bis(2-ethylhexyl)phthalate	+	CRQL
607GW04I04			
607GW04D04	bis(2-ethylhexyl)phthalate	+	U
607GW03D04	All results acid fraction	+/-	J/UR
607GW05D04			
607GW03D04RE	All results	+/-	do not use
607GW05D04RE			

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE
METALS

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW 846 Appendix IX Methods; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 31703

A validation was performed on the Metals Data from SDG 31703. The data was evaluated based on the following parameters.

*	●	Data Completeness
*	●	Holding Times
*	●	Calibrations
	●	Blanks
*	●	Interferences
*	●	Matrix Spike Recovery
*	●	Matrix Duplicates
	●	Field Duplicates
*	●	Laboratory Control Samples
*	●	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation blank exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Aluminum	11.3 ug/l	all water samples below 56.5 ug/l
Antimony	4.1 ug/l	all water samples below 20.5 ug/l

The field blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Calcium	46.9 ug/l	no impact
Chromium	1.5 ug/l	all water samples below 7.5 ug/l

Iron	28.1 ug/l	all water samples below 141 ug/l
Manganese	0.63 ug/l	no impact
Nickel	1.8 ug/l	all water samples below 9.0 ug/l
Sodium	14800 ug/l	all water samples below 74000 ug/l
Zinc	8.6 ug/l	all water samples below 43.0 ug/l

The USEPA requires that all sample values below five times the preparation, field, DI or calibration blank contamination be qualified as non-detect, "U".

The preparation blank exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Magnesium	-56.9 ug/l	all water samples below 569 ug/l

This reviewer qualifies all positive and non-detect results below ten times the negative bias as estimated, "J" or "UJ".

Field Duplicate Results

The RPDs for samples 613GW00104 and 613HW00104 for Aluminum (166), Iron (197%), Manganese (154%), Potassium (37%) and Sodium (66%) were greater than 35%. All positive and non-detect results are qualified as estimated, "J" or "UJ".

"B" Qualifier

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B" per Ensafe's request.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
All water samples below 56.5 ug/l	Al.	+	U
All water samples below 20.5 ug/l	Sb.		
All water samples below 7.5 ug/l	Cr.		
All water samples below 141 ug/l	Fe.		
All water samples below 9.0 ug/l	Ni.		
All water samples below 74000 ug/l	Na.		
All water samples below 43.0 ug/l	Zn.		
All water samples below 569 ug/l	Mg.	+/U	J/UJ
613GW00604 and 613HW00604.	Al, Mn, Fe K and Na.	+/U	J/UJ
All "B" results	all analytes	B	J

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	31821
Date:	December 23, 1997
Client Name:	EnSafe
Project/Site Name:	Charleston - Zone F
Date Sampled:	November 12-17, 1997
Number of Samples:	21 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Southwest Laboratory of Oklahoma
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	EPA DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, Semivolatiles, Metals

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G Scarpa
for Paul B. Humburg, President

12/30/97
Date

4127 Plaza 94 South · St. Charles, MO 63304

SDG# 31821

Samples and Fractions Reviewed

Sample Identifications | Analytical Fractions

ENSAFE ID	MATRIX	VOA		SVOA		TAL	
240GW00304	WATER	X		X		X	
240DW00304	WATER	X		X		X	
240EW00304	WATER	X		X		X	
240FW00304	WATER	X		X		X	
GELGW00504	WATER	X		X		X	
GELGW00704	WATER	X		X		X	
GELGW01104	WATER	X		X		X	
240TW00304	WATER	X					
GELGW01204	WATER	X		X		X	
GELHW01204	WATER	X		X		X	
GELTW01204	WATER	X					
GELGW00804	WATER	X		X		X	
GELGW00604	WATER	X		X		X	
GELGW01304	WATER	X		X		X	
GELTW01304	WATER	X					
620GW00204	WATER	X		X		X	
620DW00204	WATER	X		X		X	
620EW00204	WATER	X		X		X	
620FW00204	WATER	X		X		X	
620GW003A3	WATER	X		X		X	
620TW00204	WATER	X					
Total Billable Samples (Water/Soil)		21	0	17	0	17	0

VOA= SW846 Volatiles
SVOA= SW846 Semivolatiles
TAL= SW846 Metals

DATA ASSESSMENT NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8260; the National Functional Guidelines for Organic Data Validation, 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 31821

A validation was performed on the Volatile Data from SDG 31821. The data was evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Tuning
* • Calibration
* • Blanks
* • Surrogate Recoveries
* • Matrix Spike/Matrix Spike Duplicates
* • Field Duplicates
* • Internal Standard Performance
* • Compound Identification
* • Compound Quantitation

* - All criteria were met for this parameter.

System Performance and Overall Assessment

The data is reported as is without qualifications and rejections.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL

No qualifications are required.

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8270; the National Functional Guidelines for Organic Data Validation, 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 31821

A validation was performed on the Semivolatile Data from SDG 31821. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibration
	•	Blanks
	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Internal Standard Performance
*	•	Compound Identification
*	•	Compound Quantitation

* - All criteria were met for this parameter.

Blanks

One of the four method blanks exhibited contamination for bis(2-ethylhexyl)phthalate.

Blank ID	Compound Detected	Concentration	Action Limit
SBLK1	bis(2-EH)phthalate	6 μg/L	60 μg/L

Blanks - continued

Sample ID	Compound Detected	Concentration	Qualification
240-G-W003-04	bis(2-EH)phthalate	7 μg/L	CRQL
GEL-G-W005-04		7 μg/L	CRQL
GEL-G-W007-04		6 μg/L	CRQL
GEL-G-W011-04		7 μg/L	CRQL

Blank ID	Compound Detected	Concentration	Action Limit
620-F-W002-04	bis(2-EH)phthalate	1 μg/L	10 μg/L

Sample ID	Compound Detected	Concentration	Qualification
620-G-W002-04	bis(2-EH)phthalate	2 μg/L	CRQL
620-G-W003-A3	bis(2-EH)phthalate	3 μg/L	CRQL

Blank ID	Compound Detected	Concentration	Action Limit
240-F-W003-04	bis(2-EH)phthalate	8 μg/L	80 μg/L

Sample ID	Compound Detected	Concentration	Qualification
GEL-G-W006-04	bis(2-EH)phthalate	5 μg/L	CRQL
GEL-G-W008-04	bis(2-EH)phthalate	2 μg/L	CRQL
GEL-H-W012-04	bis(2-EH)phthalate	2 μg/L	CRQL
GEL-G-W013-04	bis(2-EH)phthalate	12 μg/L	U

Surrogates

Sample GEL-G-W011-04 exhibited the acid surrogates phenol-d5, 2-fluorophenol, and 2,4,6-tribromophenol with 1%, 2%, and 7% recoveries, respectively. For the acid compounds only, reject (UR) all non detect results (no positive results for acid compounds).

System Performance and Overall Assessment

The data is reported as is with qualifications and rejections. Sample GEL-G-W011-04 is reported in favor of the re-extraction due to holding time deficiencies and similar surrogate recoveries.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
240-G-W003-04	bis(2-EH)phthalate	+J	CRQL
GEL-G-W005-04			CRQL
GEL-G-W007-04			CRQL
GEL-G-W011-04			CRQL
620-G-W002-04	bis(2-EH)phthalate	+J	CRQL
620-G-W003-A3			CRQL
GEL-G-W006-04	bis(2-EH)phthalate	+J	CRQL
GEL-G-W008-04			CRQL
GEL-H-W012-04			CRQL
GEL-G-W013-04		+	U
GEL-G-W011-04	all acid compounds	-	UR

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE
METALS

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW 846 Appendix IX Methods; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 31821

A validation was performed on the Metals Data from SDG 31821. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Calibrations
	•	Blanks
*	•	Interferences
*	•	Matrix Spike Recovery
*	•	Matrix Duplicates
*	•	Field Duplicates
*	•	Laboratory Control Samples
	•	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation blank exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Antimony	3.46 ug/l	all water samples below 17.3 ug/l
Lead	1.10 ug/l	all water samples below 5.5 ug/l
Manganese	2.17 ug/l	no impact
Sodium	33.5 ug/l	no impact

The field blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Aluminum	39.8 ug/l	all water samples below 199 ug/l
Beryllium	0.34 ug/l	all water samples below 1.7 ug/l
Calcium	120 ug/l	no impact
Iron	39.9 ug/l	no impact
Manganese	10.4 ug/l	all water samples below 52.0 ug/l
Nickel	1.1 ug/l	all water samples below 5.5 ug/l
Zinc	14.9 ug/l	all water samples below 74.5 ug/l
Sodium	18200 ug/l	all water samples below 91000ug/l

The USEPA requires that all sample values below five times the preparation, field, DI or calibration blank contamination be qualified as non-detect, "U".

Serial Dilution results

The serial dilution RPD for waters for Aluminum was greater than 10%. All positive results are qualified as estimated, "J".

"B" Qualifier

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B" per Ensafe's request.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
All water samples below 199 ug/l	Al.	+	U
All water samples below 17.3 ug/l	Sb.		
All water samples below 1.7 ug/l	Be.		
All water samples below 9.4 ug/l	Pb.		
All water samples below 52.0 ug/l	Mn.		
All water samples below 5.5 ug/l	Ni.		
All water samples below 91000 ug/l	Na.		
All water samples below 74.5 ug/l	Zn.		
All water samples	Al.	+	J
All "B" results	all analytes	B	J

Data Validation Report

Zone F

SDG # 31975

DATA ASSESSMENT AND NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA SW846 Method 8260 with CLP deliverables; National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 31975

A validation was performed on the Volatile Data from SDG 31975. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibrations
*	•	Internal Standard Performance
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Field Duplicates
*	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data as presented did not requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL

No qualifications are required.

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA SW846 Method 8270 with CLP deliverables; National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 31975

A validation was performed on the Semivolatile Data from SDG 31975. The data was evaluated based on the following parameters.

*	•	Data Completeness
	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibrations
*	•	Internal Standard Performance
	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicate
*	•	Field Duplicates
	•	Compound Identification /Quantitation

* - All criteria were met for this parameter

Holding Times

All extraction and analysis holding times for all samples were not met for all samples per the SOW and National Functional Guidelines.

Sample 619GW00304RE, exceeded the extraction holding time by two (2) days. Qualify all positive results as estimated (J).

Method Blanks

The method blanks associated with these samples exhibited contamination and the samples required qualifications. The end-user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes,dilution factors, or percent moisture as the assocoiated samples. These factors must be taken into consideration when applying the 5X or 10X criteria to field samples.

Associated Blank	Compound	Concentration	Action Level
SBLK1	phenol	2J	10
	bis(2-ethylhexyl)phthalate	2J	20
SBLK2	phenol	2J	10
	bis(2-ethylhexyl)phthalate	7J	70

Sample ID	Compound	Qualification
613GW00504	bis(2-ethylhexyl)phthalate	CRQL
617GW01004		
619GW00204		
619GW00104		
GELGW01404	bis(2-ethylhexyl)phthalate	U

Compound Identification/Quantitation

Do not use the results for sample 619GW00304, in favor of the re-extracted sample analysis due to non compliant surrogate recoveries.

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data as presented requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL
619GW00304RE	All results	+	J
613GW00504 617GW01004 619GW00204 619GW00104	bis(2-ethylhexyl)phthalate	+	CRQL
GELGW01404	bis(2-ethylhexyl)phthalate	+	U
619GW00304	All results	+/-	Do not use

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLORS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8081; the National Functional Guidelines for Organic Data Validation, February 1994; and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 31975B

A validation was performed on the Pesticide/Aroclor Data from SDG 31975B. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC Performance
*	•	Calibration
*	•	Blanks
	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
*	•	Compound Quantitation

* - All criteria were met for this parameter.

Method Deviations

The method requires that all target compounds, with the exception of several PCBs, be analyzed with a five (5) point calibration curve. The laboratory analyzed a single point curve for Toxaphene. No positive results were reported for this compound, therefore the data did not require qualification.

Surrogate Recoveries

The samples listed below exhibited low DCB recoveries during pesticide analysis. The positive pesticide results are qualified as estimated, J, and the non-detect pesticide results are qualified as estimated, UJ.

Sample ID	Surrogate	% Recovery
619GW00204	DCB-1/DCB-2	46%/51%
619GW00304	DCB-1	49%

The samples listed below exhibited low DCB recoveries during PCB analysis. The positive PCB results are qualified as estimated, J, and the non-detect PCB results are qualified as estimated, UJ.

Sample ID	Surrogate	% Recovery
619GW00304	DCB-1/DCB-2	50%/52%

System Performance and Overall Assessment

The data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

NJ = Result is considered presumptively present at an estimated concentration

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
619GW00204 619GW00304	All Pesticides	+/-	J/UJ
619GW00304	All PCBs	+/-	J/UJ

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE
METALS

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW 846 Appendix IX Methods; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 31975

A validation was performed on the Metals Data from SDG 31975. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Calibrations
	•	Blanks
*	•	Interferences
*	•	Matrix Spike Recovery
*	•	Matrix Duplicates
*	•	Field Duplicates
*	•	Laboratory Control Samples
*	•	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation blank exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Aluminum	14.0 ug/l	all water samples below 70.0 ug/l
Antimony	1.90 ug/l	no impact
Beryllium	0.23 ug/l	no impact

The calibration blank exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Antimony	3.7 ug/l	all water samples below 18.5 ug/l

Arsenic	2.5 ug/l	all water samples below 12.5 ug/l
Iron	76.7 ug/l	no impact
Beryllium	0.5 ug/l	all water samples below 2.5 ug/l

The field blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Nickel	1.5 ug/l	all water samples below 7.5 ug/l
Sodium	22300 ug/l	all water samples below 111500 ug/l
Tin	15.9 ug/l	no impact
Zinc	7.3 ug/l	all water samples below 36.5 ug/l

The USEPA requires that all sample values below five times the preparation, field, DI or calibration blank contamination be qualified as non-detect, "U".

The preparation blank exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Lead	-1.0 ug/l	all water samples below 10.0 ug/l

This reviewer qualifies all positive and non-detect results below ten times the negative bias as estimated, "J" or "UJ".

"B" Qualifier

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B" per Ensafe's request.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
All water samples below 70.0 ug/l	Al.	+	U
All water samples below 2.50 ug/l	Be.		
All water samples below 18.5 ug/l	Sb.		
All water samples below 12.5 ug/l	As.		
All water samples below 7.5 ug/l	Ni.		
All water samples below 111500 ug/l	Na.		
All water samples below 36.5 ug/l	Zn.		
All water samples below 10.0 ug/l	Pb.	+/U	J/UJ
All "B" results	all analytes	B	J

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	31975
Date:	January 7, 1998
Client Name:	EnSafe
Project/Site Name:	Charleston - Zone F
Date Sampled:	November 26-December 2, 1997
Number of Samples:	11 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Southwest Laboratory of Oklahoma
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	EPA DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, Semivolatiles, Pesticide/PCB's, Metals

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

for Kimberly S. Stopp
Paul B. Humburg, President

14 January 1998
Date

SDG# 31975

Samples and Fractions Reviewed

Sample Identifications | Analytical Fractions

ENSAFE ID	MATRIX	VOA		SVOA		P/P		TAL	
613GW00504	WATER	X		X				X	
617GW00104	WATER	X		X				X	
619GW00204	WATER	X		X		X		X	
619GW00304	WATER	X		X		X		X	
619TW00304	WATER	X							
GELGW01404	WATER	X		X				X	
619GW00104	WATER	X		X		X		X	
619DW00104	WATER	X		X		X		X	
619EW00104	WATER	X		X		X		X	
619FW00104	WATER	X		X		X		X	
619TW00104	WATER	X							
Total Billable Samples (Water/Soil)		11	0	9	0	6	0	9	0

VOA= SW846 Volatiles
SVOA= SW846 Semivolatiles
P/P= SW846 Pesticide/PCB's
TAL= SW846 Metals

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	36036
Date:	November 23, 1998
Client Name:	Ensafe
Project/Site Name:	Charleston Zone(s) G, F, I
Date Sampled:	October 20, 1998
Number of Samples:	19 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Southwest Laboratory of Oklahoma
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Scafone — 11-24-98.

for Paul B. Humburg, President — Date

4127 Plaza 94 South • St. Charles, MO 63304
(314) 936-1332 • Fax (314) 936-1335

SDG# 36036

Samples and Fractions Reviewed

Sample Identifications Analytical Fraction

ENSAFE ID	MATRIX	VOA	
681GW00101	WATER	X	
681GW00201	WATER	X	
681GW00301	WATER	X	
607GW010C1	WATER	X	
607GW011C1	WATER	X	
607GW012C1	WATER	X	
607TW012C1	WATER	X	
607GW013C1	WATER	X	
607GW014C1	WATER	X	
607HW014C1	WATER	X	
607GW015C1	WATER	X	
607GW016C1	WATER	X	
607GW017C1	WATER	X	
613GW00601	WATER	X	
613TW00601	WATER	X	
GELGW01405	WATER	X	
FDSGW17A04	WATER	X	
FDSHW17A04	WATER	X	
FDSGW17B04	WATER	X	
Total Billable Samples (Water/Soil)		19	0

VOA= SW846 Volatiles

DATA ASSESSMENT AND NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8260B; the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results.

SDG # 36036

A validation was performed on the Volatile Data from SDG 36036. The data was evaluated based on the following parameters.

* Data Completeness
* Holding Times
* GC/MS Tuning
  Calibrations
* Internal Standard Performance
* Blanks
* Surrogate Recoveries
* Laboratory Control Samples
* Field Duplicates
  Compound Identification /Quantitation

* - All criteria were met for this parameter

Initial Calibration

The initial calibration, analyzed on 10-19-98, contained compounds with RRFs less than 0.050. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as rejected (UR).

613GW00601	2-chloroethyl vinyl ether (0.038)
FDSGW17A04	
FDSGW17B04	
FDSHW17A04	
GELGW01405	
681GW00301	
681GW00101	

The initial calibration, analyzed on 10-21-98, contained compounds with RRFs less than 0.050. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as rejected (UR).

681GW00201	2-chloroethyl vinyl ether (0.023)
607GW010C1	acetone (0.027)
607GW011C1	
607GW017C1	
607GW016C1	
607GW015C1	
607GW014C1	
607HW014C1	
607GW013C1	
607GW012C1	

Continuing Calibration

The continuing calibration, R31064.D, contained compounds with RRFs less than 0.050. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as rejected (UR).

613GW00601	acetone (0.040)
FDSGW17A04	
FDSGW17B04	
FDSHW17A04	
GELGW01405	
681GW00301	
681GW00101	

The continuing calibration, UL6769.D, contained compounds with %Ds greater than 50% and less than 90%. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as estimated (UJ).

681GW00201	2-butanone (61.8%)
607GW010C1	
607GW011C1	
607GW017C1	
607GW016C1	
607GW015C1	
607GW014C1	
607HW014C1	

The continuing calibration, UL6769.D, contained compounds with %Ds greater than 90%. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as estimated (UR).

681GW00201	2-chloroethyl vinyl ether (161.8%)
607GW010C1	
607GW011C1	
607GW017C1	
607GW016C1	
607GW015C1	
607GW014C1	
607HW014C1	

Continuing Calibration *(continued)*

The continuing calibration, UL6769.D, contained compounds with RRFs less than 0.050. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as rejected (UR).

681GW00201	acetone (0.029)
607GW010C1	
607GW011C1	
607GW017C1	
607GW016C1	
607GW015C1	
607GW014C1	
607HW014C1	

The continuing calibration, UL6810.D, contained compounds with RRFs less than 0.050. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as rejected (UR).

607GW013C1	acetone (0.035)
607GW012C1	2-chloroethyl vinyl ether (0.028)

Compound Identification /Quantitation

Do not use E-flagged results for samples listed below, in favor of the dilution D-flagged results.

607GW011C1
607GW017C1
607GW016C1
607GW015C1
607GW014C1
607HW014C1

System Performance and Overall Assessment

The data as presented requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
613GW00601	2-chloroethyl vinyl ether	+/-	J/UR
FDSGW17A04			
FDSGW17B04			
FDSHW17A04			
GELGW01405			
681GW00301			
681GW00101			
681GW00201	2-chloroethyl vinyl ether	+/-	J/UR
607GW010C1	acetone		
607GW011C1			
607GW017C1			
607GW016C1			
607GW015C1			
607GW014C1			
607HW014C1			
607GW013C1			
607GW012C1			
613GW00601	acetone	+/-	J/UR
FDSGW17A04			
FDSGW17B04			
FDSHW17A04			
GELGW01405			
681GW00301			
681GW00101			
681GW00201	2-butanone	+/-	J/UJ
607GW010C1			
607GW011C1			
607GW017C1			
607GW016C1			
607GW015C1			
607GW014C1			
607HW014C1			

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non detect result

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
681GW00201 607GW010C1 607GW011C1 607GW017C1 607GW016C1 607GW015C1 607GW014C1 607HW014C1	2-chloroethyl vinyl ether	+/-	J/UR
681GW00201 607GW010C1 607GW011C1 607GW017C1 607GW016C1 607GW015C1 607GW014C1 607HW014C1	acetone	+/-	J/UR
607GW013C1 607GW012C1	acetone 2-chloroethyl vinyl ether	+/-	J/UR
607GW011C1 607GW017C1 607GW016C1 607GW015C1 607GW014C1 607HW014C1	all E-flagged compounds	+	do not use

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
607GW011C1DL	all results except D-flagged compounds	+/-	do not use
607GW017C1DL			
607GW016C1DL			
607GW015C1DL			
607GW014C1DL			
607HW014C1DL			

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	37108
Date:	February 15, 1999
Client Name:	Ensafe
Project/Site Name:	Charleston Zone F
Date Sampled:	January 15, 1999
Number of Samples:	3 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Southwest Laboratory of Oklahoma
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Metals, Total Suspended Solids

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Sexton

Paul B. Humburg, President

2-15-99

Date

4127 Plaza 94 South • St. Charles, MO 63304
(314) 936-1332 • Fax (314) 936-1335

SDG# 37108

Samples and Fractions Reviewed

Sample Identifications | Analytical Fractions

ENSAFE ID	MATRIX	MET		TSS	
FDSGW17BF5	WATER	X			
FDSGW17BU5	WATER	X			
FDSGW17B05	WATER			X	
Total Billable Samples (Water/Soil)		2	0	1	0

MET= Metals
TSS= Total Suspended Solids

DATA ASSESSMENT NARRATIVE
METALS

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW 846 Methods; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDGs # 37108

A validation was performed on the Metals Data from SDG 37108. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Calibrations
	•	Blanks
*	•	Interferences
*	•	Matrix Spike Recovery
*	•	Matrix Duplicates
*	•	Field Duplicates
*	•	Laboratory Control Samples
*	•	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The calibration blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Beryllium	0.2 ug/l	no impact

The USEPA requires that all sample values below five times the preparation, field or calibration blank contamination be qualified as non-detect, "U".

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B". Value is below the CRDL but greater than the IDL.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all "B" results	all analytes	B	J

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	39074
Date:	July 21, 1999
Client Name:	Ensafe
Project/Site Name:	Charleston Zone F
Date Sampled:	June 18, 1999
Number of Samples:	2 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Southwest Laboratory of Oklahoma
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	EPA DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, Semivolatiles, Pesticides/PCBs, Metals, Cyanide

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Sexton
for Paul B. Humburg, President

7-22-99
Date

4127 Plaza 94 South • St. Charles, MO 63304
(636) 936-1332 • Fax (636) 936-1335

SDG# 39074

Samples and Fractions Reviewed

Sample Identifications | Analytical Fractions

ENSAFE ID	MATRIX	VOA		SVOA		P/P		MET		CN	
613GW00602	WATER	X		X		X		X		X	
613TW00602	WATER	X									
Total Billable Samples (Water/Soil)		2	0	1	0	1	0	1	0	1	0

VOA= Volatiles
SVOA= Semivolatiles
P/P= Pesticides/PCBs
MET= Metals
CN= Cyanide

DATA ASSESSMENT AND NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8260B; the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results.

SDG # 39074

A validation was performed on the Volatile Data from SDG 39074. The data was evaluated based on the following parameters.

* Data Completeness
* Holding Times
* GC/MS Tuning
  Calibrations
* Internal Standard Performance
  Blanks
* Surrogate Recoveries
* Laboratory Control Samples
* Matrix Spike/Matrix Spike duplicate
* Field Duplicates
* Compound Identification/Quantitation

* - All criteria were met for this parameter

Initial Calibration

The initial calibration, analyzed on 06/21/99, contained compounds with correlation coefficient less than 0.850. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as rejected (UR).

All Samples	chloroethane (0.799)

Blank

The end user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes, dilution factors, or percent moisture as associated samples. These factors must be taken into considerations when applying the 5X and 10X criteria to field samples.

Method Blank

Associated blank	Compound	Concentration	Action Level
VBLK1	trichloroethene	2J ug/L	20 ug/L

Samples	Compound	Qualification
613GW00602	trichloroethene	CRQL

System Performance and Overall Assessment

The data as presented requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
All Samples	chloroethane	+/-	J/UR
613GW00602	trichloroethene	+	CRQL

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8270C; the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results.

SDG # 39074

A validation was performed on the Semivolatile Data from SDG 39074. The data was evaluated based on the following parameters.

* Data Completeness
* Holding Times
* GC/MS Tuning
  Calibrations
* Internal Standard Performance
  Blanks
* Surrogate Recoveries
* Laboratory Control Samples
* Matrix Spike/Matrix Spike duplicate
* Field Duplicates
* Compound Identification/Quantitation

* - All criteria were met for this parameter

Continuing Calibration

The continuing calibration, P21544.D, contained compounds with %Ds greater than 50% and less than 90%. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J) and non detects as estimated (UJ).

613FGW00602 4-nitroaniline (58.2)

Blank

The end user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes, dilution factors, or percent moisture as associated samples. These factors must be taken into considerations when applying the 5X and 10X criteria to field samples.

Method Blank

Associated blank	Compound	Concentration	Action Level
SBLK1	bis(2-ethylhexyl)phthalate	1J ug/L	10 ug/L

Samples	Compound	Qualification
613GW00602	bis(2-ethylhexyl)phthalate	CRQL

System Performance and Overall Assessment

The data as presented requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
613FGW00602	4-nitroaniline	+/-	J/UJ
613GW00602	bis(2-ethylhexyl)phthalate	+	CRQL

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLORS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8081; the National Functional Guidelines for Organic Data Validation, February 1994; and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 39074

A validation was performed on the Pesticide/Aroclor Data from SDG 39074. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC Performance
*	•	Calibration
*	•	Blanks
	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Method Deviations

The SW-846 Method 8081 (1994) requires a five-point calibration curve for all single-component pesticides, Toxaphene, and Aroclors 1016 and 1260. The laboratory analyzed a single point curve for Toxaphene and Aroclors 1016 and 1260. No positive results were reported for this compound, therefore the data did not require qualification.

Surrogate Recoveries

The sample listed below exhibited high TCX recoveries. The positive results are qualified as estimated, J.

Sample ID	Surrogate	% Recovery
613GW00602	TCX-1/TCX-2	110%/126%

Compound Quantitation

One (1) sample exhibited column quantitation %Ds greater than 40%. The following guidelines were used to qualify the data:

1. No qualifications are required for positive sample results which exhibited column quantitation differences < 40%. The "P" flag is removed from the result.

2. The positive sample result which exhibited a column quantitation difference >40%, but ≤100% is qualified as estimated, J.

3. The positive single component pesticide sample result which exhibited a column quantitation difference >100% and is <10X the respective compound CRQL, is qualified as non-detect, U. (All multi-component results are exempt from this rule.)

4. The positive single component pesticide sample result which exhibited a column quantitation difference >100% and >10X the respective compound CRQL, is qualified as presumptively present at an estimated concentration, NJ. (All multi-component results are exempt from this rule.)

5. The positive multi-component pesticide sample result which exhibited a column quantitation difference >100% and <10% the respective multi-component CRQL is qualified as presumptively present at an estimated concentration, NJ.

Compound Quantitation, Continued

The following sample and compounds have been qualified for high column quantitation %Ds.

Sample ID	Compound	%D	Lab Qual.	HESI Qual.	Ref. #
613GW00602	Gamma-BHC	89.2%	P	J	2
	Endrin	129%	P	U	3

System Performance and Overall Assessment

The data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

NJ = Result is considered presumptively present at an estimated concentration

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
613GW00602	ALL	+	J
ALL	All P < 40%	+	
ALL	All P > 40% But ≤ 100%	+	J
ALL	single component pests All P > 100% And < 10X CRQL	+	U
ALL	single component pests All P > 100% And > 10X CRQL	+	NJ
ALL	multi- component pests All P > 100% And < 10X CRQL	+	NJ

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE
Metals and Cyanide

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW 846 Methods for Appendix IX metals; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDGs # 39074

A validation was performed on the metals and cyanide Data from SDG 39074. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Calibrations
	•	Blanks
*	•	Interferences
	•	Matrix Spike Recovery
*	•	Matrix Duplicates
*	•	Field Duplicates
*	•	Laboratory Control Samples
*	•	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation and calibration blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Selenium	3.02 ug/l	all water samples below 15.1 ug/l
Cyanide	1.1 ug/l	all water samples below 5.5 ug/l
Aluminum	32.6 ug/l	no impact
Barium	0.4 ug/l	no impact
Cadmium	0.4 ug/l	no impact
Magnesium	51.2 ug/l	no impact

The USEPA requires that all sample values below five times the preparation or calibration blank contamination be qualified as non-detect, "U".

Matrix Spike Recovery results

The matrix spike recovery for waters for Mercury (74%) was below the lower control limits (>30% but <75%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B". Value is below the CRDL but greater than the IDL.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all water samples below 15.1 ug/l	Se.	+	U
all water samples below 5.5 ug/l	Cn.		
all water samples	Hg.	+/U	J/UJ
all "B" results	all analytes	B	J

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	ECZG03
Date:	June 9, 1998
Client Name:	EnSafe
Project/Site Name:	Charleston - Zone F & G
Date Sampled:	April 24, 1998
Number of Samples:	5 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Savannah Laboratories
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	EPA DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, Semivolatiles, Metals

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Simpson
for Paul B. Humburg, President

6-17-98.
Date

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SDG# ECZG03

Samples and Fractions Reviewed

Sample Identifications — Analytical Fractions

ENSAFE ID	MATRIX	VOA		SVOA		TAL	
FDSGW17A03	WATER	X		X		X	
FDSGW17B03	WATER	X		X		X	
FDSTW17B03	WATER	X					
024GW0401	WATER	X		X		X	
024HW0401	WATER	X		X		X	
Total Billable Samples (Water/Soil)		5	0	4	0	4	0

VOA= SW846 Volatiles
SVOA= SW846 Semivolatiles
TAL= SW846 Metals

DATA ASSESSMENT NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8260; the National Functional Guidelines for Organic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # ECZG03

A validation was performed on the Volatile Data from SDG ECZG03. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Calibration
*	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Internal Standard Performance
*	•	Compound Identification
*	•	Compound Quantitation

* - All criteria were met for this parameter.

Calibrations

The continuing calibration standard BQ252.D exhibited one (1) compound with a %D greater than 90%. For the following sample and compound, the reported positive results are qualified as estimated, J, and the reported non-detect results are rejected, UR.

024GW00401	carbon disulfide
024HW00401	
FDSGW17B03	
FDSGW17A03	

System Performance and Overall Assessment

The data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
024GW00401	carbon disulfide	+/-	J/UR
024HW00401			
FDSGW17B03			
FDSGW17A03			

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8270B, Revision 2, 9/94; the National Functional Guidelines for Organic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # ECZG03

A validation was performed on the Semivolatile Data from SDG ECZG03. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibration
	•	Blanks
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Internal Standard Performance
*	•	Compound Identification
*	•	Compound Quantitation

* - All criteria were met for this parameter.

Method Blanks

The method blank associated with the samples in this SDG exhibited contamination. One (1) field sample required qualification. The end-user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes, dilution factors, or percent moisture as associated samples. These factors must be taken into consideration when applying the 5X or 10X criteria to field samples.

Associated Blank	Compound	Conc.	Action Level
0429A-EMB	bis(2-ethylhexyl)phthalate	2.2J μg/L	22 μg/L

Method Blanks (continued)

Samples	Compound	Qualification
FDSGW17A03	bis(2-ethylhexyl)phthalate	CRQL

System Performance and Overall Assessment

The data, as reported, did require qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = **Not detected**

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
FDSGW17A03	bis(2-ethylhexyl)phthalate	+B	CRQL

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE
METALS

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Methods; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDGs # ECZG03

A validation was performed on the Metals Data from SDG ECZG03. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Calibrations
	•	Blanks
*	•	Interferences
*	•	Matrix Spike Recovery
*	•	Matrix Duplicates
*	•	Field Duplicates
*	•	Laboratory Control Samples
*	•	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Beryllium	0.31 ug/l	all water samples below 1.55 ug/l
Chromium	0.83 ug/l	all water samples below 4.15 ug/l
Potassium	19.7 ug/l	no impact

The calibration blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Aluminum	11.7 ug/l	no impact

Barium	1.4 ug/l	no impact
Calcium	15.2 ug/l	no impact
Chromium	0.9 ug/l	no impact
Copper	1.8 ug/l	all water samples below 9.0 ug/l
Iron	30.8 ug/l	no impact
Magnesium	22.4 ug/l	no impact
Manganese	1.3 ug/l	no impact
Thallium	6.2 ug/l	no impact

The USEPA requires that all sample values below five times the preparation or calibration blank contamination be qualified as non-detect, "U".

The preparation and calibration blanks exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Aluminum	-26.5 ug/l	all water samples below 265 ug/l
Nickel	-1.40 ug/l	all water samples below 14.0 ug/l
Zinc	-0.72 ug/l	all water samples below 7.2 ug/l

This reviewer qualifies all samples results below ten times the negative bias as estimated, "J" or "UJ".

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B". Value is below the CRDL but greater than the IDL.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all water samples below 1.55 ug/l	Be.	+	U
all water samples below 4.15 ug/l	Cr.		
all water samples below 9.0 ug/l	Cu.		
all water samples below 265 ug/l	Al.	+/U	J/UJ
all water samples below 14.0 ug/l	Ni.		
all water samples below 7.2 ug/l	Zn.		
all "B" results	all analytes	B	J

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	EN013
Date:	January 7, 1999
Client Name:	EnSafe
Project/Site Name:	Charleston - Zones - F, G, & I
Date Sampled:	October 19 & 20, 1998
Number of Samples:	11 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Laucks Testing Laboratories, Inc.
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	EPA DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Semivolatiles, Metals, Cyanide

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Searfoss
for Paul B. Humburg, President

1-7-99
Date

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SDG# EN013

Samples and Fractions Reviewed

Sample Identifications | Analytical Fractions

ENSAFE ID	MATRIX	SVOA		MET		CN	
613GW00601	WATER	X		X			
GELGW01405	WATER	X		X			
FDSGW17A04	WATER	X		X			
FDSHW17A04	WATER	X		X			
FDSGW17B04	WATER	X		X			
679GW00101	WATER	X		X		X	
680EW00205	WATER	X		X		X	
680FW00205	WATER	X		X		X	
681GW00101	WATER	X		X		X	
681GW00201	WATER	X		X		X	
681GW00301	WATER	X		X		X	
Total Billable Samples (Water/Soil)		11	0	11	0	6	0

SVOA= Semivolatiles
MET= Metals
CN= Cyanide

DATA ASSESSMENT NARRATIVES

DATA ASSESSMENT AND NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8270; the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results.

SDG # EN013

A validation was performed on the Semivolatile Data from SDG EN013. The data was evaluated based on the following parameters.

* Data Completeness
* Holding Times
* GC/MS Tuning
  Calibrations
* Internal Standard Performance
* Blanks
  Surrogate Recoveries
* Laboratory Control Samples
* Field Duplicates
  Compound Identification /Quantitation

* - All criteria were met for this parameter

Continuing Calibration

The continuing calibration, D1120005.D, contained compounds with %Ds greater than 25% and less than 50%. For the samples and non-compliant compounds listed below, qualify all positive results as estimated (J).

613-G-W006-01	bis(2-ethylhexyl)phthalate (25.7%)
FDS-G-W17B-04	
GEL-G-W014-05	
681-G-W002-01	

Surrogates

The following samples exhibited recoveries below 10% for acid fraction surrogates. Qualify all acid fraction compound positive results as estimated (J) and non detects as rejected (UR).

679-G-W001-01	2-fluorophenol (6%) and 2,4,6-tribromophenol (7%)
FDS-H-W17A-04	2,4,6-tribromophenol (8%)

Compound Identification /Quantitation

Do not use samples 679-G-W001-01RE and FDS-H-W17A-04 RE, in favor of the initial analysis, due to exceeded holding times.

System Performance and Overall Assessment

The data as presented requires qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
613-G-W006-01 FDS-G-W17B-04 GEL-G-W014-05 681-G-W002-01	bis(2-ethylhexyl)phthalate	+	J
679-G-W001-01 FDS-H-W17A-04	all acid compounds	+/-	J/UR
679-G-W001-01RE FDS-H-W17A-04 RE	all results	+/-	do not use

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE
METALS AND CYANIDE

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW 846 Methods; the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDGs # EN013

A validation was performed on the Metals and Cyanide Data from SDG EN013. The data was evaluated based on the following parameters.

*	●	Data Completeness
*	●	Holding Times
*	●	Calibrations
	●	Blanks
*	●	Interferences
	●	Matrix Spike Recovery
*	●	Matrix Duplicates
*	●	Field Duplicates
*	●	Laboratory Control Samples
*	●	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Chromium	8.0 ug/l	all water samples below 40.0 ug/l
Iron	27.5 ug/l	all water samples below 138 ug/l
Sodium	133 ug/l	no impact
Zinc	3.7 ug/l	no impact

The calibration blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Barium	4.3 ug/l	all water samples below 21.5 ug/l
Calcium	61.0 ug/l	no impact
Copper	3.8 ug/l	all water samples below 19.0 ug/l
Magnesium	75.5 ug/l	no impact
Manganese	1.8 ug/l	no impact
Vanadium	3.7 ug/l	all water samples below 18.5 ug/l

The field blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Calcium	96.4 ug/l	no impact
Lead	1.4 ug/l	all water samples below 7.0 ug/l
Sodium	665 ug/l	no impact
Zinc	5.7 ug/l	all water samples below 28.5 ug/l

The USEPA requires that all sample values below five times the preparation, field or calibration blank contamination be qualified as non-detect, "U".

Matrix Spike results

The Matrix Spike recovery for waters for Selenium (0%) was below 30%. All positive results are qualified as estimated, "J" and all non-detect results are rejected.

The Matrix Spike recovery for waters for Thallium (58%) was below the lower control limits (>30% but <75%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B". Value is below the CRDL but greater than the IDL.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all water samples below 40.0 ug/l	Cr.	+	U
all water samples below 138 ug/l	Fe.		
all water samples below 21.5 ug/l	Ba		
all water samples below 19.0 ug/l	Cu.		
all water samples below 18.5 ug/l	V.		
all water samples below 7.0 ug/l	Pb.		
all water samples below 28.5 ug/l	Zn.		
all water samples	Se.	+	J
		U	R
all water samples	Tl.	+/U	J/UJ
all "B" results	all analytes	B	J

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	EN018
Date:	November 29, 1999
Client Name:	Ensafe
Project/Site Name:	Charleston Zone F
Date Sampled:	October 12, 1999
Number of Samples:	10 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Laucks Testing laboratories
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	EPA DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, Semivolatiles, Metals

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Searson
for Paul B. Humburg, President

11-30-99.
Date

4127 Plaza 94 South • St. Charles, MO 63304
(636) 936-1332 • Fax (636) 936-1335

SDG# EN018

Samples and Fractions Reviewed

Sample Identifications — Analytical Fractions

ENSAFE ID	MATRIX	VOA		SVOA		MET	
607GW009A5	WATER					X	
609GW00102	WATER	X				X	
609GW00202	WATER	X				X	
613GW00105	WATER	X					
613GW00603	WATER	X		X		X	
613HW00603	WATER	X		X		X	
613DW00603	WATER	X		X		X	
FDSGW17A05	WATER	X		X		X	
FDSGW17B06	WATER	X		X		X	
GELGW01406	WATER	X		X		X	
Total Billable Samples (Water/Soil)		9	0	6	0	9	0

VOA= Volatiles
SVOA= Semivolatiles
MET= Metals

DATA ASSESSMENT NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8260B for GC/MS Volatiles; the National Functional Guidelines for Organic Data Validation, 2/94, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # EN018

A validation was performed on the Volatile Data from SDG EN018. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Calibration
*	•	Blanks
*	•	Internal Standard Performance
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
*	•	Compound Quantitation

* - All criteria were met for this parameter.

Calibrations

The initial calibration analyzed 10/18/99 on Instrument Flipper exhibited one (1) compound with an average RRF less than 0.05. For the following samples and non-compliant compound, the reported positive results are qualified as estimated, J, and the non-detect results are rejected, UR.

All Samples	acetone (0.045)

Calibrations (continued)

The continuing calibration F1029004.D exhibited one (1) compound with a RF less than 0.05. For the following samples and non-compliant compound, the reported positive results are qualified as estimated, J, and the non-detect results are rejected, UR.

609GW00202	acetone (0.037)

System Performance and Overall Assessment

The data, as reported, required qualifications/rejections.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

L = Result is estimated and biased low.

K = Result is estimated and biased high.

R = Result is rejected and unusable

D = Result value is based on dilution analysis

BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
All Samples	acetone (0.045)	+/-	J/UR
609GW00202	acetone (0.037)	+/-	J/UR

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8270C for GC/MS Semivolatiles; the National Functional Guidelines for Organic Data Validation, 2/94, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # EN018

A validation was performed on the Semivolatile Data from SDG EN018. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibration
*	•	Blanks
	•	Internal Standard Performance
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Internal Standards

The following samples exhibited non-compliant EICP area recoveries below the QC limits for the noted internal standards. All reported positive and non-detect results are qualified as estimated, J/UJ.

613GW00603	perylene-d12
613HW00603	

Compound Quantitation

For the following sample the reported results are not used in favor of the results reported from the RE analysis. The RE analysis exhibited improved internal standard area recoveries and surrogate recoveries.

GELGW01406

System Performance and Overall Assessment

The data, as reported, required qualifications/rejections.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

L = Result is estimated and biased low.

K = Result is estimated and biased high.

R = Result is rejected and unusable

D = Result value is based on dilution analysis

BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
613GW00603 613HW00603	*All associated with* perylene-d12	+/-	J/UJ
GELGW01406	All Compounds	+/-	Do Not use

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE
METALS

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 methods: the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDGs # EN018

A validation was performed on the Metals for Data from SDG EN018. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Calibrations
	•	Blanks
*	•	Interferences
*	•	Matrix Spike Recovery
*	•	Matrix Duplicates
*	•	Field Duplicates
*	•	Laboratory Control Samples
	•	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation and calibration blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Calcium	97.4 ug/l	no impact
Iron	56.4 ug/l	no impact
Magnesium	71.6 ug/l	no impact
Zinc	4.9 ug/l	all water samples below 24.5 ug/l

The USEPA requires that all sample values below five times the preparation or calibration blank contamination be qualified as non-detect, "U".

The preparation blanks exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Aluminum	-75.9 ug/l	all water samples below 759 ug/l
Chromium	-1.2 ug/l	all water samples below 12.0 ug/l
Nickel	-11.2 ug/l	all water samples below 12.0 ug/l

This reviewer qualifies all samples results below 10 times the absolute value of the negative blank value.

Serial Dilution recovery results

The serial dilution results for waters for Barium, Potassium and Sodium were greater than 10%. All positive results are qualified as estimated, "J".

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B". Value is below the CRDL but greater than the IDL.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all water samples below 4.9 ug/l	Zn.	+	U
all water samples below 759 ug/l	Al.	+/U	J/UJ
all water samples below 12.0 ug/l	Cr.		
all water samples below 12.0 ug/l	Ni.		
all water samples	Ba, K and Na.	+	J
all "B" results	all analytes	B	J

CHAIN OF CUSTODY RECORD

To: Charlie 9910324 EN018

PROJECT/JOB NO: 2906-001-00 area U-X3
COC NO:
PO NO: 1840
REL NO: ~~36~~ 37
LAB NAME: Lauck's Testing lab

CLIENT: CNC
LOCATION: Zone F
SAMPLERS: (SIGNATURE) DB Hardy

PROJECT MANAGER: Charlie Vernoy
TELE/FAX NO. (843) 884-0029
(843) 856-0107

ANALYSIS REQUIRED

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	VOA	SVOA	Pest/PCB	Metals	Cyanide	REMARKS
BCF/613DW00602	10/12/99	1045	H_2O	40 ml VOA / 1 l amber poly	4C	*	6	X	X	X			GW DI Blank
BCF/613DB0150		1045		40 ml VOA / 1 l amber poly			4	X	X	X	X	X	~~Soil DI Blank~~
BCF/613TB0601		1130		40 ml VOA			3	X					~~Trip Blank~~
BCF/6076N00945		1556		1 l poly			1			X			* moved to 10/13/99 COC Report with Soils
BCF/6096W00102		1615		40 ml VOA / 1 l poly			4	X		X			
BCF/6096W00202		1645		40 ml VOA / 1 l poly			4	X		X			
BCF/613GW00105		1555		40 ml VOA			3	X					
BCF/613GW00603		1110		40 ml VOA / 1 l poly			6	X	X	X			
BCF/613HW00603		1110		" "			6	X	X	X			
BCF/GELGW01406		1153		" "			6	X	X	X			
BCF/FDSGW17A05		1200		" "			6	X	X	X			
BCF/FDSGW17B06		1140		" "			6	X	X	X			

RELINQUISHER	DATE	TIME	RECEIVER	DATE	TIME	RELINQUISHER	DATE	TIME	RECEIVER	DATE	TIME
DB Hardy	10/12/99	1800	Charles Christensen	10/13/99	0840						
PRINTED: DB Hardy			PRINTED:			PRINTED:			PRINTED:		
COMPANY: Ensafe			COMPANY: LAUCKS			COMPANY:			COMPANY:		

METHOD OF SHIPMENT: FEDEX
SHIPMENT NO. 809609460076
SEND RESULTS TO: Ensafe

COMMENTS:
* HCL — VOA
HNO3 — Metals
NaOH — Cyanide
DOQ Level III plus TICS

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

DHSCOC2

GLOSSARY OF DATA QUALIFIERS

EN019 [redacted]

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

NJ = Result is considered presumptively present at an estimated concentration

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL

NO QUALIFICATIONS WERE REQUIRED.

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE
METALS (SOILS AND SPLP) AND WET CHEMISTRY

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 methods: the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDGs # EN019

A validation was performed on the Metals for (soils and splp) and wet chemistry Data from SDG EN019. The data was evaluated based on the following parameters.

- * Data Completeness
- * Holding Times
- * Calibrations
- Blanks
- * Interferences
- Matrix Spike Recovery
- Matrix Duplicates
- * Field Duplicates
- * Laboratory Control Samples
- Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation and calibration blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Iron	4.78 mg/kg	no impact
Lead	0.34 mg/kg	no impact
Tin	3.12 mg/kg	all soil samples below 15.6 mg/kg

The USEPA requires that all sample values below five times the preparation or calibration blank contamination be qualified as non-detect, "U".

The preparation blanks exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Aluminum	-8.07 mg/kg	no impact
Cobalt	-0.10 mg/kg	no impact
Thallium	-0.87 mg/kg	all soil samples below 8.7 mg/kg
Cadmium	-0.4 ug/l	all splp samples below 4.0 ug/l
Copper	-1.0 ug/l	all splp samples below 10.0 ug/l
Magnesium	-29.3 ug/l	no impact
Manganese	-0.3 ug/l	all splp samples below 3.0 ug/l

This reviewer qualifies all samples results below 10 times the absolute value of the negative blank value.

Matrix Spike Recovery results

The matrix spike recovery for soils for Zinc (0%) was below 30%. All positive results are qualified as estimated, "J" and all non-detect results are rejected, "UR".

The matrix spike recovery for soils for Antimony (52%), Copper (66%), Lead (58%) and Silver (61%) and for splp samples Silver (61%) were below the lower control limits (>30% but <75%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

The matrix spike recovery for soils for Cobalt (133%) was above the upper control limits (>125%). All positive results are qualified as estimated, "J".

Matrix Duplicate results

The matrix duplicate RPD results for soils for Silver (148%) was greater than 35% and for splp samples for Chromium and Iron were greater than the CRDL. All positive results are qualified as estimated, "J".

Serial Dilution recovery results

The serial dilution results for soils for Potassium was greater than 10%. All positive results are qualified as estimated, "J".

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B". Value is below the CRDL but greater than the IDL.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all soil samples below 15.6 mg/kg	Sn.	+	U
all soil samples below 8.7 mg/kg	Tl.	+/U	J/UJ
all splp samples below 4.0 ug/l	Cd.		
all splp samples below 10.0 ug/l	Cu.		
all splp samples below 3.0 ug/l	Mn.		
all soil samples	Zn.	+	J
		U	UR
all soil samples	Sb, Cu, Pb and Ag.	+/U	J/UJ
all splp samples	Ag.		
all soil samples	Co.	+	J
all soil samples	Ag.	+	J
all splp samples	Cr and Fe.	+	J
all soil samples	K.	+	J
all "B" results	all analytes	B	J

9911197

CHAIN OF CUSTODY RECORD

Amended COC 10/14/99

9910374 EN0191

PROJECT/JOB NO: 2906.001-08-420.03

COC NO:

PO NO: 1840

REL NO: 36

LAB NAME: Laucks

CLIENT: CNC

PROJECT MANAGER: C Verney

LOCATION: AOC 613 - Zone F

TELE/FAX NO. (843) 884-0029 ph (843) 856-0102

SAMPLERS: (SIGNATURE) PB Hardy

ANALYSIS REQUIRED

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	SVOA	Metals	REMARKS
BCF/613SB00802	10/13/99	1445	Soil	8oz Jar	4°C	—	2	X	X	
BCF/613SB00901	↑	1410	↑	" "	4°C	—	2	X	X	
BCF/613SB00902		1425		" "	↑	—	2	X	X	
BCF/613SB01001		1545		" "		—	2	X	X	
BCF/613SB01002		1600		" "		—	2	X	X	
BCF/613SB01401		1600		" "		—	2	X	X	
BCF/613SB01402		1615		" "		—	2	X	X	
BCF/613SB01601		1025		" "		—	2	X	X	
BCF/613SB01602		1140		" "		—	2	X	X	
BCF/613SB01701		1350		" "		—	2	X	X	[redacted] Hold
BCF/613SB01702		1410		" "		—	2	X	X	Hold
BCF/613SB01801		1325		" "		—	2	X	X	Hold
BCF/613SB01802		1330		" "		—	2	X	X	Hold
BCF/613SB01901		1135		" "		—	2	X	X	Hold
BCF/613SB01902	↓	1145	↓	" "	↓	—	2	X	X	Hold
BCF/613SB02001	10/13/99	1108	Soil	" "	4°C	—	2	X	X	Hold

RELINQUISHER:	DATE	RECEIVER:	DATE	RELINQUISHER:	DATE	RECEIVER:	DATE
PB Hardy	10/13	Charles Christensen	10/14/99				
PRINTED: PB Hardy	TIME 1630	PRINTED: Charles Christensen	TIME 0830	PRINTED:	TIME	PRINTED:	TIME
COMPANY: ENSafe		COMPANY: Laucks		COMPANY:		COMPANY:	

METHOD OF SHIPMENT: Fedex

SHIPMENT NO. 814 295 922 305

SEND RESULTS TO: ENSafe

COMMENTS: DQ Level III + TICs (Hold Analyses where marked)

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CHECKED

CHAIN OF CUSTODY RECORD

Amended COC 10/14/99
9910374 EN019

PROJECT/JOB NO:
COC NO:
PO NO: 1840
REL NO: 36
LAB NAME: Lauck's Testing Lab

CLIENT: CNC
LOCATION: ARC 613-Zone F
SAMPLERS: (SIGNATURE) PB Hardy

PROJECT MANAGER: C. Vernoy
TELE/FAX NO. (843) 884-0029 ph
(843) 856-0100

ANALYSIS REQUIRED

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	2VOA	Metals	VOA	PESTICIDE	CYANIDE	REMARKS
NBCF/613SB02002	10/12/99	1123	Soil	8 oz Jars		—	2	X	X				Hold
NBCF/613SB02101	↑	0950	↑	" "	↑	—	2	X	X				Hold
NBCF/613SB02102	↓	1015	↓	" "	↓	—	2	X	X				Hold
NBCF/613SB02201	↓	1032	↓	" "	↓	—	2	X	X				Hold
NBCF/613SB02202	10/12/99	1052	Soil	" "	0-4°C	—	2	X	X				Hold
NBCF/613DB01501	10/12/99	10:45	Water	40 ml VOA 1L Amber poly	4°C	*	9	X	X	X	X	X	Soil DI Blank
NBCF/613TB00601	10/12/99	1130	↓	40 ml VOA	↓	*HCL	3			X			Trip Blank

RELINQUISHED BY	DATE	RECEIVED BY	DATE	RELINQUISHED BY	DATE	RECEIVED BY	DATE
PB Hardy	10/13/99	Chr Chr	10/14/99				
PB Hardy	TIME 1830	Charles Christensen	TIME 0830		TIME		TIME
COMPANY: Ensafe		COMPANY: Lauck's		COMPANY:		COMPANY:	

METHOD OF SHIPMENT: Fedex
SHIPMENT NO. 814725225315
SEND RESULTS TO: Ensafe

COMMENTS: DOG level III + TICs (Hold Analysis where marked)

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CHECK REV. 11/98

800-876-7267
MEMPHIS, TENNESSEE
CITRON, OH CINCINNATI, OH DALLAS, TX JACKSONVILLE, FL KNOXVILLE, TN
TOLEDO, OH NASHVILLE, TN NORFOLK, VA PADUCAH, KY PENSACOLA, FL
MILDENHALL, ENGLAND GERMANY

CHAIN OF CUSTODY RECORD

Amended COC 10/14/99
9910374 END19

COC NO:
PO NO: 1840
REL NO: 36
LAB NAME: Laucks

CLIENT: CUC
LOCATION: ARC 613 - Zone F
SAMPLERS: (SIGNATURE) PB Hardy

PROJECT MANAGER: C. Verney
TELE/FAX NO.: (843) 884-0029 -ph
(843) 856-0127 - fax

ANALYSIS REQUIRED

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	VOA	SVOA	Pest/PCB	Metals	CN	SPLP VOA	SPLP SVOA	SPLP Pest/PCB	SPLP Metals	TOC	REMARKS
BCF/613TB00101	10/13/99	1715	H_2O	40ml VOA	4°C	HCl	3	X										Trip Blank
BCF/613SB00101	↑	1627	soil	8 oz Jar	4°C	—	2		X		X							
BCF/613SB00102		1642	↑	" "	↑	—	2		X		X							
BCF/613SB00401		0900		" "		—	2		X		X							
BCF/613SB00402		0913		" "		—	2		X		X							
BCF/613SB00501		0930		" "		—	2		X		X							
BCF/613SB00502		0953		" "		—	2		X		X							
BCF/613SB00601		1515		" "		—	2		X		X							
BCF/613SB00602		1525		" "		—	2		X		X							
BCF/613SB00701		1545		" "		—	2		X		X							
BCF/613SB00702		1603		" "		—	2		X		X							
BCF/613SB00801		1335		" "		—	2		X		X							
BCF/613SP022T1		0915		8 oz Jar / Empty VOA			4	X	X	X	X	X					X	
BCF/613SP022S1		0905		" "		—	4						X	X	X	X	X	
BCF/613SP022T2	↓	0940	↓	" "	↓	—	4	X	X	X	X	X					X	
BCF/613SP022S2	10/13/99	0940	soil	" "	4°C	—	4						X	X	X	X	X	

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
PB Hardy	10/13/99	Charles Christensen	10/14/99				
PRINTED: PB Hardy	TIME 1630	PRINTED: Charles Christensen	TIME 0830	PRINTED:	TIME	PRINTED:	TIME
COMPANY: Ensafe		COMPANY: LAUCKS		COMPANY:		COMPANY:	

METHOD OF SHIPMENT: FEDEX
SHIPMENT NO. 914 795 922 305
SEND RESULTS TO: Ensafe

COMMENTS: DOQ Level III + TICs

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CHAIN OF CUSTODY RECORD

Amended COC 10/14/99
9910374 EN019

COC NO: 259
PO NO: 1840
REL NO: 36
LAB NAME: Laucks

CLIENT: CNC
LOCATION: ADC 613 - Zone F
SAMPLERS: (SIGNATURE) PB Hardy

PROJECT MANAGER: C Vernoy
TELE/FAX NO.: (843) 884-0029 ph
(843) 856-0107

ANALYSIS REQUIRED

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	5030A	Metals									REMARKS
UBCF/6135B00802	10/13/99	1445	Soil	8oz JAR	4°C	—	2	X	X									
UBCF/6135B00901	↑	1410	↑	" "	4°C	—	2	X	X									
UBCF/6135B00902		1425		" "	↑	—	2	X	X									
UBCF/6135B01001		1545		" "		—	2	X	X									
UBCF/6135B01002		1600		" "		—	2	X	X									
UBCF/6135B01401		1600		" "		—	2	X	X									
UBCF/6135B01402		1615		" "		—	2	X	X									
UBCF/6135B01601		1025		" "		—	2	X	X									
UBCF/6135B01602		1040		" "		—	2	X	X									
UBCF/6135B01701		1350		" "		—	2	X	X									Hold
UBCF/6135B01702		1410		" "		—	2	X	X									Hold
UBCF/6135B01801		1325		" "		—	2	X	X									Hold
UBCF/6135B01802		1330		" "		—	2	X	X									Hold
UBCF/6135B01901		1135		" "		—	2	X	X									Hold
UBCF/6135B01902	↓	1145	↓	" "	↓	—	3	X	X									Hold
UBCF/6138200	10/13/99	1108	Soil	" "	4°C	—	2	X	X									Hold

RELINQUISHER:	DATE	RECEIVER:	DATE	RELINQUISHER:	DATE	RECEIVER:	DATE
PB Hardy	10/13	Charles Christenser	10/14/99				
PRINTED: PB Hardy	TIME 1830	PRINTED:	TIME 0830	PRINTED:	TIME	PRINTED:	TIME
COMPANY: ENSafe		COMPANY: Laucks		COMPANY:		COMPANY:	

METHOD OF SHIPMENT: Fedex
SHIPMENT NO. 814 595 922 305
SEND RESULTS TO: ENSafe

COMMENTS: DQ Level III + TICs (Hold Analyses where marked)

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

CHAIN OF CUSTODY RECORD

Amended COC 10/14/99
9910374 EN09

COC NO:
PO NO: 1840
REL NO: 36
LAB NAME: Lauck's Testing Lab

TOTAL P.85

CNC
AOC 613-Zone F
PROJECT MANAGER C. Vernoy
TELE/FAX NO. (843) 884-0029 ph
(843) 856-0107
S: (SIGNATURE) PB Hardy

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	8100A	Metals	VOA	PEST/PCB	CYANIDE	REMARKS
613SB02002	10/12/99	1123	Soil	8 oz Jars		—	2	X	X				Hold
F/613SB02101	↑	0950	↑	" "	↑	—	2	X	X				Hold
613SB02102	↓	1015	↓	" "	↓	—	2	X	X				Hold
613SB02201	↓	1032	↓	" "	↓	—	2	X	X				Hold
613SB02202	10/12/99	1052	Soil	" "	@4°C	—	2	X	X				Hold
613DB01501	10/12/99	10:45	Water	40 ml VOA 1L Amber poly	4°C	*	9	X	X	X	X	X	Soil DI Blank
613TB00601	10/12/99	1130	↓	40 ml VOA	↓	*HCL	3			X			Trip Blank

SHER: PB Hardy	DATE 10/13/99	RECEIVER: Chr Chrs	DATE 10/14/99	RELINQUISHER:	DATE	RECEIVER:	DATE
PB Hardy	TIME 1830	PRINTED: Charles Christensen	TIME 0830	PRINTED:	TIME	PRINTED:	TIME
Engate		COMPANY: LAUCKS		COMPANY:		COMPANY:	

DO OF SHIPMENT: Fedex
MENT NO. 7785922315
RESULTS TO: Engate

COMMENTS: DOQ Level III + TICs (Hold Analysis where marked)

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

1/90

CHAIN OF CUSTODY RECORD

Amended CC 10/14/99
9910397 END 19

COC NO:
PO NO: 1840
REL NO: 36
LAB NAME: Lauck's Testing Lab

CLIENT: CNC
LOCATION: ABC 613-Zone F
SAMPLERS: (SIGNATURE) PB Hardy
PROJECT MANAGER: C. Vernoy
TELE/FAX NO.: (843) 884-0029 ph
(843) 856-0107

ANALYSIS REQUIRED

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	SVOA	Metals	VOA	PEST/PCB	CYANIDE					REMARKS
CF/613SB02002	10/12/99	1123	Soil	8 oz Jars		—	2	X	X								Hold
BCF/613SB02101	↑	0950	↑	" "	↑	—	2	X	X								Hold
CF/613SB02102	↓	1015		" "		—	2	X	X								Hold
CF/613SB02201		1032	↓	" "	↓	—	2	X	X								Hold
CF/613SB02202	10/12/99	1050	Soil	" "	4°C	—	2	X	X								Hold
CF/613DB01501	10/12/99	10:45	Water	40 ml VOA 1L Amber poly	4°C	*	9	X	X	X	X	X					Soil DI Blank
CF/613TB00601	10/12/99	1130	↓	40 ml VOA	↓	*HCL	3			X							Trip Blank

RELINQUISHER:	DATE	TIME	RECEIVER:	DATE	TIME	RELINQUISHER:	DATE	TIME	RECEIVER:	DATE	TIME
PB Hardy	10/13/99	1830	Charles Christensen	10/14/99	0830						
PRINTED: PB Hardy			PRINTED: Charles Christensen			PRINTED:			PRINTED:		
COMPANY: EnSafe			COMPANY: LAUCKS			COMPANY:			COMPANY:		

METHOD OF SHIPMENT: Fedex
SHIPMENT NO. 814795922305
SEND RESULTS TO: EnSafe

COMMENTS: DOQ Level III + TICs (Hold Analysis where marked)

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

TOTAL P.05

2
1/98

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	EN020
Date:	November 19, 1999
Client Name:	Ensafe
Project/Site Name:	Charleston Zone F
Date Sampled:	October 14, 1999
Number of Samples:	40 Non-Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Laucks Testing Laboratories
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, SPLP Volatiles, Semivolatiles, SPLP Semivolatiles, Pesticides/PCBs, SPLP Pesticides/PCBs, Metals, SPLP Metals, Cyanide, SPLP Cyanide and Total Organic Carbon

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Searfoss

Paul B. Humburg, President

11-24-99.

Date

4127 Plaza 94 South • St. Charles, MO 63304
(636) 936-1332 • Fax (636) 936-1335

SDG# EN020

Samples and Fractions Reviewed

Sample Identifications — Analytical Fractions

ENSAFE ID	MATRIX	VOA		SPLP-V		SVOA		SPLP-SV		P/P		SPLP-P/P		MET		SPLP-MET		CN		SPLP-CN		TOC	
616SB002T1	SOIL		X				X				X				X				X				X
616SB002T2	SOIL		X				X				X				X				X				X
617SB003T1	SOIL		X				X				X				X				X				X
617SB003T2	SOIL		X				X				X				X				X				X
617SB004T1	SOIL		X				X				X				X				X				X
617SB004T2	SOIL		X				X				X				X				X				X
619SB001T1	SOIL		X				X				X				X				X				X
619SB001T2	SOIL		X				X				X				X				X				X
619SB004T1	SOIL		X				X				X				X				X				X
619SB004T2	SOIL		X				X				X				X				X				X
619SB015T1	SOIL		X				X				X				X				X				X
619SB015T2	SOIL		X				X				X				X				X				X
109SB004T1	SOIL		X				X				X				X				X				X
109SB004T2	SOIL		X				X				X				X				X				X
109SB005T1	SOIL		X				X				X				X				X				X
109SB005T2	SOIL		X				X				X				X				X				X
607SB016T1	SOIL		X				X				X				X				X				X
613SP027T1	SOIL		X				X				X				X				X				X
613SP027T2	SOIL		X				X				X				X				X				X
109SB004S1	SOIL				X				X				X				X				X		
109SB004S2	SOIL				X				X				X				X				X		
109SB005S1	SOIL				X				X				X				X				X		
109SB005S2	SOIL				X				X				X				X				X		
607SB016S1	SOIL				X				X				X				X				X		
613SP027S1	SOIL				X				X				X				X				X		
613SP027S2	SOIL				X				X				X				X				X		
616SB002S1	SOIL				X				X				X				X				X		
616SB002S2	SOIL				X				X				X				X				X		
617SB003S1	SOIL				X				X				X				X				X		
617SB003S2	SOIL				X				X				X				X				X		
617SB004S1	SOIL				X				X				X				X				X		
617SB004S2	SOIL				X				X				X				X				X		
619SB001S1	SOIL				X				X				X				X				X		
619SB001S2	SOIL				X				X				X				X				X		
619SB004S1	SOIL				X				X				X				X				X		
619SB004S2	SOIL				X				X				X				X				X		
619SB015S1	SOIL				X				X				X				X				X		
619SB015S2	SOIL				X				X				X				X				X		
611SB00901	SOIL														X								
611SB00902	SOIL														X								
Total Billable Samples (Water/Soil)		0	19	0	19	0	19	0	19	0	19	0	19	0	21	0	19	0	19	0	19	0	19

VOA= Volatiles
SPLP-V= SPLP Volatiles
SVOA= Semivolatiles
SPLP-SV= SPLP Semivolatiles
P/P= Pesticides/PCBs
SPLP-P/P = SPLP Pesticides/PCBs

MET= Metals
SPLP-MET= SPLP Metals
CN= Cyanide
SPLP-CN= SPLP Cyanide
TOC= Total Organic Carbon

DATA ASSESSMENT NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8260B for GC/MS Volatiles; the National Functional Guidelines for Organic Data Validation, 2/94, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # EN020

A validation was performed on the Volatile Data from SDG EN020. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Calibration
	•	Blanks
	•	Internal Standard Performance
	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Calibrations

The initial calibration analyzed 07/02/99 on Instrument ORCA exhibited one (1) compound with a %RSD greater than 15% for which qualifications were required. For the following samples and non-compliant compound, the reported positive results are qualified as estimated, J.

616SB002T2	carbon disulfide (21.6%)
617SB003T2	
617SB004T2	
619SB001T2	
619SB004T2	
619SB015T1	
109SB004T2	
109SB005T1	
109SB005T2	
613SP027T1	
613SP027T2	

The continuing calibration F1019003.D exhibited one (1) compound with a RF less than 0.05. For the following samples and non-compliant compound, the reported positive results are qualified as estimated, J, and the non-detect results are rejected, UR.

619SB001S2	acetone (0.049)
619SB001S1	
619SB015S1	
619SB004S2	
619SB004S1	
619SB015S2	
109SB005S1	
109SB005S2	
109SB004S1	
109SB004S2	
616SB002S1	
616SB002S2	
607SB016S1	
617SB004S1	
617SB003S1	
617SB004S2	
613SP027S2	

Calibrations (continued)

The continuing calibration F1020010.D exhibited one (1) compound with a RF less than 0.05. For the following samples and non-compliant compound, the reported positive results are qualified as estimated, J, and the non-detect results are rejected, UR.

617SB003S2	acetone (0.045)
613SP027S1	

Blanks

The method blanks and one of the SPLP blanks associated with the field samples in this SDG exhibited contamination for which qualifications were required. The end user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes, dilution factors, or percent moisture as associated samples. These factors must be taken into considerations when applying the 5X and 10X criteria to field samples.

Associated blank	Compound	Concentration	Action Level
VBLKO1	methylene chloride	4 ug/Kg	40 ug/Kg
VBLKO2	methylene chloride	5 ug/Kg	50 ug/Kg
VBLKO4	methylene chloride	9 ug/Kg	90 ug/Kg
	acetone	4 ug/Kg	40 ug/Kg
T101799ZHE	methylene chloride	20 ug/L	200 ug/L

Samples	Compound	Qualifications
619SB001T2	methylene chloride	U
619SB004T2		
619SB015T1		
109SB005T1		
109SB004T1		
616SB002T1		
616SB002T2		
607SB016T1		
109SB005T2		
617SB003T1		
617SB004T2		
617SB003T2		
613SP027T1		

Blanks (continued)

Samples	Compound	Qualifications
613SP027T2 619SB004T1RE	methylene chloride	U
619SB001T1 619SB015T2 109SB004T2 617SB004T1 109SB004S1 109SB004S2 109SB005S1 109SB005S2 607SB016S1 613SP027S2 616SB002S1 616SB002S2 617SB003S1 617SB004S1 619SB001S1 619SB001S2 619SB004S1 619SB015S1 619SB015S2	methylene chloride	CRQL
619SB004T1RE	acetone	U

Internal Standards

The following sample exhibited non-compliant EICP area recoveries below the QC limits for the noted internal standards. All reported positive and non-detect results are qualified as estimated, J/UJ.

619SB004T2 109SB004T1 616SB002T2 617SB003T2 613SP027T2	1,4-dichlorobenzene-d4

Internal Standards (continued)

The following sample exhibited non-compliant EICP area recoveries below the QC limits for the noted internal standards. All reported positive and non-detect results are qualified as estimated, J/UJ.

619SB001T2	chlorobenzene-d5
109SB005T1	1,4-dichlorobenzene-d4

619SB015T1	fluorobenzene
109SB005T2	chlorobenzene-d5
617SB004T2	1,4-dichlorobenzene-d4
613SP027T1	

Surrogate Recoveries

The following samples exhibited a surrogate recovery above the QC limits. The reported positive results are qualified as estimated, J.

Sample	Surrogate	%R
617SB003T2	4-bromofluorobenzene	146%
613SP027T2	4-bromofluorobenzene	141%

Compound Quantitation

For the following samples, the reported results are not used in favor of the results reported from the original analysis of the samples. Both analyses of the sample exhibited similar internal standard area recoveries.

619SB001T2RE
619SB004T2RE
619SB015T1RE
109SB005T1RE
109SB004T1RE
616SB002T2RE
109SB005T2RE
617SB004T2RE
617SB003T2RE
613SP027T1RE
613SP027T2RE

Compound Quantitation (continued)

For the following sample, the reported results are not used in favor of the results reported from the RE analysis of the sample. The RE analyses of the sample exhibited acceptable internal standard area recoveries.

619SB004T1

System Performance and Overall Assessment

The data, as reported, required qualifications/rejections.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

L = Result is estimated and biased low.

K = Result is estimated and biased high.

R = Result is rejected and unusable

D = Result value is based on dilution analysis

BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
616SB002T2	carbon disulfide (21.6%)	+	J
617SB003T2			
617SB004T2			
619SB001T2			
619SB004T2			
619SB015T1			
109SB004T2			
109SB005T1			
109SB005T2			
613SP027T1			
613SP027T2			
619SB001S2	acetone (0.049)	+/-	J/UR
619SB001S1			
619SB015S1			
619SB004S2			
619SB004S1			
619SB015S2			
109SB005S1			
109SB005S2			
109SB004S1			
109SB004S2			
616SB002S1			
616SB002S2			
607SB016S1			
617SB004S1			
617SB003S1			
617SB004S2			
613SP027S2			
617SB003S2	acetone (0.045)	+/-	J/UR
613SP027S1			

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
619SB001T2	methylene chloride	+B	U
619SB004T2			
619SB015T1			
109SB005T1			
109SB004T1			
616SB002T1			
616SB002T2			
607SB016T1			
109SB005T2			
617SB003T1			
617SB004T2			
617SB003T2			
613SP027T1			
613SP027T2			
619SB004T1RE			
619SB001T1	methylene chloride	+B	CRQL
619SB015T2			
109SB004T2			
617SB004T1			
109SB004S1	methylene chloride	+	CRQL
109SB004S2			
109SB005S1			
109SB005S2			
607SB016S1			
613SP027S2			
616SB002S1			
616SB002S2			
617SB003S1			
617SB004S1			
619SB001S1			
619SB001S2			
619SB004S1			
619SB015S1			
619SB015S2			
619SB004T1RE	acetone	+B	U

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
	All associated with:		
619SB004T2	1,4-dichlorobenzene-d4	+/-	J/UJ
109SB004T1			
616SB002T2			
617SB003T2			
613SP027T2			
	All associated with:		
619SB001T2	chlorobenzene-d5	+/-	J/UJ
109SB005T1	1,4-dichlorobenzene-d4		
	All associated with:		
619SB015T1	fluorobenzene	+/-	J/UJ
109SB005T2	chlorobenzene-d5		
617SB004T2	1,4-dichlorobenzene-d4	+/-	J/UJ
613SP027T1			
617SB003T2	All Compounds	+	J
613SP027T2			
619SB001T2RE	All Compounds	+/-	Do Not Use
619SB004T2RE			
619SB015T1RE			
109SB005T1RE			
109SB004T1RE			
616SB002T2RE			
109SB005T2RE			
617SB004T2RE			
617SB003T2RE			
613SP027T1RE			
613SP027T2RE			
619SB004T1			

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8270C for GC/MS Semivolatiles; the National Functional Guidelines for Organic Data Validation, 2/94, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # EN020

A validation was performed on the Semivolatile Data from SDG EN020. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Calibration
	•	Blanks
	•	Internal Standard Performance
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Calibrations

The initial calibration analyzed 10/11/99 on Instrument 5970Z exhibited two (2) compounds with %RSDs greater than 15% for which qualifications were required. For the following samples and non-compliant compounds, the reported positive results are qualified as estimated, J.

109SB004S1 benzoic acid (36.9%)

Calibrations (continued)

The initial calibration analyzed 10/11/99 on Instrument 5970Z exhibited two (2) compounds with %RSDs greater than 15% for which qualifications were required. For the following samples and non-compliant compounds, the reported positive results are qualified as estimated, J.

109SB005T1	benzo(k)fluoranthene (17.4%)
613SP027T1	
109SB004T2	
613SP027T2	
617SB004T2	
617SB003T2	

The continuing calibration standard Z1021011.D exhibited one (1) compound with a %D greater than 50% but less than 90%. For the following samples and non-compliant compound, the reported positive and non-detect results are qualified as estimated, J/UJ.

619SB001T2	benzoic acid (61.5%)
619SB001T1	
619SB004T1	
619SB004T2	
619SB015T1	
619SB015T2	
109SB005T1	
109SB005T2	

The continuing calibration standard Z1022009.D exhibited one (1) compound with a %D greater than 25% but less than 50% for which qualifications were required. For the following samples and non-compliant compound, the reported positive results are qualified as estimated, J.

617SB003T2	indeno(1,2,3-cd)pyrene (36.4%)

The continuing calibration standard Z1026002.D exhibited one (1) compound with a %D greater than 25% but less than 50% for which qualifications were required. For the following samples and non-compliant compound, the reported positive results are qualified as estimated, J.

109SB004S1	benzoic acid (30.5%)

Blanks

Two (2) of the three (3) SPLP blanks associated with the field samples in this SDG exhibited contamination for which qualifications were required. The end user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes, dilution factors, or percent moisture as associated samples. These factors must be taken into considerations when applying the 5X and 10X criteria to field samples.

Associated blank	Compound	Concentration	Action Level
SSPLPBLK01	diethylphthalate	3J ug/L	30 ug/L
SSPLPBLK	bis(2-ethylhexyl)phthalate	1J ug/L	10 ug/L

Samples	Compound	Qualifications
109SB005S2 616SB002S1	diethylphthalate	CRQL
619SB001S1 109SB004S1 607SB016S1	bis(2-ethylhexyl)phthalate	CRQL
109SB005S1 617SB003S1 613SP027S2	bis(2-ethylhexyl)phthalate	U

Internal Standards

The following samples exhibited non-compliant EICP area recoveries below the QC limits for the noted internal standards. All reported positive and non-detect results are qualified as estimated, J/UJ.

613SP027T1 613SP027T2	perylene-d12

Compound Quantitation

For the following samples, the reported results are not used in favor of the results reported from the original analyses of the samples. The dilution analyses were not necessary because there were no compounds reported in the lessor dilutions that were above the calibration range.

613SP027T2DL
613SP027T1DL
619SB001T1DL

For the following sample, the E flagged result is not used in favor of the corresponding D flagged result reported in the dilution analysis of the sample. All other results reported in the dilution analysis are not used in favor of the results reported in the lessor dilution of the sample.

617SB003T2

System Performance and Overall Assessment

The data, as reported, required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

L = Result is estimated and biased low.

K = Result is estimated and biased high.

R = Result is rejected and unusable

D = Result value is based on dilution analysis

BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
109SB004S1	benzoic acid (36.9%)	+	J
109SB005T1 613SP027T1 109SB004T2 613SP027T2 617SB004T2 617SB003T2	benzo(k)fluoranthene (17.4%)	+	J
619SB001T2 619SB001T1 619SB004T1 619SB004T2 619SB015T1 619SB015T2 109SB005T1 109SB005T2	benzoic acid (61.5%)	+/-	J/UJ
617SB003T2	indeno(1,2,3-cd)pyrene (36.4%)	+	J
109SB004S1	benzoic acid (30.5%)	+	J
109SB005S2 616SB002S1	diethylphthalate	+	CRQL
619SB001S1 109SB004S1 607SB016S1	bis(2-ethylhexyl)phthalate	+	CRQL
109SB005S1 617SB003S1 613SP027S2	bis(2-ethylhexyl)phthalate	+	U

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
613SP027T1 613SP027T2	*All associated with* perylene-d12	+/-	J/UJ
613SP027T2DL 613SP027T1DL 619SB001T1DL	All Compounds	+/-	Do not use
617SB003T2	All E flagged compounds	+E	Do not use
617SB003T2DL	All except corresponding D flagged results	+/-	Do Not use

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

PESTICIDE/AROCLORS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC performance, and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 Method 8081A/8082; the National Functional Guidelines for Organic Data Validation, February 1994; and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # EN020

A validation was performed on the Pesticide/Aroclor Data from SDG EN020. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC Performance
	•	Calibration
*	•	Blanks
	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Continuing Calibrations

The continuing calibration analyzed on 10/20/99 at 05:46 exhibited one (1) compound with a %D greater than 15% and less than 50% and required qualifications. For the following sample and non-compliant compound, the positive results are qualified as estimated, J.

109SB005T1	Methoxychlor (17.0%)

The continuing calibration analyzed on 10/20/99 at 17:02 exhibited one (1) compound with a %D greater than 15% and less than 50% and required qualifications. For the following sample and non-compliant compound, the positive results are qualified as estimated, J.

109SB005T1DL	4,4'-DDE (-17.2%)

The continuing calibration analyzed on 10/22/99 at 16:43 exhibited one (1) compound with a %D greater than 15% and less than 50% and required qualifications. For the following samples and non-compliant compound, the positive results are qualified as estimated, J.

613SP027T2DL	4,4'-DDD (-15.8%)
617SB003T2	
617SB004T2	

The continuing calibration analyzed on 10/22/99 at 17:28 exhibited one (1) compound with a %D greater than 15% and less than 50% and required qualifications. For the following sample and non-compliant compound, the positive results are qualified as estimated, J.

617SB003T2	4,4'-DDE (-17.8%)

The continuing calibration analyzed on 10/23/99 at 03:15 exhibited one (1) compound with a %D greater than 15% and less than 50% and required qualifications. For the following sample and non-compliant compound, the positive results are qualified as estimated, J.

613SP027T2	4,4'-DDE (-16.9%)

Surrogate Recoveries

The samples listed below exhibited high DCB recoveries. The positive results are qualified as estimated, J.

Sample ID	Surrogate	% Recovery
109SB005T1	DCB	275%
109SB005T1DL	DCB	335%

Compound Quantitation

Several samples exhibited column quantitation %Ds greater than 40%. The following guidelines were used to qualify the data:

1. No qualifications are required for positive sample results which exhibited column quantitation differences < 40%. The "P" flag is removed from the result.

2. The positive sample result which exhibited a column quantitation difference >40%, but ≤100% is qualified as estimated, J.

3. The positive single component pesticide sample result which exhibited a column quantitation difference > 100% and is < 10X the respective compound CRQL, is qualified as non-detect, U. (All multi-component results are exempt from this rule.)

4. The positive single component pesticide sample result which exhibited a column quantitation difference >100% and >10X the respective compound CRQL, is qualified as presumptively present at an estimated concentration, NJ. (All multi-component results are exempt from this rule.)

5. The positive multi-component pesticide sample result which exhibited a column quantitation difference > 100% and < 10% the respective multi-component CRQL is qualified as presumptively present at an estimated concentration, NJ.

Compound Quantitation, Continued

The following samples and compounds have been qualified for high column quantitation %Ds.

Sample ID	Compound	%D	Lab Qual.	HESI Qual.	Ref. #
109SB005T1	4,4'-DDE	71.4%	P	J	2
	Methoxychlor	28.3%	P		1
109SB005T1DL	Gamma-Chlordane	223.9%	P	NJ	4
109SB005T2	4,4'-DDT	35.5%	P		1
109SB004T1	Aroclor-1260	44.7%	P	J	2
607SB016T1	4,4'-DDD	150.9%	P	U	3
613SP027T1	Alpha-Chlordane	82.2%	P	J	2
	Gamma-Chlordane	525.9%	P	NJ	4
613SP027T2	4,4'-DDE	372%	P	NJ	4

Several samples were diluted to accurately quantitate target compounds. For the following samples, the results for the E-flagged compounds are replaced with the corresponding results from the dilution analysis. All other results from the dilution analysis are not used.

109SB005T1
613SP027T1
613SP027T1DL1
613SP027T2

For the following sample, the results for the dilution analysis are not used in favor of the results reported from the original analysis as the original analysis does not exhibit positive results above the calibration range of the instrument.

607SB016T1DL

Compound Quantitation, Continued

Sample 613SP027T1 exhibited a positive result above the calibration range of the instrument for Gamma-Chlordane. Gamma-Chlordane was not detected in the dilution analysis. For the following sample and E-flagged compound, the positive result is qualified as estimated, J.

613SP027T1	Gamma-Chlordane

System Performance and Overall Assessment

The data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

NJ = Result is considered presumptively present at an estimated concentration

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
109SB005T1	Methoxychlor	+	J
109SB005T1DL	4,4'-DDE	+	J
613SP027T2DL 617SB003T2 617SB004T2	4,4'-DDD	+	J
617SB003T2	4,4'-DDE	+	J
613SP027T2	4,4'-DDE	+	J
109SB005T1 109SB005T1DL	ALL	+	J
ALL	All P < 40%	+	
ALL	All P > 40% But ≤ 100%	+	J
ALL	single component pests All P > 100% And < 10X CRQL	+	U
ALL	single component pests All P > 100% And > 10X CRQL	+	NJ
ALL	multi-component pests All P> 100% And < 10X CRQL	+	NJ
109SB005T1 613SP027T1 613SP027T1DL1 613SP027T2	All E-Flagged	+E	D
109SB005T1DL 613SP027T1DL 613SP027T2DL	All except corresponding D-Flagged results	+/-	not used

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
607SB016T1DL	ALL	+/-	not used
613SP027T1	Gamma-Chlordane	+E	J

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE
METALS (SOILS AND SPLP) AND WET CHEMISTRY

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 methods: the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDGs # EN020

A validation was performed on the Metals for soils and splp and wet chemistry Data from SDG EN020. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Calibrations
	•	Blanks
*	•	Interferences
	•	Matrix Spike Recovery
	•	Matrix Duplicates
*	•	Field Duplicates
*	•	Laboratory Control Samples
	•	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation and calibration blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Iron	2.42 mg/kg	no impact
Zinc	0.40 mg/kg	no impact

The USEPA requires that all sample values below five times the preparation or calibration blank contamination be qualified as non-detect, "U".

The preparation blanks exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Cadmium	-0.06 mg/kg	all soil samples below 0.6 mg/kg
Cobalt	-0.06 mg/kg	no impact
Magnesium	-4.43 mg/kg	no impact
Thallium	-0.25 mg/kg	all soil samples below 2.5 mg/kg
Cadmium	-0.4 ug/l	all splp samples below 4.0 ug/l
Copper	-1.0 ug/l	all splp samples below 10.0 ug/l
Magnesium	-29.3 ug/l	no impact
Manganese	-0.3 ug/l	all splp samples below 3.0 ug/l

This reviewer qualifies all samples results below 10 times the absolute value of the negative blank value.

Matrix Spike Recovery results

The matrix spike recovery for soils for Thallium (0%) was below 30%. All positive results are qualified as estimated, "J" and all non-detect results are rejected, "UR".

The matrix spike recovery for soils for Antimony (47%), Chromium (49%) and Zinc (63%) and for splp samples Silver (63%) were below the lower control limits (>30% but <75%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

Matrix Duplicate results

The matrix duplicate RPD results for splp samples for Zinc (128%) is greater than 35% and Chromium and Iron were greater than the CRDL. All positive results are qualified as estimated, "J".

Serial Dilution recovery results

The serial dilution results for soils for Arsenic, Calcium, Magnesium and Potassium and for splp samples for Potassium were greater than 10%. All positive results are qualified as estimated, "J".

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B". Value is below the CRDL but greater than the IDL.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all soil samples below 0.6 mg/kg	Cd.	+/U	J/UJ
all soil samples below 2.5 mg/kg	Tl.		
all splp samples below 4.0 ug/l	Cd.		
all splp samples below 10.0 ug/l	Cu.		
all splp samples below 3.0 ug/l	Mn.		
all soil samples	Tl.	+	J
		U	UR
all soil samples	Sb, Cr and Zn.	+/U	J/UJ
all splp samples	Ag.		
all splp samples	Zn, Cr and Fe.	+	J
all soil samples	As, Ca, Mg and K.	+	J
all splp samples	K.		
all "B" results	all analytes	B	J

ENSAFE

CHAIN OF CUSTODY RECORD

Amended COC 10/15/99

PROJECT/JOB NO: 29060015 '2000
COC NO:
PO NO: 1840
REL NO: 36
LAB NAME: Lauck's Testing Labs

Zone F
PROJECT MANAGER C. Vernay
TELE/FAX NO. (843)884-0029
(843)856-0107 Fax

ANALYSIS REQUIRED

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	VOA	SVOA/TEST/PCB	Metals/Cyanide	SPLP VOA	SPLP SVOA/TEST/PCB	SPLP Metals/Cyanide	REMARKS
E/1019SB001S2	10-14-99	1335	Soil	8 oz. Glass	4°C	—	3				✓	✓	✓	
E/1019SB001T2	10-14-99	1335			"			✓	✓	✓				
E/1019SB001T1	10-14-99	1320			"			✓	✓	✓				
E/1019SB001S1	10-14-99	1320			"						✓	✓	✓	
E/1019SB004T1	10-14-99	1310			"			✓	✓	✓				
E/1019SB015S1	10-14-99	1105			"						✓	✓	✓	
E/1019SB004S2	10-14-99	1355			"						✓	✓	✓	
CF/1019SB004S1	10-14-99	1310			"						✓	✓	✓	
CF/1019SB004T2	10-14-99	1355			"			✓	✓	✓				
F/1019SB015S2	10-14-99	1440			"						✓	✓	✓	
CF/1019SB015T1	10-14-99	1105			"			✓	✓	✓				
CF/1019SB015T2	10-14-99	1440			"			✓	✓	✓				
CF/1095B005S1	10-14-99	0915			"						✓	✓	✓	
CF/1095B005T1	10-14-99	0915			"			✓	✓	✓				
CF/1095B005S2	10-14-99	0925			"						✓	✓	✓	
CF/1095B005T2	10-14-99	0925			"			✓	✓	✓				

RELINQUISHER	DATE	TIME	RECEIVER	DATE	TIME	RELINQUISHER	DATE	TIME	RECEIVER	DATE	TIME
PB Hardy	10/14/99	1630	Pam Johnson	10/15/99	0830						
PB Hardy			PRINTED: PAM R JOHNSON			PRINTED:			PRINTED:		
EnSafe			COMPANY: Lauck's			COMPANY:			COMPANY:		

MODE OF SHIPMENT: Fed Ex
SHIPMENT NO. 8147959 22279
SEND RESULTS TO: EnSafe

COMMENTS:

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE

ENSAFE

CHAIN OF CUSTODY RECORD

Amended COC 10/15/99

PROJECT/JOB NO: [illegible]
COC NO:
PO NO: 1640
REL NO: 36
LAB NAME: Lancks testing Labs

PROJECT MANAGER: C Vernay
TELE/FAX NO.: (843) 884-0029
(843) 856-0107 fax

ATION: [illegible] Zone F
PLERS: (SIGNATURE): [illegible]

ANALYSIS REQUIRED

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	VOA	SVOA/PEST/PCB	Metals/Cyanide/TOC	EPA VOA	SPLP SVOA/PEST/PCB	SPLP Metals/Cyanide					REMARKS
CF/1095B00451	10-14-99	0815	Soil	8 oz. Glass	4°C	—	3				✓	✓	✓					
CF/1095B00452		0835					3				✓	✓	✓					
CF/1095B00477		0815					3	✓	✓	✓								
CF/1095B00478		0835					3	✓	✓	✓								
BCF/1095B00277		1635					3	✓	✓	✓								
BCF/1095B00278		1635					3				✓	✓	✓					
BCF/1095B00252		1645					3	✓	✓	✓								
BCF/1095B00253		1645					3				✓	✓	✓					

10/14/99

RELINQUISHER	DATE	RECEIVER	DATE	RELINQUISHER	DATE	RECEIVER	DATE
RB Hardy	10/14/99	Pam Johnson	10/15/99				
PRINTED: DB Hardy	TIME 1930	PRINTED: PAM R. JOHNSON	TIME 0830	PRINTED:	TIME	PRINTED:	TIME
COMPANY: EnSafe		COMPANY: Lancks		COMPANY:		COMPANY:	

METHOD OF SHIPMENT: Fed Ex
SHIPMENT NO.: 8147299 22279
SEND RESULTS TO: EnSafe

COMMENTS:

ANALYTICAL DATA RECEIVED BY (INITIALS/DATE)

ENSCIE2

991, 113 EN020

ENSAFE

KNOXVILLE, TN
PENSACOLA, FL

CHAIN OF CUSTODY RECORD

PROJECT/JOB NO: 2906 001 08420
COC NO:
PO NO: 18C
REL NO: 36
LAB NAME: LANCKS Testing Labs

ZONE F

C. Vernoy

PROJECT MANAGER [illegible]

ATION NAS CHARLESTON

TELE/FAX NO. (843) 884-0029
(843) 856-0107

PLERS: (SIGNATURE) PB Hardy

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	METALS	VOA	SVOA	PEST	PCB	CYANIDE	TOC	SPLP-VOA & SPLP-SVOA	SPLP PEST & SPLP-PCB	SPLP METALS & SPLP CYANIDE	REMARKS
CF/611SB01201	10-14-99	1348	SOIL	8 oz. GLASS	4°C	NONE	1	X										HOLD
CF/611SB01202	10-14-99	1402	↓	↓	↓	↓	1	X										HOLD
CF/611SB00901	↓	1415	↓	↓	↓	↓	1	X										
CF/611SB00902	↓	1425	↓	↓	↓	↓	1	X										
CF/607SB016T1	10-14-99	1613	SOIL	8 oz. GLASS/ENC	4°C	NONE	5	X	X	X	X	X	X	X				
CF/607SB016S1	↓	1613	↓	8 oz. GLASS	↓	↓	3								X	X	X	
CF/617SB004S1	10-14-99	1642	SOIL	8 oz. GLASS/~~ENC~~	4°C	NONE	3								X	X	X	
CF/617SB004T1	↓	1642	↓	~~ENC~~ 8 oz. GLASS	↓	↓	5	X	X	X	X	X	X	X				
CF/617SB003T1	10-14-99	1650	SOIL	8 oz. GLASS/ENC	4°C	NONE	5	X	X	X	X	X	X	X				
CF/617SB003S1	↓	1650	↓	8 oz. GLASS	↓	↓	3								X	X	X	
CF/617SB004T2	10-14-99	1700	SOIL	8 oz. GLASS/ENC	4°C	NONE	5	X	X	X	X	X	X	X				
CF/617SB004S2	↓	1700	↓	8 oz. GLASS	↓	↓	3								X	X	X	
CF/617SB003T2	10-14-99	1715	SOIL	8 oz. GLASS/ENC	4°C	NONE	5	X	X	X	X	X	X	X				
CF/617SB003S2	↓	1715	↓	8 oz. GLASS	↓	↓	3								X	X	X	

QUISHER: PB Hardy	DATE 10/14/99	RECEIVER: [signature]	DATE 10/15/99	RELINQUISHER:	DATE	RECEIVER:	DATE
ED: PB Hardy	TIME 1830	PRINTED: PAM R. JOHNSON	TIME 0830	PRINTED:	TIME	PRINTED:	TIME
NY: Ensafe		COMPANY: Lancks		COMPANY:		COMPANY:	

THOD OF SHIPMENT: FEDEX
PMENT NO: 814 7959 22279
RESULTS: Ensafe

COMMENTS:

9910 '3 EN020

CHAIN OF CUSTODY RECORD

PROJECT/JOB NO: 2906.01084200
COC NO: 2906.01084200.2
PO NO: 1840
REL NO: 36
LAB NAME: Laucks Testing Labs

CLIENT: CNC
LOCATION: Zone F
SAMPLERS: (SIGNATURE) PB Hardy

PROJECT MANAGER: C. Verney
TELE/FAX NO. (843) 884-0029 - ph
(843) 856-0107 - fax

ANALYSIS REQUIRED

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	VOA	SVOA	Pest/PCB	Metals/TOC	Cyanide	SPLP VOA	SPLP SVOA	SPLP Pest/PCB	SPLP Metals	SPLP Cyanide	REMARKS
BCF6135P027T1	10/14/99	1225	Soil	8oz Jar/Encore	4°C	—	5	X	X	X	X	X						
BCF6135P027S1	"	1225	"	8oz Jar	"	—	3						X	X	X	X	X	
BCF6135P027E2	"	1245	"	8oz Jar/Encore	"	—	5	X	X	X	X	X						
BCF6135P027S2	"	1245	"	8oz Jar	"	—	3						X	X	X	X	X	

RELINQUISHER	DATE	TIME	RECEIVER	DATE	TIME
PB Hardy	10/14/99	1830	Pam Johnson	10/15/99	0830
PB Hardy			PAM R. JOHNSON		
EnSafe			Laucks		

RELINQUISHER	DATE	TIME	RECEIVER	DATE	TIME

METHOD OF SHIPMENT: FEDEX
SHIPMENT NO. 814 7959 22279
SEND RESULTS TO: EnSafe

COMMENTS:

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	EN021
Date:	November 22, 1999
Client Name:	Ensafe
Project/Site Name:	Charleston Zone F
Date Sampled:	October 14, 1999
Number of Samples:	30 Non-Aqueous Sample(s) with 0 MS/MSD(s) 1 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Laucks Testing Laboratories
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, SPLP Volatiles, Semivolatiles, SPLP Semivolatiles, Pesticides/PCBs, SPLP Pesticides/PCBs, Metals, SPLP Metals, Cyanide, SPLP Cyanide and Total Organic Carbon

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

for Craig G. Searfoss
Paul B. Humburg, President

11-30-99.
Date

4127 Plaza 94 South • St. Charles, MO 63304

SDG# EN021

Samples and Fractions Reviewed

Sample Identifications — Analytical Fractions

ENSAFE ID	MATRIX	VOA		SPLP-V		SVOA		SPLP-SV		P/P		SPLP-P/P		MET		SPLP-MET		CN		SPLP-CN		TOC	
607SB010T1	SOIL		X				X				X				X				X				X
607SB010T2	SOIL		X				X				X				X				X				X
611SB001T1	SOIL		X				X				X				X				X				X
611SB001T2	SOIL		X				X				X				X				X				X
611SB002T1	SOIL		X				X				X				X				X				X
611SB002T2	SOIL		X				X				X				X				X				X
613SB00201	SOIL						X								X								
613SB00202	SOIL						X								X								
613SB00301	SOIL						X								X								
613CB00301	SOIL						X								X								
613SB00302	SOIL						X								X								
613CB00302	SOIL						X								X								
613SB01201	SOIL						X								X								
613CB01201	SOIL						X								X								
613SB01202	SOIL						X								X								
613CB01202	SOIL						X								X								
613SB01301	SOIL						X								X								
613CB01301	SOIL						X								X								
613SB01302	SOIL						X								X								
613CB01302	SOIL						X								X								
FDSSC097T1	SOIL		X				X				X				X				X				X
FDSSC097T2	SOIL		X				X				X				X				X				X
607SB010S1	SOIL				X				X				X				X				X		
607SB010S2	SOIL				X				X				X				X				X		
611SB001S1	SOIL				X				X				X				X				X		
611SB001S2	SOIL				X				X				X				X				X		
611SB002S1	SOIL				X				X				X				X				X		
611SB002S2	SOIL				X				X				X				X				X		
613TB01301	WATER			X																			
FDSSC097S1	SOIL				X				X				X				X				X		
FDSSC097S2	SOIL				X				X				X				X				X		
Total Billable Samples (Water/Soil)		0	8	1	8	0	22	0	8	0	8	0	8	0	22	0	8	0	8	0	8	0	8

VOA= Volatiles
SPLP-V= SPLP Volatiles
SVOA= Semivolatiles
SPLP-SV= SPLP Semivolatiles
P/P= Pesticides/PCBs
SPLP-P/P= SPLP Pesticides/PCBs

MET= Metals
SPLP-MET= SPLP Metals
CN= Cyanide
SPLP-CN= SPLP Cyanide
TOC= Total Organic Carbon

DATA ASSESSMENT NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8260B for GC/MS Volatiles; the National Functional Guidelines for Organic Data Validation, 2/94, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # EN021

A validation was performed on the Volatile Data from SDG EN021. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Calibration
	•	Blanks
	•	Internal Standard Performance
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

DATA ASSESSMENT NARRATIVE
VOLATILE ORGANICS

PAGE 2

Calibrations

The initial calibration analyzed 10/18/99 on Instrument Flipper exhibited one (1) compound with a RRF less than 0.05. For the following samples and non-compliant compound, the reported positive results are qualified as estimated, J, and the non-detect results are rejected, UR.

All SPLP Samples acetone (0.045)

The continuing calibration F1020010.D exhibited one (1) compound with a RRF less than 0.05. For the following samples and non-compliant compound, the reported positive results are qualified as estimated, J, and the non-detect results are rejected, UR.

All SPLP Samples acetone (0.045)

Blanks

The method blanks associated with the soil samples in this SDG exhibited contamination for which qualifications were required. The end user should note that the action levels indicated for the blank analysis may not involve the same weights, volumes, dilution factors, or percent moisture as associated samples. These factors must be taken into considerations when applying the 5X and 10X criteria to field samples.

Associated blank	Compound	Concentration	Action Level
VBLKO1	methylene chloride	5 ug/Kg	50 ug/Kg
VBLKO2	methylene chloride	9 ug/Kg	90 ug/Kg
	acetone	9 ug/Kg	90 ug/Kg

Samples	Compound	Qualifications
611SB001T1	methylene chloride	U
611SB002T1		
611SB002T1		
611SB002T2		
FDSSC097T1		

Blanks (continued)

Samples	Compound	Qualifications
611SB001T2RE 607SB010T1 607SB010T2 FDSSC097T2RE	methylene chloride	U
611SB001T2RE 607SB010T1 607SB010T2 FDSSC097T2RE	acetone	U

Internal Standards

The following samples exhibited non-compliant EICP area recoveries below the QC limits for the noted internal standards. All reported positive and non-detect results are qualified as estimated, J/UJ.

607SB010T1 FDSSC097T2RE	1,4-dichlorobenzene-d4

Compound Quantitation

For the following samples, the reported results are not used in favor of the results reported from the original or RE analysis of the samples. The samples used exhibited improved or similar internal standard areas.

607SB010T1RE
611SB001T2
FDSSC097T2

System Performance and Overall Assessment

The data, as reported, required qualifications/rejections.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

L = Result is estimated and biased low.

K = Result is estimated and biased high.

R = Result is rejected and unusable

D = Result value is based on dilution analysis

BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
All SPLP Samples	acetone (0.045)	+/-	J/UR
All SPLP Samples	acetone (0.045)	+/-	J/UR
611SB001T1 611SB002T1 611SB002T1 611SB002T2 FDSSC097T1 611SB001T2RE 607SB010T1 607SB010T2 FDSSC097T2RE	methylene chloride	+B	U
611SB001T2RE 607SB010T1 607SB010T2 FDSSC097T2RE	acetone	+B	U
607SB010T1 FDSSC097T2RE	*All associated with* 1,4-dichlorobenzene-d4	+/-	J/UJ
607SB010T1RE 611SB001T2 FDSSC097T2	All compounds	+/-	Do Not Use

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8270C for GC/MS Semivolatiles; the National Functional Guidelines for Organic Data Validation, 2/94, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # EN021

A validation was performed on the Semivolatile Data from SDG EN021. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Calibration
*	•	Blanks
	•	Internal Standard Performance
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
	•	Field Duplicates
*	•	Compound Identification
	•	Compound Quantitation

* - All criteria were met for this parameter.

Calibrations

The continuing calibration D1027002.D exhibited one (1) compound with a %D greater than 20% but less than 50% for. For the following samples and non-compliant compound, the reported positive results are qualified as estimated, J.

607SB010T1	indeno(1,2,3-cd)pyrene (21.1%)
FDSSC097T2	dibenz(a,h)anthracene (24.5%)
	benzo(g,h,i)perylene (25.8%)

Internal Standards

The following samples exhibited non-compliant EICP area recoveries below the QC limits for the noted internal standards. All reported positive and non-detect results are qualified as estimated, J/UJ.

613SB00301	perylene-d12
613CB00302	
613CB00301	chrysene-d12
FDSSC097T2	perylene-d12

Field Duplicates

The field duplicate analysis of the following samples exhibited non-compliant RPDs for the noted compounds. The reported positive results are qualified as estimated, J.

613SB01301	phenanthrene
613CB01301	fluoranthene
	pyrene
	benzo(a)anthracene
	chrysene
	benzo(b)fluoranthene
	benzo(a)pyrene

Compound Quantitation

For the following samples, the reported results are not used in favor of the results reported from the original analyses of the samples. The dilution analyses were not necessary because there were no compounds reported in the lessor dilutions that were above the calibration range.

613CB00301DL
613SB00301DL
613CB00302DL
FDSSC097T2DL

System Performance and Overall Assessment

The data, as reported, required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

L = Result is estimated and biased low.

K = Result is estimated and biased high.

R = Result is rejected and unusable

D = Result value is based on dilution analysis

BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
607SB010T1 FDSSC097T2	indeno(1,2,3-cd)pyrene (21.1%) dibenz(a,h)anthracene (24.5%) benzo(g,h,i)perylene (25.8%)	+	J
613SB00301 613CB00302	*All associated with* perylene-d12	+/-	J/UJ
613CB00301 FDSSC097T2	*All associated with* chrysene-d12 perylene-d12	+/-	J/UJ
613SB01301 613CB01301	phenanthrene fluoranthene pyrene benzo(a)anthracene chrysene benzo(b)fluoranthene benzo(a)pyrene	+	J
613CB00301DL 613SB00301DL 613CB00302DL FDSSC097T2	All Compounds	+/-	Do Not Use

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

Continuing Calibrations

The continuing calibration analyzed on 10/22/99 at 17:28 exhibited one (1) compound with a %D greater than 15% and less than 50% and required qualifications. For the following sample and non-compliant compound, the positive results are qualified as estimated, J.

607SB010T1 4,4'-DDE (-17.8%)

The continuing calibration analyzed on 10/23/99 at 03:15 exhibited one (1) compound with a %D greater than 15% and less than 50% and required qualifications. For the following sample and non-compliant compound, the positive results are qualified as estimated, J.

FDSSC097T2 4,4'-DDE (-16.9%)

Compound Quantitation

Several samples exhibited column quantitation %Ds greater than 40%. The following guidelines were used to qualify the data:

1. No qualifications are required for positive sample results which exhibited column quantitation differences < 40%. The "P" flag is removed from the result.

2. The positive sample result which exhibited a column quantitation difference >40%, but ≤100% is qualified as estimated, J.

3. The positive single component pesticide sample result which exhibited a column quantitation difference > 100% and is < 10X the respective compound CRQL, is qualified as non-detect, U. (All multi-component results are exempt from this rule.)

4. The positive single component pesticide sample result which exhibited a column quantitation difference >100% and >10X the respective compound CRQL, is qualified as presumptively present at an estimated concentration, NJ. (All multi-component results are exempt from this rule.)

5. The positive multi-component pesticide sample result which exhibited a column quantitation difference > 100% and < 10% the respective multi-component CRQL is qualified as presumptively present at an estimated concentration, NJ.

Compound Quantitation, Continued

The following samples and compounds have been qualified for high column quantitation %Ds.

Sample ID	Compound	%D	Lab Qual.	HESI Qual.	Ref. #
FDSSC097T2	Gamma-Chlordane	29.8%	P		1
	4,4'-DDE	33%	P		1
607SB010T1	Gamma-Chlordane	28.8%	P		1

One (1) sample was diluted to accurately quantitate target compounds. For the following sample, the results for the E-flagged compounds are replaced with the corresponding results from the dilution analysis. All other results from the dilution analysis are not used.

FDSSC097T1

System Performance and Overall Assessment

The data required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

NJ = Result is considered presumptively present at an estimated concentration

UR = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
607SB010T1	4,4'-DDE	+	J
FDSSC097T2	4,4'-DDE	+	J
ALL	All P < 40%	+	
ALL	All P > 40% But ≤ 100%	+	J
ALL	single component pests All P > 100% And < 10X CRQL	+	U
ALL	single component pests All P > 100% And > 10X CRQL	+	NJ
ALL	multi-component pests All P> 100% And < 10X CRQL	+	NJ
FDSSC097T1	All E-Flagged	+E	D
FDSSC097T1DL	All except corresponding D-Flagged results	+/-	not used

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non-detect result

DATA ASSESSMENT NARRATIVE
METALS (SOILS AND SPLP) AND TOC

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 methods: the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDGs # EN021

A validation was performed on the Metals for soils and SPLP and TOC Data from SDG EN021. The data was evaluated based on the following parameters.

*	●	Data Completeness
*	●	Holding Times
*	●	Calibrations
	●	Blanks
*	●	Interferences
	●	Matrix Spike Recovery
	●	Matrix Duplicates
*	●	Field Duplicates
*	●	Laboratory Control Samples
	●	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation and calibration blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Calcium	75.4 mg/kg	no impact
Tin	2.16 mg/kg	all soil samples below 10.8 mg/kg
Zinc	0.40 mg/kg	no impact
Antimony	3.0 ug/l	all SPLP samples below 15.0 ug/l
Iron	80.1 ug/l	all SPLP samples below 400 ug/l
Manganese	0.50 ug/l	all SPLP samples below 2.5 ug/l
Zinc	2.2 ug/l	no impact

Tin	3.1 ug/l	all SPLP samples below 15.5 ug/l

The USEPA requires that all sample values below five times the preparation or calibration blank contamination be qualified as non-detect, "U".

Matrix Spike Recovery results

The matrix spike recoveries for soils for Zinc (4%), Chromium (16%) aand Copper (10%) were below 30%. All positive results are qualified as estimated, "J" and all non-detect results are rejected, "UR".

The matrix spike recoveries for soils for Antimony (53%), Manganese (54%) and Nickel (70%) were below the lower control limits (>30% but <75%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

Matrix Duplicate results

The matrix duplicate RPD results for soils for Calcium (129%), Chromium (62%), Cobalt (81%), Copper (101%), Iron (52%), Lead (70%), Zinc (76%) and NIckel (90%) were greater than 35% and for SPLP samples for Zinc was greater than the CRDL. All positive results are qualified as estimated, "J".

Serial Dilution recovery results

The serial dilution results for soils for Calcium, Iron, Magnesium and Iron and for splp samples for Potassium were greater than 10%. All positive results are qualified as estimated, "J".

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B". Value is below the CRDL but greater than the IDL.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all soil samples below 10.8 mg/kg	Sn.	+	U
all SPLP samples below 15.0 ug/l	Sb.		
all SPLP samples below 400 ug/l	Fe.		
all SPLP samples below 2.5 ug/l	Mn.		
all SPLP samples below 15.5 ug/l	Sn.		
all soil samples	Zn, Cr and	+	J
	Cu.	U	UR
all soil samples	Sb, Mn and Ni.	+/U	J/UJ
all soil samples	Ca, Cr, Co, Cu, Fe, Pb, Ni and Zn.	+	J
all SPLP samples	Zn.		
all soil samples	Ca, Fe, Mg and K.	+	J
all SPLP samples	K.		
all "B" results	all analytes	B	J

9910411 ~~EN022~~ 19
EN021

CHAIN OF CUSTODY RECORD

PAGE 5 OF 6

PROJECT/JOB NO: 2906 00108420 00
COC NO:
CO NO: 1840
TEL NO: 36
LAB NAME: Laucks

CA
ON Zone
RS: (SIGNATURE) PB Hardy

PROJECT MANAGER C. Verney
TELE/FAX NO. (843) 884-0029 PH
(843) 856-0107 FAX

ANALYSIS REQUIRED

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	5 VOA	Metals	VOA								REMARKS
F613SB01201	10/14/99	0905	soil	8 oz Jar	4°C	—	2	X	X									
F613CB01201	"	"	"	" "	"	—	2	X	X									
F613SB01202	"	0920	"	" "	"	—	2	X	X									
F613CB01202	"	"	"	" "	"	—	2	X	X									
F613SB01301	"	"	"	" "	"	—	2	X	X									
F613CB01301	"	"	"	" "	"	—	2	X	X									
F613SB01302	"	0950	"	" "	"	—	2	X	X									
F613CB01302	"	"	"	" "	"	—	2	X	X									
F613SB00301	"	1100	"	" "	"	—	2	X	X									
F613CB00301	"	"	"	" "	"	—	2	X	X									
F613SB00302	"	1115	"	" "	"	—	2	X	X									
F613CB00302	"	"	"	" "	"	—	2	X	X									
F613SB00201	"	1130	"	" "	"	—	2	X	X									
F613SB00202	"	1140	"	" "	"	—	2	X	X									
F613TB01301	"	1700	H2O	40 ml VOA	"	—	2			X								Trip Blank

	DATE		DATE		DATE		DATE
HER: PB Hardy	11/14/99	RECEIVER: Pam R. Johnson	10/15/99	RELINQUISHER:		RECEIVER:	
PB Hardy	TIME 1830	PRINTED: PAM R. JOHNSON	TIME 0830	PRINTED:	TIME	PRINTED:	TIME
EnSafe		COMPANY: Laucks		COMPANY:		COMPANY:	

OD OF SHIPMENT: FEDEX
ENT NO. 7147959 22279
RESULTS TO EnSafe

COMMENTS:

9910411 ~~EN022~~ EN021

CHAIN OF CUSTODY RECORD

PAGE 6 OF 6

PROJECT/JOB NO: 290600, 842000

COC NO:

PO NO: 184.0

REL NO: 36

LAB NAME: LANCK'S

CLIENT: U.S. N

LOCATION: Zone F Charleston, SC

SAMPLERS: (SIGNATURE) PB Hardy

PROJECT MANAGER: C. V Crnoy

TELE/FAX NO. (843) 884-0029 ph (843) 856-0107 fax

ANALYSIS REQUIRED

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	VOA	SVOA	PEST	PCB	METALS	CYANIDE	TOC	SPLP VOA & SPLP SVOA	SPLP PEST & SPLP PCB	SPLP METALS & SPLP CYANIDE	REMARKS
F/611SB001T1	10/14/99	0830	SOIL	8oz. Glass/Enc	4°C	None	5	X	X	X	X	X	X	X				
F/611SB001S1		0830		8oz. Glass			3								X	X	X	
CF/611SB001T2		0845		8oz. Glass/Enc			5	X	X	X	X	X	X	X				
CF/611SB001S2		0845		8oz. Glass			3								X	X	X	
CF/611SB002T1		0900		8oz. Glass/Enc			5	X	X	X	X	X	X	X				
CF/611SB002S1		0900		8oz. Glass			3								X	X	X	
CF/611SB002T2		0918		8oz. Glass/Enc			5	X	X	X	X	X	X	X				
CF/611SB002S2		0918		8oz. Glass			3								X	X	X	
CF/FDSS097T1		1100		8oz/Enc			5	X	X	X	X	X	X	X				
CF/FDSS097S1		1100		8oz			3								X	X	X	
CF/FDSS097T2		1115		8oz/Enc			5	X	X	X	X	X	X	X				
CF/FDSS097S2		1115		8oz			3								X	X	X	
CF/607SB010T1		1147		8oz/Enc			5	X	X	X	X	X	X	X				
CF/607SB010S1		1147		8oz			3								X	X	X	
CF/607SB010T2		1200		8oz/Enc			5	X	X	X	X	X	X	X				
CF/607SB010S2		1200		8oz			3								X	X	X	

RELINQUISHER:	DATE	RECEIVER:	DATE	RELINQUISHER:	DATE	RECEIVER:	DATE
PB Hardy	10/14/99	[signature]	10/16/99				
PRINTED: PB Hardy	TIME 1830	PRINTED: PAM R. JOHNSON	TIME 0830	PRINTED:	TIME	PRINTED:	TIME
COMPANY: Ensafe		COMPANY: Lancks		COMPANY:		COMPANY:	

METHOD OF SHIPMENT: FEDEX

SHIPMENT NO. 814 7959 2227 9

RESULTS TO: Ensafe

COMMENTS:

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	EN023
Date:	November 29, 1999
Client Name:	Ensafe
Project/Site Name:	Charleston Zone F
Date Sampled:	October 15, 1999
Number of Samples:	22 Non-Aqueous Sample(s) with 0 MS/MSD(s) 3 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Laucks Testing Laboratories
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, SPLP Volatiles, Semivolatiles, SPLP Semivolatiles, Pesticides/PCBs, SPLP Pesticides/PCBs, Metals, SPLP Metals, Cyanide, SPLP Cyanide and Total Organic Carbon

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Searfoss

Paul B. Humburg, President

12-2-99.

Date

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(636) 936-1332 • Fax (636) 936-1335

SDG# EN023

Samples and Fractions Reviewed

Sample Identifications — Analytical Fractions

ENSAFE ID	MATRIX	VOA		SPLP-V		SVOA		SPLP-SV		P/P		SPLP-P/P		MET		SPLP-MET		CN		SPLP-CN		TOC	
109SB001T1	SOIL		X				X				X				X				X				X
109SB001T2	SOIL		X				X				X				X				X				X
109SB01001	SOIL														X								
109SB01002	SOIL														X								
613SB01101	SOIL						X								X								
613SB01102	SOIL						X								X								
613SP051T1	SOIL		X				X				X				X				X				X
613SP051T2	SOIL		X				X				X				X				X				X
619SB01601	SOIL						X																
619SB01602	SOIL						X																
619SB01701	SOIL						X																
619SB01702	SOIL						X																
619SB01801	SOIL						X																
619SB01802	SOIL						X																
619SB02001	SOIL						X																
619SB02002	SOIL						X																
620SB008T2	SOIL		X				X				X				X				X				X
620TB01201	WATER	X																					
620EB01201	WATER	X				X				X				X				X					
620FB01201	WATER	X				X				X				X				X					
109SB001S1	SOIL				X				X				X				X				X		
109SB001S2	SOIL				X				X				X				X				X		
613SP051S1	SOIL				X				X				X				X				X		
613SP051S2	SOIL				X				X				X				X				X		
620SB008S2	SOIL				X				X				X				X				X		
Total Billable Samples (Water/Soil)		3	5	0	5	2	15	0	5	2	5	0	5	2	9	0	5	2	5	0	5	0	5

VOA= Volatiles
SPLP-V= SPLP Volatiles
SVOA= Semivolatiles
SPLP-SV= SPLP Semivolatiles
P/P= Pesticides/PCBs
SPLP-P/P= SPLP Pesticides/PCBs
MET= Metals
SPLP-MET= SPLP Metals
CN= Cyanide
SPLP-CN= SPLP Cyanide
TOC= Total Organic Carbon

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	EN026
Date:	December 10, 1999
Client Name:	Ensafe
Project/Site Name:	Charleston Zone F
Date Sampled:	October 13 & 15 & 16, 1999
Number of Samples:	17 Non-Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Laucks Testing Laboratories
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data. February, 1994
QA/QC Level:	DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Metals

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Searson
for Paul B. Humburg, President

12-14-99
Date

4127 Plaza 94 South • St. Charles, MO 63304
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SDG# EN026

Samples and Fractions Reviewed

Sample Identifications Analytical Fraction

ENSAFE ID	MATRIX	MET	
609SB01001	SOIL		X
609SB01002	SOIL		X
609SB01101	SOIL		X
609SB01102	SOIL		X
609SB01201	SOIL		X
609SB01202	SOIL		X
611SB01101	SOIL		X
611CB01101	SOIL		X
611SB01102	SOIL		X
613SB01901	SOIL		X
613SB01902	SOIL		X
613SB02001	SOIL		X
613SB02002	SOIL		X
613SB02101	SOIL		X
613SB02102	SOIL		X
613SB02201	SOIL		X
613SB02202	SOIL		X
Total Billable Samples (Water/Soil)		0	17

MET= Metals

DATA ASSESSMENT NARRATIVE
METALS

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 methods: the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDGs # EN026

A validation was performed on the Metals for soils Data from SDG EN026. The data was evaluated based on the following parameters.

*	•	Data Completeness
*	•	Holding Times
*	•	Calibrations
	•	Blanks
*	•	Interferences
	•	Matrix Spike Recovery
	•	Matrix Duplicates
	•	Field Duplicates
*	•	Laboratory Control Samples
	•	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation and calibration blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Arsenic	0.20 mg/kg	no impact
Calcium	17.6 mg/kg	no impact
Chromium	0.10 mg/kg	no impact
Iron	7.11 mg/kg	no impact
Manganese	0.13 mg/kg	no impact
Selenium	0.27 mg/kg	all soil samples below 1.35 mg/kg
Silver	0.05 mg/kg	no impact

Tin	3.28 mg/kg	all soil samples below 16.5 mg/kg

The USEPA requires that all sample values below five times the preparation or calibration blank contamination be qualified as non-detect, "U".

The preparation blanks exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Barium	-0.08 mg/kg	no impact
Cadmium	-0.36 mg/kg	all soil samples below 3.6 mg/kg
Thallium	-0.84 mg/kg	all soil samples below 8.4 mg/kg

This reviewer qualifies all samples results below 10 times the absolute value of the negative blank value.

Matrix Spike Recovery results

The matrix spike recovery for soils for Antimony (51%) was below the lower control limits (>30% but <75%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

The matrix Spike recoveries for soils for Copper (243%), Lead (204%) and Manganese (169%) were above the upper control limits. All positive results are qualified as estimated, "J".

Matrix Duplicate results

The matrix duplicate RPD results for soils for Arsenic (38%), Calcium (65%), Copper (109%), Manganese (36%), Mercury (53%) and Zinc (42%) were greater than 35% or greater than two times the CRDL. All positive results are qualified as estimated, "J". The differences for Chromium (32%), Iron (23%) and Lead (29%) were not greater than 35% and will not be qualified for soils.

Field Duplicate results

The field duplicate results for samples 611SB01101 and 611CB01101 for Aluminum (111%), Arsenic (153%), Barium (115%), Chromium (123%), Cobalt (153%), Copper (110%), Iron (122%), Lead (148%), Manganese (187%), NIckel (120%), Vanadium (123%) and Zinc (126%) were greater than 50%. All positive and non-detect results are qualified as estimated, "J" or "UJ".

Serial Dilution recovery results

The serial dilution results for soils for Aluminum, Barium, Chromium, Copper, Iron, Magnesium, Manganese, Nickel, Potassium and Vanadium were greater than 10%. All positive results are qualified as estimated, "J".

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B". Value is below the CRDL but greater than the IDL.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all soil samples below 1.35 mg/kg	Se.	+	U
all soil samples below 16.5 mg/kg	Sn.		
all soil samples below 8.4 mg/kg	Tl.	+/U	J/UJ
all soil samples below 3.6 mg/kg	Cd.		
all soil samples	Sb.	+/U	J/UJ
all soil samples	Cu, Pb and Mn.	+	J
all soil samples	As, Ca, Cu, Mn, Hg and Zn.	+	J
611SB01101 and 611CB01101	Al, As, Ba, Cr, Co, Cu, Fe, Pb, Mn, Ni, V and Zn.	+/U	J/UJ
all soil samples	Al, Ba, Cr, Fe, Mg, Mn, Ni, K and V.	+	J
all "B" results	all analytes	B	J

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	EN027
Date:	December 10, 1999
Client Name:	Ensafe
Project/Site Name:	Charleston Zone F
Date Sampled:	November 15 - 16, 1999
Number of Samples:	20 Non-Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Laucks Testing Laboratories
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Semivolatiles and Metals

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Scarborough — 12-16-99.

Paul B. Hamburg, President — Date

4127 Plaza 94 South • St. Charles, MO 63304
(636) 936-1332 • Fax (636) 936-1335

SDG# EN027

Samples and Fractions Reviewed

Sample Identifications Analytical Fractions

ENSAFE ID	MATRIX	SVOA		MET	
611SB01201	SOIL				X
611SB01202	SOIL				X
611SB01301	SOIL				X
611SB01302	SOIL				X
611SB01401	SOIL				X
611SB01402	SOIL				X
613SB01701	SOIL				X
613CB01701	SOIL				X
613SB01702	SOIL				X
613CB01702	SOIL				X
613SB01801	SOIL				X
613SB01802	SOIL				X
613SB02101	SOIL		X		
613SB02102	SOIL		X		
613SB02201	SOIL		X		
613SB02202	SOIL		X		
613SB02301	SOIL		X		X
613SB02302	SOIL		X		X
613SB02401	SOIL		X		X
613SB02402	SOIL		X		X
Total Billable Samples (Water/Soil)		0	8	0	16

SVOA= Semivolatiles
MET= Metals

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	EN028
Date:	December 16, 1999
Client Name:	Ensafe
Project/Site Name:	Charleston Zone F
Date Sampled:	November 16 - 17, 1999
Number of Samples:	20 Non-Aqueous Sample(s) with 0 MS/MSD(s) 3 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Laucks Testing Laboratories
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	EPA DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Semivolatiles and Metals

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Seaman
Paul B. Humburg, President

12-21-99
Date

4127 Plaza 94 South • St Charles, MO 63304
(636) 936-1332 • Fax (636) 936-1335

SDG# EN028

Samples and Fractions Reviewed

Sample Identifications Analytical Fractions

ENSAFE ID	MATRIX	SVOA		MET	
613SB02501	SOIL		X		X
613SB02601	SOIL		X		X
613SB02602	SOIL		X		X
613CB02602	SOIL		X		X
613EB02602	WATER	X		X	
613FB02602	WATER	X		X	
613DB02602	WATER	X		X	
613SB02701	SOIL		X		X
613SB02702	SOIL		X		X
613SB02801	SOIL		X		X
613SB02802	SOIL		X		X
620SB01001	SOIL				X
620SB01002	SOIL				X
620SB01101	SOIL				X
620SB01102	SOIL				X
620SB01201	SOIL				X
620SB01202	SOIL				X
620SB01301	SOIL				X
620CB01301	SOIL				X
620SB01302	SOIL				X
620CB01302	SOIL				X
620SB01401	SOIL				X
620SB01402	SOIL				X
Total Billable Samples (Water/Soil)		3	8	3	20

SVOA= Semivolatiles
MET= Metals

1/11/00

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	EN030
Date:	January 6, 2000
Client Name:	Ensafe
Project/Site Name:	Charleston Zone F
Date Sampled:	December 1, 1999
Number of Samples:	5 Non-Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Laucks Testing Laboratories
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	EPA DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Semivolatiles and Metals

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Searfoss
Paul B. Humburg, President

1-10-00
Date

4127 Plaza 94 South • St. Charles, MO 63304
(636) 936-1332 • Fax (636) 936-1335

SDG# EN030

Samples and Fractions Reviewed

Sample Identifications Analytical Fractions

ENSAFE ID	MATRIX	SVOA		MET	
613SB02602	SOIL		X		X
613SB02901	SOIL		X		X
613SB02902	SOIL		X		X
613SB03001	SOIL		X		X
613SB03002	SOIL		X		X
Total Billable Samples (Water/Soil)		0	5	0	5

SVOA= Semivolatiles
MET= Metals

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	EN029
Date:	December 16, 1999
Client Name:	Ensafe
Project/Site Name:	Charleston Zone F
Date Sampled:	November 19, 1999
Number of Samples:	6 Aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Laucks Testing Laboratories
Validation Guidance:	National Functional Guidelines for Organic and Inorganic Data, February, 1994
QA/QC Level:	EPA DQO Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, Semivolatiles and Metals

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Searboss
for Paul B. Humburg, President

12-21-99.
Date

4127 Plaza 94 South • St. Charles, MO 63304
(636) 936-1332 • Fax (636) 936-1335

SDG# EN029

Samples and Fractions Reviewed

Sample Identifications | Analytical Fractions

ENSAFE ID	MATRIX	VOA		SVOA		MET	
613GW00701	WATER	X		X		X	
613EW00701	WATER	X		X		X	
613FW00701	WATER	X		X		X	
613DW00701	WATER	X		X		X	
613GW00801	WATER	X					
613TW01101	WATER	X					
Total Billable Samples (Water/Soil)		6	0	4	0	4	0

VOA= Volatiles
SVOA= Semivolatiles
MET= Metals

DATA ASSESSMENT NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8260B for GC/MS Volatiles; the National Functional Guidelines for Organic Data Validation, 2/94, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # EN029

A validation was performed on the Volatile Data from SDG EN029. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
	•	Calibration
*	•	Blanks
*	•	Internal Standard Performance
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
*	•	Compound Quantitation

* - All criteria were met for this parameter.

Calibrations

The initial calibration analyzed 10/18/99 on Instrument FLIPPER exhibited one (1) compound with a RRF less than 0.05. For the following samples and non-compliant compound, the reported positive results are qualified as estimated, J, and the non-detect results are rejected, UR.

All Samples acetone (0.045)

Calibrations (continued)

The continuing calibration F1123007.D exhibited two (2) compounds with RRFs less than 0.05. For the following samples and non-compliant compounds, the reported positive results are qualified as estimated, J, and the non-detect results are rejected, UR.

All Samples	acetone (0.027)
	2-butanone (0.049)

System Performance and Overall Assessment

The data, as reported, required qualifications/rejections.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

L = Result is estimated and biased low.

K = Result is estimated and biased high.

R = Result is rejected and unusable

D = Result value is based on dilution analysis

BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL
All Samples	acetone (0.045)	+/-	J/UR
All Samples	acetone (0.027) 2-butanone (0.049)	+/-	J/UR

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
\+ in the DL column denotes a positive result
\- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8270C for GC/MS Semivolatiles; the National Functional Guidelines for Organic Data Validation, 2/94, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # EN029

A validation was performed on the Semivolatile Data from SDG EN029. The data was evaluated based on the following parameters:

*	•	Data Completeness
*	•	Holding Times
*	•	GC/MS Tuning
*	•	Calibration
*	•	Blanks
*	•	Internal Standard Performance
*	•	Surrogate Recoveries
*	•	Matrix Spike/Matrix Spike Duplicates
*	•	Field Duplicates
*	•	Compound Identification
*	•	Compound Quantitation

* - All criteria were met for this parameter.

System Performance and Overall Assessment

The data, as reported, did not require qualifications/rejections.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

L = Result is estimated and biased low.

K = Result is estimated and biased high.

R = Result is rejected and unusable

D = Result value is based on dilution analysis

BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common laboratory contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL

NO QUALIFICATIONS WERE REQUIRED

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE
METALS

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW846 methods: the Functional Guidelines for Inorganic Data Validation, February 1994, and DQO Level III requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDGs # EN029

A validation was performed on the Metals Data from SDG EN029. The data was evaluated based on the following parameters.

*	●	Data Completeness
*	●	Holding Times
*	●	Calibrations
	●	Blanks
*	●	Interferences
	●	Matrix Spike Recovery
*	●	Matrix Duplicates
*	●	Field Duplicates
*	●	Laboratory Control Samples
*	●	Serial Dilutions

* - All criteria were met for this parameter.

Preparation and Field Blanks

The preparation, field QC and calibration blanks exhibited contamination for the following elements.

Elements	Conc.	Samples affected
Lead	2.70 ug/l	no impact
Manganese	0.40 ug/l	no impact
Zinc	1.10 ug/l	all water samples below 5.5 ug/l

The USEPA requires that all sample values below five times the preparation or calibration blank contamination be qualified as non-detect, "U".

The preparation blanks exhibited negative bias for the following elements.

Elements	Conc.	Samples affected
Aluminum	-73.2 ug/l	all water samples below 732 ug/l
Copper	-0.70 ug/l	all water samples below 7.0 ug/l
Magnesium	-34.4 ug/l	no impact
Thallium	-3.0 ug/l	all water samples below 30.0 ug/l

This reviewer qualifies all samples results below 10 times the absolute value of the negative blank value.

Matrix Spike Recovery results

The matrix spike recovery for waters for Mercury (47%) was below the lower control limits (>30% but <75%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

The matrix spike recovery for waters for Iron (130%) was above the upper control limits (>125%). All positive results are qualified as estimated, "J".

All sample results left with a "B" qualifier after all other qualifications, will be qualified with a "J" qualifier in place of the "B". Value is below the CRDL but greater than the IDL.

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
all water samples below 5.5 ug/l	Zn.	+	U
all water samples below 10.0 ug/l	As.		
all water samples below 732 ug/l	Al.	+/U	J/UJ
all water samples below 7.0 ug/l	Cu.		
all water samples below 30.0 ug/l	Tl.		
all water samples	Hg.	+/U	J/UJ
all water samples	Fe.	+	J
all "B" results	all analytes	B	J

ENSAFE

800-588-7962
MEMPHIS, TENNESSEE
CHARLESTON, SC; CINCINNATI, OH; DALLAS, TX; JACKSON, TN; KNOXVILLE, TN; LANCASTER, PA; NASHVILLE, TN; NORFOLK, VA; PADUCAH, KY; PENSACOLA, FL; RALEIGH, NC; COLOGNE, GERMANY

9911484 GN029

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT/JOB NO: 2906-C 08-440-00
COC NO:
PO NO: 1840
REL NO: 36
LAB NAME: Laucks

CLIENT: NAVY CLEAN
PROJECT MANAGER: G. Smith / T. Hawkcroft
LOCATION: Zone F 613
TELE/FAX NO: 843-884-0029
SAMPLERS: (SIGNATURE)

ANALYSIS REQUIRED

	FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION TEMP.	PRESERVATION CHEMICAL	NO. OF CONTAINERS	VOC	SVOC	Metals							REMARKS
1	613GW00801	11-19-99	0845	GW	3 - 40 ml vials	4°C	HCl	3	X									MW spl
2	613GW00701	11-19-99	1005	GW	40 ml vials 1 L amber 1 L poly	4°C	HCl HNO3	5	X	X	X							MW spl
3	613DW00701	11-19-99	0915	GW	"	"	"	5	X	X	X							DI H2O blank
4	613FW00701	11-19-99	0925	GW	"	"	"	5	X	X	X							Field Blank
5	613EW00701	11-19-99	1020	GW	"	"	"	5	X	X	X							Equip Blank
6	613TB01101	11-19-99	—	GW	40 ml vials	4°C	HCl	3	X									trip blank

RELINQUISHER:	DATE	RECEIVER:	DATE	RELINQUISHER:	DATE	RECEIVER:	DATE
Joseph P. George	11/19/99	Hugh Prentice	11/20/99				
PRINTED: Joseph P. George	TIME 1730	PRINTED: NV Prentice	TIME 1045	PRINTED:	TIME	PRINTED:	TIME
COMPANY: EnSafe		COMPANY: LAUCKS		COMPANY:		COMPANY:	

METHOD OF SHIPMENT: Fed Ex
SHIPMENT NO. 814 7959 22154
SEND RESULTS TO: C. Vernacy - EnSafe

COMMENTS: 14 day turnaround - Final Fax - DQO III

Data Validation Summary - Charleston Naval Complex - Zone F, AOC 613/615

TO: Louise Palmer/CH2M HILL/CLT

FROM: Herb Kelly/CH2M HILL/GNA

DATE: September 23, 2001

The purpose of this memorandum is to present the results of the data validation process for the samples collected at AOC 613/615 in Zone F. The samples were collected on the dates of June 6 and June 22, 2001.

The specific samples and analytical fractions reviewed are summarized below in Table 1.

The Quality Control areas that were review and the resulting findings are documented within each subsection that follows. This data was validated for compliance with the analytical method requirements. This process also included a review of the data to assess the accuracy, precision, and completeness based upon procedures described in the guidance documents such as the Environmental Protection Agency (EPA) *National Functional Guidelines for Inorganic Data Review (EPA 1994) and National Functional Guidelines for Organic Data Review (EPA 1999)*. Quality assurance/quality control (QA/QC) summary forms and data reports were reviewed.

Samples were submitted to General Engineering Laboratories, Inc., in Charleston, South Carolina, for the following analyses: SW-846 8270 Semivolatile Organic Compounds (SVOC) and Arsenic following method SW-846 6010.

Sample results that were not within the acceptance limits were appended with a qualifying flag, which consisted of a single- or double-letter code that indicated a possible problem with the data. The qualifying flags originated during the data review and validation processes. These also include the secondary, or the two-digit "sub-qualifier" flags. The secondary qualifiers provide the reasoning behind the assignment of a qualifier flag to the data. The secondary qualifiers are presented and defined below.

Attachment 1 lists the changes in data qualifiers, due to the validation process.

The following primary flags were used to qualify the data:

[=] Detected. The analyte was analyzed for and detected at the concentration shown.

[J] Estimated. The analyte was present but the reported value may not be accurate or precise.

[U] Undetected. The analyte was analyzed for but not detected above the method detection limit.

[UJ] Detection limit estimated. The analyte was analyzed for but qualified as not detected; the result is estimated.

[R] Rejected. The data is not useable.

Secondary Data Validation Qualifiers

Code	Definition
2S	Second Source
BL	Blank
BD	Blank Spike/Blank Spike Duplicate or (LCS/LCSD) Precision
BS	Blank Spike/LCS
CC	Continuing Calibration Verification
DL	Dilution
FD	Field Duplicate
HT	Holding Time
IB	In-Between (metals - B's → J's)
IC	Initial Calibration
IS	Internal Standard
LD	Lab Duplicate
LR	Concentration exceeded Linear Range
MD	MS/MSD or LCS/LCSD Precision
MS	Matrix Spike/Matrix Spike Duplicate
OT	Other (see DV worksheet)
PD	Pesticide Degradation
PS	Post Spike
RE	Re-extraction/Re-analysis
SD	Serial Dilution
SS	Spiked Surrogate
TN	Tune

Table 1 - Chemical Analytical Methods – Field and Quality Control Samples

TABLE 1
Chemical Analytical Methods – Field and Quality Control Samples
Charleston Naval Complex, Zone F, AOC 613/615, Charleston, SC

43556	FIELDQC	613EB03101MS	1200018316	6/7/01	WQ	MS			X		
43556	FIELDQC	613EB03101SD	1200018317	6/7/01	WQ	SD			X		
43556	FIELDQC	613EB03101	43556001	6/7/01	WQ	EB			X	X	
43557	F613SB031	613SB03101MS	1200019365	6/7/01	SO	MS	0	1	X		
43557	F613SB031	613SB03101SD	1200019366	6/7/01	SO	SD	0	1	X		
43557	F613SB031	613SB03101	43557001	6/7/01	SO	N	0	1	X		
43557	F613SB031	613SB03103	43557002	6/7/01	SO	N	2	3	X		
43557	F613SB032	613SB03201	43557003	6/7/01	SO	N	0	1	X		
43557	F613SB032	613SB03203	43557004	6/7/01	SO	N	2	3	X		
43557	F613SB032	613CB03203	43557005	6/7/01	SO	FD	2	3	X		
43557	F613SB033	613SB03301	43557006	6/7/01	SO	N	0	1		X	
43557	F613SB034	613SB03401	43557007	6/7/01	SO	N	0	1		X	
44685	F613GW009	613GW009LA	44685001	6/22/01	WG	N					X
44685	F613GW003	613GW003LA	44685002	6/22/01	WG	N					X
44685	F613GW004	613GW004LA	44685003	6/22/01	WG	N					X
44685	FGELGW012	GELGW012LA	44685004	6/22/01	WG	N					X
44685	F613EW004	613EW004LA	44685005	6/22/01	WQ	EB					X
44685	F613TW004	613TW004LA	44685006	6/22/01	WQ	TB					X

TABLE 1
Chemical Analytical Methods – Field and Quality Control Samples
Charleston Naval Complex, Zone F, AOC 613/615, Charleston, SC

SDG	Station ID	Sample ID	Lab Sample ID	Date Collected	Matrix	Sample Type	Upper Depth	Lower Depth	SW6010 Arsenic	SW8270 PAHs	SW8260 VOCs

MATRIX CODE

SO - Soil
WG - Groundwater
WQ - Water QC Samples

SAMPLE TYPE CODE

EB - Equipment Blank
TB - Trip Blank
N - Native Sample
FD - Field Duplicate
MS - Matrix Spike
SD - Matrix Spike Duplicate

ANALYSIS CODE

PAHs - Polyaromatic Hydrocarbons
VOCs - Volatile Organic Compounds

Organic Parameters

Quality Control Review

The following list represents the QA/QC measures that are typically reviewed during the data quality evaluation procedure for organic data.

- **Holding Times** – The holding times are evaluated to verify that samples were extracted and analyzed within holding times.
- **Blank samples** – Method blanks and equipment blanks were provided for this project. Blank samples enable the reviewer to determine if an analyte may be attributed to sampling or laboratory procedures, rather than environmental contamination from site activities.
- **Surrogate Recoveries** – Surrogate Compounds are added to each sample and the recoveries are used to monitor lab performance and possible matrix interference.
- **Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples** – Spike recovery is used to evaluate potential matrix interferences, as well as accuracy. Precision information is also determined by calculating the reproducibility between the recoveries of each spiked parameter.
- **Lab Control Sample (LCS)** – This sample is a "controlled matrix", either laboratory reagent water or Ottawa sand, in which target compounds have been added prior to extraction/analysis. The recoveries serve as a monitor of the overall performance of each step during the analysis, including sample preparation.
- **GC/MS Tuning** – The mass spectrum of the tuning compound is evaluated for method compliance. The criteria are established to verify the proper mass assignment and mass resolution.
- **Initial Calibration** – The initial calibration ensures that the instrument is capable of producing acceptable qualitative and quantitative data for the compounds of interest.
- **Continuing Calibration** – The continuing calibration checks satisfactory performance of the instrument and its predicted response to the target compounds.
- **Internal Standards** – The internal standards (retention time and response) are evaluated for method compliance. The internal standards are used in quantitation of the target parameters and monitor the instrument sensitivity and response for stability during each analysis.

Polyaromatic Hydrocarbons (PAHs) Analyses

The QA/QC parameters for the PAH analyses for all of the samples were within acceptable control limits, except as noted below.

Calibrations

All initial and continuing calibration criteria were met except as noted in Table 2 below.

TABLE 2
Exceptions to Initial Calibration Criteria and Continuing Calibration Criteria: PAHs
Charleston Naval Complex, Zone F, AOC 613/615, Charleston, SC

Instrument/Calibration Date	Analyte	%Relative Standard Deviation or R^2 (ICAL) /%Difference (CCAL)	Associated Samples
MSD7-ICAL-06/12	Benzo(b)fluoranthene	0.986	43557 - 6, 7
MSD7-CCAL-6/16, 1341	Benzo(k)fluoranthene	22.5 high	43557 - 6, 7
	Benzo(g,h,i)perylene	20.8 high	

Flags were applied to the compounds in the associated samples in the following manner:

- When the percent Relative Standard Deviation (%RSD) or R^2 was out in the initial calibration, all associated samples were qualified. Detected compounds were flagged "J" and non-detected compounds were flagged "UJ", as estimated.
- When the percent difference (%D) was low in the continuing calibration standards, detected compounds were flagged "J" and non-detected compounds were flagged "UJ", as estimated.
- When the percent difference was high, detected compounds were flagged "J", as estimated. Non-detected compounds were not flagged.

Volatile Organic Compounds (VOCs) Analyses

The QA/QC parameters for the VOC analyses for all of the samples were within acceptable control limits.

Inorganic Parameters

Quality Control Review

The following list represents the QA/QC measures that are typically reviewed during the data quality evaluation procedure for inorganic parameters.

- **Holding Times** – The holding times are evaluated to verify that samples were extracted and analyzed within holding times.
- **Blank samples** – Sample preparation, initial calibration blanks/continuing calibration blanks, and equipment blanks were provided for this project. Blank samples enable the reviewer to determine if an analyte may be attributed to sampling or laboratory procedures, rather than environmental contamination from site activities.
- **Lab Control Sample (LCS)** – This sample is a "controlled matrix", in which target parameters have been added prior to digestion/analysis. The recoveries serve as a monitor of the overall performance of each step during the analysis, including sample preparation.
- **Pre/Post Digestion Spike (MS/MSD)** – Spike recovery is used to evaluate potential matrix interferences, as well as accuracy. Precision information is also determined by calculating the reproducibility between the recoveries of each spiked parameter.
- **ICP Interference Check Sample** – This sample verifies the lab's interelement and background correction factors.
- **Initial Calibration Verification** – This parameter ensures that the instrument is capable of producing acceptable quantitative data for the target analyte list to be measured.
- **Continuing Calibration Verification** – This one-point, mid-range parameter establishes that the initial calibration is still valid by checking the performance of the instrument on a continual basis.
- **ICP Serial Dilution** – The serial dilution of samples quantitated by ICP determines whether or not significant physical or chemical interferences exist due to the sample matrix.

Arsenic Analyses

The QA/QC parameters for the Arsenic analyses for all of the samples were within acceptable control limits, except as noted below.

Blanks

Arsenic was reported in a continuing calibration blank at a concentration of 4.08 ug/L.

All concentrations in the samples were greater than five times the concentration reported in the continuing calibration blank, therefore no flags were applied.

Conclusion

A review of the analytical data submitted regarding the investigation of AOC 613/615 in Zone F at the Charleston Naval Complex, Charleston, South Carolina by CH2M HILL has been completed. An overall evaluation of the data indicates that the sample handling, shipment, and analytical procedures have been adequately completed, and that the analytical results should be considered usable as qualified.

The analytical data had minor QC concerns, however, it did not affect data usability for those specific results. The validation review demonstrated that the analytical systems were generally in control and the data results can be used in the decision making process.

Data Validation Summary - Charleston Naval Complex - Zone F, SWMU 175

TO: Louise Palmer/CH2M HILL/CLT

FROM: Herb Kelly/CH2M HILL/GNA

DATE: September 23, 2001

The purpose of this memorandum is to present the results of the data validation process for the samples collected at SWMU 175 in Zone F. The samples were collected on the date of June 7, 2001.

The specific samples and analytical fractions reviewed are summarized below in Table 1.

The Quality Control areas that were review and the resulting findings are documented within each subsection that follows. This data was validated for compliance with the analytical method requirements. This process also included a review of the data to assess the accuracy, precision, and completeness based upon procedures described in the guidance documents such as the Environmental Protection Agency (EPA) *National Functional Guidelines for Inorganic Data Review (EPA 1994) and National Functional Guidelines for Organic Data Review (EPA 1999)*. Quality assurance/quality control (QA/QC) summary forms and data reports were reviewed.

Samples were submitted to General Engineering Laboratories, Inc., in Charleston, South Carolina, for the following analyses: Lead following method SW-846 6010.

Sample results that were not within the acceptance limits were appended with a qualifying flag, which consisted of a single- or double-letter code that indicated a possible problem with the data. The qualifying flags originated during the data review and validation processes. These also include the secondary, or the two-digit "sub-qualifier" flags. The secondary qualifiers provide the reasoning behind the assignment of a qualifier flag to the data. The secondary qualifiers are presented and defined below.

The following primary flags were used to qualify the data:

[=] Detected. The analyte was analyzed for and detected at the concentration shown.

[J] Estimated. The analyte was present but the reported value may not be accurate or precise.

[U] Undetected. The analyte was analyzed for but not detected above the method detection limit.

[UJ] Detection limit estimated. The analyte was analyzed for but qualified as not detected; the result is estimated.

[R] Rejected. The data is not useable.

Secondary Data Validation Qualifiers

Code	Definition
2S	Second Source
BL	Blank
BD	Blank Spike/Blank Spike Duplicate or (LCS/LCSD) Precision
BS	Blank Spike/LCS
CC	Continuing Calibration Verification
DL	Dilution
FD	Field Duplicate
HT	Holding Time
IB	In-Between (metals - B's → J's)
IC	Initial Calibration
IS	Internal Standard
LD	Lab Duplicate
LR	Concentration exceeded Linear Range
MD	MS/MSD or LCS/LCSD Precision
MS	Matrix Spike/Matrix Spike Duplicate
OT	Other (see DV worksheet)
PD	Pesticide Degradation
PS	Post Spike
RE	Re-extraction/Re-analysis
SD	Serial Dilution
SS	Spiked Surrogate
TN	Tune

Table 1 - Chemical Analytical Methods – Field and Quality Control Samples

TABLE 1
Chemical Analytical Methods – Field and Quality Control Samples
Charleston Naval Complex, Zone F, SWMU 175, Charleston, SC

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
43574	F613SB035	175SB03501	43574001	6/7/01	SO	N	0	1	X
43574	F613SB035	175SB03503	43574002	6/7/01	SO	N	2	3	X
43574	F175SB036	175SB03601	43574003	6/7/01	SO	N	0	1	X
43574	F175SB036	175SB03603	43574004	6/7/01	SO	N	2	3	X
43574	F175SB037	175SB03703	43574005	6/7/01	SO	N	2	3	X

MATRIX CODE

SO - Soil

SAMPLE TYPE CODE

N - Native Sample

Inorganic Parameters

Quality Control Review

The following list represents the QA/QC measures that are typically reviewed during the data quality evaluation procedure for inorganic parameters.

- **Holding Times** – The holding times are evaluated to verify that samples were extracted and analyzed within holding times.
- **Blank samples** – Sample preparation, initial calibration blanks/continuing calibration blanks, and equipment blanks were provided for this project. Blank samples enable the reviewer to determine if an analyte may be attributed to sampling or laboratory procedures, rather than environmental contamination from site activities.
- **Lab Control Sample (LCS)** – This sample is a "controlled matrix", in which target parameters have been added prior to digestion/analysis. The recoveries serve as a monitor of the overall performance of each step during the analysis, including sample preparation.
- **Pre/Post Digestion Spike (MS/MSD)** – Spike recovery is used to evaluate potential matrix interferences, as well as accuracy. Precision information is also determined by calculating the reproducibility between the recoveries of each spiked parameter.
- **ICP Interference Check Sample** – This sample verifies the lab's interelement and background correction factors.
- **Initial Calibration Verification** – This parameter ensures that the instrument is capable of producing acceptable quantitative data for the target analyte list to be measured.
- **Continuing Calibration Verification** – This one-point, mid-range parameter establishes that the initial calibration is still valid by checking the performance of the instrument on a continual basis.
- **ICP Serial Dilution** – The serial dilution of samples quantitated by ICP determines whether or not significant physical or chemical interferences exist due to the sample matrix.

Lead Analyses

The QA/QC parameters for the Metals analyses for all of the samples were within acceptable control limits, except as noted below.

Blanks

The Metals target parameters detected in blank samples are listed in Table 2.

TABLE 2
Blank Contamination: Metals
Charleston Naval Complex, Zone F, SWMU 175, Charleston, SC

SDG	Lab Sample ID	Sample ID	Sample Type	Parameter	Lab Result	Units	Flag Concentrations
443574	1200019363		LB	Lead	0.370	mg/Kg	<1.85 mg/Kg

All concentrations in the samples were greater than five times the concentration reported in the laboratory blank, therefore no flags were applied.

Conclusion

A review of the analytical data submitted regarding the investigation of SWMU 175 in Zone F at the Charleston Naval Complex, Charleston, South Carolina by CH2M HILL has been completed. An overall evaluation of the data indicates that the sample handling, shipment, and analytical procedures have been adequately completed, and that the analytical results should be considered usable as qualified.

The analytical data had only minor QC concerns regarding lead in the laboratory blank, but no qualifying flags were applied to the analytical results. The validation review demonstrated that the analytical systems were generally in control and the data results can be used in the decision making process.

Chain of Custody/ Laboratory Analysis Form

Lab Batch/SDG ID: 43557

Laboratory:	GEL, Charleston, SC
Project Name:	Charleston Navy Complex
Site Name:	Zone F, AOC 613/615
Project Number:	
TAT:	21 day
Project Manager:	Tom Belsel/ATL
Level:	Level 3
Address:	GNV: 3011 SW Williston Rd., Gainesville, FL 32605
	ATL: 115 Perimeter Center Place NE, Suite 700, Atlanta, GA 30346-1278
Send Report To:	see 2nd page of COC
EDD:	CNC format

Sample ID	Station ID	Depth Begin	Depth End	Date & Time Collected	Matrix	# of containers	Arsenic (SW6010B) 1 - 8oz CWM Jar	Arsenic (SW6010B) 1 - 500 mL HDPE, HNO3	PAHs (SW8270C) 1 - 8 oz CWM Jar	PAHs (SW8270C) 2 - 1 Liter Amber	Comments
613EB03101	F613EB031			6·7·01 / 1205	SQ	3		X		X	EB 43556001
613SB03101	F613SB031			6·7·01 / 1255	SO	1	X				43557 001
613SB03103	F613SB031			6·7·01 / 1300	SO	1	X				002
613SB03201	F613SB032			6·7·01 / 1230	SO	1	X				003
613SB03203	F613SB032			6·7·01 / 1235	SO	1	X				004
613CB03203	F613SB032			6·7·01 / 1245	SO	1	X				005
613SB03301	F613SB033			6·7·01 / 1225	SO	1			X		006
613SB03401	F613SB034			6·7·01 / 1215	SO	1			X		007

200/04/1704
.1 200/01
.2

Sampled By: Darren / Gates / Steve Ellen Date/Time: 6.7.01 / AS above Relinquished by: [signature] Date/Time: 6.7.01 /

Additional Samplers:

Received By Lab: Patricia Dover Date/Time: 6/7/01 16:50 Relinquished by: Date/Time

Received By: Date/Time

Shipped Via: UPS FedEx Hand Other

Remarks: PAH List on 2nd page of COC. Temperature:

D

43574

Laboratory:	GEL, Charleston, SC
Project Name:	Charleston Navy Complex
Site Name:	Zone F, SMWU 175
Project Number:	
TAT:	21 day
Project Manager:	Tom Beisel/ATL
Level:	Level 3
Address:	GNV: 3011 SW Williston Rd., Gainesville, FL 32605
	ATL: 115 Perimeter Center Place NE, Suite 700, Atlanta, GA 30346-1278
Send Report To:	see 2nd page of COC
EDD:	CNC format

Sample ID	Station ID	Depth Begin	Depth End	Date & Time Collected	Matrix	# of containers	LEAD (SW6010B) (1 - 4 oz CWM Jar)	LEAD (SW6010B) (1 - 500 mL HDPE, HNO3)	PCBs (SW8082) (1 - 8 oz CWM Jar)	PAHs (SW8270C) (1 - 8 oz CWM Jar)	PCBs (SW8082) (2 - 1 Liter Amber)	PAHs (SW8270C) (2 - 1 Liter Amber)		Comments
175SB03501	F175SB035	0	1	6-7-01 / 1430	SO	1	X							43574 001
175SB03503	F175SB035	2	3	6-7-01 / 1435	SO	1	X							002
175SB03601	F175SB036	0	1	6-7-01 / 1440	SO	1	X							003
175SB03603	F175SB036	2	3	6-7-01 / 1445	SO	1	X							004
* 175SB03703	F175SB037	2	3	6-7-01 / 1450	SO	1	X							005

Sampled By: Darryl Gates / STAN Filler Date/Time: 6-7-01 / as above Relinquished by: [signature] Date/Time: 6-7-01 /

Additional Samplers:

Received By Lab: Patricia Dever Date/Time: 6/7/01 16:50 Relinquished by: Date/Time

Received By: Date/Time Shipped Via: UPS FedEx Hand Other

Remarks: Temperature:

that 100104

Chain of Custody/ Laboratory Analysis Form

Lab Batch/SDG ID: 44685

444685

Laboratory:	GEL, Charleston, SC
Project Name:	Charleston Navy Complex
Site Name:	Zone F, AOC 613/615
Project Number:	
TAT:	21 day
Project Manager:	Tom Beisel/ATL
Level:	Level 3
Address:	GNV: 3011 SW Williston Rd., Gainesville, FL 32605
	ATL: 115 Perimeter Center Place NE, Suite 700, Atlanta, GA 30346-1278
Send Report To:	see 2nd page of COC
EDD:	CNC format

Sample ID	Station ID	Depth Begin	Depth End	Date & Time Collected	Matrix	# of containers	VOCs (SW8260B) * 3 - 40 mL Vial, HCL	VOCs (SW8260B) 3 - 40 mL Vial	SVOCs (SW8270C) ** 2 - 1L amber	Pest/PCB (SW8081/8082) ** 2 - 1L amber	Metals (SW6010) ** 1 - 500mL HDPE, HNO3	VOCs (SW8260B) ** 3 - 5g Encore	SVOCs (SW8270C) ** 1 - 8oz jar	Pest/PCB (SW8081/8082) ** 1 - 8oz jar	Metals (SW6010) ** 1 - 4oz jar	VOCs (SW8260B) ** 3 - 40 mL Vial, HCl	Comments
613GW009LA	F613GW009			6-22-01/1105	WG	3	X										44685 001
613GW003LA	F613GW003			6-22-01/1305	WG	3	X										002
613GW004LA	F613GW004			6-22-01/1210	WG	3	X										003
GELGW012LA	FGELGW012			6-22-01/1240	WG	3	X										004
613EW004LA	F613EW004			6-22-01/1025	WQ	3	X										EB 005
613TW004LA	F613TW004			6-22-01/1030	WQ	3		X									TB 006
~~613UA241DLA~~	~~F613UA241D~~				SL							X	X	X	X		OWS sludge
~~613VA241DLA~~	~~F613VA241D~~				SO							X	X	X	X		OWS solid
~~613ZA241DLA~~	~~F613ZA241D~~				WW				X	X	X					X	OWS water
~~613EA241DLA~~	~~F613EA241D~~				WQ				X	X	X					X	EB

Sampled By: Warren Gates Date/Time: 6-22-01/ as listed Relinquished by: Stan Eller Date/Time: 6-22-01 @ 3:

Additional Samplers: Stan Eller

Received By Lab: Patricia Dover Date/Time: 6/22/01 15:25 Relinquished by: Date/Time:

Received By: Date/Time: Shipped Via: UPS FedEx Hand Other

Remarks: * VOC list for groundwater on 2nd page of COC. ** Please call Herb Kelly for OWS target lists. Temperature:

7

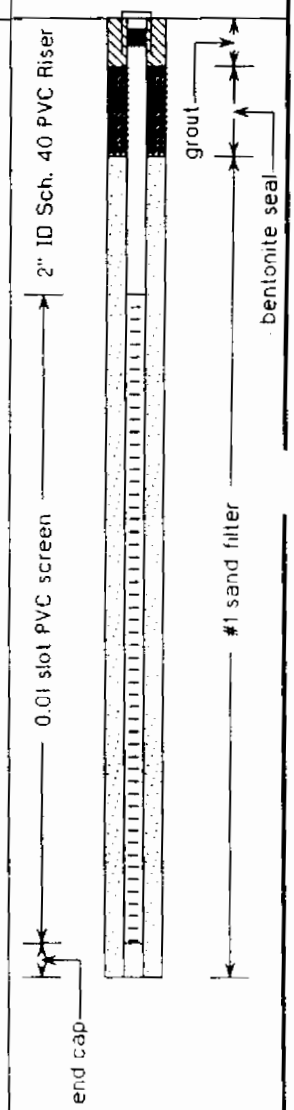
ENSAFE

Monitoring Well NBCF613006

Project: *ZONE F - Naval Base Charleston*	Coordinates: *2319437.0 E, 374212.9 N*
Location: *Charleston, SC*	Surface Elevation: *10.0 feet msl*
Started at *1100 on 09-23-98*	TOC Elevation: *9.73 feet msl*
Completed at *1700 on 09-24-98*	Depth to Groundwater: *6.32 feet TOC* Measured: *10/20/98*
Drilling Method: *4.25" ID (7.5" OD) HSA with split spoon sampler*	Groundwater Elevation: *3.41 feet msl*
Drilling Company: *Alliance Environmental (SC cert. #889)*	Total Depth: *14.0 feet*
Geologist: *C. Smith*	Well Screen: *4.0 to 13.5 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	OVA (ppm)	% RECOVERY	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
								Surface conditions: Concrete	
							CL	Clay: medium brown with grey mottling; silty, with fine to coarse gravel, and fine to coarse sand; moist. (Fill)	8 / 7.6
			1	0	20		CL	Clay: medium brown with grey mottling; silty, with fine to coarse gravel, and fine to coarse sand; moist, very strong fuel odor. (Fill)	6 / 5.8
5			2	1750	10		CL	Clay: brown and lt blue; silty, sandy; with interbedded fine grained Sand; wet, strong odor.	4 / 3.6
			3	1100	20		ML	Silt: bluish grey; sandy-fine to coarse; with interbedded .5" to 1" thick fine to coarse Sand seams.	2
10			4	900	100				2
			5	940	10		CL	Clay: grey; silty; stiff, medium plasticity, moist.	2
			6	48	100				4
15									
20									

WELL DIAGRAM



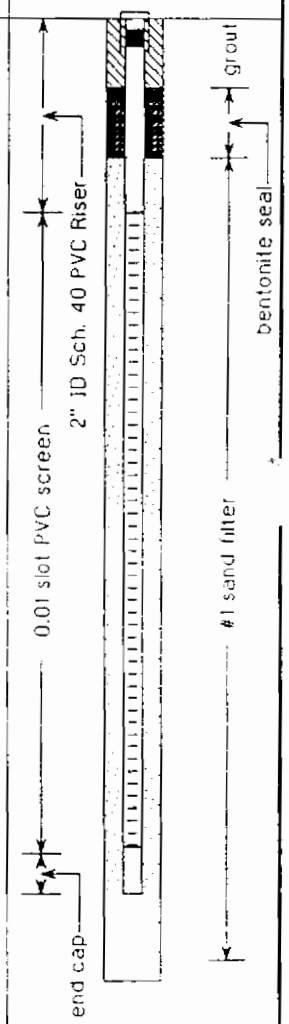
ENSAFE

Monitoring Well NBCF613007

Project: *ZONE F - Charleston Naval Complex*	Coordinates: *374255.4 E, 2319373.0 N*
Location: *Charleston, SC*	Surface Elevation: *8.5 feet msl*
Started at *12:00 on 11-17-99*	TOC Elevation: *8.34 feet msl*
Completed at *14:00 on 11-17-99*	Depth to Groundwater: *7.47 feet TOC* Measured: *11-18-99*
Drilling Method: *4.25" ID (7.5" OD) HSA with split spoon sampler*	Groundwater Elevation: *0.87 feet msl*
Drilling Company: *Miller Drilling (SC cert. #1397)*	Total Depth: *12.8 feet*
Geologist: *D. Doyle*	Well Screen: *2.8 to 12.2 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	OVA (ppm)	% RECOVERY	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft msl)
							GM	Surface conditions: Asphalt Gravel (logged from split spoon and cuttings)	7
			1	128	75		SW	Sand: tan & grey; medium; well sorted, medium dense, very moist.	5
							OL	Silt: black; clayey; very soft, sulfur odor, wet.	4.5
5			2	45	50		OL	Silt: black; clayey; very soft, sulfur odor, wet.	3.5
									2.5
			3	80	50		OL	Silt: black; clayey; very soft, sulfur odor, wet. @8 to 10 ft. bgs: sandy (interval logged from cuttings)	1.5
			4	30	100				
10			5	na	0				
							CL	Clay: greenish-grey; sandy; soft, very moist.	2.5
			6	25	50				3.5
15									
20									

WELL DIAGRAM



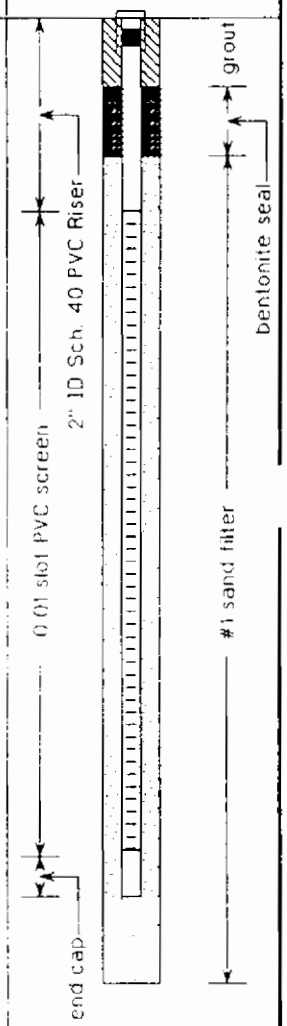
ENSAFE

Monitoring Well NBCF613008

Project: *ZONE F – Charleston Naval Complex*	Coordinates: *374045.2 E, 231913.7.8 N*
Location: *Charleston, SC*	Surface Elevation: *9.3 feet msl*
Started at *10:00 on 11-17-99*	TOC Elevation: *9.11 feet msl*
Completed at *12:00 on 11-17-99*	Depth to Groundwater: *7.76 feet TOC* Measured: *11-18-99*
Drilling Method: *4.25" ID (7.5" OD) HSA with split spoon sampler*	Groundwater Elevation: *1.35 feet msl*
Drilling Company: *Miller Drilling (SC cert. #1397)*	Total Depth: *12.8 feet*
Geologist: *D. Doyle*	Well Screen: *2.8 to 12.2 feet*

DEPTH IN FEET	LITHOLOGIC SAMPLE	ANALYTICAL SAMPLE	SAMPLE NO.	OVA (ppm)	% RECOVERY	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	ELEV. (ft-msl)
							GM	Surface conditions: Asphalt Gravel from 0.3 to 4 feet bgs. (logged from post hole cuttings)	
							SW	Sand; grey; medium, trace silt; well sorted, loose, wet.	5.3 4.8
5			1	5.6	25		CL	Clay, red-brown and grey – mottled; sandy; medium stiff, moist.	3.3 2.3
			2	0	50			@8 to 12 ft. bgs: slight increase in sand content.	1.3
10			3	0	100		CL		
			4	0	100				2.7
15									
20									

WELL DIAGRAM



CH2MHILL	PROJECT NUMBER 158814	WELL NUMBER F613GW009	SHEET 1 OF 1

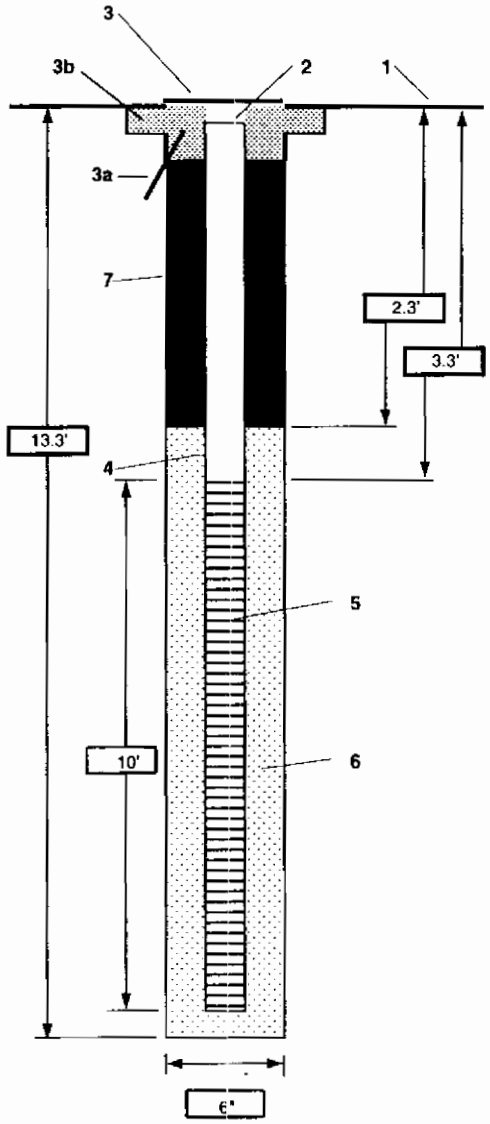
WELL COMPLETION DIAGRAM

PROJECT : Charleston Naval Complex LOCATION : Charleston, SC

DRILLING CONTRACTOR : EEG

DRILLING METHOD AND EQUIPMENT USED : hollow stem auger

WATER LEVELS : 3.79' bls START : 06/07/2001 END : 06/07/2001 LOGGER : T. Wiley/ATL



1- Ground elevation at well	
2- Top of casing elevation	
3- Wellhead protection cover type	flush mount
a) drain tube?	
b) concrete pad dimensions	2' x 2'
4- Dia./type of well casing	2"
5- Type/slot size of screen	0.010 " slotted well screen
6- Type screen filter	#2 sand
a) Quantity used	8.5 bags
7- Type of seal	bentonite pellets
a) Quantity used	5 gal bucket
Development method	
Development time	
Estimated purge volume	

Comments Grout weight =

Total Depth (BTOC) =

Final field parameters collected during well development ( ):

pH =

conductivity =

temperature =

Note: Diagram not to scale.

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
158814.ZF.PR.01	F613GW009	SHEET 1 of 1

SOIL BORING LOG

PROJECT : Charleston, SC, CNC
LOCATION : Chalreston, SC
ELEVATION :
DRILLING CONTRACTOR : EEG
DRILLING METHOD AND EQUIPMENT USED : Hollow Stem Rotary
WATER LEVELS :
START : 06/07/2001 END: 06/07/2001
LOGGER : T. Wiley/ATL

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (IN)	#/TYPE	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.	PID (ppm)
	0-1	--			asphalt, **GRAVEL** (GW)		0.0
	1-4	--			**GRAVEL,SAND** (fill material) (GW-GM) darker color at 3'	hand augering, obstruction encountered, possibly rail tie treated with creosote	34 18
5	4-5	--			**SILTY CLAY** (ML-CL) dark black		0.0
10	5-10	--			**SILTY CLAY** (CL-ML) lighter color brown less plastic, tan color at 8-10'		0.0
	10-13.3	--			**SILTY CLAY** (ML-CL),tan colored	Boring ended at 13.3 ft.	0.0
15							
20							
25							
30							
35							

LEGEND

Initial Comments and Responses on the Draft Final Zone F RFI Report Specific to AOC 613
April 7, 1999

SCDHEC (Eric Cathcart) Comments on The Zone F Draft RCRA Facility Investigation Report (dated 31 December 1998) NAVBASE Charleston
February 26, 1999

Comment 1: Soil sample blanks for the following areas contained detectable contaminants: SWMU 4, AOC 619, SWMU 36, AOC 620, SWMU 109, AOC 607, AOC 609, AOC 611, AOC 613, AOC 616, AOC 617, and Grid soil samples. Groundwater blanks contained detectable contaminants for the following areas: AOC 619, AOC 620, SWMU 109, AOC 607, AOC 609, AOC 613, GEL samples, Location 240, AOC 617, and Grid groundwater samples. These detections were noted in the volatile, semivolatile, and metals methods. In accordance with the Environmental Protection Agency, *Standard Operating Procedures* for sample collection, trace contaminants in field, trip, equipment, and distilled water blanks may indicate a problem with either decontamination procedures and/or cross contamination of samples during collection or transport. The RFI report should fully explain the existence of trace contaminants in blanks. Please revise the text to include this/these explanation(s).

Response 1: The Project Chemist has reviewed and evaluated the data and compiled the findings in the following memo to the Project Team for review and approval.

Memorandum

To: Charleston Naval Complex Project Team

From: Charlie Vernoy, EnSafe

Subject: **Response to Comments on the Draft Zone F and K RFI Reports**

Date: March 31, 1999

Several comments by the South Carolina Department of Health and Environmental Control (SCDHEC) on the Draft Zone F and K RFI Report discuss the context of the Data Validation section and how blank contamination can be further explained relevantly to specific site

samples. This memo is intended to explain the data validation process and how it relates to blank contamination associated with the RFI report process for the Charleston Naval Complex (CNC) project and offer a resolution to stated comments. For demonstration purposes, AOC 607 in Zone F has been designated as the site to be addressed in this memo.

As part of the RFI process at CNC, chemical environmental samples undergo a third party data validation review process following USEPA Functional Guidelines. This process includes the review of analytical data generated at specific data quality objectives (DQOs) and making a determination of the validity of the results through implementation of the functional guidelines and providing professional judgement in the qualification of the data. DQOs include the collection and analysis of quality control (QC) blanks which are intended to identify possible contaminants that may be associated with the collection/analysis process.

To assess possible cross contamination from sampling procedures, deionized water, equipment, and field blanks are collected on a weekly basis per sampling event and trip blanks are submitted daily when volatile organic compounds (VOCs) are requested for analysis. The laboratory is also required to provide data on internal laboratory contamination and must analyze method blanks according to specific method requirements. The QC blanks and environmental samples are analyzed by the same methods and are routinely batched in the same Sample Delivery Group (SDG). A typical SDG includes a total of 20 samples. Batching QC and environmental samples together in the same SDG provides needed information to the data validator to make necessary decisions about the quality of the data. There are occasions when a sampling event at a particular site will have multiple SDGs and it becomes the responsibility of the data validator to incorporate the findings of QC blanks into other SDGs associated with the site.

Each SDG has its own data package incorporating the analytical results of samples and providing necessary QC data to make judgements about the validity of the data. When reviewing the data, the validator follows strict guidelines and must qualify sample data when appropriate. Contamination found in QC blank data is one aspect where qualification of data is necessary. Functional guidelines state that when contamination is found in QC blanks the validator must incorporate the findings to site samples where applicable. The way the validator applies the finding is through the "5x" or "10x" rule. The "5x" rule is taking the analytical result of the contaminant found in a QC blank and multiplying the result by five. If a compound is found in all associated blanks, then the highest result is subjected to the rule. The adjusted result is then compared to all site samples and if detections in site samples are less than the adjusted result of the blank contaminant, site sample detections are adjusted to non-detect. This rule covers all compounds except for acetone, methylene chloride, 2-butanone, and bis(2-ethylhexyl)phthalate, which are known laboratory and possible field sampling contaminants, where the "10x" rule will apply.

Upon completion of the data review process, the validator generates a validation report

which includes the functional guideline checklist with instructions on qualifying data, actual data sheets of site samples showing data qualifiers, an electronic file of the site sample data with qualifiers, and a summary report outlining deficiencies noted and data qualifiers used. EnSafe reviews the report for consistency and electronically adds the data files to a database. Once the data is validated and added to the database it becomes final and is used in writing nature and extent, fate and transport, and risk assessment sections for RFI reports. As part of the Data Validation section in the CNC RFI reports, all SDG data validation summary reports and database spreadsheets are included for review.
As part of the RFI report process, all contaminants detected in site samples that are not validated to non-detect are to be mentioned in the nature and extent section and compared to regulatory limits such as risk-based concentrations, soil screening and maximum contaminant levels. In short, if an adjusted blank contaminant detection was not higher than the site sample detection, then the site sample result is reported in the RFI report. This result would then be reviewed as a possible chemical of potential concern (COPC) or chemical of concern (COC) and identified as such where applicable. The quarterly monitoring sampling program would help to determine if a COPC or COC was from cross contamination or actual detection.

Section 4.3 in the Zone F and K Draft RFI reports summarized blank contamination found in common multiple blanks associated with a particular site (usually first round sampling events). The sections did not list contaminations found in only one blank because of the assumption that it was a single occurrence and not part of a trend. The data validation summary reports listed all blank contamination per SDG but do not point out trends between the SDGs.

In addressing comments concerning blank contamination at CNC, AOC 607 was used to demonstrate the association between field and method blank detections in all sampling events under the RFI in Zone F. Tables 1 and 2 list compounds detected and the ranges associated with the blanks. The asterisk denotes compounds that were detected in a blank but were not detected in a site sample.

Table 1 - Soil AOC 607

Field Blanks	*Range*	*Method Blanks*	*Range*
1234678-HxCDF	3.76-11.7 pg/L	1234678-HpCDD	3.67 pg/L
123478-HxCDF	0.704-2.29 pg/L	234678-HxCDF	3.15 pg/L
123678-HxCDD	2.74-7.37 pg/L	Acetone	2-12 ug/L
123678-HxCDF	1.3 pg/L	Aluminum	2.27 ug/L
123789-HxCDD	50.2-131 pg/L	Beryllium	.035-.039 ug/L
234678-HxCDF	2.74-3.5 pg/L	bis(2-Ethylhexy)lphthalate	45-53 ug/L
2-Butanone	23 ug/L	Butylbenzylphthalate	94 ug/L
Acetone	4-120 ug/L	Chloroform	1 ug/L

Acetonitrile	2800-14000 ug/L	Chromium*	.155-.202 ug/L
Aluminum	246 ug/L	Iron	4.9-6.27 ug/L
Barium	16.7 ug/L	Lead	0.296 ug/L
Benzyl Alcohol*	2 ug/L	Methylene Chloride	2-14 ug/L
Beryllium	0.31-.41 ug/L	OCDD	31 pg/L
Bromodichloromethane*	13 ug/L	Thallium	.425-4.76 ug/L
Calcium	18.7 ug/L	Tin	1.37-2.8 ug/L
Chloroform*	34 ug/L	Vanadium	0.052-.852 ug/L
Chromium	1 ug/L		
Copper	0.75 ug/L		
Cyanide	3.5 ug/L		
Iron	596 ug/L		
Magnesium	1340 ug/L		
Manganese	13.3 ug/L		
Mercury	0.11 ug/L		
Methylene Chloride	1-14 ug/L		
Napthalene	1 ug/L		
Nickel	14 ug/L		
N-Nitrosodimethylamine*	1-4 ug/L		
OCDD	388-744 pg/L		
OCDF	2.5-6.71 pg/L		
Potassium	1320 ug/L		
Sodium	6410 ug/L		
Thallium	6.8 ug/L		
Tin	2.8 ug/L		
Toluene	2 ug/L		
Vanadium	1.7 ug/L		
Zinc	7.1-10.3 ug/L		

Notes:

* Compounds not detected in any site samples.

Table 2 - Water AOC 607

Field Blanks	*Ranges*	*Method Blanks*	*Ranges*
1234678-HpCDD*	3-6 pg/L	1234789-HpCDF*	3.76 pg/L
234678-HxCDF*	3 pg/L	234678-HxCDF*	6.45 pg/L
Acetone	3 ug/l	Acetone	3-7 ug/L
Aluminum	9.3-19.6 ug/L	Aluminum	12-23.8 ug/L
Antimony	1.7-2.8 ug/L	Antimony	1.6-6.22 ug/L
Arsenic	2.2-2.5 ug/L	Arsenic	2.53-2.67 ug/L
Barium	.34-.98 ug/L	Barium	.35-2.55 ug/L
BEHP*	1-110 ug/L	BEHP*	1-10 ug/L
Bromodichloromethane*	2 ug/L	Benzene*	1 ug/L

Calcium	39.2-99.8 ug/L
Chloroform*	1-7 ug/L
Chromium	1.5 ug/L
Cobalt	1.1 ug/L
Di-n-octyl phthalate*	9 ug/L
Iron	22.4-35.9 ug/L
Magesnium	49.8 ug/L
Manganese	.38-.72 ug/L
Methylene Chloride	6-19 ug/L
Nickel	1.8 ug/L
OCDD*	9 pg/L
OCDF*	4 pg/L
Potassium	690-699 ug/L
Silver	2.3-3.8 ug/L
Sodium	33.2-24700 ug/L
Tetrachloroethene	1-14 ug/L
Zinc	7.6 ug/L

Benzoic acid	4 ug/L
Calcium	60.5 ug/L
Chloroform*	1-3 ug/L
Cobalt	1.24 ug/L
Copper	1.14-2.5 ug/L
Cyanide*	1.79-2.5 ug/L
Diethylphthalate*	1 ug/L
Heptachlor*	0.012 ug/L
Iron	20.1-32 ug/L
Lead	.91-1.4 ug/L
Magesnium	50.6-56.9 ug/L
Manganese	.5-1.2 ug/L
Methylene Chloride	2-17 ug/L
Nickel	.72-1 ug/L
OCDD*	7.35-11 pg/L
OCDF*	5.66 pg/L
Potassium	178 ug/L
Silver	1.44-1.94 ug/L
Sodium	27.5-107 ug/L
Tetrachloroethene	2 ug/L
Thallium	3.4-3.75 ug/L
Tin	19.6 ug/L
Toluene	2 ug/L
Vanadium	0.813 ug/L
Xylene*	1-2 ug/L
Zinc	7.61-10.2 ug/L

Notes:

* Compounds not detected in any site samples.

In reviewing the compounds for both lists, explanations can be made as to why certain compounds were detected. The majority of compounds that make the lists are inorganics. In comparing the method blank lists there was an increase of inorganic compounds detected in the water events as compared to the soil events. Detections generally ranged higher for the water event method blanks. The field blank lists showed virtually the same number of inorganic compounds for both soil and water events. In contrast to the method blanks, detections of common metals in the field blanks generally ranged higher for soil events. A possible reason for the high incident of metals in field blanks maybe the water from the North Charleston Water System which is used for the on-site carbon filtered/single canister deionized water system. The deionized system is routinely maintained by the Culligan company, but even working at optimal efficiency the system cannot filter out all compounds. The same can be said of the laboratories that use a carbon filtered/dual canister deionized system to filter water for the method blanks. Eliminating all metal detections from blank analyses is an insurmountable task and efforts to identify exact sources of metals are impossible.

The organic blank detections are easier to explain in some cases. For example, the VOCs bromodichloromethane and chloroform were detected in field blanks for the soil and water events and but just chloroform was detected in the method blanks. The two VOCs are common by-products of the chlorination process of municipal water systems. As noted in the tables, bromodichloromethane and chloroform were not detected in any site samples during water sampling events.

The chlorinated dioxin and dibenzofuran detections noted in the field and method blanks are common contaminants found in a dioxin lab. Due to the extremely low detection limits (parts per quadrillion) that a dioxin lab routinely meets due to current technology, it has become extremely difficult to decontaminate glassware down to non-detect levels. However, once the 2,3,7,8-TCDD Toxicity Equivalency Factors (TEFs) are applied to the results, the overall detections are minimal.

It is possible for acetone to be detected in samples because of the decontamination procedures at CNC that use isopropyl alcohol. Acetone being a contaminant of isopropyl alcohol. But the decontamination procedures used in the field are not what laboratories follow so the acetone detections in the method blanks must be from cross contamination in the lab. Acetone is used in laboratories as a solvent for the extraction of soils.

Methylene chloride is not used in decontamination procedures but was detected in field blanks as well as in method blanks. The explanation for this is that laboratories use methylene chloride when performing water extraction for semivolatile and pesticides analyses and very likely cross contamination with CNC samples has occurred. Methylene chloride has not been identified as a COC at AOC 607.

Tetrachloroethene (PCE), also not used in decontamination procedures, was detected in the field and method blanks for the water events. AOC 607 has large PCE detections in the shallow and intermediate groundwater around building 1189 and it is very possible that cross contamination between samples as occurred. The detections for PCE do not affect the results found in the site samples.

The detections of benzene, toluene, and xylene are all below their respective method detection limits (MDLs) and cannot be verified as a true detection. The high detections of acetonitrile (an Appendix IX compound) occurred in two field blanks collected in 11/96. Both blanks were from the same SDG and no associated site samples had detections of the compound.

The phthalate compounds detected in both field and method blanks are commonly found in plastics found in disposable gloves and glassware. The phthalates that were detected in blanks during water events were not detected in any site samples. Phthalates were detected in the method blanks during soil events and not the field blanks leading to the speculation that phthalate contamination is caused by the laboratory.

CH2M-Jones Response Clarification: *See document "Response to Reply to Comment Responses"*

AOC 613/615/SWMU 175
Comment 8:
The area downgradient of well GEL014 has not been fully delineated. Information should be reported from existing wells at other areas of investigation or a request should be submitted to install additional wells. Please include all information pertaining the assessment of the petroleum contamination by the UST program of SCDHEC.

Response 8:
An additional well was installed downgradient of GEL014. The results relative to the arsenic will be discussed in the Final Zone F RFI. Recommend transfer of this area to the UST program to address fuel constituents. This report will be available to the Project Team when available. Free product is present in GEL014.

CH2M-Jones Response Clarification: *The RFI Report Addendum addresses constituents*

detected in FGELGW014 and surrounding wells, and includes information regarding the UST program.

Comment 9:
An analysis was performed for one quarter in well GEL014 for total petroleum hydrocarbons (TPH) with significant results. TPH is not a "recognized" component and therefore lacks either an MCL or RBC. Emphasis should be placed on results of VOC and SVOC analyses.

Response 9:
Comment duly noted, TPH results were presented not for nature and extent or risk purposes but only to provide the reviewer a complete set of all data collected.

CH2M-Jones Response Clarification: *No clarification required.*

Comment 10:
Point risk estimates for DPT 11 and DPT 15 are listed as "No COPC's detected"; however, no data exists for DPT 11 or DPT 15. The point risk estimate figure should be revised to indicate that samples were "Not Taken".

Response 10:
Discrepancies will be investigated and the figure will be revised accordingly.

CH2M-Jones Response Clarification: *Comment noted; figure not applicable to RFI Report Addendum.*

Comment 11:
The RFI Report mentions an underground storage tank that "allegedly contained waste oil and other waste liquids". Due to the uncertainty of the contents, the Department recommends sampling for all possible contaminants including, but not limited to, breakdown products (ie., vinyl chloride, etc).

Response 11:
Soil screening samples were generally analyzed for VOC, SVOC and metals at DQO Level III. In addition 10% of the samples were duplicated and analyzed for Appendix IX parameters at DQO Level IV.

Groundwater screening samples were generally analyzed for the same sets of parameters. Due to the low hydraulic conductivity of the sediments, several locations had partial parameters collected. When this occurred, VOCs were the highest priority to ensure effective monitoring of the UST. In addition, several shallow and one deep

monitoring wells were installed and sampled. Each well was sampled four times and analyzed for VOCs, SVOCs and metals at DOQ Level III with duplicate samples analyzed for Appendix IX at DQO Level IV.

CH2M-Jones Response Clarification: *No clarification required.*

SCDHEC (Johnny Tapia) Comments on The Zone F Draft RCRA Facility Investigation Report (dated 31 December 1998) NAVBASE Charleston March 12, 1999

Comment 2:
Section 4.3. "Data Validation Reports" is an enumeration of the results and detections of blank samples in soil and groundwater. These results should be interpreted in a relevant and meaningful manner by describing if the blank detection means the contaminant is present in the sample, is a product of cross-contamination, etc. This would clarify the significance of the presence of certain contaminants in the samples collected at each unit. As written, contributes minimum value for the review of the document. Please revise this section.

Response 2:
The Project Chemist will review and evaluate the data and compile the findings into a memo for the Project Team's review and approval. Please see response to E. Cathcart Comment #1.

CH2M-Jones Response Clarification: *No further clarification needed.*

Comment 3:
Table 6.4 which calculates the Soil Screening Levels for the protection of groundwater needs to revise and recalculate the values for Thallium and Benzo(a)pyrene. The MCL values for the Target Leachate Concentration are not correct, therefore the calculated SSL values need to be verified. Please correct and consider implications throughout the report.

Response 3:
The MCL value for benzo(a)pyrene in Table 6.4, used as the unadjusted target leachate concentration, is shown incorrectly as 0.002 mg/L; it should be 0.0002 mg/L, and will be corrected in the final report. The unadjusted target leachate concentration of 0.0005 mg/L shown for thallium is actually the MCLG rather than thallium's MCL of 0.002 (see column heading in table), and is therefore more conservative (lower) than the MCL. The *Soil Screening Guidance: User's Guide* specifies the use of a nonzero MCLG, MCL, or HBL (Equation 10, p. 29) to determine the target soil leachate concentration. In any event, neither of the calculated SSLs from Table 6.4 was used in the Section 10 screening tables. Because benzo(a)pyrene has an EPA-calculated SSL of 8 mg/kg (*Soil Screening Guidance: Technical Background Document*, Appendix A), that value was used in the tables. The EPA-calculated value of 0.7 mg/kg for thallium would have been used in the screening tables, except that thallium's background reference value of 1.24 mg/kg for subsurface soil was higher, and was therefore used instead. Sometime after the draft RFI report for Zone F was submitted, SCDHEC requested that background reference values for inorganics not be used in place of corresponding SSLs in the fate and transport screening tables when they exceed the SSLs. Consequently, 0.7 mg/kg will be used as the SSL for thallium in the final RFI report.

CH2M-Jones Response Clarification: *SSLs for both Thallium and Benzo(a)pyrene are taken from the Soil Screening Guidance:Technical Background Document, adjusted for DAF = 10. CH2M-Jones does not agree that background values that exceed SSL values should not be considered in the assessment of COCs. Therefore, if background data indicate that background values exceed the SSL, these background data will also be used as screening levels in assessing whether a chemical may be a COC.*

Comment 4:
The second paragraph of page 6.16 needs to be revised for the statements made about the use of the highest of background values (upper or lower soil) used as the screening alternative to SSLs. The same approach is mentioned for groundwater where the greater of shallow or deep background concentrations is used as an screening alternative to the tap water RBCs. Using this approach defeats the purpose of collecting two set of samples (upper and lower) to determine background reference concentrations and is not a conservative screening process. In addition, the same paragraph states that this approach is proposed based only on assumptions. The Screening process should continue as previously approved. Please revise this paragraph and consider implications throughout the report.

Response 4:
Contaminant transport from soil to groundwater involves infiltration of rainwater into the soil followed by percolation downward through surface soil and subsurface soil (the vadose, or unsaturated zone), through the water table into the saturated zone (the unconfined aquifer). Each molecule of water is exposed to contaminants in both surface and subsurface soil as it moves downward to the aquifer. Because the migrating soil water is also exposed to background concentrations of soil constituents at each level, the only relevant background concentration for making comparisons to contaminant concentrations is the greater of the surface soil or subsurface soil values. Collecting background soil samples at both depths is necessary because most human health risk assessment applications require comparisons to background for surface soil only. Because of SCDHEC's request (see Response 3 above) that background values not be used in place of SSLs, however, this is a moot point.

As stated in the paragraph in question on page 6.16, the lithology of the surficial aquifer in Zone F is complex. Given the uncertainty about the interconnectedness of the portions of the aquifer encountered in each well, groundwater results from each depth (shallow or deep) will be screened only against background reference values from the corresponding depth for the final report.

CH2M-Jones Response Clarification: *See document "Response to Reply to Comment Responses" for revised EnSafe response.*

Comment 5:
Please clarify in the text that according to EPA's latest guidance on dioxins the 1,000 ng/Kg (as 2,3,7,8-TCDD TEQs) is based on a residential cleanup level with a risk level of 1E-4. Please clarify also that this cleanup level is being used as a screening number due to the complex and time-consuming calculations involved with risk presented by dioxins. For instance page 7.7 needs this clarification. Please correct accordingly.

Response 5:
The above clarifications will be made in the revised report with one exception. The 1,000 ng/kg PRG for 2,3,7,8-TCDD TEQs is based on an *industrial* scenario and a target risk of 1E-04.

CH2M-Jones Response Clarification: *Dioxin detections in soil duplicate samples from AOC 613 were at least 3 orders of magnitude lower than the 1,000 ng/kg TEQ PRG quoted, and therefore were not considered of concern at the site.*

Comment 6:
Page 7.10, "Summary of COPCs" paragraph makes the statement that "If no groundwater impacts were identified, the current soil concentrations were considered sufficiently protective of the underlying aquifer". The Department does not necessarily agree with this statement. Other factors as age of the unit, age of spills, type of contaminants present, barriers present (asphalt, concrete, etc.) would influence the presence of contaminants in groundwater. Please modify this statement and consider this factor when making this statement in reference to a specific unit.

Response 6:
The factors mentioned above will be considered when evaluating soil's potential impact to the groundwater.

CH2M-Jones Response Clarification: *See document "Response to Reply to Comment Responses" for revised EnSafe response.*

Comment 7:
It may be appropriate to determine a background reference concentration, at Zone F soil and groundwater, for chemicals considered essential nutrients specially for iron. This natural nutrient has been detected at higher concentrations than usual throughout this zone and may be of concern. An evaluation can not be properly done at this time without having an appropriate background concentration and it has been dismissed many times without further consideration. This should be corrected in the final RFI report.

Response 7: Printouts of iron detections in both soil and groundwater exhibit smooth distributions with one high anomalous concentration in each case. Iron in soil samples appears to correlate closely with aluminum, indicating that high concentrations of both metals are related to high percentages of clay in the sample. Scatterplots of iron vs. aluminum would help confirm this interpretation, and would also make it possible to identify individual samples with genuinely anomalous high iron concentrations.

Agreed, a background concentration should be developed for iron. Since iron is an essential nutrient, there is no clear guidance for iron risk assessment for human health and therefore no clear risk based remedial alternatives to the background concentration. For sites with iron reported at concentrations above the background reference concentration it is highly recommended that the Project Team develop a framework for managing such sites. However, it will be necessary to do so with a minimum of risk based decision making tools.

CH2M-Jones Response Clarification: *Background concentrations for iron are identified from grid samples from combined Zones E and F for the AOC 613/615/SWMU 175 area. The concentrations presented in Technical Memorandum: A Summary of Inorganic Chemical Concentrators in Background Soil and Groundwater the CMC, dated November 2001 will be used for screening.*

Comment 8:
This comment is applicable to all units in Zone F. The Risk uncertainty section generally summarizes all detections and explain contributing or mitigating factors to be considered when reaching a decision on the fate of the unit. Since groundwater contamination is assessed based mainly on the first quarter of groundwater sampling, mitigating or contributing factors, such as results of subsequent rounds of groundwater sampling that confirm or refute possible contamination, should be acknowledged. Also, new contaminants detected should be mentioned. Please review the report.

Response 8:
The Navy agrees and will evaluate all available data for incorporation into the final report.

CH2M-Jones Response Clarification: *No further clarification required.*

Comment 24:
The presence and/or confirmation of removal of several USTs and associated piping within the area of AOC 613 and 615 should be clarified; as well as it needs to be confirmed if the UST program is assessing or remediating this area. Please include a clear summary of this information in the revised RFI report.

Response 24:
Agreed.

CH2M-Jones Response Clarification: *No further clarification required.*

Comment 25:
The report states that soil screening data was collected and analyzed in lieu of discrete soil samples as proposed in the approved work plan. The work plan however, also proposed that 10% of the samples will be analyzed for Appendix IX constituents. This approved proposal has not been met. Additional Appendix IX samples should be collected. The reported presence of dioxins in groundwater after the first round of sampling at one of the wells, calls for additional sampling.

Response 25:
A total of 65 soil and 58 groundwater screening samples were collected, along with six duplicate soil and five duplicate groundwater samples which were analyzed for Appendix IX parameters.

CH2M-Jones Response Clarification: *Appendix IX parameters were only analyzed in additional duplicate samples where previously detected Appendix IX constituents indicated a substantial presence on the site. There is no reason to suspect that dioxins have been released at this site.*

Comment 26:
At this group of units, the soil investigation was done by collecting screening samples at a depth that is between the surface and subsurface soil layers. Only one discrete sample was collected and analyzed at the subsurface soil interval. **Any conclusion about the lower soil contamination would be inappropriate and the least speculative in nature.** All lower soil conclusions and statements should be revised in this section of the report, specially the fate and transport section. There is a considerable investigatory gap on this group of units that need to be filled. Additional work is needed.

Response 26:
The final will be rewritten to clarify statements regarding subsurface soil. The Fate and Transport section compares surface and subsurface soil concentrations to SSLs considered protective of groundwater to evaluate the potential impact to shallow

groundwater. The Navy has collected 58 groundwater screening samples and four rounds of samples from 14 monitoring wells and analyzed these of DQO III. This should be sufficient to characterize the site.

CH2M-Jones Response Clarification: *Sufficient discreet samples were collected as described in the two Work Plan Addenda to adequately characterize the site soil.*

Comment 27:
Tables 10.7.9 and 10.7.10 need to be corrected. These tables show the results of groundwater sampling, therefore the units should be ug/L instead of ug/Kg. Please revise.

Response 27:

These tables will be revised to present the proper units.

CH2M-Jones Response Clarification: *No further clarification required.*

Comment 28:
Table 10.7.11 needs to be corrected for the MCL for dioxin, which is 0.03 ng/L instead of 1,900. Please revise.

Response 28:
The table will be revised to show the correct MCL.

CH2M-Jones Response Clarification: *No further clarification required.*

Comment 29:
A preliminary comparison of soil screening samples collected showed the PCE, Methylene chloride, Benzo(a)anthracene, Arsenic, Chromium, and Thallium exceeded their respective SSLs or lower soil background reference concentrations. In addition, a fair assessment of contaminant presence is further complicated because of the erratic changes on the group of parameters analyzed at each sampling location. The logic for this sampling scheme is not well understood nor it helps the Department on making a contamination presence determination. All Appendix IX constituents are suspect to be present within these group of units. Further sampling, as asked by previous comments, should include the full set of Appendix IX analytes.

Response 29:
Please refer to the response to Comment 26.

CH2M-Jones Response Clarification: *No further clarification required.*

Comment 30:
Table 10.7.28 was incomplete. This table should summarize all COCs for all media. Please revise for the missing groundwater COCs.

Response 30:
The table will be revised to show all COCs.

CH2M-Jones Response Clarification: *No further clarification required.*

Response to Reply to Comments on the Draft Final Zone F RFI Report
June 25, 1999

SCDHEC (Eric Cathcart) Reply to Comments received 7 April 1999 on The Zone F Draft RCRA Facility Investigation Report (dated 31 December 1998) Charleston Naval Complex

Comment 1: Soil sample blanks for the following areas contained detectable contaminants: SWMU 4, AOC 619, SWMU 36, AOC 620, SWMU 109, AOC 607, AOC 609, AOC 611, AOC 613, AOC 616, AOC 617, and Grid soil samples. Groundwater blanks contained detectable contaminants for the following areas: AOC 619, AOC 620, SWMU 109, AOC 607, AOC 609, AOC 613, GEL samples, Location 240, AOC 617, and Grid groundwater samples. These detections were noted in the volatile, semivolatile, and metals methods. In accordance with the Environmental Protection Agency, *Standard Operating Procedures* for sample collection, trace contaminants in field, trip, equipment, and distilled water blanks may indicate a problem with either decontamination procedures and/or cross contamination of samples during collection or transport. The RFI report should fully explain the existence of trace contaminants in blanks. Please revise the text to include this/these explanation(s).

Response 1: The Project Chemist has reviewed and evaluated the data and compiled the findings in the following memo to the Project Team for review and approval.

Memorandum

To: Charleston Naval Complex Project Team

From: Charlie Vernoy, EnSafe

Subject: **Response to Comments on the Draft Zone F and K RFI Reports**

Date: March 31, 1999

Contents of the memorandum not included. Refer to original comment letter.

SCDHEC response:

The presence of tetrachloroethene in the field and method blanks for groundwater samples and the Navy's suggestion that cross contamination may have occurred between samples for AOC 607 concerns the Department. The Navy should make every effort to prevent cross contamination in future samples. Field personnel should review the procedures for sample collection and shipment as noted in CVA Final Comprehensive Sampling and Analysis Plan dated 30 August 1994 and the EPA Region IV Environmental Compliance Branch <u>Standard Operating Procedures</u>

and Quality Assurance Manual.

The Navy's explanation for the high incident of metals in the field blanks should be validated through water quality data from the North Charleston Water System. The data report should be submitted within ninety days of receipt of this letter.

Response:
EnSafe will contact the City of North Charleston to inquire if such data is available and, if so, obtain a copy for comparison to the metals detected in Zone F field blanks.

CH2M-Jones Response Clarification: *Data from the City for the time period during described sampling is not available for comparison.*

Comment 8:
AOC 613/615 and SWMU 175
The area downgradient of well GEL014 has not been fully delineated. Information should be reported from existing wells at other areas of investigation or a request should be submitted to install additional wells. Please include all information pertaining the assessment of the petroleum contamination by the UST program of SCDHEC.
Response 8:
An additional well was installed downgradient of GEL014. The results relative to the arsenic will be discussed in the Final Zone F RFI. Recommend transfer of this area to the UST program to address fuel constituents. This report will be available to the Project Team when available. Free product is present in GEL014.

SCDHEC response:

The Navy informed the Department during the 13 April 1999 Team meeting that the additional well that was installed downgradient of GEL014 was installed approximately 9 months ago. The Navy should revise the well location map to include the new well. The Department also recommends sampling the well for the Appendix IX at DQO Level IV. The Department recommends production of a map showing the location of the fuel distribution map in relation to the known free product. The Navy should not exclude areas downgradient of GEL014 that may contain free product. The Navy informed the Department during the 13 April 1999 Team meeting that the source of the free product in GEL014 has been removed. The Department will hold a final decision about the site until the above noted information is provided and reviewed.

Response:
The well has been sampled twice for VOCs, SVOCs, metals, and pesticides/PCBs at DQO Level III. The figure will be revised to show the location of the newly installed monitoring well (613006), the approximate location of the piping of the Fuel Distribution System and, if delineated, the area of free product. The active sections of the FDS

pipelines were cleaned of fuel when this facility was closed. It is possible that older "by passed" sections still exist which may contain residual petroleum product.

CH2M-Jones Response Clarification: *Additional investigation of this area (Site 17) is continuing within the UST program. The RFI Report Addendum shows the FDS line and presents data from three sampling events at F613GW006 and five sampling events at adjacent wells FFDSGW17A and FFDSGW17B.*

SCDHEC (Johnny Tapia) Reply to Comments on The Zone F Draft RCRA Facility Investigation Report (dated 31 December 1998) Charleston Naval Complex

Comment 4:
The second paragraph of page 6.16 needs to be revised for the statements made about the use of the highest of background values (upper or lower soil) used as the screening alternative to SSLs. The same approach is mentioned for groundwater where the greater of shallow or deep background concentrations is used as an screening alternative to the tap water RBCs. Using this approach defeats the purpose of collecting two set of samples (upper and lower) to determine background reference concentrations and is not a conservative screening process. In addition, the same paragraph states that this approach is proposed based only on assumptions. The Screening process should continue as previously approved. Please revise this paragraph and consider implications throughout the report.

Response 4:

The text will be modified to clarify that only SSLs will be used for the initial fate and transport screening. Inorganic SSL exceedances will be compared to background concentrations for discussion purposes only. Because the migration path, soil-to-groundwater, crosses through both soil intervals, the greater background will be used for this comparison.

As stated in the paragraph in question on page 6.16, the lithology of the surficial aquifer in Zone F is complex. Given the uncertainty about the interconnectedness of the portions of the aquifer encountered in each well, groundwater results from each depth (shallow or deep) will be screened only against background reference values from the corresponding depth for the final report.

CH2M-Jones Response Clarification: *Screening against background concentrations will be performed as agreed by the BCT.*

Comment 6:
Page 7.10, "Summary of COPCs" paragraph makes the statement that "If no groundwater impacts were identified, the current soil concentrations were considered sufficiently protective of the underlying aquifer". The Department does not necessarily agree with this statement. Other factors as age of the unit, age of spills, type of contaminants present, barriers present (asphalt, concrete, etc.) would influence the presence of contaminants in groundwater. Please modify this statement and consider this factor when making this statement in reference to a specific unit.

Response 6:

The Navy agrees and will revise the text in Section 7. Site specific factors potentially affecting the soil-to-groundwater pathway will be identified and discussed as appropriate for the site. This information will be added to the fate and transportation subsections of Section 10 text.

CH2M-Jones Response Clarification: *CH2M-Jones is screening soil parameters for COPCs using the soil screening process as agreed upon with DHEC.*

SCDHEC (Susan Byrd) Reply to Comments on The Zone F Draft RCRA Facility Investigation Report (dated 31 December 1998) Charleston Naval Complex

Comment 1:
Section 6.2.1, Page 6.11, Line 20
The text states that the soil-to-groundwater migration pathway was assessed using generic SSLs that assume a DAF of 20, rather than site specific SSLs. A vague description was given for the justification of the DAF value used; however, a more thorough explanation as to why the DAF value of 20 was selected, including site specific parameters, should be discussed in this section. A table showing the comparative site specific values should be included.

Response 1:
Because of the number of sites in each zone, fate and transport evaluation consists of a conservative, first-look screening followed by a more detailed look at the potential problem chemicals identified in the screening. In keeping with the preliminary nature of the screening, generic DAFs of 10 or 20 have been used to calculate SSLs for protection of groundwater. Normally, a DAF of 20 is used, as recommended in the 1996 USEPA *Soil Screening Guidance.* Where hydrogeological conditions indicate that a more conservative value is appropriate, a DAF of 10 is used. For example, DAFs of 10 were used for the Naval Annex in Zone K because sediments there are almost entirely permeable sand, and for Zone I because groundwater levels are very close to the surface and the horizontal gradient is unusually low. Fate and transport evaluation for Zone E was carried out differently than for other zones: recognizing that groundwater would not be used as drinking water in this industrial area, the focus was on potential threats to surface water in the Cooper River. To make up for this less conservative approach to groundwater, the DAF was arbitrarily lowered from 20 to 10, although hydrogeological conditions would have justified using 20. The decision to use a DAF of 20 was not dependant on site specific parameters. The rationale for using a DAF of 20 for Zone G is presented in Section 6.3.

CH2M-Jones Response Clarification: *As agreed by the BCT, DAFs of 1 for VOCs and 10 for other parameters have been used for initial screening. Site specific DAFs may be calculated for chemicals that exceed initial SSL screening values.*

Comment 2:
Section 6.2.1, Page 6.16, Line 1
The text state that the greater of the background reference values for surface soil and subsurface soil was used as the screening alternatives to SSLs for inorganics. Using the highest background reference value does not seem to be a conservative approach for background comparison. An explanation should be given to support the statement that the higher background value is always relevant. Also, the approach of comparing surface soils to subsurface soils is not supported due to the influence to "natural occurring" surface

soils from the Naval activities such as land covering with dredge materials. To resolve comparing "apples to oranges", compare surface soil background levels solely to surface soil samples and subsurface soil background levels to subsurface samples.

Response 2:
The text will be modified to clarify that only SSLs will be used for the initial fate and transport screening. Because the migrating soil water is exposed to background concentrations of soil constituents at each level, the only relevant background concentration for fate and transport comparisons is the greater of the surface soil or subsurface soil values. The surficial soil (less that 5 feet bgs) throughout Zone G is an extremely heterogeneous composite of native soil and dredge spoil and other fill materials. It would not be feasible to accurately identify, characterize and determine background concentrations for each soil type encountered.

CH2M-Jones Response Clarification: *As agreed by the BCT, if background samples were collected in areas not impacted by Navy activities, the range of background values is therefore indicative of concentrations not directly related to specific site activities. Site data will be compared to the background range to evaluate COPCs.*

Comment 3:
Section 7.3.4, Page 7.8, Line 22
The terms "significantly greater" is vague and should be defined more clearly or deleted from the text.

Response 3:
The adjective "significantly" will be deleted from the revised text.

CH2M-Jones Response Clarification: *No further clarification required.*

Comment 4:
Section 7.3.9, Page 7.19, Line 16
The text states that parameters not having RBC values were not included in the CDI calculation data. EPA Risk Assessment Guidance for Superfund recommends alternative measures when toxicity values are not available. An alternative measure should be implemented in order to prevent deleting values from the calculations.

Response 4:
Parameters that do not have corresponding RBCs due to the lack of approved toxicological data were not included in the CDI calculations. For Zone F media, only essential nutrients were not included due to a lack of quantitative toxicity values. Perhaps SCDHEC and/or the CNC Project Team could assist in identifying the necessary toxicity values.

CH2M-Jones Response Clarification: *No further clarification required.*

Comment 5:
Section 8.0, Page 8.1, Lines 2-10
A better justification should be provided for not conducting the Ecological Risk Assessment since receptors were identified in the text. The fact that no Zone F AECs were identified in earlier investigations could be one rationale. Emphasis should be placed on the size of the areas and the unlikeliness that the species identified reside in the areas for prolonged periods of time. Further justification as to why the habitat is considered "limited" should be provided.

Response 5:
The text will be modified to more fully justify the decision not to conduct a Ecological Risk Assessment based on a lack of AECs in Zone F.

CH2M-Jones Response Clarification: *AECs have not been identified in Zone F and therefore an ERA will not be conducted.*

Comment 6:
Section 10.1
It would be very helpful to have a map at the beginning of each SWMU and AOC section showing the location of each SWMU or AOC within Zone F. The maps provided in each section are larger scale maps of the SWMUs and AOCs which do not show their locations within the entire Zone.

Response 6:
This information is provided as Figure1-2 in Volume I of the RFI.

CH2M-Jones Response Clarification: *A location map will be provided at the beginning of each AOC or SWMU section or individual RFI Report Addendum.*

Comment 11: (AOC 613/615/SWMU 175)
Section 10.7.5, Page 10.7.121, Line 2
The term "None VOCs" should be changed to "Nine VOCs".

Response 11:
This text will be revised to identify the correct number of VOCs.

CH2M-Jones Response Clarification: *The correct number of VOCs has been identified in the RFI Report Addendum.*

Comment 12:

Section 10.7.6.2, Page 10.7.148, Line 4
The text give two reasons why contaminants detected in groundwater were not detected in subsurface soil. Numerous other scenarios could also account for the non-detect in the subsurface soil such as the age of the unit and the fact that the release my have occurred many years ago, soil types and soil-to-groundwater migration rates, influence from nearby AOCs, SWMUs, storm drains, etc. The fact that other rationales exist should be mentioned in the text.

Response 12:
The text in this section and other sections with a similar scenarios will be revised to discuss other potential rationales for this observance.

CH2M-Jones Response Clarification: *No further clarification required.*

Comment 13:
Section 10.7.7.6, Page 10.7.191, Line 23
The text refers to "grossly elevated concentrations". This terminology is vague and should be either reworded or deleted from the text.

Response 13:
This terminology will be deleted from the revised text.

CH2M-Jones Response Clarification: *No further clarification required.*

Surface Soil -Hypothetical Future Industrial Worker Carcinogenic Scenario

Charleston Navy Complex - Zone F, AOC 613

										Ingestion		Dermal		Inhalation	
Units	**Chemical**	**WOE**	**SFo**	**SFd**	**SFI**	**VFind**	**EPC**	**ABSgi**	**DABS**	**CDI**	**ELCR**	**CDI**	**ELCR**	**CDI**	**ELCR**
mg/kg	Aluminum						1.41E+04	10%	0.001	2.46E-03		3.96E-06		7.46E-07	
mg/kg	Antimony						1.00E+00	2%	0.001	1.75E-07		2.81E-10		5.30E-11	
mg/kg	Arsenic	A	1.50E+00	1.88E+00	1.51E+01		1.32E+01	80%	0.001	2.31E-06	3.5E-06	3.72E-09	7.0E-09	7.01E-10	1.1E-08
mg/kg	BEQ	B2	7.30E+00	2.35E+01	3.10E+00	1.33E+07	4.84E-01	31%	0.01	8.46E-08	6.2E-07	1.36E-09	3.2E-08	2.57E-09	8.0E-09
mg/kg	Chromium, Total	A-D			4.20E+01		2.84E+01	2%	0.001	4.96E-06		7.97E-09		1.50E-09	6.3E-08
mg/kg	Copper						3.08E+01	30%	0.001	5.39E-06		8.66E-09		1.63E-09	
mg/kg	Lead	B2					1.45E+02	15%	0.001	2.53E-05		4.07E-08		7.68E-09	
mg/kg	Mercury				8.60E-05	3.02E+04	3.27E-01	0%	0.001	5.72E-08		9.19E-11		7.56E-07	6.5E-11
mg/kg	PCB-1260 (Arochlor 1260)	B2	2.00E+00	2.22E+00		4.98E+05	2.15E-01	90.00%	0.001	3.75E-08	7.5E-08	6.03E-11	1.3E-10	3.01E-08	
mg/kg	Thallium						4.82E-01	15%	0.001	8.41E-08		1.35E-10		2.55E-11	
mg/kg	Vanadium						3.82E+01	1%	0.001	6.68E-06		1.07E-08		2.02E-09	
	Total Risk										**4E-06**		**4E-08**		**2E-08**
												Total Risk =		**4E-06**	

Notes: WOE = Weight of Evidence; CDI = Chronic Daily Intake; EPC = Exposure Point Concentration; ELCR = Excess Lifetime Cancer Exposure

Surface Soil -Hypothetical Future Industrial Worker Non-carcinogenic Scenario

Charleston Navy Complex - Zone F, AOC 613

										Ingestion		Dermal		Inhalation	
Units	**Chemical**	**WOE**	**RfDo**	**RfDd**	**RfDi**	**VFind**	**EPC**	**ABSgi**	**DABS**	**CDI**	**HQ**	**CDI**	**HQ**	**CDI**	**HQ**
mg/kg	Aluminum		1.00E+00	1.00E-01			1.41E+04	10%	0.001	6.89E-03	0.0069	1.11E-05	1.11E-04	2.09E-06	
mg/kg	Antimony		4.00E-04	8.00E-06			1.00E+00	2%	0.001	4.90E-07	0.0012	7.88E-10	9.85E-05	1.49E-10	
mg/kg	Arsenic	A	3.00E-04	2.40E-04			1.32E+01	80%	0.001	6.48E-06	0.022	1.04E-08	4.34E-05	1.96E-09	
mg/kg	BEQ	B2				1.33E+07	4.84E-01	31%	0.01	2.37E-07		3.81E-09		7.18E-09	
mg/kg	Chromium, Total	A-D	3.00E-03	6.00E-05	2.86E-05		2.84E+01	2%	0.001	1.39E-05	0.0046	2.23E-08	3.72E-04	4.21E-09	0.0001
mg/kg	Copper		3.70E-02	1.11E-02			3.08E+01	30%	0.001	1.51E-05	0.0004	2.43E-08	2.18E-06	4.57E-09	
mg/kg	Lead	B2					1.45E+02	15%	0.001	7.09E-05		1.14E-07		2.15E-08	
mg/kg	Mercury					3.02E+04	3.27E-01	0.01%	0.001	1.60E-07		2.57E-10		2.12E-06	
mg/kg	PCB-1260 (Arochlor 1260)	B2	2.00E-05	1.80E-05		4.98E+05	2.15E-01	90%	0.001	1.05E-07	0.01	1.69E-10	0.00001	8.44E-08	
mg/kg	Thallium		6.60E-05	9.90E-06			4.82E-01	15%	0.001	2.36E-07	3.57E-03	3.79E-10	3.83E-05	7.14E-11	
mg/kg	Vanadium		7.00E-03	7.00E-05			3.82E+01	1%	0.001	1.87E-05	0.0027	3.01E-08	4.29E-04	5.67E-09	
	Hazard Index										**0.046**		**0.0011**		**1.47E-04**
													Total HI=	**0.047**	

Notes: WOE = Weight of Evidence; CDI = Chronic Daily Intake; EPC = Exposure Point Concentration; HQ = Hazard Quotient; HI = Hazard Index

Surface Soil - Future Residential Adult Carcinogenic Scenario

Charleston Navy Complex - Zone F, AOC 613

										Ingestion		Dermal		Inhalation	
Units	**Chemical**	**WOE**	**SFo**	**SFd**	**SFI**	**RME**	**DE**	**ABS**	**VFres**	**CDI**	**ELCR**	**CDI**	**ELCR**	**CDI**	**ELCR**
mg/kg	Aluminum					1.41E+04	10%	0.001		2.21E-02		2.37E-05		1.90E-06	
mg/kg	Antimony					1.00E+00	2%	0.001		1.57E-06		1.68E-09		1.35E-10	
mg/kg	Arsenic	A	1.50E+00	1.88E+00	1.51E+01	1.32E+01	80%	0.001		2.07E-05	3.1E-05	2.22E-08	4.2E-08	1.79E-09	2.7E-08
mg/kg	BEQ	B2	7.30E+00	2.35E+01	3.10E+00	4.84E-01	31.00%	0.01	1.33E+07	7.58E-07	5.5E-06	8.13E-09	1.9E-07	6.54E-09	2.0E-08
mg/kg	Chromium, Total	A-D			4.20E+01	2.84E+01	2%	0.001		4.44E-05		2.04E-08		3.83E-09	1.6E-07
mg/kg	Copper					3.08E+01	30%	0.001		4.83E-05		2.22E-08		1.78E-09	
mg/kg	Lead	B2				1.45E+02	15%	0.001		2.27E-04		1.04E-07		8.38E-09	
mg/kg	Mercury				8.60E-05	3.27E-01	0%	0.001	3.02E+04	5.12E-07		2.35E-10		1.93E-06	1.7E-10
mg/kg	PCB-1260 (Arochlor 1260)	B2	2.00E+00	2.22E+00		2.15E-01	90.00%	0.001	4.98E+05	1.26E-07	2.5E-07	1.55E-10	3.4E-10	7.68E-08	
mg/kg	Thallium					4.82E-01	15%	0.001		2.83E-07		3.47E-10		6.50E-11	
mg/kg	Vanadium					3.82E+01	1%	0.001		2.24E-05		2.75E-08		5.16E-09	
	Total Risk										3.7E-05		2.3E-07		2.1E-07
													Total Risk =	**4E-05**	

Notes: WOE = Weight of Evidence; CDI = Chronic Daily Intake; RME = Reasonable Maximum Exposure Concentration; ELCR = Excess Lifetime Cancer Exposure

Surface Soil - Future Residential Adult Non-carcinogenic Scenario

Charleston Navy Complex - Zone F, AOC 613

										Ingestion		Dermal		Inhalation	
Units	**Chemical**	**WOE**	**RfDo**	**RfDd**	**RfDi**	**RME**	**DE**	**ABS**	**VFres**	**CDI**	**HQ**	**CDI**	**HQ**	**CDI**	**HQ**
mg/kg	Aluminum		1.00E+00			1.41E+04	10%	0.001		1.93E-02	0.019	4.41E-05		2.92E-06	
mg/kg	Antimony		4.00E-04	8.00E-06		1.00E+00	2%	0.001		1.37E-06	0.0034	3.13E-09	3.92E-04	2.08E-10	
mg/kg	Arsenic	A	3.00E-04	2.40E-04		1.32E+01	80%	0.001		1.81E-05	0.060	4.14E-08	1.73E-04	2.75E-09	
mg/kg	BEQ	B2				4.84E-01	31%	0.01	1.33E+07	6.63E-07		1.52E-08		1.01E-08	
mg/kg	Chromium, Total	A-D	3.00E-03	6.00E-05	2.86E-05	2.84E+01	2%	0.001		3.89E-05	0.013	2.07E-07	0.0035	5.89E-09	2.1E-04
mg/kg	Copper		3.70E-02	1.11E-02		3.08E+01	30%	0.001		4.22E-05	0.001	2.25E-07	0.00002	6.40E-09	
mg/kg	Lead	B2				1.45E+02	15%	0.001		1.99E-04		1.06E-06		3.01E-08	
mg/kg	Mercury					3.27E-01	0.01%	0.001	3.02E+04	4.48E-07		2.39E-09		2.96E-06	
mg/kg	PCB-1260 (Arochlor 1260)	B2	2.00E-05	1.80E-05		2.15E-01	90%	0.001	4.98E+05	2.94E-07	1.5E-02	3.61E-10	0.00002	1.18E-07	
mg/kg	Thallium		6.60E-05	9.90E-06		4.82E-01	15%	0.001		6.60E-07	1.00E-02	8.09E-10	8.17E-05	1.00E-10	
mg/kg	Vanadium		7.00E-03	7.00E-05		3.82E+01	1%	0.001		5.23E-05	0.007	6.42E-08	9.17E-04	7.93E-09	
	Hazard Index										0.13		0.0051		2.06E-04
													Total HI =	**0.13**	

Notes: WOE = Weight of Evidence; CDI = Chronic Daily Intake; RME = Reasonable Maximum Exposure Concentration; HQ = Hazard Quotient; HI = Hazard Index

Surface Soil - Future Residential Child Non-carcinogenic Scenario

Charleston Navy Complex - Zone F, AOC 613

										Ingestion		Dermal		Inhalation	
Units	**Chemical**	**WOE**	**RfDo**	**RfDd**	**RfDI**	**RME**	**DE**	**ABS**	**VF CHILD**	**CDI**	**HQ**	**CDI**	**HQ**	**CDI**	**HQ**
mg/kg	Aluminum		1.00E+00	1.00E-01		1.41E+04	10%	0.001		1.80E-01	0.18	4.99E-04	0.0050	1.02E-05	
mg/kg	Antimony		4.00E-04	8.00E-06		1.00E+00	2%	0.001		1.28E-05	0.032	3.55E-08	0.0044	7.28E-10	
mg/kg	Arsenic	A	3.00E-04	2.40E-04		1.32E+01	80%	0.001		1.69E-04	0.56	4.69E-07	0.0020	9.62E-09	
mg/kg	BEQ	B2				4.84E-01	31%	0.01	1.33E+07	6.E-06		2.E-07		3.5.E-08	
mg/kg	Chromium, Total	A-D	3.00E-03	6.00E-05	2.86E-05	2.84E+01	2%	0.001		4.E-04	0.12	1.E-06	0.017	2.1.E-08	0.001
mg/kg	Copper		3.70E-02	1.11E-02		3.08E+01	30%	0.001		4.E-04	0.01	1.E-06	0.000	2.2.E-08	
mg/kg	Lead	B2				1.45E+02	15%	0.001		2.E-03		5.E-06		1.1.E-07	
mg/kg	Mercury					3.27E-01	0%	0.001	3.02E+04	4.E-06		1.E-08		1.0.E-05	
mg/kg	PCB-1260 (Arochlor 1260)	B2	2.00E-05	1.80E-05		2.15E-01	90.00%	0.001	4.98E+05	3.E-06	1.37E-01	8.E-09	0.00	4.1.E-07	
mg/kg	Thallium		6.60E-05	9.90E-06		4.82E-01	15%	0.001		6.E-06	9.33E-02	2.E-08	1.72E-03	3.5.E-10	
mg/kg	Vanadium		7.00E-03	7.00E-05		3.82E+01	1%	0.001		5.E-04	0.07	1.E-06	1.93E-02	2.8.E-08	
	Hazard Index										1.2		0.050		0.0007
													Total HI =	**1.3**	

Notes: WOE = Weight of Evidence; CDI = Chronic Daily Intake; RME = Reasonable Maximum Exposure Concentration; HQ = Hazard Quotient; HI = Hazard Index