GW - 32

REPORTS

YEAR(S):

1991 - EPA RCRA PHASE I

FINAL Book 2

RCRA FACILITY INVESTIGATION
PHASE I - FINAL REPORT
GIANT REFINING COMPANY
GALLUP, NEW MEXICO
APRIL 8, 1991
BOOK 2

Section 6.0
Soil Sampling Data

GIANT
REFINING CO.

Route 3, Box 7
Gallup, New Mexico
87301

505
722-3833

June 15, 1990

Julie Essey
Enseco
4955 Yarrow Street
Arvada, CO 80002

RE: SAMPLE BOTTLE REQUEST

Dear Julie:

Giant Refining Co. requests that Enseco provide analytical support for Phase I of the RCRA Facility Investigation for its Ciniza Refinery. Invoices should reference RFE Number 997-9004-37. Review the following list and associated attachments for sample bottle shipment. The sample bottles must be received at Ciniza by June 21, 1990.

I. Solid Waste Management Unit #6

A. Number of sample containers for soil samples:
Soil samples: 60
Equipment Blanks: 2
Trip Blanks: 2
Field Duplicates: 5

B. Analytical Requirements
BTEX - 8020
Lead - 6010
Nickle - 6010

II. Solid Waste Management Unit #8

A. Number of sample containers for soil samples:
Soil Samples: 39
Equipment Blanks: 2
Trip Blanks: 2
Field Duplicates: 3

B. Analytical Requirements:
Skinner (Refinery) Volatiles (see attached) - 8240
Skinner (Refinery) Semi-Volatiles (see attached) - 8270
Background Metals - see attached

C. Number of sample containers for water samples:
Liquid samples: 1
Equipment Blanks: 0
Trip Blanks: 0
Field Duplicates: 1

D. Analytical Requirements:
pH - 9040
TDS - 160.1
BTEX - 8020
TPH - GC/FID

III. Solid Waste Management Unit #9

A. Number of sample containers for soil samples:
Soil Samples: 28
Equipment Blanks: 1
Trip Blanks: 1
Field Duplicates: 3

B. Analytical Requirements:
Priority Pollutant Volatiles (see attached) - 8240
Priority Pollutant Semi-Volatiles (see attached)- 8270
Background Metals - see attached

IV. Solid Waste Management Unit #10

A. Number of sample containers for soil samples:
Soil Samples: 22
Equipment Blanks: 1
Trip Blanks: 1
Field Duplicates: 2

B. Analytical Requirements:
Priority Pollutant Volatiles (see attached) - 8240
Priority Pollutant Semi-Volatiles (see attached)- 8270
Background Metals - see attached

Submit one completed analytical report for each of the four individual solid waste management units.
If you have any questions contact me at (505) 722-3833 ext. 217.

Sincerely,

Claud Rosendale

Claud Rosendale
Environmental Manager
Ciniza Refinery

CCR:ctf

Attachments

Background Metals

1. Antimony
2. Arsenic
3. Barium
4. Beryllium
5. Cadmium
6. Chromium
7. Cobalt
8. Copper
9. Lead
10. Mercury
11. Nickle
12. Potassium
13. Selenium
14. Vanadium
15. Zinc

LABORATORY

TECH NOTES

Analytical Services

RADIAN CORPORATION

Number 3
Revised, April 1990

GCMS TARGET LISTS MADE SIMPLE

NEW TCLP LIST INCLUDED

To simplify project planning and data review, *Tech Note 3* provides a table of gas chromatographic/mass spectrometric (GC/MS) volatile and semivolatile organic chemicals covered by EPA's major water and waste regulations. Pesticides normally analyzed by gas chromatographic methods have been omitted from the lists.

Be aware that the table of GC/MS target compounds can change as EPA amends its regulations or promulgates new ones. Note, also, that there are two separate TCLP lists – Toxicity and Land ban – for solvent wastes (F001-F005) and those containing dioxins (F020-F023; F026-F028). Stay aware of changes in regulations by referring to appropriate technical or trade journals or to the *Federal Register*.

In addition, call us for an update from time to time – we will be happy to advise you on changes to *Tech Note 3*. And as always, Radian's Marketing Managers and Client Service Coordinators will actively help you identify the best analysis methods and the most appropriate compound lists for your monitoring needs when you schedule work with Radian's Analytical Services Laboratories.

VOLATILE COMPOUNDS*

	TEST PARAMETERS BY REGULATIONS							
	CWA		RCRA					SUPERFUND
ANALYTE	NPDES[a]	824[b]	APPENDIX IX	9240[c]	SKINNER	TCLP		CLP[d]
						Toxicity	Land ban	
A								
Acetone			✓	✓			✓	✓
Acetonitrile			✓					
Acrolein	✓		✓	✓				
Acrylonitrile	✓		✓	✓				
Allyl chloride			✓					
B								
Benzene	✓	✓	✓	✓	✓	✓		✓
Bromodichloromethane	✓	✓	✓	✓				✓
Bromoform	✓	✓	✓	✓				✓
Bromomethane	✓	✓	✓	✓[e]				✓
Butyl Alcohol							✓	
C								
Carbon disulfide			✓	✓	✓		✓	✓
Carbon tetrachloride	✓	✓	✓	✓		✓	✓	✓

*This list of compounds, which is a comparison of lists and methods as performed at Radian, is current as of publication date. It should not be used as a substitute for consulting the most recent issue of *40 CFR* or SW846 methods for any changes.

[a] *40 CFR*, Pt. 122, Appendix D
[b] *40 CFR*, Pt. 136, Appendix A
[c] *SW-846, 3rd Edition*
[d] *CLP SOW 7/88*
[e] Listed as methyl bromide

(cont ▶)

VOLATILE COMPOUNDS (cont.)

ANALYTE	CWA		RCRA					SUPERFL
						TCLP		
	NPDES	624	APPENDIX IX	8240	SKINNER	Toxicity	Land ban	CLP
Chlorobenzene	✓	✓	✓	✓	✓	✓	✓	✓
Chlorodibromomethane	✓[f]	✓[f]	✓[f]	✓				✓
Chloroethane	✓	✓	✓	✓				✓
2-Chloroethyivinyl ether	✓	✓		✓				
Chloroform	✓	✓	✓	✓	✓	✓		✓
Chloromethane	✓	✓	✓	✓				✓
Chloropropene			✓					
D								
1.2 Dichlorobenzene	✓	✓						
1.3 Dichlorobenzene	✓	✓						
1.4 Dichlorobenzene	✓	✓						
1.2-Dibromo-3-chloropropane			✓					
Dibromomethane			✓[g]	✓				
1.2-Dibromoethane			✓		✓[g]			
1.4-Dichloro-2-butane				✓				
trans-1.4-Dichloro-2-butene			✓	✓				
Dichlorodifluoromethane			✓	✓				
1.1-Dichloroethane	✓	✓	✓	✓				✓
1.2-Dichloroethane	✓	✓	✓	✓	✓	✓		✓
1.1-Dichloroethylene	✓	✓	✓	✓		✓		✓
trans-1.2-dichloroethylene	✓	✓	✓	✓				✓
1.2-Dichloropropane	✓	✓	✓	✓				✓
cis-1.3-Dichloropropene	✓	✓	✓	✓				✓
trans-1.3-Dichloropropene	✓	✓	✓	✓				✓
1.4 Dioxane			✓		✓			
E								
Ethanol				✓				
Ethyl acetate							✓	
Ethyl benzene	✓	✓	✓	✓	✓		✓	✓
Ethyl ether							✓	
Ethyl methacrylate			✓	✓				
H								
2-Hexanone			✓	✓				✓

TEST PARAMETERS BY REGULATIONS

[f] Listed as dibromochloromethane
[g] Listed as methylene dibromide
[h] Listed as ethylene dibromide
[i] Listed as methyl iodide

(cont ▶

VOLATILE COMPOUNDS (cont.)

ANALYTE	TEST PARAMETERS BY REGULATIONS							
	CWA		RCRA					SUPERFUND
	NPDES	624	APPENDIX IX	8240	SKINNER	TCLP		CLP
						Toxicity	Land ban	
I								
Iodomethane			✓[1]	✓				
Isobutanol							✓	
M								
Methacrylonitrile			✓					
Methanol							✓	
Methylene chloride	✓	✓	✓	✓			✓	✓
Methyl ethyl ketone			✓[1]	✓	✓	✓	✓	✓
Methyl isobutyl ketone			✓[2]	✓[2]			✓	✓
Methyl methacrylate			✓					
P								
Propionitrile			✓					
S								
Styrene			✓	✓	✓			✓
T								
1,1,1,2-Tetrachloroethane			✓					
1,1,2,2-Tetrachloroethane	✓	✓	✓	✓				✓
Tetrachloroethylene	✓	✓	✓	✓		✓	✓	✓
Toluene	✓	✓	✓	✓	✓		✓	✓
1,1,1-Trichloroethane	✓	✓	✓	✓			✓	✓
1,1,2-Trichloroethane	✓	✓	✓	✓				✓
Trichloroethylene	✓	✓	✓	✓		✓	✓	✓
Trichlorofluoromethane		✓	✓	✓			✓	
1,2,3-Trichloropropane			✓	✓				
1,1,2-Trichloro-2,2,1-trifluoroethane							✓	
V								
Vinyl acetate			✓	✓				✓
Vinyl chloride	✓	✓	✓	✓		✓		✓
X								
Xylenes			✓	✓	✓		✓	✓

[1] Listed as 2-butatone
[2] Listed as 4-methyl-2-pentanone

SEMIVOLATILE COMPOUNDS*

ANALYTE	TEST PARAMETERS BY REGULATIONS							
	CWA		RCRA					SUPERF
	NPDES	625[l]	APPENDIX IX	8270[m]	SKINNER	TCLP		CLP
						Toxicity	Land ban	
A								
Acenaphthene	✓	✓	✓	✓				✓
Acenaphthylene	✓	✓	✓	✓				✓
Acetophenone			✓	✓				
2-Acetylaminofluorene			✓					
4-Aminobiphenyl			✓	✓				
Aniline			✓	✓				
Anthracene	✓	✓	✓	✓	✓			✓
Aramite			✓					
B								
Benzenethiol					✓			
Benzidine	✓			✓				
Benzoic acid				✓				✓
Benzo(a)anthracene	✓	✓	✓	✓	✓			✓
Benzo(b)fluoranthene	✓	✓	✓	✓	✓			✓
Benzo(k)fluoranthene	✓	✓	✓	✓	✓			✓
Benzo(g,h,i)perylene	✓	✓	✓	✓				✓
Benzo(a)pyrene	✓	✓	✓	✓	✓			✓
Benzyl alcohol			✓	✓				✓
Bis(2-chloroethoxy)methane	✓	✓	✓	✓				✓
Bis(2-chloroethyl)ether	✓	✓	✓	✓				✓
Bis(2-chloroisopropyl)ether	✓[n]	✓		✓[o]				✓
Bis(2-ethylhexyl)phthalate	✓	✓	✓	✓	✓			✓
4-Bromophenyl phenyl ether	✓	✓	✓	✓				✓
Butyl benzyl phthalate	✓[p]	✓	✓	✓	✓			✓
C								
4-Chloroaniline			✓[q]	✓				✓
Chlorobenzilate			✓					
4-Chloro-3-methylphenol	✓[r]	✓	✓[r]	✓				✓
1-Chloronaphthane				✓				
2-Chloronaphthane	✓	✓	✓	✓				✓
2-Chlorophenol	✓	✓	✓	✓				✓
4-Chlorophenyl phenyl ether	✓	✓	✓	✓				✓

*This list of compounds, which is a comparison of lists and methods as performed at Radian, is current as of publication date. It should not be used as a substitute for consulting the most recent issue of *40 CFR* or methods for any changes. Chromatographicable pesticides are excluded from this list.

[l] *40 CFR*, Pt. 136, Appendix A.

[m] *SW-846, 3rd Edition*

[n] Listed as 2,2'-oxybis(1-chloropropane)

[o] Listed as bis(2-chloro-1 methylethyl)ether

[p] Listed as benzyl butyl phthlate

[q] Listed as p-chloraniline

[r] Listed as p-chloro-m-cresol

(cont

SEMIVOLATILE COMPOUNDS (cont.)

TEST PARAMETERS BY REGULATIONS

ANALYTE	CWA		RCRA					SUPERFUND
	NPDES	625	APPENDIX IX	8270	SKINNER	TCLP		CLP[d]
						Toxicity	Land ban	
Chrysene	✓	✓	✓	✓	✓			✓
Cresol						✓		
Cyclohexanone							✓	
D								
Diallate			✓					
Dibenzo(a,h)acridine					✓			
Dibenzo(a,j)acridine				✓				
Dibenzo(a,h)anthracene	✓	✓	✓	✓	✓			✓
Dibenzofurans tetrachloro pentachloro hexachloro			✓	✓			•	✓
1,2-Dibromo-3-chloropropane			✓					
Di-n-butylphthalate	✓	✓	✓	✓	✓			✓
1,2-Dichlorobenzene	✓	✓	✓	✓	✓		✓	✓
1,3-Dichlorobenzene	✓	✓	✓	✓	✓			✓
1,4-Dichlorobenzene	✓	✓	✓	✓	✓	✓		✓
3,3'-Dichlorobenzidine	✓	✓	✓	✓				✓
2,4-Dichlorophenol	✓	✓	✓	✓				✓
2,6-Dichlorophenol			✓	✓				✓
Diethyl phthalate	✓	✓	✓	✓	✓			✓
p(Dimethylamino)azobenzene			✓	✓				
7,12-Dimethylbenz(a)anthracene			✓	✓	✓			
3,3'-Dimethylbenzidine			✓					
α,α-Dimethylphenethylamine			✓	✓				
2,4-Dimethylphenol	✓	✓	✓	✓	✓			✓
Dimethyl phthalate	✓	✓	✓	✓	✓			✓
m-Dinitrobenzene			✓					
4,6-Dinitro-2-methylphenol	✓	✓	✓[b]	✓[b]				✓
2,4-Dinitrophenol	✓	✓	✓	✓	✓			✓
2,4-Dinitrotoluene	✓	✓	✓	✓		✓		✓
2,6-Dinitrotoluene	✓	✓	✓	✓				✓
Di-n-octyl phthalate	✓	✓	✓	✓	✓			✓
Dioxins tetrachlorodibenzo-p- pentachlorodibenzo-p- hexachlorodibenzo-p-							•	
Diphenylamine			✓	✓				
1,2-Diphenylhydrazine	✓			✓				

[b] Listed as 4,6-dinitro-o-cresol
[c] Dioxin Wastes (F020, 021, 022, 023, 026, 027, 028)

(cont ▶)

SEMIVOLATILE COMPOUNDS (cont.)

TEST PARAMETERS BY REGULATIONS

ANALYTE	CWA		RCRA					SUPERFUND
	NPDES	625	APPENDIX IX	8270	SKINNER	TCLP		CLP
						Toxicity	Land ban	
E								
Ethyl methanesulfonate			✓	✓				
F								
Fluoranthene	✓	✓	✓	✓	✓			✓
Fluorene	✓	✓	✓	✓				✓
H								
Hexachlorobenzene	✓	✓	✓	✓		✓		✓
Hexachloro-1,3-butadiene	✓	✓	✓	✓		✓		✓
Hexachlorocyclopentadiene	✓		✓	✓				✓
Hexachloroethane	✓	✓	✓	✓		✓		✓
Hexachlorophene			✓					
Hexachloropropene			✓					
2-Hexanone			✓					
I								
Indene					✓			
Indeno(1,2,3-cd)pyrene	✓	✓	✓	✓				✓
Isodrin			✓					
Isophorone	✓	✓	✓	✓				✓
Isosafrole			✓					
M								
Methapyrilene			✓					
3-Methylcholanthrene			✓	✓				
Methylchrysene					✓			
Methyl methanesulfonate			✓	✓				
1-Methylnaphthalene					✓			
2-Methylnaphthalene			✓	✓				✓
2-Methylphenol			✓[t]	✓	✓	✓[t]	✓[t]	✓
3-Methylphenol			✓[t]		✓	✓[t]	✓[t]	
4-Methylphenol			✓[t]	✓	✓	✓[t]	✓[t]	✓
N								
Naphthalene	✓	✓	✓	✓	✓			✓
1,4-Naphthoquinone			✓					

[t] Listed as o,m,p cresols
[•] Listed as o,m,p nitroanilines
[v] Listed as o nitrophenol

(cont. ▶)

SEMIVOLATILE COMPOUNDS (cont.)

ANALYTE	CWA		RCRA					SUPERFUND
	NPDES	625	APPENDIX IX	8270	SKINNER	TCLP		CLP
						Toxicity	Land ban	
1-Naphthylamine			✓	✓				
2-Naphthylamine			✓	✓				
2-Nitroaniline			✓ [u]	✓				✓
3-Nitroaniline			✓ [u]	✓				✓
4-Nitroaniline			✓ [u]	✓				✓
Nitrobenzene	✓	✓	✓	✓		✓	✓	✓
5-Nitro-*o*-toluidine			✓					
2-Nitrophenol	✓	✓	✓ [v]	✓				✓
4-Nitrophenol	✓	✓	✓ [w]	✓	✓			✓
4-Nitroquinoline-1-oxide			✓					
N-Nitrosodiethylamine			✓					
N-Nitrosodimethylamine	✓		✓	✓				
N-Nitroso-di-n-butylamine			✓	✓				
N-Nitrosodi-n-propylamine	✓	✓	✓	✓				✓
N-Nitrosopiperidine			✓	✓				
N-Nitrosodiphenylamine	✓		✓	✓				✓
N-Nitrosomethylethylamine			✓					
N-Nitrosomorpholine			✓					
N-Nitrosopyrrolidine			✓					
P								
Pentachlorobenzene			✓	✓				
Pentachloroethane			✓					
Pentachloronitrobenzene			✓	✓				
Pentachlorophenol	✓	✓	✓	✓		✓	✓	✓
Phenacetin			✓	✓				
Phenanthrene	✓	✓	✓	✓	✓			✓
Phenol	✓	✓	✓	✓	✓			✓
p-Phenylenediamine			✓					
2-Picoline			✓	✓				
Polychlorinated dibenzofurans			✓ [x]					
Polychlorinated dioxins			✓ [x]					
Pronamide			✓	✓				
Pyrene	✓	✓	✓	✓	✓			✓
Pyridine			✓		✓	✓	✓	
Q								
Quinoline					✓			

[v] Listed as p-nitrophenol
[x] Listed as polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans by Method SW8280, *SW-846, 3rd Edition*
[*] Dioxin Wastes (F020, 021, 022, 023, 026, 027, 028)

(cont ►)

SEMIVOLATILE COMPOUNDS (cont.)

TEST PARAMETERS BY REGULATIONS

ANALYTE	CWA		RCRA					SUPERFUND
	NPDES[a]	625	APPENDIX IX	8270	SKINNER	TCLP		CLP
						Toxicity	Land ban	
S								
Safrole			✓					
T								
1,2,4,5-Tetrachlorobenzene			✓	✓				
2,3,4,6-Tetrachlorophenol			✓	✓			*	
o-Toluidine			✓					
1,2,4-Trichlorobenzene	✓	✓	✓	✓				✓
2,4,5-Trichlorophenol			✓	✓		✓	*	✓
2,4,6-Trichlorophenol	✓	✓	✓	✓		✓	*	✓
sym-Trinitrobenzene			✓					
0,0,0 Triethylphosphorothiate			✓					

* Dioxin Wastes (F020, 021, 022, 023, 026, 027, 029)

RADIAN CORPORATION

Return Address:
P.O. Box 201088
Austin, Texas 78720-1088

Radian Laboratories:

AUSTIN
8501 Mo-Pac Blvd.
P.O. Box 201088
Austin, TX 78720-1088
(512)454-4797

MILWAUKEE
5103 West Beloit Rd.
Milwaukee, WI 53214
(414)643-2701

PERIMETER PARK
P.O. Box 13000
Research Triangle Park, NC 27709
(919)481-0212

SACRAMENTO
10395 Old Placerville Road
Sacramento, CA 95827
(916)362-5332

A company of The Hartford Steam Boiler Inspection and Insurance Co.

6/25/90

TABLE 2

Field Equipment Checklist
Soil and Sludge Sampling

	ITEM	REMARKS
✓	PID Meter	YES Calibrated
✓	Site Specific SWMU Work Plan	
✓	Generic Sampling Plan	
✓	Site Map With Sample Locations	
✓	Sample Bottles	
✓	Ice Chests	
✓	Trip Blanks	
✓	Methanol	
✓	Deionized Water	
✓	Squeeze Bottles	
✓	Personal Protective Equipment	
✓	Chain of Custody and Sample Record Forms	
✓	Plastic Bags (to provide clean surfaces)	
✓	Disposable Gloves	
✓	Paper Towels	
✓	Tape (for labels and dispenser)	
✓	Sharpie, Pens, Pencils	
✓	Blue Ice or Ice	
✓	Zip-Lock Bags, 1 gallon	

Original Date 05/31/89
Revision Date 12/15/89

6/26/90

TABLE 2

Field Equipment Checklist
Soil and Sludge Sampling

	ITEM	REMARKS
✓	PID Meter	YES Calibrated
✓	Site Specific SWMU Work Plan	
✓	Generic Sampling Plan	
✓	Site Map With Sample Locations	
✓	Sample Bottles	
✓	Ice Chests	
✓	Trip Blanks	
✓	Methanol	
✓	Deionized Water	
✓	Squeeze Bottles	
✓	Personal Protective Equipment	
✓	Chain of Custody and Sample Record Forms	
✓	Plastic Bags (to provide clean surfaces)	
✓	Disposable Gloves	
✓	Paper Towels	
✓	Tape (for labels and dispenser)	
✓	Sharpie, Pens, Pencils	
✓	Blue Ice or Ice	
✓	Zip-Lock Bags, 1 gallon	

Original Date 05/31/89
Revision Date 12/15/89

5/27/90

SWMU 6

TABLE 2

Field Equipment Checklist
Soil and Sludge Sampling

	ITEM	REMARKS
✓	PID Meter	✓ Calibrated
✓	Site Specific SWMU Work Plan	
✓	Generic Sampling Plan	
✓	Site Map With Sample Locations	
✓	Sample Bottles	
✓	Ice Chests	
✓	Trip Blanks	
✓	Methanol	
✓	Deionized Water	
✓	Squeeze Bottles	
✓	Personal Protective Equipment	
✓	Chain of Custody and Sample Record Forms	
✓	Plastic Bags (to provide clean surfaces)	
✓	Disposable Gloves	
✓	Paper Towels	
✓	Tape (for labels and dispenser)	
✓	Sharpie, Pens, Pencils	
✓	Blue Ice or Ice	
✓	Zip-Lock Bags, 1 gallon	

6-28-90

TABLE 2

Field Equipment Checklist
Soil and Sludge Sampling

	ITEM	REMARKS
✓	PID Meter	YES Calibrated
✓	Site Specific SWMU Work Plan	
✓	Generic Sampling Plan	
✓	Site Map With Sample Locations	
✓	Sample Bottles	
✓	Ice Chests	
✓	Trip Blanks	
✓	Methanol	
✓	Deionized Water	
✓	Squeeze Bottles	
✓	Personal Protective Equipment	
✓	Chain of Custody and Sample Record Forms	
✓	Plastic Bags (to provide clean surfaces)	
✓	Disposable Gloves	
✓	Paper Towels	
✓	Tape (for labels and dispenser)	
✓	Sharpie, Pens, Pencils	
✓	Blue Ice or Ice	
✓	Zip-Lock Bags, 1 gallon	

6-29-90

TABLE 2

Field Equipment Checklist
Soil and Sludge Sampling

	ITEM	REMARKS
✓	PID Meter	~~✓~~ Calibrated
✓	Site Specific SWMU Work Plan	
✓	Generic Sampling Plan	
✓	Site Map With Sample Locations	
✓	Sample Bottles	
✓	Ice Chests	
✓	Trip Blanks	
✓	Methanol	
✓	Deionized Water	
✓	Squeeze Bottles	
✓	Personal Protective Equipment	
✓	Chain of Custody and Sample Record Forms	
✓	Plastic Bags (to provide clean surfaces)	
✓	Disposable Gloves	
✓	Paper Towels	
✓	Tape (for labels and dispenser)	
✓	Sharpie, Pens, Pencils	
✓	Blue Ice or Ice	
✓	Zip-Lock Bags, 1 gallon	

7/2/90

TABLE 2

Field Equipment Checklist
Soil and Sludge Sampling

	ITEM	REMARKS
✓	PID Meter	✓ Calibrated
✓	Site Specific SWMU Work Plan	
✓	Generic Sampling Plan	
✓	Site Map With Sample Locations	
✓	Sample Bottles	
✓	Ice Chests	
✓	Trip Blanks	
✓	Methanol	
✓	Deionized Water	
✓	Squeeze Bottles	
✓	Personal Protective Equipment	
✓	Chain of Custody and Sample Record Forms	
✓	Plastic Bags (to provide clean surfaces)	
✓	Disposable Gloves	
✓	Paper Towels	
✓	Tape (for labels and dispenser)	
✓	Sharpie, Pens, Pencils	
✓	Blue Ice or Ice	
✓	Zip-Lock Bags, 1 gallon	

7/5/90

TABLE 2

Field Equipment Checklist
Soil and Sludge Sampling

	ITEM	REMARKS
✓	PID Meter	✓ Calibrated
✓	Site Specific SWMU Work Plan	
✓	Generic Sampling Plan	
✓	Site Map With Sample Locations	
✓	Sample Bottles	
✓	Ice Chests	
✓	Trip Blanks	
✓	Methanol	
✓	Deionized Water	
✓	Squeeze Bottles	
✓	Personal Protective Equipment	
✓	Chain of Custody and Sample Record Forms	
✓	Plastic Bags (to provide clean surfaces)	
✓	Disposable Gloves	
✓	Paper Towels	
✓	Tape (for labels and dispenser)	
✓	Sharpie, Pens, Pencils	
✓	Blue Ice or Ice	
✓	Zip-Lock Bags, 1 gallon	

RFI 0601 Angle

Personnel: Danny, Philbert, Mark, Corrie, Chris, Mike*

Weather: Rainy
Windy 0-5 mph
Temperature 70

Terrain: Wet, some standing water around

Sampling: 07-05-90 Background PID 0.75
11:40 took sample at 0-½', soil was light brown, sand and rock PID 0.75
1:40 took sample at 3½-4', soil was brown and sandy clay PID 0.75
1:55 took sample at 7-7½', soil was rocky with granular sand PID 0.75

Sampling Method:
The first sample was taken with an open end auger before lunch. After lunch the backhoe dug a 7½' hole and set the culvert in it. The second sample was 3½' down and 2½' horizontally, with the closed end auger. Then it started raining on the last sample interval which is 7½' down and 5' horizontally. We used the open end auger.

* Notes sample team leader

RFI 0602

Personnel: Mark, Chris, Corrie, Danny, Philbert, Mike, Claud*

Weather: Clear
Wind 3-5 mph
Temperature 94

Terrain: brown soil with some rock

Sampling: 06-29-90 Background PID 1.0
12:15 took sample at 0-½', the soil looked dry rocky and sandy PID 1.0
12:25 took sample at 3½-4', the soil was dark brown and moist with some rocks PID 1.0
1:00 took sample at 7-7½', the soil looked brown, rocky and sandy PID 1.0

Sampling Method:
The first sample was taken with the open end auger. Then the backhoe dug down to the next interval where the sample was taken with the closed end auger. Again the backhoe dug down to the last interval where the closed end auger was used.

RFI 0603 Angle

Personnel: Danny, Corrie, Mark, Chris, Mike*

Weather: Cloudy
Wind 4-8 mph
Temperature 76

Terrain: brown soil with rocks

Sampling: 07-05-90 Background PID 1.0
10:30 took sample at 0-½', the soil was brown, moist and rocky PID 1.0
11:30 took sample at 3½-4', the soil was brown with sand and rock PID 1.0
11:55 took sample at 7-7½', the soil was very rocky with granular sand PID 1.0

Sampling Method:
The first sample was taken with an open end auger. Then the backhoe dug down to 7½', and the culvert was set in. At 3½' we augered 2½' horizontally and took the sample. The last sample was at the 7½' level and augered 5' horizontally.

Unusual Incidents:
During the last sample it was sprinkling down rain.

RFI 0604

Personnel: Mark, Chris, Corrie, Philbert, Danny, Mike, Claud*

Weather: Clear
Wind 3-5 mph
Temperature 96

Terrain: hard brown soil with rocks

Sampling: 06-29-90 Background PID 1.0
1:10 took sample at 0-½', the soil was brown rocky and sandy PID 1.0
1:15 took sample at 3½-4', the soil was brown rocky and sandy PID 1.0
1:25 took sample at 7-7½', the sample looked wet, brown, rocky, sandy soil PID 1.0

Sampling Method:
The first sample was taken with the open end auger. Then the backhoe dug down to the next interval where the closed end auger was used. Again the backhoe dug down to the last interval where the closed end auger was used to sample.

RFI 0605 Angle

Personnel: Danny, Philbert, Mark, Corrie, Chris, Mike*

Weather: Cloudy
Wind 4-8 mph
Temperature 74

Terrain: brown soil with rocks

Sampling: 07-05-90 Background PID 0.75
8:18 took sample at 0-½', soil was very moist and granular PID 0.75
8:45 took sample at 3½-4', soil was greyish rocky and granular sand PID 250
10:20 took sample at 7-7½', soil was rocky brown and granular sand PID 100

Sampling Method:
The first sample was taken with an open end auger. Then the backhoe dug down to 7½' and the culvert was set in. At the 3½ level we augered 2½ horizontally under the tank and took the sample with the closed end auger. For the 3rd sample at 7½, we augered 5' horizontally under the tank to get the next sample.

Unusual Incidents:
It had rained the night of 7-4-90.

RFI 0606

Personnel: Mark, Chris, Corrie, Danny, Philbert, Mike, Claud*

Weather: Clear
Wind 0-5
Temperature 93

Terrain: hard brown soil with a few rocks

Sampling: 06-29-90 Background PID 2.5
11:43 took sample at 0-½', the soil was dry and sandy PID 2.5
11:50 took sample at 3½-4', the soil was moist and very dark. PID 115
12:03 took sample at 7-7½', the sample looked like dark, moist sandy soil PID 130

Sampling Method:
The first sample was collected with the closed end auger. Then the backhoe dug down to the next interval where the closed end auger was used to sample. The backhoe then dug to the final internal and the sample was collected with the closed end auger.

RFI 0607 Angle

Personnel: Andy Jaramillo, Brian Hitchcock, Claud*, (Jeff, Jay) with PRC

Weather: Clear
Wind 0-5 mph
Temperature

Terrain: dark brown soil and very hard no weeds or brush

Sampling: 06-27-90 at about 6:45

Vert. depth	depth at 50°	PID	Background PID
0-½	0-0.65	1.0	1.0
3½-4	4.75-5.22	0.5	0.5
7-7½	9.14-9.8	1.0	0.5

Lithology:

0-4' Hard compacted brown clay
4-8½' Brown rocky, sand.
8½-10' Hard brown clay

Sampling Method:

Used Rodgers & Co. drilling rig with a hollow stemmed auger to collect the sample. Equipment was steam cleaned before drilling.

RFI 0608

Personnel: Mark, Chris, Corrie, Mike*, Danny, (Jeff and Jay) with PRC

Weather: Clear
Wind 0-5 mph
Temperature 84

Terrain: brown rocky soil around tank

Sampling: 06-27-90 Background PID 0.5
7:06 took sample 0-½', the soil was brown, sandy and rocky PID 0.5
8:06 took sample at 3½-4', this sample was split with PRC as a duplicate, the sample is rocky and sandy PID 1.5
8:23 took sample at 7-7½', the soil was still brown, rocky and sandy PID 1.5

Sampling Method:
The first sample was taken with the open end auger. Then the backhoe dug down to the next interval where the closed end auger was used. Again the backhoe dug down to the last interval where the closed end auger was used.

RFI 0609 Angle

Personnel: Andy Jaramillo, Brian Hitchcock, Claud*, (Jeff, Jay) with PRC

Weather: Few scattered clouds
Wind 3-7 mph
Temperature 96

Terrain: dark brown soil with some rocks

Sampling: 06-27-90 at about 1:25

Vert. depth	depth at 50°	PID	Background PID
0-½	0-0.65	1.5	1.0
3½-4	4.75-5.22	0.75	0.75
7-7½	9.14-9.8	0.75	0.75

Lithology: 0-10 Brown sandy granular soil

Sampling Method:
Used Rodgers & Co. drilling rig with a hollow stemmed auger to take the sample with. The augers were steam cleaned and the core was wire brushed, rinsed with tap water, then distilled water.

RFI 0610

Personnel: Mark, Chris, Danny, Corrie, Mike*

Weather: Scattered clouds
Wind 3-5 mph
Temperature 92

Terrain: brown soil with rocks

Sampling: 06-27-90 Background PID 1.5
12:00 took sample at 0-½', soil was brown and sandy with rocks PID 1.5
12:29 took sample at 3½-4', soil was moist and dark PID 1.5
12:48 took sample at 7-7½', soil was moist dark clay PID 55

Sampling Method:
The first sample was taken with an open end auger. Then the backhoe dug down to 3½' where the closed end auger to take the sample. Again the backhoe dug down to the last interval and sampled with the closed end auger.

RFI 0611 Angle

Personnel: Andy Jaramillo, Brian Hitchcock, Claud*, (Jeff & Jay) with PRC

Weather: Clear
Wind 0-3 mph
Temperature 95

Terrain: rocky with hard dark brown soil

Sampling: 06-27-90 at about 12:25

Vert. depth	depth at 50°	PID	Background PID
0-½	0-0.65	1.5	1.5
3½-4	4.75-5.22	25.0	1.0
7-7½	9.14-9.8	25.0	1.0

Lithology: 0-8 Brown sandy, rocky soil
8-10 Sandy compacted soil

Sampling Method:
Used Rodgers & Co. drilling rig with a hollow stemmed auger to sample with. The augers were steam cleaned and the core was wire brushed, rinsed with tap water, then distilled water.

RFI 0612

Personnel: Mark, Chris, Corrie, Danny, Philbert, Claud*, Mike

Weather: Clear
Wind 0-5 mph
Temperature 79

Terrain: brown hard soil with a few rocks

Sampling: 06-29-90 Background PID 1.0
9:35 took sample 0-$\frac{1}{2}$, the soil had some dry sand with some black looking soil PID 1.0
9:38 took sample $3\frac{1}{2}$-4, the soil was greyish-brown, sandy and dry PID 100.0
9:50 took sample 7-$7\frac{1}{2}$, the soil was damp light brown granular clay PID 75.0

Sampling Method:
The first sample point was taken with the closed end hand auger. Then the backhoe dug down to the next interval where the next sample was extracted with the closed end auger. Again the backhoe dug down to the last interval where the final sample was taken with the closed end auger.

Unusual Incidents:
Welding on the sample station on the tank was occurring approximately 30' around the side of the tank during sampling.

RFI 0613 Angle

Personnel: Andy Jaramillo, Brian Hitchcock, Claud*, (Jeff, Jay) with PRC

Weather: Clear
Wind 0-3 mph N.W.
Temperature 90

Terrain: rocky with hard dark brown soil

Sampling: 06-27-90 at about 11:05

Vert. depth	depth at 50°	PID	Background PID
*0-½	0-0.65	1.0	1.0
3½-4	4.75-5.22	1.5	1.0
7-7½	9.14-9.8	2.5	1.0

*got a duplicate for Giant

Lithology: 0-10 brown, sandy soil with some rocks

Sampling Method:
Used Rodgers & Co. drilling rig with a hollow stemmed auger to collect the sample. The augers were steam cleaned and the core was wire brushed, rinsed with tap water then distilled water.

RFI 0614

Personnel: Mark, Chris, Corrie, Philbert, Danny, Mike, Claud*

Weather: Clear
Wind 0-5 mph
Temperature 87

Terrain: brown soil with a few rocks

Sampling: 06-29-90 Background PID 1.0
10:05 took sample at 0-½', the soil looked like clean dry sand PID 1.0
10:23 took sample at 3½-4', the soil was moist light brown granular sand PID 175
10:30 took sample at 7-7½', the soil was grey-brown granular and sandy PID 135

Sampling Method:
The first point was taken with open end auger, then the backhoe dug down to the next internal. At this internal the closed end auger was used. Again the backhoe was used to dig down to 7' where the last sample was taken with a closed end auger.

RFI 0615 Angle

Personnel: Andy Jaramillo, Brian Hitchcock, Claud*, (Jeff, Jay) with PRC

Weather: Clear
Wind 0-5 mph
Temperature: 80

Terrain: Rocky and hard dark soil

Sampling: 06-27-90 at about 8:35

Vert. Depth	Depth at 50°	PID	Background PID
0-½'	0-0.65	0.5	0.5
3½-4	4.75-5.22	1.0	1.0
*7-7½	9.14-9.8	1.0	1.0

*split a sample with PRC as a duplicate

Lithology:

0-3½ sandy, brown rocky
3½-4.0 compacted brown clay
5-10 sandy & rocky

Sampling Method:

Used Rodgers & Co. drilling rig equipped with a hollow stemmed auger to collect the sample. The augers were steam cleaned and the core was wire brushed, rinsed with tap water then distilled water.

RFI 0616

Personnel: Mark, Chris, Corrie, Danny, Mike*

Weather: Clear
Wind 0-5 mph
Temperature 86

Terrain: hard brown rocky soil around tank

Sampling: 06-27-90 Background PID 0.5
8:37 took sample 0-½', the soil was dry light brown sand PID 0.5
9:09 took sample at 3½-4', the soil was moist and brown sand PID 8.0
9:30 took sample at 7-7½', the soil was moist brown-greyish sandy and rocky PID 78.0

Sampling Method:
The first sample was taken with an open end auger. The the backhoe dug down to 3½' where the next sample was taken with the closed end auger. Again the backhoe dug down to the last interval, and the sample was taken with the closed end auger.

Unusual Incidents:
When the backhoe dug down about 2½', we found an electrical conduit. As a result, the backhoe dug a little closer to the tank.

RFI 0617 Angle

Personnel: Andy Jaramillo, Brian Hitchcock, Claud*, (Jeff, Jay) with PRC

Weather: Clear
Wind 0-5 mph
Temperature 85°

Terrain: dark brown soil and rocky

Sampling: 06-27-90 at about 10:25

Vert. depth	depth at 50°	PID	Background
0-½	0-0.65	1.5	1.5
3½-4	4.75-5.22	1.0	1.0
7-7½	9.14-9.8	1.0	1.0

Lithology: 0-10' brown sand, rocky soil

Sampling Method:
Used Rodgers & Co. drilling rig equipped with a hollow stemmed auger to collect the samples. All equipment was steam cleaned. The core was also rinsed with distilled water.

RFI 0618

Personnel: Mark, Chris, Corrie, Danny, Mike*

Weather: Clear
Wind 0-5 mph
Temperature 89

Terrain: brown soil with some rock

Sampling: 06-27-90 Background PID 1.0
9:49 took sample at 0-½', soil looked like clean brown rocky sand PID 1.0
10:00 took sample at 3½-4', soil was brown with sand and rocks and a little grey color PID 75
11:05 took sample at 7-7½', soil looks grey rocky and granular sand PID 50

Sampling Method:
The first sample was taken with an open end auger. Then the backhoe dug down to the next interval where the closed end auger took the sample. Again the backhoe dug to the last interval and sampled with the closed end auger.

RFI 0619 Angle

Personnel: Andy Jaramillo, Brian Hitchcock, Claud*, (Jeff, Jay) with PRC

Weather: Clear
Wind 0-5 mph
Temperature 72

Terrain: dark brown soil and rocky

Sampling: 06-27-90 at about 7:45

Vert. depth	depth at 50°	PID	Background PID
0-½	0-0.65	1.0	1.0
3½-4	4.75-5.22	0	0
7-7½	9.14-9.8	0	0

Lithology:

0-2' sandy, rocky brown
2-5' clay
5-7 sandy
7-10 clay

Sampling Method:

Used Rodgers & Co. drilling rig equipped with a hollow stemmed auger to collect the sample. The augers were steam cleaned and the core was wire brushed, rinsed with tap water then distilled water.

RFI 0620

Personnel: Mark, Chris, Corrie, Danny, Mike*

Weather: Clear
Wind 0-5 mph
Temperature

Terrain: hard light brown soil with rock

Sampling: 06-27-90 Background PID 1.0
1:00 took sample 0-½', soil was light colored and rocky PID 1.0
1:15 took sample 3½-4', soil was greyish and sandy PID 20.0
1:20 took sample at 7-7½', soil was greyish and sandy and rocky PID 110

Sampling Method:
The first sample was taken with an open end auger. Then the backhoe dug down to the next interval and sampled with the closed end auger. Again the backhoe to the last interval and sampled with the closed end auger.

RFI 0801 ANGLE

Personnel: Andy Jaramillo, Brian Hitchcock, Claud*

Weather: Clear
Wind 3-5 mph West
Temperature 92

Terrain: Medium height weeds & bushes with spots of bare ground

Sampling: 06-26-90 started at 11:45

Vertical	Angle	Background	PID
5-5½	6.53-7.18	2.0	3.0
8-8½	10.4-11.10	2.0	2.6
10½-11	13.7-14.36	2.0	2.0

Lithology:

0-8½	fine dry brown soil
8½-10	damp chunky soil with some black

Sampling Method:
Used Rodgers & Co. drilling rig with a hollow stemmed auger. 0-5' was drilled with a plug and no core. The core was inserted for the 5-15' sampling. The auger was steam cleaned with the core being cleaned with a wire brush, rinsed with tap water and distilled water.

RFI 0802 ANGLE

Personnel: Andy Jaramillo, Brian Hitchcock, Claud*, (Jeff & Barry) with PRC

Weather: Clear
Wind 0-5 mph
Temperature 80

Terrain: Medium height weeds & bushes with spots of bare ground

Sampling: 06-26-90 started at 10:00 finished at 11:15

Vertical	Angle	Background	PID
5-5½	6.53-7.18	1.5	2.0
8-8½	10.4-11.10	1.5	2.0
10½-11	13.7-14.36	1.5	3.0

Lithology:

0-8' Dry fine brown soil
9-10' Damp chunky brown soil
10-15' Damp chunky brown with black material interspersed

Sampling Method:

Used Rodgers & Co. drilling rig with a hollow stemmed auger. 0-5' was drilled with a plug and no core. The core was inserted for the 5-15' sampling. The auger was steam cleaned with the core being cleaned with a wire brush, rinsed with tap water and distilled water.

Unusual Incidents:

Inside slope of dike appears to have chunks of asphalt on surface. PRC collected an equipment rinse of the hollow stem core before the 10-15' sample was collected and there was sediment in the sample. PRC also collected a split on the 8' sample.

RFI 0803 ANGLE

Personnel: Andy Jaramillo, Brian Hitchcock, Claud*, (Jeff & Barry) with PRC

Weather: Clear
No Wind
Temperature 70

Terrain: Medium height weeds and bushes with spots of bare ground

Sampling: 06-26-90 started at 7:45 finished at 9:50

Vertical	Angle 50°	Background	PID
5-5½	6.53-7.18	1.0	2.0
8-8½	10.4-11.10	1.0	1.0
10½-11	13.7-14.36	1.0	1.0

Lithology:

0-8½' dry fine soil, light brown
8½-13½ damp chunky soil
13½-15 brown granular sand

Sampling Method:

Used Rodgers & Co. rig with a hollow stemmed auger. 0-5' was drilled with a plug and no core. The core was inserted for the 5-15' sampling. The auger was steam cleaned with the core being cleaned with a wire brush, rinsed with tap water and distilled water.

RFI 0804

Personnel: Danny, Philbert, Mark, Corrie, Mike, Claud*, (Jeff & Barry) with PRC

Weather: Partly cloudy
Wind 0-5 mph SW
Temperature 70

Terrain: Medium sized bushes and weeds

Sampling: 06-25-90 Background PID 2.0
9:40 took sample at 10½-11', the soil was light colored brown and dry PID 7½
10:00 took sample at 8-8½', the soil was light colored dry and brown PID 2.5
10:30 took sample at 5-5½', the soil was light colored brown PID 3.0

Sampling Method:
First of all the backhoe dug a hole to 8' and set the culvert in. Then we augered down from 8-10½' with the open end auger and sampled with the closed end auger. On the 8-8½' and 5-5½' sample we used the probes to collect the samples.

Unusual Incidents:
Between 8:30-9:30, Billy was scraping off weeds with the scraper approximately 100 yds. to the west.

RFI 0805

Personnel: Danny, Philbert, Mark, Corrie, Mike, Claud*, (Jeff & Barry) with PRC

Weather: Cloudy, with some sprinkles
Wind 10-15 mph
Temperature 87

Terrain: Medium sized bushes and weeds

Sampling: 06-25-90 Background PID 3.0
1:00 took sample at 10½-11', the soil was light brown and dry PID 4.0
1:15 took sample at 8-8½', the soil was light brown and dry PID 2.5
1:20 took sample at 5-5½', the soil was light brown and dry PID 5.5

Sampling Method:
First the backhoe dug an 8' hole and set the culvert in it. Then we augered down from 8' to 10½' where we took the first sample with the closed end auger. At the 8' and 5' level we used the hand held probes to take samples.

Unusual Incidents:
Before the culvert was set in this hole it was taken to the shop to have the 3" holes made into 5" holes.

RFI 0806

Personnel: Danny, Mark, Chris, Mike, Philbert, Corrie, Claud*, (Jeff & Barry) with PRC

Weather: Clear
No Wind
Temperature 84

Terrain: Medium sized bushes and weeds

Sampling: 06-26-90 Background PID 1.0
7:30 took sample at 8-8½', we split this sample with PRC, the soil was dark moist clay PID 1.0
8:15 took sample at 10½-11', the soil was moist and very hard dark clay PID 1.0
9:00 took sample at 5-5½', the soil was a moist thick dark clay PID 1.0

Sampling Method:
We sampled the 8' level first so we could split it with PRC. The sample was collected with a closed end auger. After that we augered on down from 8' to 10½', and sampled with the closed end auger. Then the last sample was taken at the 5' level with the closed end auger.

Unusual Incidents:
The hole for the culvert was dug the day before to speed up sampling.

RFI 0807

Personnel: Danny, Mark, Chris, Mike*, Philbert, Corrie

Weather: Clear
Wind 0-5 mph
Temperature 92

Terrain: Medium sized bushes 2-2½' tall

Sampling: 06-26-90 Background PID 1.5
9:45 took sample at 0-½', the soil had moist clay and sand PID 1.5
10:05 took sample at 2-2½', the soil was a moist clay PID 1.5
10:30 took sample at 4½-5', the soil was a brown moist clay PID 1.5

Sampling Method:
First we sampled the top six inches then we augered down to 2' where the next internal is. At that internal we took our sample with the closed end auger. Then we augered down to 4½' where the last sample was extracted with the closed end auger.

Unusual Incidents:
At about 10:53, Mark cut his hand and went to First Aid. Also about 10:31, after filling a 4 oz. VOA bottle it fell on the ground with the lid off. What we did was with a spoon, scrape off ½" of soil off the top and replaced it with new soil.

RFI 0808

Personnel: Danny, Mark, Chris, Mike*, Philbert, Corrie

Weather: Clear
Wind 0-5 mph
Temperature 93

Terrain: Medium sized bushes 2-2½' tall

Sampling: 06-26-90 Background PID 1.0
12:00 took sample at 0-½', the soil was sandy with some clay PID 1.0
12:23 took sample at 2-2½', the soil was a moist clay PID 1.0
12:50 took sample at 4½-5', the soil was a dark moist clay PID 1.0

Sampling Method:
First we sampled the top six inches then augered down to 2'. At this level we took a sample and when we cleaned the auger there seemed to be a film left on the inside of the closed end auger, so we cleaned it again as best as we could. Then we augered on down to 4½' and took the next sample with the closed end auger.

RFI 0809

Personnel: Danny, Mark, Chris, Mike*, Philbert, Corrie

Weather: Cloudy
Wind 0-5 mph
Temperature 85

Terrain: A few scattered bushes about 2' high

Sampling: 06-26-90 Background PID 1.0
1:05 took sample at 0-½', the soil was sandy with some clay PID 0.0
1:20 took sample at 2-2½', the soil was a moist clay PID 1.5
1:35 took sample at 4½-5', the soil was a dark moist clay PID 1.0

Sampling Method:
First we sampled the top six inches then augered down to 2' level. At that 2' level we took our sample with the closed end auger. Then we augered down to 4½' and took the last sample with a closed end auger.

RFI 0810

Personnel: Mark, Chris, Corrie, Philbert, Claud*, Danny, Mike

Weather: High thin scattered clouds
No wind
Temperature 72

Terrain: A few taller dead sunflowers but vegetation is minimal.

Sampling: 06-29-90 Background PID 0.75
7:10 took sample at 0-½', the soil was brown sandy and dry PID 0.75
7:11 took sample 2-2½', the soil was brown damp sticky soil PID 0.50
7:29 took sample 4½-5.0', the soil was dark brown and like clay PID 5.5

Sampling Method:
The first sample was taken with the open end auger. Then the backhoe dug down to 2' where the next sample was taken with the closed end auger. The backhoe then dug to 4½' and the final sample was collected with the closed end auger.

RFI 0811

Personnel: Mark, Chris, Corrie, Philbert, Claud*, Danny, Mike

Weather: High thin clouds
No wind
Temperature 80

Terrain: A few taller dead sunflowers but vegetation is minimal.

Sampling: 06-29-90 Background PID 0.75
8:10 took sample at 0-½' and took duplicate of sample, the soil was dry and sandy PID 0.75
8:15 took sample at 2-2½', the soil was dark brown damp and sticky PID 30
8:20 took sample at 4½-5', the soil was dry and sandy PID 11

Sampling Method:
The first sample was taken with an open end auger. Then the backhoe dug down 2' and we sampled with the closed end auger. Again the backhoe dug down to 5' where we sampled with an open end auger.

RFI 0812

Personnel: Mark. Chris, Corrie, Philbert, Claud*, Danny, Mike

Weather: High thin clouds
No wind
Temperature 82

Terrain: A few taller dead sunflowers but vegetation is minimal.

Sampling: 06-29-90 Background PID 1.5
8:30 took sample at 0-½', the soil was dry brown and sandy PID 1.5
8:38 took sample at 2-2½', the soil was brown damp and sticky PID 18
8:43 took sample at 4½-5', the soil was dark moist sticky clay PID 1.5

Sampling Method:
The first sample was taken with an open ended auger. Then the backhoe dug down to 2' and we took the sample with the closed end auger. The backhoe dug to 5' and the sample was collected with the closed end auger.

Unusual Incidents:
On the first sample the lid on the organics bottle was dropped. The lid was wiped off and dusted and put back on the bottle.

RFI 0813

Personnel: Mark, Chris, Corrie, Philbert, Claud*, Danny, Mike

Weather: High clouds thinning
No wind
Temperature 75

Terrain: A few taller dead sunflowers but vegetation is minimal.

Sampling: 06-29-90 Background PID 0.75
7:35 took sample at 0-½', the soil was light brown and sandy PID 0.75
7:49 took sample at 2-2½', the soil was brown moist and a little sticky PID 0.75
7:52 took sample and a duplicate at 4½-5', the soil was brown and clay like. PID 0.75

Sampling Method:
The first sample was taken with the open end auger. The backhoe dug down to the 2' sample point and we used the closed end auger. Then the backhoe dug down to 4½' and at the last sample point we used the open end auger.

RFI 0901

Personnel: Chris, Philbert, Mark, Corrie, Danny, Claud, Mike*

Weather: High thin clouds
Wind 0-5 mph
Temperature 75

Terrain: A few small bushes and weeds

Sampling: 07-02-90 Background PID 0.75

7:53 took sample at 0-½', soil was very sandy and dry PID 0.75
7:54 took sample at 3-3½', soil was still sandy and brown PID 0.75
7:56 sample of the rinse water was taken
8:03 took sample at 5-5½', soil was like clay PID 0.75
8:10 sample of the rinse water was taken
8:17 took sample at 7-7½', soil was a moist clay PID 0.75

Sampling Method:
The first sample was taken with an open end auger. The backhoe dug down to 3' where we took the next sample with the closed end auger. Then the backhoe dug to 5' where we sampled with an open end auger. Again the backhoe dug down to 7' where we took a sample with open end auger.

RFI 0902

Personnel: Danny, Chris, Mark, Corrie, Philbert, Mike*

Weather: High thin clouds
Wind 0-5 mph
Temperature 82

Terrain: A few small weeds

Sampling: 07-02-90 Background PID 0.75
9:10 took sample 0-½', the soil was like clean sand PID 0.75
9:20 took sample at 3-3½', the soil was brown and moist PID 0.75
9:28 took sample at 5-5½', the soil was clay PID 0.75
9:43 took sample at 7-7½', the soil was a hard clay PID 0.75

Sampling Method:
The first sample was taken with an open end auger. Then the backhoe dug down to 3' where the 2nd sample was taken with a closed end auger. The 3rd sample was dug down to 5' with the backhoe and sampled with an open end auger. The 4th sample point was dug down to 7' with the backhoe and extracted with the closed end auger.

RFI 0903

Personnel: Mark, Danny, Corrie, Chris, Mike*, Philbert

Weather: High thin clouds
Wind 0-5 mph
Temperature 85

Terrain: A few small weeds and bushes

Sampling: 07-02-90 Background PID 0.5
10:29 took sample at 0-½', the sample was dry and sandy PID 0.5
10:38 took sample at 3-3½', the sample was clay like and dry PID 0.5
10:50 took sample at 5-5½', the soil was dry clay PID 0.5
11:00 took sample at 7-7½', the soil was dry clay PID 0.5

Sampling Method:
The first sample was taken with the open end auger. The backhoe dug down to 3' where the closed end auger was used to sample. Then the backhoe dug down to 5' and the sample was collected with the open end auger. The last sample was dug down to 7' with the backhoe then sampled with the closed end auger.

RFI 0904

Personnel: Danny, Chris, Mark, Corrie, Philbert, Mike*

Weather: High thin clouds
Wind 0-5 mph
Temperature 78

Terrain: A few small weeds

Sampling: 07-02-90 Background PID 0.75
8:25 took sample at 0-½', the soil was dark brown sand with black asphalt chunks PID 0.75
8:40 took sample at 3-3½', the soil was moist and like soft clay PID 0.75
8:52 took sample at 5-5½', the soil was like clean hard clay PID 1.5
9:03 took sample at 7-7½', the soil was like hard clay PID 0.75

Sampling Method:
The first sample was taken with an open end auger. Then the backhoe dug down to 3' where the 2nd sample was taken with a closed end auger. The 3rd sample was dug down to 5' with the backhoe and sampled with an open end auger. The 4th sample point was dug down to 7' with the backhoe and extracted with the closed end auger.

RFI 0905

Personnel: Mark, Danny, Corrie, Chris, Mike*, Philbert

Weather: High thin clouds
Wind 0-5 mph
Temperature 83

Terrain: 07-02-90 Background PID 0.75

9:50 took sample at 0-½', the soil was dark brown with a touch of black PID 0.75

9:58 took sample at 3-3½', the soil was clean and dry PID 0.75

10:05 took sample at 5-5½', the soil was clean dry clay PID 0.75

10:05 took duplicate of sample at 5-5½'

10:13 took sample at 7-7½', the soil was like clay PID 0.75

Sampling Method:

The first sample was taken with the open end auger. Then the backhoe dug down to 3' where the 2nd sample was taken with the closed end auger. The 3rd sample was dug down to 5' with the backhoe then sampled with closed end auger. Then the backhoe dug down to 7' where we sampled with the closed end auger.

RFI 0906

Personnel: Mark, Danny, Corrie, Philbert, Chris, Mike*

Weather: Very few high clouds
Wind 0-5 mph
Temperature 90

Terrain: A few small scattered weeds and bushes

Sampling: 07-02-90 Background PID 0.5
12:03 took sample at 0-½', the soil was dark brown and black looking sand
12:06 took sample at 3-3½' and split it into two samples one as a duplicate. Soil was brown and sandy PID 0.5
12:13 took sample at 5-5½', the soil was dark brown and sandy PID 0.5
12:18 took sample at 7-7½', the soil was a dry clay PID 0.5

Sampling Method:
The first sample was taken with an open end auger. The backhoe then dug down 3' for the next sample with the closed end auger. The 3rd sample was dug down to 5' with the backhoe then sampled with the open end auger. The last sample was dug down to 7' with the backhoe then sampled with the closed end auger.

RFI 0907

Personnel: Philbert, Danny, Chris, Mike*, Mark, Corrie

Weather: Clear
Wind 0-5 mph
Temperature 92

Terrain: A few scattered weeds and bushes

Sampling: 07-02-90 Background PID 1.0
12:22 took sample at 0-½', the soil looked brown and dry
PID 3.5
12:42 took sample at 3-3½', the soil was sandy and dry
PID 1.0
12:46 took sample at 5-5½', the soil was sandy and dry
PID 1.0
12:58 took sample at 7-7½', the soil was a dry clay
PID 1.0

Sampling Method:
The first sample was taken with an open end auger. The backhoe then dug down to the 3' level for the next sample with the closed end auger. After the backhoe dug down again to 5' the sample was taken with an open end auger. The last sample was dug down to 7' with the backhoe then sampled with the closed end auger.

RFI 1001

Personnel: Mark, Chris, Corrie, Danny, Mike, Claud*, (Jeff, Jay) PRC

Weather: Clear
No Wind
Temp 73°

Terrain: A few scattered weeds less than a foot high. The sample was collected on level ground near an overflow pipe outlet from a 4-5' high bank.

Sampling: 06-28-90
Background PID 4.0

7:16 took first sample 0-½' and split it with EPA as a duplicate. PID 4.0. The soil was brown, dry and granular.

7:21 Started augering down to 3-3½'

7:30 took sample at 3-3½' PID 5.0 we took our sample, the soil was brown and very moist.

7:39 filled the hole.

Sampling Method:
The first sample was taken with the closed split spoon auger. The open end split spoon auger was used to auger down to the 3-3½' interval. The second sample was then taken with the closed split spoon auger.

RFI 1002

Personnel: Mark, Chris, Danny, Mike*, Jeff, Jay

Weather: Clear
Wind 0-5 mph
Temperature 87

Terrain: A few scattered bushes about a foot in height on level ground

Sampling: 6-28-90
Background 1.0
11:50 took top sample at 0-½', the soil was dry and brown. PID 1.0
11:58 took second sample 3-3½', the soil was brown with traces of black lines. PID 5.0
12:03 took third sample 6-6½', the soil is dark brown and a little moist. PID 3.0
12:13 took fourth sample 9-9½', the soil is dark brown and moist. PID 1.0
12:35 took last sample at 12½-13', the soil is brown damp clay. PID 0.5

Sampling Method:
The first sample was collected in an open end auger, then the backhoe dug down to 3' where the next sample was collected with the open end auger. The backhoe proceeded down to 6' level where the third sample was collected with a closed end auger. The backhoe again dug down to the next interval 9-9½' and the sample was collected with the closed end auger. The backhoe dug down to 12' and the open end auger was used to go down 6 more inches, here the closed auger was used to collect the 12½-13' sample.

Unusual Incidents:
At about 4½' there was a 4-6" wide darker brown, almost black layer.

RFI 1003

Personnel: Mark, Chris, Corrie, Danny, Claud*, Mike, (Jeff, Jay) with PRC

Weather: Clear
No Wind
Temperature 73

Terrain: A few scattered weeds about a foot in height on level ground.

Sampling: 06-28-90
Background PID 1.5

8:00 took first sample at 12½-13' interval and split it with PRC for a duplicate, and took another sample for a replicate for PRC. The soil was dark brown and a little moist. PID 1.5

8:21 took the second sample at 9-9½' interval, the soil was moist and dark brown. PID 10

8:35 took sample at 6-6½' interval, another background PID was taken at 8:30, it read 1.0 and the sample read 4.0. The soil was moist and dark brown.

8:43 took sample at 3-3½ interval, the soil was dark brown. PID 2.0

8:46 took sample at 0-½' interval, the soil was brown and dry. PID 1.0

Sampling Method:
The backhoe first dug down to 10', then we set a 4' diameter culvert, with precut holes for sampling, in the hole. The open end auger was used to auger from 10' to 12½' then the closed end auger was used to take the sample. Next we used the closed end auger to take the 9-9½' sample through one of the precut port holes. The third sample was done the same way at the 6-6½' interval, and again at 3-3½'. At 0-½' the open end auger was used to collect the sample.

RFI 1004

Personnel: Mark, Chris, Corrie, Danny, Philbert, Claud*, Mike, (Jeff, Jay) with PRC.

Weather: Clear
No Wind
Temperature 75°

Terrain: A few scattered small bushes about a foot high on level ground.

Sampling: 06-28-90
Background 1.0

8:53 took sample at 0-½', the soil was brown and a little moist. PID 1.0

9:01 took second sample at 3-3½', the soil looked dark like oily sludge and moist. PID 38

9:07 took sample at 6-6½', the soil looked like dark sticky sludge, the sample was split with PRC as a duplicate. PID 50

9:32 took sample at 9-9½', the soil looked like sludge but last few inches of the sample was clearing up. PID 150

9:45 took sample at 12½-13', the soil looked dark brown but clean. PID 20

Sampling Method:
The first sample was taken with an open end auger, then the backhoe dug down to 3-3½' and the closed end auger was used to sample. The backhoe dug down to the next depth of 6-6½' where the third sample was taken with the closed end auger. Then the backhoe dug down as far as it could to about 12', where we augered down 6" with open end auger and then took our sample with the closed end auger.

RFI 1005

Personnel: Corrie, Claud*, Philbert, Jeff, Jay

Weather: Clear
Wind 0-5 mph
Temperature 83

Terrain: A few scattered bushes about a foot in height on level ground.

Sampling: 06-28-90
Background PID 3.0

10:29 took 0-½' sample, the soil was dry and brown PID 3.0

10:48 took sample at 3-3½', the soil was dark brown and little moist, another background PID was taken with a reading of 1.5 and the sample also read 1.5.

11:01 took sample at 6-6½', the soil was like black sludge PID 42

11:15 took sample at 9-9½', the soil was clean and brown PID 2.5

11:30 took last sample at 12½-13', the soil was clean sticky brown clay. PID 3.5

Sampling Method:
The top sample was taken with the open end auger, then the backhoe dug down 3' where another sample was taken. At the 3' level, the closed end auger was used, and we split the sample with PRC as a duplicate. The backhoe then dug down to the 6' level, black sludge was very apparent from about 5'9" tp 7'10", where the sample was taken. Then the backhoe dug down to the 9' level and another sample was taken with closed end auger. On the final sample there was clean brown clay, but from about 10' to 11' was more black sludge.

Section 6.4
Calculation for Verticle Depth
of Angle Samples

The angle bores were drilled at a fifty degree (50°) angle from verticle. The formula for angle depth is:

$$\text{Angle Depth} = \frac{\text{Verticle depth}}{\text{Sin } 50°}$$

Sin 50° = 0.766

Verticle Depths		Angle Depths
0.0' to 0.5'	=	0.0' to 0.7'
3.5' to 4.0'	=	4.6' to 5.2'
5.0' to 5.5'	=	6.5' to 7.2'
7.0' to 7.5'	=	9.1' to 9.8'
8.0' to 8.5'	=	10.4'to 11.1'
10.5'to 11.0'	=	13.7'to 14.4'

SECTION 7.0

Statistical Information for Soil Samples

SECTION 7.1

GENERAL REVIEW

This section includes the collection of information required, the methodology for statistical calculations and the actual statistical comparisons of background values to each individual sample.

Background samples were collected on April 28, 1987 and April 4 and 5, 1988. The analysis for each sampling event is listed on TABLE 7-1 and TABLE 7-2 respectively. All background samples were collected from a background plot which is specified in FIGURE 7-1. The exact location of each sample point is specifically listed on FIGURE 7-2 and FIGURE 7-3. The background plot and sample collection locations were approved by the New Mexico Environmental Improvement Division in a Land Treatment Demonstration Permit that was issued to Giant Refining Company on December 22, 1986.

It was Giant's plan to use equivalent vertical depths for background and sample comparisons. However, many of the individual sample points (1-2 foot, 2-3 foot, 3-4 foot, and 4-5 foot) for background collection was composited into one (1) sample for each of the two (2) sampling events. This allowed only two (2) samples to be used for calculating averages and tolerance limits. It is generally understood that a minimum of four (4) sets of analysis should be used to calculate background averages.

To achieve this goal, Giant combined the background analytical for each metal from all samples ranging in vertical depths of zero (0) to five (5) feet. These background averages were then compared to the results of all samples collected for the RFI samples that were in the zero (0) to five (5) foot interval range. Averages and tolerance limits were calculated on the background samples from the five (5) to six (6) foot intervals. These averages were used for statistical comparisons of all remaining RFI samples greater than five (5) feet in depth.

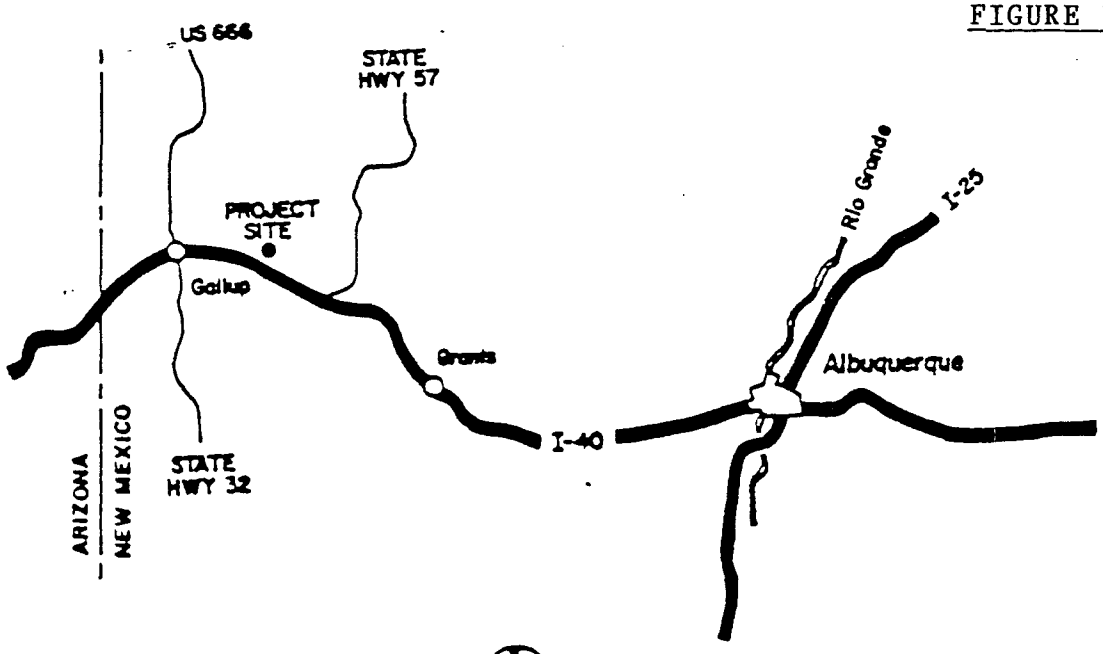
There were no background calculations computed for antimony, cadmium, mercury and selenium as all the original data was below the detection limits for each of these metals. However, there were some analytical results above detection limits for these metals. Section 7.3 lists all results that are greater than detection limits for each of these four (4) metals.

The background data for beryllium at the zero (0) to five (5) foot level is somewhat different as all analytical parameters equaled one (1). As a result, the upper tolerance limit is one (1) and there is no coefficient of variance.

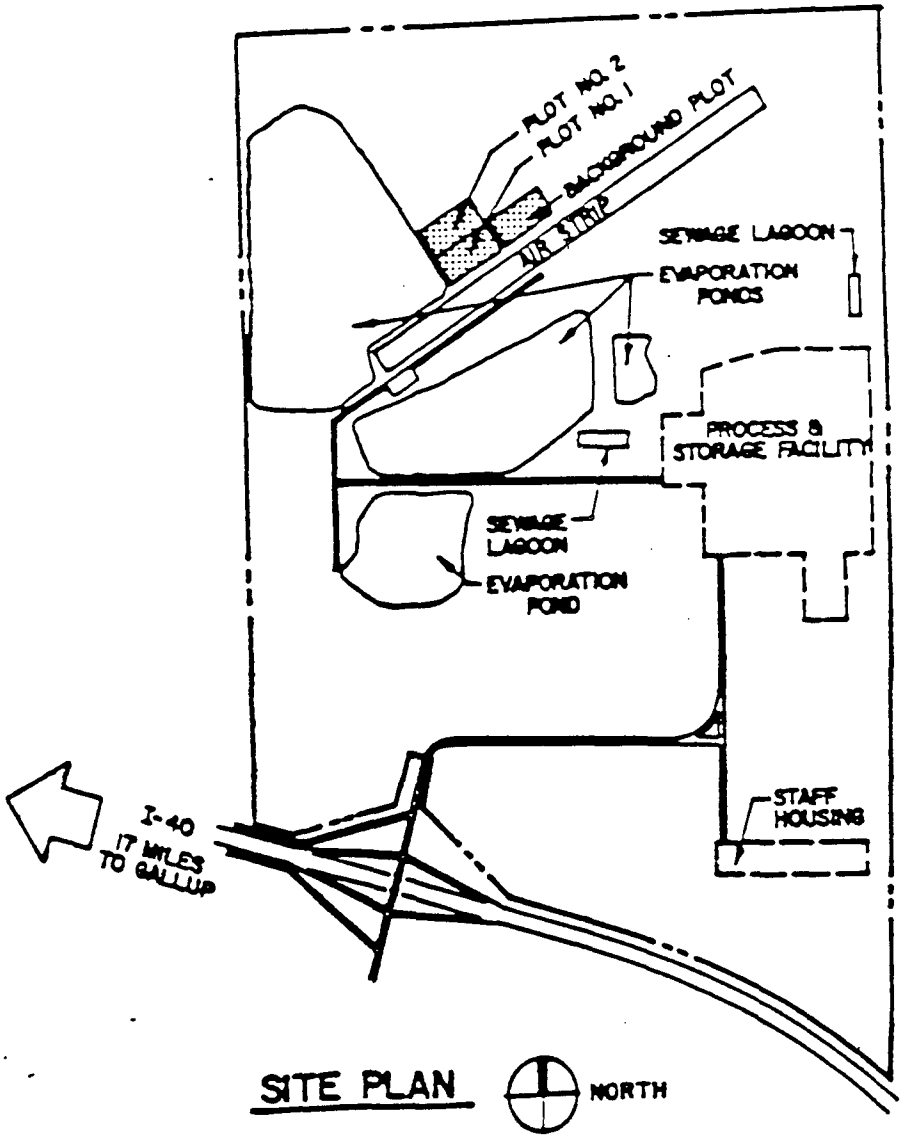
The background values for lead at the five (5) to six (6) foot level was calculated from the results of the April 28, 1987

sampling event. All lead analysis from this sample depth for the April 4 and 5, 1988 sampling event was reported as non detectable at a detection limit of 10 mg/kg.

FIGURE 7-1



VICINITY MAP NORTH



SITE PLAN NORTH

GIANT REFINING COMPANY - GALLUP, NM
LAND TREATMENT DEMONSTRATION
VICINITY & SITE PLAN

FIGURE 2.0

Lockwood, Andrews & Newnam, Inc.

FIGURE 7-2

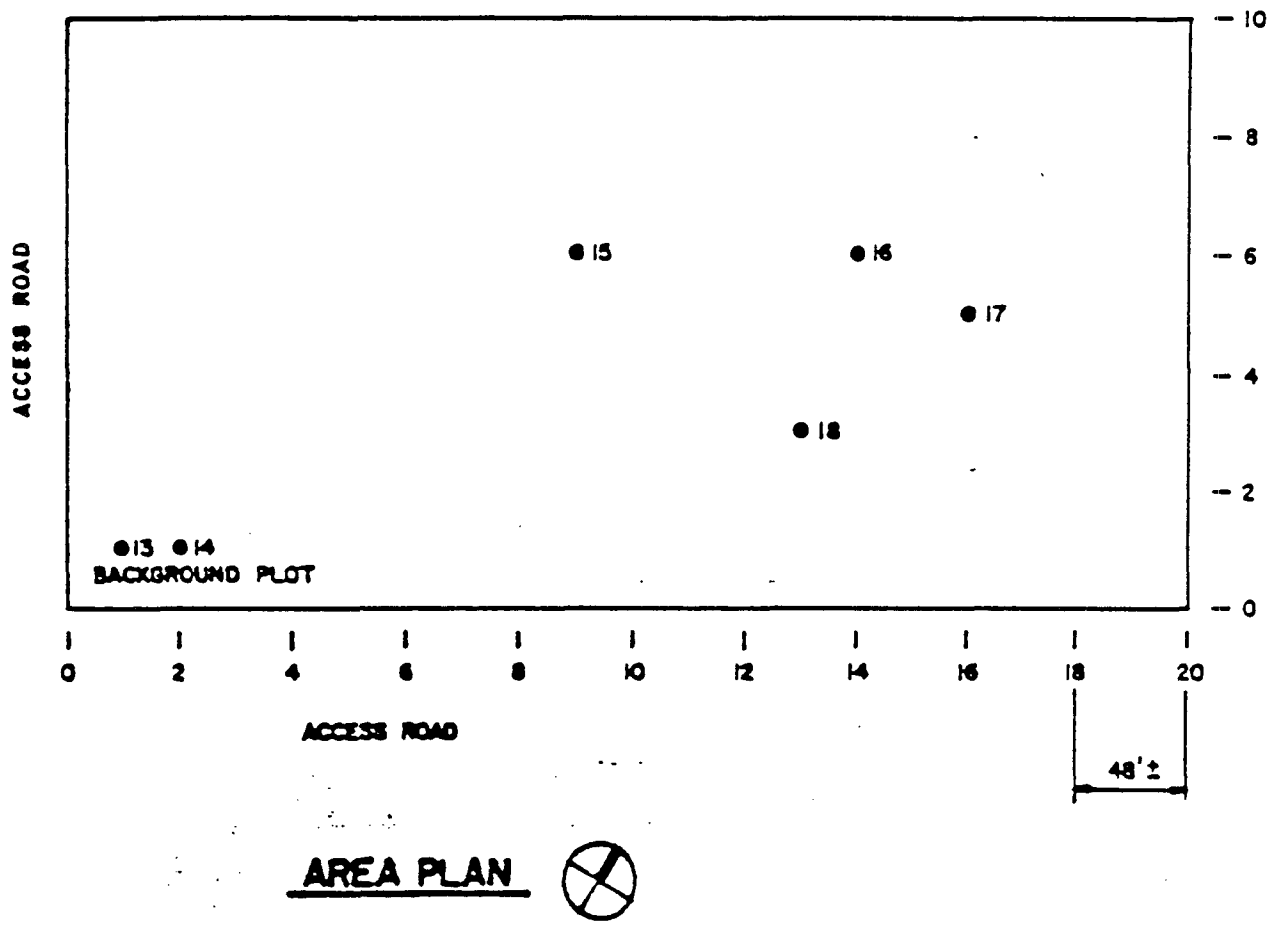
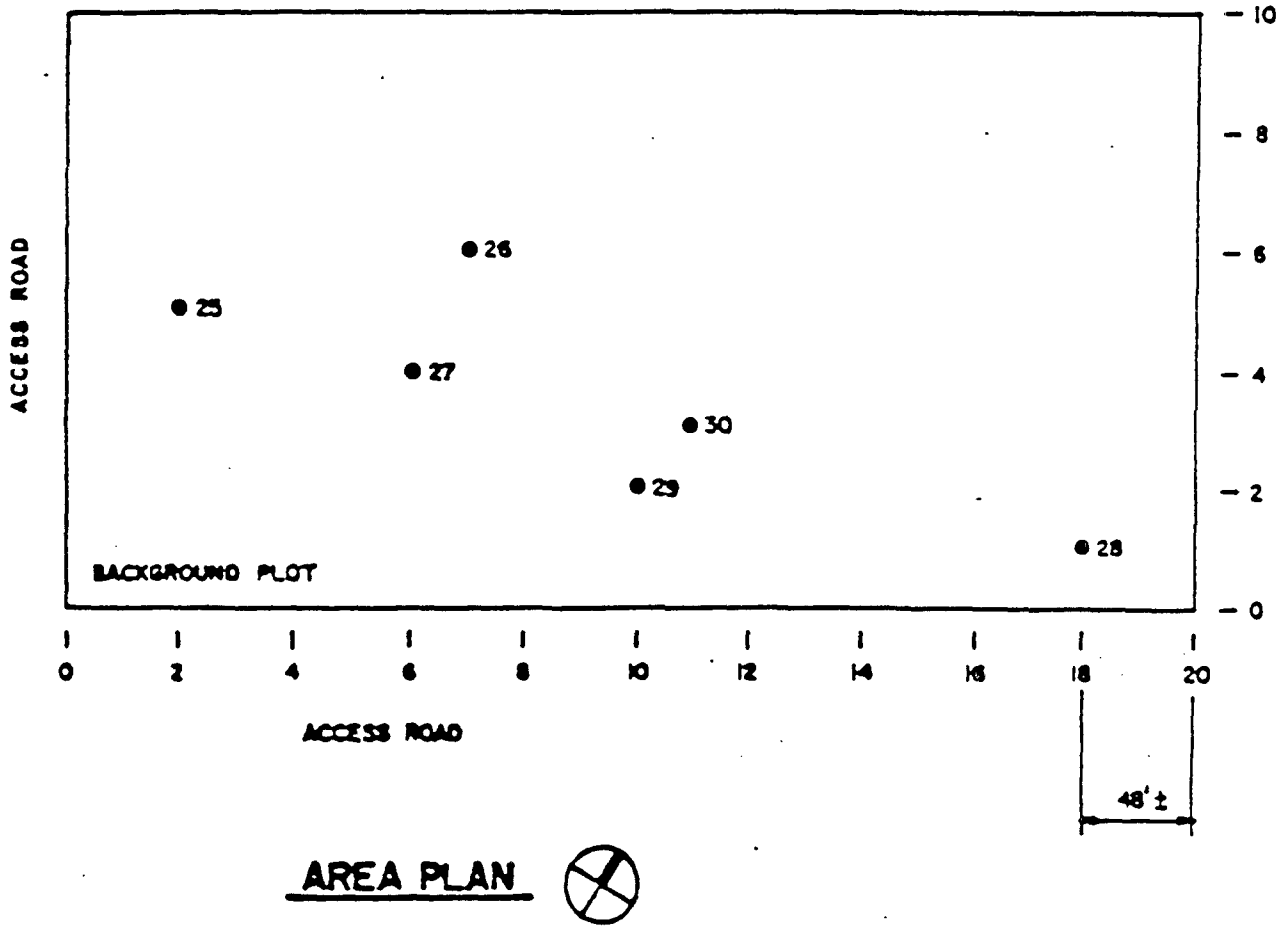


FIGURE 3.2

GIANT REFINING COMPANY - GALLUP, NM
LAND TREATMENT DEMONSTRATION
SAMPLE LOCATIONS - PRE DEMO EVENT, APR '87

Lockwood, Andrews & Newnam, Inc.

FIGURE 7-3



AREA PLAN

FIGURE 3.7

GIANT REFINING COMPANY - GALLUP, NM
LAND TREATMENT DEMONSTRATION
SAMPLE LOCATIONS - EVENT NO.5, APR '88

Lockwood, Andrews & Newnam, Inc.

TABLE 7-1

First sampling trip
after application
4-28-87

Background Plot Data

METALS	zone	0-1	0-1	1-2	2-3	3-4	4-5	5-6	5-6	5-6	5-6	5-6	5-6
	sample #	0745	0925	0750	0755	0800	805	810	0820	0900	0940	1035	1130
	comp holes	13-15	16-18	13-18	13-18	13-18	13-18	13	14	15	16	17	17
TOTAL METALS, mg/kg													
ANTIMONY		nd	nd					nd	nd	nd	nd	nd	nd
ARSENIC		3.8	4.4					6.2	5.8	7	6	2.8	7.2
BARIUM		300	250	280	230	300	370	180	280	250	170	320	280
BERYLLIUM		1	1					1.3	1.2	1.3	1	0.8	1.3
CADMIUM		nd	nd					nd	nd	nd	0.5	nd	nd
CHROMIUM		7	7	3	5	5	6	7	4	7	3	3	5
COBALT		2.9	3.7					4	2.1	3.7	2.2	0.5	2.6
COPPER		4.4	4.1					5.7	4.6	5.5	4.7	2.9	5.4
LEAD		12	13	9	11	9	11	12	11	12	9	9	10
MERCURY		0.06	nd					nd	nd	nd	nd	nd	nd
NICKEL		9	9					10	7	10	5	7	9
POTASSIUM		2100	2900					1700	1600	1700	1000	700	1500
SELENIUM		nd	nd					nd	nd	nd	nd	nd	nd
VANADIUM		13	15					16	13	15	11	8.7	13
ZINC		18	15	9	12	12	13	14	12	15	9	8	13

TABLE 7-2

Fifth sampling trip
after application
4-5-88 and 4-6-88

Background Plot Data

METALS	zone	0-1	0-1	1-2	2-3	3-4	4-5	5-6	5-6	5-6	5-6	5-6	5-6
	sample #	3701	3801	3912	4023	4134	4245	4356	4456	4556	4656	4756	4856
	comp holes	25-27	28-30	25-30	25-30	25-30	25-30	25	26	27	28	29	30
TOTAL METALS, mg/kg													
ANTIMONY		nd	nd					nd	nd	nd	nd	nd	nd
ARSENIC		0.5	0.4					0.6	nd	nd	0.6	1.1	nd
BARIUM		300	300	280	300	380	290	270	330	270	260	220	270
BERYLLIUM		1	1					1.1	1.2	1.2	1.3	1.2	0.8
CADMIUM		nd	nd					nd	nd	nd	nd	nd	nd
CHROMIUM		6	5	4	4	4	4	4	5	4	4	3	4
COBALT		3	2					2	3	3	3	3	2
COPPER		4	3					4	6	5	5	5	4
LEAD		12	10	11	12	1	10	nd	nd	nd	nd	nd	nd
MERCURY		nd	nd					nd	nd	nd	nd	nd	nd
NICKEL		8	7					7	9	8	8	7	6
POTASSIUM		1400	1400					1300	1300	1300	1400	1100	1300
SELENIUM		nd	nd					nd	nd	nd	nd	nd	nd
VANADIUM		13	11					13	12	11	13	12	13
ZINC		16	12	11	11	10	11	10	12	11	11	10	9

Statistical Analysis.

The statistical analysis is concerned with the problem of comparing observations of the concentrations of metals from compliance data with observations of concentrations from background data in order to determine if the concentrations of metals from the compliance data exceed, in a statistically significant fashion, the concentrations from the background data. The primary method used is that of the construction of a *tolerance interval* and the use of the resulting *upper tolerance limit*. The analysis was carried out in the following way:

1. The background data consisted, for each of the eleven metals analyzed, of from four to twelve values at each of two depths.

2. For each metal, at each of the two depths, the (one-sided) tolerance interval was constructed using the following technique:

   a) Calculate the mean, $\overline{X}$, and the standard deviation, SD, from the background data.

   b) Construct the one-sided upper tolerance limit as $TL = \overline{X} + KS$, where K is the one-sided normal tolerance factor found in Table 1.

   c) The tolerance interval is the interval [0, TL]. This interval will contain, with 95% confidence, 95% of random observations from the same distribution as the background data.

3. The observations forming the compliance data (for the same metal at the same depth) are now compared, one by one, with the upper tolerance limit, TL, found above. If an observation exceeds TL, this is interpreted as statistically significant evidence that the observation is from a distribution with a higher concentration of the metal and that, therefore, contamination has occured.

SECTION 7.3

CONDENSED ANALYTICAL AND DISCUSSIONS FOR ANTIMONY, CADMIUM, MERCURY AND SELENIUM

As indicated in Section 7.1 there was no background calculation or statistical comparisons computed for antimony, cadmium, mercury or selenium. This was a result of the background analytical being non-detectable (less than detection limits) for each of these metals. However, some of the samples did indicate analytical results at levels greater than detection limits. The following tables lists all samples with analytical results which exceeds the detection limits of the background samples.

RFI06 TANK FARM

No Analytical Applicable

RFI08-RAILROAD RACK LAGOON

Sample #	Metal	Units	Result	Sample Detection Limit
05V5.0	Cadmium	mg/kg	0.70	0.50
07V4.5	Cadmium	mg/kg	0.99	0.50

Antimony, mercury and selenium was not detected in any of the samples for this SWMU. The results for cadmium are very low and do not indicate any potential contamination.

RFI09 INACTIVE LAND TREATMENT AREA AND DRAINAGE DITCH

No Analytical Applicable

RFI10-TWO SLUDGE PITS

Sample #	Metal	Units	Result	Sample Detection Limit
01V3.0	Cadmium	mg/kg	0.70	0.50
03V12.5	Cadmium	mg/kg	0.73	0.50
04V3.0	Cadmium	mg/kg	0.56	0.50
04V6.0	Mercury	mg/kg	1.30	0.10
05V6.0	Cadmium	mg/kg	1.50	0.50
05V6.0	Mercury	mg/kg	2.90	0.69

Antimony and selenium was not detected in any of the samples for this SWMU. Cadmium and mercury was detected at various levels in several of the samples however, it appears the six (6) foot sample depths of samples 04 and 05 are the only areas of concern for these four metals.

Notes on the Statistical Analysis.

1. In order to construct the upper tolerance limit, the backgound data is assumed to be approximately normally distributed. This assumption was checked by calculating the coefficient of variation (CV) for each of the background data sets. If this value exceeds 1, then that fact indicates non-normality. In none of the data sets analyzed did the coefficient of variation exceed 1. It was therefore assumed that the values observed in the background wells were normally distributed. No other tests of normality were carried out.

2. If the standard deviation for the backgound data is zero, (i.e., all values are the same), then the tolerance interval approach is not particulary useful. In that case the upper tolerance limit is identical to the common value of the background data values and any observation coming from the compliance wells which exceeds that upper tolerance limit must be taken as evidence of contamination. This was the situation for beryllium at the shallow depth; the background data consisted of four values, all equal to 1 mg/kg. For this one data set an analysis of variance was also carried out; this test indicated no statistically significant difference in the concentrations of beryllium in the background data and the compliance data, even though many of the individual values from the compliance wells indicated contamination using the tolerance interval approach.

3. No detectable amounts of arsenic, cadmium, mercury or selenium were found in the background. Therefore, no tests were carried out for these elements.

4. The analytical results reported under the sample data column is reported in mg/kg.

Background Data for Arsenic: 0-5 foot level

Data: 3.8, 4.4, 0.5, 0.4
Mean: 2.27
SD: 1.84
The Upper Tolerance Limit = 11.73
The Coefficient of Variance = 0.81

Background Data for Arsenic: 5-6 foot level

Data: 6.2, 5.8, 7, 6, 2.8, 7.2, 0.6, 0.6, 1.1
Mean: 4.14
SD: 2.67
The Upper Tolerance Limit = 12.23
The Coefficient of Variance = 0.64

Background Data for Barium: 0-5 foot level

Data: 300, 250, 280, 230, 300, 370, 300, 300, 280, 300, 380, 290
Mean: 298.33
SD: 40.38
The Upper Tolerance Limit = 408.81
The Coefficient of Variance = 0.14

Background Data for Barium: 5-6 foot level

Data: 180, 280, 250, 170, 320, 280, 270, 330, 270, 260, 220, 270
Mean: 258.33
SD: 46.34
The Upper Tolerance Limit = 385.11
The Coefficient of Variance = 0.18

Background Data for Beryllium: 0-5 foot level

Data: 1, 1, 1, 1
Mean: 1.00
SD: 0.00
The Upper Tolerance Limit = 1.00
The Coefficient of Variance = 0.00

Background Data for Beryllium: 5-6 foot level

Data: 1.3, 1.2, 1.3, 1, 0.8, 1.3, 1.1, 1.2, 1.2, 1.3, 1.2, 0.8
Mean: 1.14
SD: 0.18
The Upper Tolerance Limit = 1.62
The Coefficient of Variance = 0.15

Background Data for Chromium: 0-5 foot level

Data: 7, 7, 3, 5, 5, 6, 6, 5, 4, 4, 4, 4
Mean: 5.00
SD: 1.22
The Upper Tolerance Limit = 8.35
The Coefficient of Variance = 0.24

Background Data for Chromium: 5-6 foot level

Data: 7, 4, 7, 3, 3, 5, 4, 5, 4, 4, 3, 4
Mean: 4.42
SD: 1.32
The Upper Tolerance Limit = 8.03
The Coefficient of Variance = 0.30

Background Data for Cobalt: 0-5 foot level

Data: 2.9, 3.7, 3, 2
Mean: 2.90
SD: 0.60
The Upper Tolerance Limit = 6.01
The Coefficient of Variance = 0.21

Background Data for Cobalt: 5-6 foot level

Data: 4, 2.1, 3.7, 2.2, 0.5, 2.6, 2, 3, 3, 3, 3, 2
Mean: 2.59
SD: 0.88
The Upper Tolerance Limit = 5.01
The Coefficient of Variance = 0.34

Background Data for Copper: 0-5 foot level

Data: 4.4, 4.1, 4, 3
Mean: 3.88
SD: 0.53
The Upper Tolerance Limit = 6.58
The Coefficient of Variance = 0.14

Background Data for Copper: 5-6 foot level

Data: 5.7, 4.6, 5.5, 4.7, 2.9, 5.4, 4, 6, 5, 5, 5, 4
Mean: 4.82
SD: 0.82
The Upper Tolerance Limit = 7.07
The Coefficient of Variance = 0.17

Background Data for Lead: 0-5 foot level

Data: 12, 13, 9, 11, 9, 11, 12, 10, 11, 12, 1, 10
Mean: 10.08
SD: 2.98
The Upper Tolerance Limit = 18.25
The Coefficient of Variance = 0.30

Background Data for Lead: 5-6 foot level

Data: 12, 11, 12, 9, 9, 10
Mean: 10.50
SD: 1.26
The Upper Tolerance Limit = 15.16
The Coefficient of Variance = 0.12

Background Data for Nickel: 0-5 foot level

Data: 9, 9, 8, 7
Mean: 8.25
SD: 0.83
The Upper Tolerance Limit = 12.52
The Coefficient of Variance = 0.10

Background Data for Nickel: 5-6 foot level

Data: 10, 7, 10, 5, 7, 9, 7, 9, 8, 8, 7, 6
Mean: 7.75
SD: 1.48
The Upper Tolerance Limit = 11.80
The Coefficient of Variance = 0.19

Background Data for Potassium: 0-5 foot level

Data: 2100, 2900, 1400, 1400
Mean: 1950.00
SD: 618.47
The Upper Tolerance Limit = 5132.01
The Coefficient of Variance = 0.32

Background Data for Potassium: 5-6 foot level

Data: 1700, 1600, 1700, 1000, 700, 1500, 1300, 1300, 1300, 1400
1100, 1300
Mean: 1325.00
SD: 280.25
The Upper Tolerance Limit = 2091.77
The Coefficient of Variance = 0.21

Background Data for Vanadium: 0-5 foot level

Data: 13, 15, 13, 11
Mean: 13.00
SD: 1.41
The Upper Tolerance Limit = 20.28
The Coefficient of Variance = 0.11

Background Data for Vanadium: 5-6 foot level

Data: 16, 13, 15, 11, 8.7, 13, 13, 12, 11, 11, 10, 9
Mean: 11.89
SD: 2.14
The Upper Tolerance Limit = 17.74
The Coefficient of Variance = 0.18

Background Data for Zinc: 0-5 foot level

Data: 18, 15, 9, 12, 12, 13, 16, 12, 11, 11, 10, 11
Mean: 12.50
SD: 2.50
The Upper Tolerance Limit = 19.34
The Coefficient of Variance = 0.20

Background Data for Zinc: 5-6 foot level

Data: 14, 12, 15, 9, 8, 13, 10, 12, 11, 11, 10, 9
Mean: 11.17
SD: 2.03
The Upper Tolerance Limit = 16.73
The Coefficient of Variance = 0.18

Analysis of Variance for Beryllium (0 - 5 feet)

Background Data:

1.0 1.0 1.0 1.0

Data from Railroad Rack Lagoon:

1.0 1.0 3.0 0.8 0.9 0.6 1.0 0.8
0.9 1.1 1.1 1.0 1.2 0.9 1.1 0.8
0.9 0.8 0.9

Data from Inactive Land Treatment Area and Drainage Ditch:

1.0 0.9 1.3 1.2 0.7 1.0 0.9 1.3
0.9 0.9 0.7

Data from Sludge Pits:

1.2 0.8 0.8 1.1 1.1 0.6 1.0 0.7
1.0 1.1 1.0 0.9 1.0 0.7 0.9 0.8
0.9 0.9 0.7

---------- Statistical Results Follow ----------

SS_Wells = 0.20
SS_Total = 5.60
SS_Error = 5.40
MS_Wells = 0.07
MS_Error = 0.11

Degrees of freedom: v1 = 3, v2 = 49
The calculated F-value is: F = 0.62

The tabulated F critical value is 2.800

Since 0.62 < 2.800 the test indicates no statistically significant difference among the wells.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0601a0.0	Lead	14.6	Within the tolerance limit.
	Nickel	5.3	Within the tolerance limit.
RFI0601a3.5	Lead	16.6	Within the tolerance limit.
	Nickel	6.6	Within the tolerance limit.
RFI0601a7.0	Lead	13.0	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0602v0.0	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0602v3.5	Lead	9.5	Within the tolerance limit.
	Nickel	4.6	Within the tolerance limit.
RFI0602v7.0	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0603a0.0	Lead	27.7	Exceeds the tolerance limit by 51.8%.
	Nickel	nd	Within the tolerance limit.
RFI0603a3.5	Lead	6.5	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0604v0.0	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0604v3.5	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0604v7.0	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0605a0.0	Lead	138	Exceeds the tolerance limit by 656.2%.
	Nickel	nd	Within the tolerance limit.
RFI0605a3.5	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0605a7.0	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0606v0.0	Lead	28.5	Exceeds the tolerance limit by 56.2%.
	Nickel	nd	Within the tolerance limit.
RFI0606v3.5	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0606v7.0	Lead	7.0	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0607a0.0	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0607a3.5	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0607a7.0	Lead	7.0	Within the tolerance limit.
	Nickel	6.0	Within the tolerance limit.
RFI0608v0.0	Lead	23.1	Exceeds the tolerance limit by 26.6%.
	Nickel	nd	Within the tolerance limit.
RFI0608v3.5	Lead	5.3	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0608v7.0	Lead	14.2	Within the tolerance limit.
	Nickel	9.7	Within the tolerance limit.
RFI0609a0.0	Lead	10.6	Within the tolerance limit.
	Nickel	4.5	Within the tolerance limit.
RFI0609a3.5	Lead	8.0	Within the tolerance limit.
	Nickel	6.3	Within the tolerance limit.
RFI0609a7.0	Lead	8.3	Within the tolerance limit.
	Nickel	4.3	Within the tolerance limit.
RFI0610v0.0	Lead	129	Exceeds the tolerance limit by 606.8%.
	Nickel	15.2	Exceeds the tolerance limit by 21.4%.
RFI0610v3.5	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0610v7.0	Lead	10.3	Within the tolerance limit.
	Nickel	5.1	Within the tolerance limit.
RFI0611a0.0	Lead	44.6	Exceeds the tolerance limit by 144.4%.
	Nickel	nd	Within the tolerance limit.
RFI0611a3.5	Lead	21.4	Exceeds the tolerance limit by 17.3%.
	Nickel	6.2	Within the tolerance limit.
RFI0611a7.0	Lead	23.9	Exceeds the tolerance limit by 57.6%.
	Nickel	5.5	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0612v0.0	Lead	736	Exceeds the tolerance limit by 3932.9%.
	Nickel	41.3	Exceeds the tolerance limit by 230.0%.
RFI0612v3.5	Lead	11	Within the tolerance limit.
	Nickel	4.4	Within the tolerance limit.
RFI0612v7.0	Lead	9.4	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0613a0.0	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0613d0.0	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0613a3.5	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0613a7.0	Lead	5.2	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0614v0.0	Lead	57.4	Exceeds the tolerance limit by 214.5%.
	Nickel	10.3	Within the tolerance limit.
RFI0614v3.5	Lead	9.0	Within the tolerance limit.
	Nickel	5	Within the tolerance limit.
RFI0614v7.0	Lead	12	Within the tolerance limit.
	Nickel	7.3	Within the tolerance limit.
RFI0615a0.0	Lead	17	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0615a3.5	Lead	6.7	Within the tolerance limit.
	Nickel	6.1	Within the tolerance limit.
RFI0615a7.0	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0616v0.0	Lead	238	Exceeds the tolerance limit by 1204.1%.
	Nickel	32.9	Exceeds the tolerance limit by 162.9%.
RFI0616v3.5	Lead	301	Exceeds the tolerance limit by 1549.3%.
	Nickel	58.2	Exceeds the tolerance limit by 365.0%.
RFI0616v7.0	Lead	55.3	Exceeds the tolerance limit by 264.7%.
	Nickel	6.5	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0617a0.0	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0617a3.5	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0617a7.0	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0618v0.0	Lead	14.8	Within the tolerance limit.
	Nickel	7.1	Within the tolerance limit.
RFI0618v3.5	Lead	12.3	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0618v7.0	Lead	21.2	Exceeds the tolerance limit by 39.8%.
	Nickel	nd	Within the tolerance limit.
RFI0619a0.0	Lead	19.1	Exceeds the tolerance limit by 4.7%.
	Nickel	9.6	Within the tolerance limit.
RFI0619a3.5	Lead	nd	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
RFI0619a7.0	Lead	8	Within the tolerance limit.
	Nickel	7.1	Within the tolerance limit.
RFI0820v0.0	Lead	21.6	Exceeds the tolerance limit by 18.4%.
	Nickel	49.8	Exceeds the tolerance limit by 297.9%.
RFI0820v3.5	Lead	9.9	Within the tolerance limit.
	Nickel	4.9	Within the tolerance limit.
RFI0820v7.0	Lead	7.8	Within the tolerance limit.
	Nickel	6.8	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0801a5.0	Arsenic	nd	Within the tolerance limit.
	Barium	275	Within the tolerance limit.
	Beryllium	.97	Within the tolerance limit.
	Chromium	7.9	Within the tolerance limit.
	Cobalt	2.7	Within the tolerance limit.
	Copper	4.5	Within the tolerance limit.
	Lead	7.1	Within the tolerance limit.
	Nickel	8.5	Within the tolerance limit.
	Potassium	1440	Within the tolerance limit.
	Vanadium	13.9	Within the tolerance limit.
	Zinc	12.6	Within the tolerance limit.
RFI0801a8.0	Arsenic	nd	Within the tolerance limit.
	Barium	432	Exceeds the tolerance limit by 12.2%.
	Beryllium	1.1	Within the tolerance limit.
	Chromium	10.9	Exceeds the tolerance limit by 35.8%.
	Cobalt	2.5	Within the tolerance limit.
	Copper	5.9	Within the tolerance limit.
	Lead	7.2	Within the tolerance limit.
	Nickel	10.1	Within the tolerance limit.
	Potassium	2480	Exceeds the tolerance limit by 18.6%.
	Vanadium	16.9	Within the tolerance limit.
	Zinc	16.4	Within the tolerance limit.
RFI0801a10.5	Arsenic	nd	Within the tolerance limit.
	Barium	308	Within the tolerance limit.
	Beryllium	1.1	Within the tolerance limit.
	Chromium	6.2	Within the tolerance limit.
	Cobalt	2.2	Within the tolerance limit.
	Copper	7	Within the tolerance limit.
	Lead	8.6	Within the tolerance limit.
	Nickel	7.3	Within the tolerance limit.
	Potassium	960	Within the tolerance limit.
	Vanadium	13.5	Within the tolerance limit.
	Zinc	11.2	Within the tolerance limit.
RFI0802a5.0	Arsenic	nd	Within the tolerance limit.
	Barium	232	Within the tolerance limit.
	Beryllium	1.1	Within the tolerance limit.
	Chromium	7.5	Within the tolerance limit.
	Cobalt	3.4	Within the tolerance limit.
	Copper	5.7	Within the tolerance limit.
	Lead	11.7	Within the tolerance limit.
	Nickel	8.8	Within the tolerance limit.
	Potassium	1400	Within the tolerance limit.
	Vanadium	15.0	Within the tolerance limit.
	Zinc	13.1	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0802d5.0	Arsenic	nd	Within the tolerance limit.
	Barium	259	Within the tolerance limit.
	Beryllium	1.1	Within the tolerance limit.
	Chromium	8.7	Exceeds the tolerance limit by 8.4%.
	Cobalt	3.5	Within the tolerance limit.
	Copper	5.3	Within the tolerance limit.
	Lead	10.8	Within the tolerance limit.
	Nickel	9.7	Within the tolerance limit.
	Potassium	1610	Within the tolerance limit.
	Vanadium	15.9	Within the tolerance limit.
	Zinc	14.5	Within the tolerance limit.
RFI0802a8.0	Arsenic	nd	Within the tolerance limit.
	Barium	230	Within the tolerance limit.
	Beryllium	1.1	Within the tolerance limit.
	Chromium	9.5	Exceeds the tolerance limit by 18.3%.
	Cobalt	3	Within the tolerance limit.
	Copper	5.8	Within the tolerance limit.
	Lead	6.9	Within the tolerance limit.
	Nickel	9.2	Within the tolerance limit.
	Potassium	2390	Exceeds the tolerance limit by 14.3%.
	Vanadium	17.1	Within the tolerance limit.
	Zinc	16.9	Exceeds the tolerance limit by 1.0%.
RFI0802a10.5	Arsenic	nd	Within the tolerance limit.
	Barium	276	Within the tolerance limit.
	Beryllium	1.2	Within the tolerance limit.
	Chromium	8.4	Exceeds the tolerance limit by 4.6%.
	Cobalt	3.3	Within the tolerance limit.
	Copper	6.7	Within the tolerance limit.
	Lead	8.5	Within the tolerance limit.
	Nickel	9.3	Within the tolerance limit.
	Potassium	1350	Within the tolerance limit.
	Vanadium	15.8	Within the tolerance limit.
	Zinc	13.9	Within the tolerance limit.
RFI0803a5.0	Arsenic	nd	Within the tolerance limit.
	Barium	223	Within the tolerance limit.
	Beryllium	.9	Within the tolerance limit.
	Chromium	5.6	Within the tolerance limit.
	Cobalt	2.2	Within the tolerance limit.
	Copper	5.1	Within the tolerance limit.
	Lead	12.5	Within the tolerance limit.
	Nickel	6.7	Within the tolerance limit.
	Potassium	1320	Within the tolerance limit.
	Vanadium	14	Within the tolerance limit.
	Zinc	11.4	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0803a8.0	Arsenic	nd	Within the tolerance limit.
	Barium	242	Within the tolerance limit.
	Beryllium	1.2	Within the tolerance limit.
	Chromium	10.4	Exceeds the tolerance limit by 29.5%.
	Cobalt	3.6	Within the tolerance limit.
	Copper	8.9	Exceeds the tolerance limit by 25.8%.
	Lead	5.4	Within the tolerance limit.
	Nickel	9.7	Within the tolerance limit.
	Potassium	2820	Exceeds the tolerance limit by 34.8%.
	Vanadium	17.6	Within the tolerance limit.
	Zinc	17.3	Exceeds the tolerance limit by 3.4%.
RFI0803a10.5	Arsenic	nd	Within the tolerance limit.
	Barium	277	Within the tolerance limit.
	Beryllium	.67	Within the tolerance limit.
	Chromium	1.3	Within the tolerance limit.
	Cobalt	1.5	Within the tolerance limit.
	Copper	3.6	Within the tolerance limit.
	Lead	5.6	Within the tolerance limit.
	Nickel	4.7	Within the tolerance limit.
	Potassium	665	Within the tolerance limit.
	Vanadium	13.1	Within the tolerance limit.
	Zinc	8.3	Within the tolerance limit.
RFI0804v5.0	Arsenic	nd	Within the tolerance limit.
	Barium	291	Within the tolerance limit.
	Beryllium	.95	Within the tolerance limit.
	Chromium	6.4	Within the tolerance limit.
	Cobalt	2	Within the tolerance limit.
	Copper	4.8	Within the tolerance limit.
	Lead	13.3	Within the tolerance limit.
	Nickel	7.6	Within the tolerance limit.
	Potassium	980	Within the tolerance limit.
	Vanadium	15	Within the tolerance limit.
	Zinc	11.1	Within the tolerance limit.
RFI0804v8.0	Arsenic	nd	Within the tolerance limit.
	Barium	276	Within the tolerance limit.
	Beryllium	.95	Within the tolerance limit.
	Chromium	6.7	Within the tolerance limit.
	Cobalt	2.5	Within the tolerance limit.
	Copper	4.6	Within the tolerance limit.
	Lead	9.6	Within the tolerance limit.
	Nickel	7.5	Within the tolerance limit.
	Potassium	1030	Within the tolerance limit.
	Vanadium	15.5	Within the tolerance limit.
	Zinc	10.9	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0804v10.5	Arsenic	nd	Within the tolerance limit.
	Barium	216	Within the tolerance limit.
	Beryllium	1.1	Within the tolerance limit.
	Chromium	5.9	Within the tolerance limit.
	Cobalt	2.6	Within the tolerance limit.
	Copper	5.5	Within the tolerance limit.
	Lead	9.5	Within the tolerance limit.
	Nickel	6.8	Within the tolerance limit.
	Potassium	500	Within the tolerance limit.
	Vanadium	15.8	Within the tolerance limit.
	Zinc	11.4	Within the tolerance limit.
RFI0805v5.0	Arsenic	nd	Within the tolerance limit.
	Barium	302	Within the tolerance limit.
	Beryllium	.93	Within the tolerance limit.
	Chromium	6.2	Within the tolerance limit.
	Cobalt	2.1	Within the tolerance limit.
	Copper	4.7	Within the tolerance limit.
	Lead	9.3	Within the tolerance limit.
	Nickel	6.6	Within the tolerance limit.
	Potassium	60	Within the tolerance limit.
	Vanadium	14.8	Within the tolerance limit.
	Zinc	10.5	Within the tolerance limit.
RFI0805v8.0	Arsenic	nd	Within the tolerance limit.
	Barium	300	Within the tolerance limit.
	Beryllium	1.1	Within the tolerance limit.
	Chromium	8.3	Exceeds the tolerance limit by 3.4%.
	Cobalt	3.1	Within the tolerance limit.
	Copper	5.7	Within the tolerance limit.
	Lead	10.1	Within the tolerance limit.
	Nickel	9.1	Within the tolerance limit.
	Potassium	2110	Exceeds the tolerance limit by 0.9%.
	Vanadium	16.9	Within the tolerance limit.
	Zinc	15	Within the tolerance limit.
RFI0805v10.5	Arsenic	nd	Within the tolerance limit.
	Barium	226	Within the tolerance limit.
	Beryllium	.61	Within the tolerance limit.
	Chromium	3.8	Within the tolerance limit.
	Cobalt	1.5	Within the tolerance limit.
	Copper	3.8	Within the tolerance limit.
	Lead	6.1	Within the tolerance limit.
	Nickel	4.3	Within the tolerance limit.
	Potassium	610	Within the tolerance limit.
	Vanadium	11.5	Within the tolerance limit.
	Zinc	7.5	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0806v5.0	Arsenic	nd	Within the tolerance limit.
	Barium	264	Within the tolerance limit.
	Beryllium	.77	Within the tolerance limit.
	Chromium	5.1	Within the tolerance limit.
	Cobalt	1.6	Within the tolerance limit.
	Copper	4.4	Within the tolerance limit.
	Lead	7.6	Within the tolerance limit.
	Nickel	5.7	Within the tolerance limit.
	Potassium	1140	Within the tolerance limit.
	Vanadium	13.2	Within the tolerance limit.
	Zinc	10	Within the tolerance limit.
RFI0806v8.0	Arsenic	nd	Within the tolerance limit.
	Barium	281	Within the tolerance limit.
	Beryllium	.99	Within the tolerance limit.
	Chromium	7.3	Within the tolerance limit.
	Cobalt	2.7	Within the tolerance limit.
	Copper	5.1	Within the tolerance limit.
	Lead	8.9	Within the tolerance limit.
	Nickel	8.5	Within the tolerance limit.
	Potassium	1830	Within the tolerance limit.
	Vanadium	15	Within the tolerance limit.
	Zinc	13.5	Within the tolerance limit.
RFI0806v10.5	Arsenic	nd	Within the tolerance limit.
	Barium	203	Within the tolerance limit.
	Beryllium	1.2	Within the tolerance limit.
	Chromium	7	Within the tolerance limit.
	Cobalt	3.5	Within the tolerance limit.
	Copper	6.3	Within the tolerance limit.
	Lead	10.8	Within the tolerance limit.
	Nickel	9.3	Within the tolerance limit.
	Potassium	1290	Within the tolerance limit.
	Vanadium	13.8	Within the tolerance limit.
	Zinc	13.2	Within the tolerance limit.
RFI0807v0.5	Arsenic	nd	Within the tolerance limit.
	Barium	258	Within the tolerance limit.
	Beryllium	1	Within the tolerance limit.
	Chromium	7.2	Within the tolerance limit.
	Cobalt	3.1	Within the tolerance limit.
	Copper	5.7	Within the tolerance limit.
	Lead	11.5	Within the tolerance limit.
	Nickel	9.3	Within the tolerance limit.
	Potassium	1370	Within the tolerance limit.
	Vanadium	14.7	Within the tolerance limit.
	Zinc	14.8	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0807v2.5	Arsenic	nd	Within the tolerance limit.
	Barium	257	Within the tolerance limit.
	Beryllium	.98	Within the tolerance limit.
	Chromium	7.2	Within the tolerance limit.
	Cobalt	2.9	Within the tolerance limit.
	Copper	5	Within the tolerance limit.
	Lead	9.9	Within the tolerance limit.
	Nickel	8.3	Within the tolerance limit.
	Potassium	1190	Within the tolerance limit.
	Vanadium	15	Within the tolerance limit.
	Zinc	12.5	Within the tolerance limit.
RFI0807v4.5	Arsenic	nd	Within the tolerance limit.
	Barium	604	Exceeds the tolerance limit by 47.7%.
	Beryllium	3	Exceeds the tolerance limit by 200.0%.
	Chromium	18	Exceeds the tolerance limit by 115.5%.
	Cobalt	7.8	Exceeds the tolerance limit by 29.8%.
	Copper	13.6	Exceeds the tolerance limit by 106.6%.
	Lead	27.6	Exceeds the tolerance limit by 51.2%.
	Nickel	20.9	Exceeds the tolerance limit by 67.0%.
	Potassium	3210	Within the tolerance limit.
	Vanadium	11.1	Within the tolerance limit.
	Zinc	30.3	Exceeds the tolerance limit by 56.7%.
RFI0808v0.5	Arsenic	nd	Within the tolerance limit.
	Barium	206	Within the tolerance limit.
	Beryllium	.83	Within the tolerance limit.
	Chromium	6.6	Within the tolerance limit.
	Cobalt	3.1	Within the tolerance limit.
	Copper	4.7	Within the tolerance limit.
	Lead	12.6	Within the tolerance limit.
	Nickel	8	Within the tolerance limit.
	Potassium	1470	Within the tolerance limit.
	Vanadium	13.2	Within the tolerance limit.
	Zinc	15.7	Within the tolerance limit.
RFI0808v2.5	Arsenic	nd	Within the tolerance limit.
	Barium	246	Within the tolerance limit.
	Beryllium	.91	Within the tolerance limit.
	Chromium	6.5	Within the tolerance limit.
	Cobalt	2.5	Within the tolerance limit.
	Copper	5.1	Within the tolerance limit.
	Lead	8.6	Within the tolerance limit.
	Nickel	7.4	Within the tolerance limit.
	Potassium	1060	Within the tolerance limit.
	Vanadium	14.1	Within the tolerance limit.
	Zinc	11.7	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0808v4.5	Arsenic	nd	Within the tolerance limit.
	Barium	210	Within the tolerance limit.
	Beryllium	.62	Within the tolerance limit.
	Chromium	4.5	Within the tolerance limit.
	Cobalt	1.5	Within the tolerance limit.
	Copper	3.3	Within the tolerance limit.
	Lead	8.6	Within the tolerance limit.
	Nickel	4.7	Within the tolerance limit.
	Potassium	704	Within the tolerance limit.
	Vanadium	12	Within the tolerance limit.
	Zinc	7.9	Within the tolerance limit.
RFI0809v0.5	Arsenic	nd	Within the tolerance limit.
	Barium	293	Within the tolerance limit.
	Beryllium	1	Within the tolerance limit.
	Chromium	8.5	Exceeds the tolerance limit by 1.8%.
	Cobalt	2.6	Within the tolerance limit.
	Copper	5.7	Within the tolerance limit.
	Lead	11.7	Within the tolerance limit.
	Nickel	8.4	Within the tolerance limit.
	Potassium	1580	Within the tolerance limit.
	Vanadium	16.2	Within the tolerance limit.
	Zinc	17.2	Within the tolerance limit.
RFI0809v2.5	Arsenic	nd	Within the tolerance limit.
	Barium	242	Within the tolerance limit.
	Beryllium	.83	Within the tolerance limit.
	Chromium	5.7	Within the tolerance limit.
	Cobalt	2.5	Within the tolerance limit.
	Copper	4.2	Within the tolerance limit.
	Lead	8.2	Within the tolerance limit.
	Nickel	7	Within the tolerance limit.
	Potassium	1050	Within the tolerance limit.
	Vanadium	13.3	Within the tolerance limit.
	Zinc	11	Within the tolerance limit.
RFI0809v4.5	Arsenic	nd	Within the tolerance limit.
	Barium	197	Within the tolerance limit.
	Beryllium	.86	Within the tolerance limit.
	Chromium	4.7	Within the tolerance limit.
	Cobalt	2.2	Within the tolerance limit.
	Copper	4.8	Within the tolerance limit.
	Lead	8.5	Within the tolerance limit.
	Nickel	3.3	Within the tolerance limit.
	Potassium	951	Within the tolerance limit.
	Vanadium	12.8	Within the tolerance limit.
	Zinc	8.9	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0810v0.5	Arsenic	.51	Within the tolerance limit.
	Barium	277	Within the tolerance limit.
	Beryllium	1.1	Exceeds the tolerance limit by 10.0%.
	Chromium	5.5	Within the tolerance limit.
	Cobalt	2.1	Within the tolerance limit.
	Copper	5.4	Within the tolerance limit.
	Lead	10.1	Within the tolerance limit.
	Nickel	7.1	Within the tolerance limit.
	Potassium	980	Within the tolerance limit.
	Vanadium	11.8	Within the tolerance limit.
	Zinc	9.8	Within the tolerance limit.
RFI0810v2.5	Arsenic	nd	Within the tolerance limit.
	Barium	280	Within the tolerance limit.
	Beryllium	1.1	Exceeds the tolerance limit by 10.0%.
	Chromium	5.6	Within the tolerance limit.
	Cobalt	2.3	Within the tolerance limit.
	Copper	6	Within the tolerance limit.
	Lead	10.2	Within the tolerance limit.
	Nickel	7.8	Within the tolerance limit.
	Potassium	1000	Within the tolerance limit.
	Vanadium	11.7	Within the tolerance limit.
	Zinc	12	Within the tolerance limit.
RFI0810v4.5	Arsenic	nd	Within the tolerance limit.
	Barium	266	Within the tolerance limit.
	Beryllium	1	Within the tolerance limit.
	Chromium	3.8	Within the tolerance limit.
	Cobalt	1.4	Within the tolerance limit.
	Copper	5.2	Within the tolerance limit.
	Lead	7.7	Within the tolerance limit.
	Nickel	4.7	Within the tolerance limit.
	Potassium	837	Within the tolerance limit.
	Vanadium	10	Within the tolerance limit.
	Zinc	8.5	Within the tolerance limit.
RFI0811v0.5	Arsenic	.57	Within the tolerance limit.
	Barium	262	Within the tolerance limit.
	Beryllium	1.2	Exceeds the tolerance limit by 20.0%.
	Chromium	5.8	Within the tolerance limit.
	Cobalt	2.5	Within the tolerance limit.
	Copper	6.5	Within the tolerance limit.
	Lead	9.5	Within the tolerance limit.
	Nickel	7.7	Within the tolerance limit.
	Potassium	1550	Within the tolerance limit.
	Vanadium	12.8	Within the tolerance limit.
	Zinc	13.2	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0811d0.5	Arsenic	nd	Within the tolerance limit.
	Barium	176	Within the tolerance limit.
	Beryllium	.85	Within the tolerance limit.
	Chromium	4.8	Within the tolerance limit.
	Cobalt	2	Within the tolerance limit.
	Copper	4.4	Within the tolerance limit.
	Lead	6.4	Within the tolerance limit.
	Nickel	5.8	Within the tolerance limit.
	Potassium	831	Within the tolerance limit.
	Vanadium	10	Within the tolerance limit.
	Zinc	9.5	Within the tolerance limit.
RFI0811v2.5	Arsenic	nd	Within the tolerance limit.
	Barium	206	Within the tolerance limit.
	Beryllium	1.1	Exceeds the tolerance limit by 10.0%.
	Chromium	7.1	Within the tolerance limit.
	Cobalt	2.9	Within the tolerance limit.
	Copper	5.1	Within the tolerance limit.
	Lead	7.8	Within the tolerance limit.
	Nickel	8.2	Within the tolerance limit.
	Potassium	1310	Within the tolerance limit.
	Vanadium	13.1	Within the tolerance limit.
	Zinc	12.6	Within the tolerance limit.
RFI0811v4.5	Arsenic	nd	Within the tolerance limit.
	Barium	213	Within the tolerance limit.
	Beryllium	.75	Within the tolerance limit.
	Chromium	3.9	Within the tolerance limit.
	Cobalt	1.4	Within the tolerance limit.
	Copper	3.5	Within the tolerance limit.
	Lead	7	Within the tolerance limit.
	Nickel	4.4	Within the tolerance limit.
	Potassium	551	Within the tolerance limit.
	Vanadium	10	Within the tolerance limit.
	Zinc	7	Within the tolerance limit.
RFI0812v0.5	Arsenic	.53	Within the tolerance limit.
	Barium	244	Within the tolerance limit.
	Beryllium	.85	Within the tolerance limit.
	Chromium	6.1	Within the tolerance limit.
	Cobalt	1.9	Within the tolerance limit.
	Copper	4	Within the tolerance limit.
	Lead	15.6	Within the tolerance limit.
	Nickel	5.9	Within the tolerance limit.
	Potassium	747	Within the tolerance limit.
	Vanadium	12.5	Within the tolerance limit.
	Zinc	9.5	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0812v2.5	Arsenic	nd	Within the tolerance limit.
	Barium	159	Within the tolerance limit.
	Beryllium	.82	Within the tolerance limit.
	Chromium	4.5	Within the tolerance limit.
	Cobalt	1.9	Within the tolerance limit.
	Copper	4.4	Within the tolerance limit.
	Lead	7.8	Within the tolerance limit.
	Nickel	5.1	Within the tolerance limit.
	Potassium	728	Within the tolerance limit.
	Vanadium	8.9	Within the tolerance limit.
	Zinc	7.4	Within the tolerance limit.
RFI0812v4.5	Arsenic	nd	Within the tolerance limit.
	Barium	279	Within the tolerance limit.
	Beryllium	.92	Within the tolerance limit.
	Chromium	3.9	Within the tolerance limit.
	Cobalt	1.4	Within the tolerance limit.
	Copper	4.5	Within the tolerance limit.
	Lead	7.6	Within the tolerance limit.
	Nickel	5.2	Within the tolerance limit.
	Potassium	620	Within the tolerance limit.
	Vanadium	9.9	Within the tolerance limit.
	Zinc	7.8	Within the tolerance limit.
RFI0813v0.5	Arsenic	nd	Within the tolerance limit.
	Barium	260	Within the tolerance limit.
	Beryllium	1.1	Exceeds the tolerance limit by 10.0%.
	Chromium	6.8	Within the tolerance limit.
	Cobalt	2.7	Within the tolerance limit.
	Copper	5.3	Within the tolerance limit.
	Lead	11.5	Within the tolerance limit.
	Nickel	8	Within the tolerance limit.
	Potassium	1040	Within the tolerance limit.
	Vanadium	14.2	Within the tolerance limit.
	Zinc	12.3	Within the tolerance limit.
RFI0813v2.5	Arsenic	nd	Within the tolerance limit.
	Barium	237	Within the tolerance limit.
	Beryllium	.87	Within the tolerance limit.
	Chromium	5.7	Within the tolerance limit.
	Cobalt	2.1	Within the tolerance limit.
	Copper	4.2	Within the tolerance limit.
	Lead	8	Within the tolerance limit.
	Nickel	6.2	Within the tolerance limit.
	Potassium	793	Within the tolerance limit.
	Vanadium	11.9	Within the tolerance limit.
	Zinc	9.5	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0813v4.5	Arsenic	nd	Within the tolerance limit.
	Barium	183	Within the tolerance limit.
	Beryllium	.95	Within the tolerance limit.
	Chromium	5.1	Within the tolerance limit.
	Cobalt	2.2	Within the tolerance limit.
	Copper	4.9	Within the tolerance limit.
	Lead	7.6	Within the tolerance limit.
	Nickel	5.7	Within the tolerance limit.
	Potassium	1160	Within the tolerance limit.
	Vanadium	10.9	Within the tolerance limit.
	Zinc	9.3	Within the tolerance limit.
RFI0813d4.5	Arsenic	nd	Within the tolerance limit.
	Barium	218	Within the tolerance limit.
	Beryllium	.99	Within the tolerance limit.
	Chromium	5.9	Within the tolerance limit.
	Cobalt	2.2	Within the tolerance limit.
	Copper	5	Within the tolerance limit.
	Lead	7.1	Within the tolerance limit.
	Nickel	6.3	Within the tolerance limit.
	Potassium	1080	Within the tolerance limit.
	Vanadium	11.6	Within the tolerance limit.
	Zinc	9.8	Within the tolerance limit.
RFI0901v0.0	Arsenic	.86	Within the tolerance limit.
	Barium	316	Within the tolerance limit.
	Beryllium	.95	Within the tolerance limit.
	Chromium	13.9	Exceeds the tolerance limit by 66.4%.
	Cobalt	3.2	Within the tolerance limit.
	Copper	7.4	Exceeds the tolerance limit by 12.4%.
	Lead	13.4	Within the tolerance limit.
	Nickel	6.3	Within the tolerance limit.
	Potassium	1210	Within the tolerance limit.
	Vanadium	12.9	Within the tolerance limit.
	Zinc	19.7	Exceeds the tolerance limit by 1.9%.
RFI0901v3.0	Arsenic	nd	Within the tolerance limit.
	Barium	330	Within the tolerance limit.
	Beryllium	.88	Within the tolerance limit.
	Chromium	4.8	Within the tolerance limit.
	Cobalt	2.8	Within the tolerance limit.
	Copper	3.6	Within the tolerance limit.
	Lead	11.4	Within the tolerance limit.
	Nickel	5.2	Within the tolerance limit.
	Potassium	712	Within the tolerance limit.
	Vanadium	12.9	Within the tolerance limit.
	Zinc	6.9	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0901v5.0	Arsenic	nd	Within the tolerance limit.
	Barium	332	Within the tolerance limit.
	Beryllium	1.1	Within the tolerance limit.
	Chromium	5.1	Within the tolerance limit.
	Cobalt	3.8	Within the tolerance limit.
	Copper	5.3	Within the tolerance limit.
	Lead	9.8	Within the tolerance limit.
	Nickel	5.7	Within the tolerance limit.
	Potassium	1400	Within the tolerance limit.
	Vanadium	14.1	Within the tolerance limit.
	Zinc	9.3	Within the tolerance limit.
RFI0901v7.0	Arsenic	nd	Within the tolerance limit.
	Barium	309	Within the tolerance limit.
	Beryllium	1.2	Within the tolerance limit.
	Chromium	5.4	Within the tolerance limit.
	Cobalt	4	Within the tolerance limit.
	Copper	5.7	Within the tolerance limit.
	Lead	13.2	Within the tolerance limit.
	Nickel	6.7	Within the tolerance limit.
	Potassium	963	Within the tolerance limit.
	Vanadium	14.7	Within the tolerance limit.
	Zinc	9.2	Within the tolerance limit.
RFI0902v0.0	Arsenic	nd	Within the tolerance limit.
	Barium	302	Within the tolerance limit.
	Beryllium	1.3	Exceeds the tolerance limit by 30.0%.
	Chromium	11.8	Exceeds the tolerance limit by 41.3%.
	Cobalt	5.8	Within the tolerance limit.
	Copper	8.1	Exceeds the tolerance limit by 23.1%.
	Lead	16.1	Within the tolerance limit.
	Nickel	11.4	Within the tolerance limit.
	Potassium	2110	Within the tolerance limit.
	Vanadium	20.1	Within the tolerance limit.
	Zinc	18.4	Within the tolerance limit.
RFI0902v3.0	Arsenic	nd	Within the tolerance limit.
	Barium	318	Within the tolerance limit.
	Beryllium	1.2	Exceeds the tolerance limit by 20.0%.
	Chromium	6.3	Within the tolerance limit.
	Cobalt	3.7	Within the tolerance limit.
	Copper	5.6	Within the tolerance limit.
	Lead	13.9	Within the tolerance limit.
	Nickel	6.8	Within the tolerance limit.
	Potassium	1220	Within the tolerance limit.
	Vanadium	16	Within the tolerance limit.
	Zinc	12.0	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0902v5.0	Arsenic	nd	Within the tolerance limit.
	Barium	237	Within the tolerance limit.
	Beryllium	1.2	Within the tolerance limit.
	Chromium	7.2	Within the tolerance limit.
	Cobalt	4.4	Within the tolerance limit.
	Copper	5.7	Within the tolerance limit.
	Lead	13.4	Within the tolerance limit.
	Nickel	8.2	Within the tolerance limit.
	Potassium	1640	Within the tolerance limit.
	Vanadium	15.9	Within the tolerance limit.
	Zinc	12.3	Within the tolerance limit.
RFI0902v7.0	Arsenic	nd	Within the tolerance limit.
	Barium	262	Within the tolerance limit.
	Beryllium	.59	Within the tolerance limit.
	Chromium	2.3	Within the tolerance limit.
	Cobalt	2	Within the tolerance limit.
	Copper	nd	Within the tolerance limit.
	Lead	11.9	Within the tolerance limit.
	Nickel	nd	Within the tolerance limit.
	Potassium	nd	Within the tolerance limit.
	Vanadium	9.5	Within the tolerance limit.
	Zinc	5.7	Within the tolerance limit.
RFI0903v0.0	Arsenic	nd	Within the tolerance limit.
	Barium	214	Within the tolerance limit.
	Beryllium	.73	Within the tolerance limit.
	Chromium	4.9	Within the tolerance limit.
	Cobalt	1.6	Within the tolerance limit.
	Copper	4.5	Within the tolerance limit.
	Lead	6	Within the tolerance limit.
	Nickel	5.1	Within the tolerance limit.
	Potassium	991	Within the tolerance limit.
	Vanadium	10.1	Within the tolerance limit.
	Zinc	8.7	Within the tolerance limit.
RFI0903v3.0	Arsenic	nd	Within the tolerance limit.
	Barium	307	Within the tolerance limit.
	Beryllium	1	Within the tolerance limit.
	Chromium	6.1	Within the tolerance limit.
	Cobalt	2.1	Within the tolerance limit.
	Copper	4.8	Within the tolerance limit.
	Lead	8	Within the tolerance limit.
	Nickel	6.7	Within the tolerance limit.
	Potassium	955	Within the tolerance limit.
	Vanadium	13.1	Within the tolerance limit.
	Zinc	9.6	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0903v5.0	Arsenic	nd	Within the tolerance limit.
	Barium	334	Within the tolerance limit.
	Beryllium	1.2	Within the tolerance limit.
	Chromium	7.6	Within the tolerance limit.
	Cobalt	3.4	Within the tolerance limit.
	Copper	8.6	Exceeds the tolerance limit by 21.6%.
	Lead	9.9	Within the tolerance limit.
	Nickel	9.1	Within the tolerance limit.
	Potassium	1300	Within the tolerance limit.
	Vanadium	16.1	Within the tolerance limit.
	Zinc	13.4	Within the tolerance limit.
RFI0903v7.0	Arsenic	.58	Within the tolerance limit.
	Barium	224	Within the tolerance limit.
	Beryllium	1.1	Within the tolerance limit.
	Chromium	7.6	Within the tolerance limit.
	Cobalt	3.2	Within the tolerance limit.
	Copper	5.8	Within the tolerance limit.
	Lead	7.3	Within the tolerance limit.
	Nickel	8.2	Within the tolerance limit.
	Potassium	1860	Within the tolerance limit.
	Vanadium	14.9	Within the tolerance limit.
	Zinc	13.3	Within the tolerance limit.
RFI0904v0.0	Arsenic	2.1	Within the tolerance limit.
	Barium	406	Within the tolerance limit.
	Beryllium	.91	Within the tolerance limit.
	Chromium	42.3	Exceeds the tolerance limit by 406.5%.
	Cobalt	4.4	Within the tolerance limit.
	Copper	13.9	Exceeds the tolerance limit by 111.2%.
	Lead	29.7	Exceeds the tolerance limit by 62.7%.
	Nickel	10	Within the tolerance limit.
	Potassium	1250	Within the tolerance limit.
	Vanadium	16.4	Within the tolerance limit.
	Zinc	69.6	Exceeds the tolerance limit by 259.9%.
RFI0904v3.0	Arsenic	nd	Within the tolerance limit.
	Barium	275	Within the tolerance limit.
	Beryllium	1.3	Exceeds the tolerance limit by 30.0%.
	Chromium	6.7	Within the tolerance limit.
	Cobalt	4.1	Within the tolerance limit.
	Copper	6.5	Within the tolerance limit.
	Lead	13.8	Within the tolerance limit.
	Nickel	7.4	Within the tolerance limit.
	Potassium	1180	Within the tolerance limit.
	Vanadium	16.4	Within the tolerance limit.
	Zinc	11.1	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0904v5.0	Arsenic	nd	Within the tolerance limit.
	Barium	309	Within the tolerance limit.
	Beryllium	1.1	Within the tolerance limit.
	Chromium	5.2	Within the tolerance limit.
	Cobalt	3.4	Within the tolerance limit.
	Copper	5.2	Within the tolerance limit.
	Lead	12.4	Within the tolerance limit.
	Nickel	5.1	Within the tolerance limit.
	Potassium	983	Within the tolerance limit.
	Vanadium	12.8	Within the tolerance limit.
	Zinc	9.1	Within the tolerance limit.
RFI0904v7.0	Arsenic	nd	Within the tolerance limit.
	Barium	239	Within the tolerance limit.
	Beryllium	1.4	Within the tolerance limit.
	Chromium	8.1	Exceeds the tolerance limit by 0.9%.
	Cobalt	4.8	Within the tolerance limit.
	Copper	7.2	Exceeds the tolerance limit by 1.8%.
	Lead	16.4	Exceeds the tolerance limit by 8.1%.
	Nickel	7.8	Within the tolerance limit.
	Potassium	1560	Within the tolerance limit.
	Vanadium	18.1	Exceeds the tolerance limit by 2.1%.
	Zinc	14	Within the tolerance limit.
RFI0905v0.0	Arsenic	nd	Within the tolerance limit.
	Barium	285	Within the tolerance limit.
	Beryllium	1.2	Exceeds the tolerance limit by 20.0%.
	Chromium	8.1	Within the tolerance limit.
	Cobalt	4.6	Within the tolerance limit.
	Copper	5.5	Within the tolerance limit.
	Lead	14.9	Within the tolerance limit.
	Nickel	9.1	Within the tolerance limit.
	Potassium	1160	Within the tolerance limit.
	Vanadium	17.9	Within the tolerance limit.
	Zinc	12.1	Within the tolerance limit.
RFI0905v3.0	Arsenic	nd	Within the tolerance limit.
	Barium	418	Exceeds the tolerance limit by 2.2%.
	Beryllium	.77	Within the tolerance limit.
	Chromium	32.2	Exceeds the tolerance limit by 285.6%.
	Cobalt	5	Within the tolerance limit.
	Copper	11.9	Exceeds the tolerance limit by 80.8%.
	Lead	31	Exceeds the tolerance limit by 69.9%.
	Nickel	8.7	Within the tolerance limit.
	Potassium	1100	Within the tolerance limit.
	Vanadium	16.9	Within the tolerance limit.
	Zinc	55.6	Exceeds the tolerance limit by 187.5%.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0905v5.0	Arsenic	nd	Within the tolerance limit.
	Barium	333	Within the tolerance limit.
	Beryllium	.94	Within the tolerance limit.
	Chromium	6.1	Within the tolerance limit.
	Cobalt	3.5	Within the tolerance limit.
	Copper	3.5	Within the tolerance limit.
	Lead	13.7	Within the tolerance limit.
	Nickel	5.5	Within the tolerance limit.
	Potassium	825	Within the tolerance limit.
	Vanadium	15.5	Within the tolerance limit.
	Zinc	8.4	Within the tolerance limit.
RFI0905d5.0	Arsenic	nd	Within the tolerance limit.
	Barium	375	Within the tolerance limit.
	Beryllium	.91	Within the tolerance limit.
	Chromium	6.8	Within the tolerance limit.
	Cobalt	3.9	Within the tolerance limit.
	Copper	4.2	Within the tolerance limit.
	Lead	14.4	Within the tolerance limit.
	Nickel	6.9	Within the tolerance limit.
	Potassium	936	Within the tolerance limit.
	Vanadium	16.4	Within the tolerance limit.
	Zinc	10.1	Within the tolerance limit.
RFI0905v7.0	Arsenic	nd	Within the tolerance limit.
	Barium	313	Within the tolerance limit.
	Beryllium	1.3	Within the tolerance limit.
	Chromium	8.5	Exceeds the tolerance limit by 5.9%.
	Cobalt	4.5	Within the tolerance limit.
	Copper	6.4	Within the tolerance limit.
	Lead	12.8	Within the tolerance limit.
	Nickel	9.2	Within the tolerance limit.
	Potassium	1590	Within the tolerance limit.
	Vanadium	18.5	Exceeds the tolerance limit by 4.3%.
	Zinc	13.3	Within the tolerance limit.
RFI0906v0.0	Arsenic	1.7	Within the tolerance limit.
	Barium	289	Within the tolerance limit.
	Beryllium	.79	Within the tolerance limit.
	Chromium	7.8	Within the tolerance limit.
	Cobalt	2.3	Within the tolerance limit.
	Copper	14.3	Exceeds the tolerance limit by 117.3%.
	Lead	28.1	Exceeds the tolerance limit by 54.0%.
	Nickel	11.4	Within the tolerance limit.
	Potassium	989	Within the tolerance limit.
	Vanadium	14.5	Within the tolerance limit.
	Zinc	22.8	Exceeds the tolerance limit by 17.9%.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0906v3.0	Arsenic	1.2	Within the tolerance limit.
	Barium	243	Within the tolerance limit.
	Beryllium	1.1	Exceeds the tolerance limit by 10.0%.
	Chromium	6.3	Within the tolerance limit.
	Cobalt	2.6	Within the tolerance limit.
	Copper	5.1	Within the tolerance limit.
	Lead	9.2	Within the tolerance limit.
	Nickel	7	Within the tolerance limit.
	Potassium	1110	Within the tolerance limit.
	Vanadium	14.5	Within the tolerance limit.
	Zinc	10.6	Within the tolerance limit.
RFI0906d3.0	Arsenic	nd	Within the tolerance limit.
	Barium	226	Within the tolerance limit.
	Beryllium	1.1	Exceeds the tolerance limit by 10.0%.
	Chromium	6.3	Within the tolerance limit.
	Cobalt	2.6	Within the tolerance limit.
	Copper	5.4	Within the tolerance limit.
	Lead	8.1	Within the tolerance limit.
	Nickel	7.2	Within the tolerance limit.
	Potassium	1120	Within the tolerance limit.
	Vanadium	14.2	Within the tolerance limit.
	Zinc	10.4	Within the tolerance limit.
RFI0906d5.0	Arsenic	nd	Within the tolerance limit.
	Barium	241	Within the tolerance limit.
	Beryllium	.97	Within the tolerance limit.
	Chromium	5.1	Within the tolerance limit.
	Cobalt	1.9	Within the tolerance limit.
	Copper	4.5	Within the tolerance limit.
	Lead	7.5	Within the tolerance limit.
	Nickel	5.3	Within the tolerance limit.
	Potassium	897	Within the tolerance limit.
	Vanadium	12.6	Within the tolerance limit.
	Zinc	8.4	Within the tolerance limit.
RFI0906d7.0	Arsenic	.53	Within the tolerance limit.
	Barium	319	Within the tolerance limit.
	Beryllium	.97	Within the tolerance limit.
	Chromium	4.1	Within the tolerance limit.
	Cobalt	1.7	Within the tolerance limit.
	Copper	4.9	Within the tolerance limit.
	Lead	8.1	Within the tolerance limit.
	Nickel	5	Within the tolerance limit.
	Potassium	838	Within the tolerance limit.
	Vanadium	13	Within the tolerance limit.
	Zinc	7.8	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI0907v0.0	Arsenic	1.4	Within the tolerance limit.
	Barium	447	Exceeds the tolerance limit by 9.3%.
	Beryllium	.59	Within the tolerance limit.
	Chromium	102	Exceeds the tolerance limit by 1121.4%.
	Cobalt	1.2	Within the tolerance limit.
	Copper	10.5	Exceeds the tolerance limit by 59.5%.
	Lead	14	Within the tolerance limit.
	Nickel	6	Within the tolerance limit.
	Potassium	853	Within the tolerance limit.
	Vanadium	14.6	Within the tolerance limit.
	Zinc	157	Exceeds the tolerance limit by 711.8%.
RFI0907v3.0	Arsenic	.66	Within the tolerance limit.
	Barium	234	Within the tolerance limit.
	Beryllium	.97	Within the tolerance limit.
	Chromium	8.6	Exceeds the tolerance limit by 3.0%.
	Cobalt	2.9	Within the tolerance limit.
	Copper	5.5	Within the tolerance limit.
	Lead	9.1	Within the tolerance limit.
	Nickel	7.7	Within the tolerance limit.
	Potassium	1030	Within the tolerance limit.
	Vanadium	13.1	Within the tolerance limit.
	Zinc	14.3	Within the tolerance limit.
RFI0907v5.0	Arsenic	.61	Within the tolerance limit.
	Barium	208	Within the tolerance limit.
	Beryllium	.66	Within the tolerance limit.
	Chromium	16.2	Exceeds the tolerance limit by 101.8%.
	Cobalt	1.5	Within the tolerance limit.
	Copper	4.1	Within the tolerance limit.
	Lead	7.2	Within the tolerance limit.
	Nickel	4.7	Within the tolerance limit.
	Potassium	776	Within the tolerance limit.
	Vanadium	10.3	Within the tolerance limit.
	Zinc	23.8	Exceeds the tolerance limit by 42.2%.
RFI0907v7.0	Arsenic	.58	Within the tolerance limit.
	Barium	240	Within the tolerance limit.
	Beryllium	1	Within the tolerance limit.
	Chromium	7.6	Within the tolerance limit.
	Cobalt	2.5	Within the tolerance limit.
	Copper	5.1	Within the tolerance limit.
	Lead	7.5	Within the tolerance limit.
	Nickel	6.8	Within the tolerance limit.
	Potassium	1390	Within the tolerance limit.
	Vanadium	12.7	Within the tolerance limit.
	Zinc	13.4	Within the tolerance limit.

RFI#	METAL	SAMPLE DATA	NOTE
RFI1001v0.0	Arsenic	.97	Within the tolerance limit.
	Barium	392	Within the tolerance limit.
	Beryllium	.7	Within the tolerance limit.
	Chromium	60.1	Exceeds the tolerance limit by 619.7%.
	Cobalt	2	Within the tolerance limit.
	Copper	10.3	Exceeds the tolerance limit by 56.5%.
	Lead	11.1	Within the tolerance limit.
	Nickel	7	Within the tolerance limit.
	Potassium	972	Within the tolerance limit.
	Vanadium	16.3	Within the tolerance limit.
	Zinc	81.3	Exceeds the tolerance limit by 320.4%.
RFI1001v3.0	Arsenic	nd	Within the tolerance limit.
	Barium	107	Within the tolerance limit.
	Beryllium	1	Within the tolerance limit.
	Chromium	6.1	Within the tolerance limit.
	Cobalt	3.6	Within the tolerance limit.
	Copper	5.9	Within the tolerance limit.
	Lead	5.5	Within the tolerance limit.
	Nickel	6.7	Within the tolerance limit.
	Potassium	1310	Within the tolerance limit.
	Vanadium	14	Within the tolerance limit.
	Zinc	14.7	Within the tolerance limit.
RFI1001d3.0	Arsenic	nd	Within the tolerance limit.
	Barium	105	Within the tolerance limit.
	Beryllium	1.1	Exceeds the tolerance limit by 10.0%.
	Chromium	7.8	Within the tolerance limit.
	Cobalt	4.6	Within the tolerance limit.
	Copper	7.1	Exceeds the tolerance limit by 7.9%.
	Lead	6.3	Within the tolerance limit.
	Nickel	9.1	Within the tolerance limit.
	Potassium	1660	Within the tolerance limit.
	Vanadium	16.3	Within the tolerance limit.
	Zinc	17.7	Within the tolerance limit.
RFI1002v0.0	Arsenic	.52	Within the tolerance limit.
	Barium	188	Within the tolerance limit.
	Beryllium	1	Within the tolerance limit.
	Chromium	7	Within the tolerance limit.
	Cobalt	4.3	Within the tolerance limit.
	Copper	6.4	Within the tolerance limit.
	Lead	13.8	Within the tolerance limit.
	Nickel	6.4	Within the tolerance limit.
	Potassium	806	Within the tolerance limit.
	Vanadium	15.4	Within the tolerance limit.
	Zinc	13.4	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI1002v3.0	Arsenic	.79	Within the tolerance limit.
	Barium	231	Within the tolerance limit.
	Beryllium	.9	Within the tolerance limit.
	Chromium	117	Exceeds the tolerance limit by 1301.0%.
	Cobalt	4.4	Within the tolerance limit.
	Copper	16.5	Exceeds the tolerance limit by 150.7%.
	Lead	19.3	Exceeds the tolerance limit by 5.8%.
	Nickel	9.2	Within the tolerance limit.
	Potassium	1310	Within the tolerance limit.
	Vanadium	18.2	Within the tolerance limit.
	Zinc	228	Exceeds the tolerance limit by 1078.9%.
RFI1002v6.0	Arsenic	.58	Within the tolerance limit.
	Barium	332	Within the tolerance limit.
	Beryllium	.9	Within the tolerance limit.
	Chromium	6.7	Within the tolerance limit.
	Cobalt	3.9	Within the tolerance limit.
	Copper	5.2	Within the tolerance limit.
	Lead	13.5	Within the tolerance limit.
	Nickel	6.5	Within the tolerance limit.
	Potassium	841	Within the tolerance limit.
	Vanadium	18.3	Exceeds the tolerance limit by 3.2%.
	Zinc	11.2	Within the tolerance limit.
RFI1002v9.0	Arsenic	nd	Within the tolerance limit.
	Barium	201	Within the tolerance limit.
	Beryllium	1.4	Within the tolerance limit.
	Chromium	8	Within the tolerance limit.
	Cobalt	6	Exceeds the tolerance limit by 19.8%.
	Copper	7.7	Exceeds the tolerance limit by 8.9%.
	Lead	14.9	Within the tolerance limit.
	Nickel	9.5	Within the tolerance limit.
	Potassium	1380	Within the tolerance limit.
	Vanadium	16.5	Within the tolerance limit.
	Zinc	15.2	Within the tolerance limit.
RFI1002v12.5	Arsenic	nd	Within the tolerance limit.
	Barium	171	Within the tolerance limit.
	Beryllium	.87	Within the tolerance limit.
	Chromium	6.4	Within the tolerance limit.
	Cobalt	5.4	Exceeds the tolerance limit by 7.9%.
	Copper	7.7	Exceeds the tolerance limit by 8.9%.
	Lead	11.9	Within the tolerance limit.
	Nickel	8.5	Within the tolerance limit.
	Potassium	1410	Within the tolerance limit.
	Vanadium	18	Exceeds the tolerance limit by 1.5%.
	Zinc	15	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI1002d12.5	Arsenic	nd	Within the tolerance limit.
	Barium	124	Within the tolerance limit.
	Beryllium	1.1	Within the tolerance limit.
	Chromium	6.1	Within the tolerance limit.
	Cobalt	3.9	Within the tolerance limit.
	Copper	7.8	Exceeds the tolerance limit by 10.3%.
	Lead	16	Exceeds the tolerance limit by 5.5%.
	Nickel	6.9	Within the tolerance limit.
	Potassium	1010	Within the tolerance limit.
	Vanadium	14	Within the tolerance limit.
	Zinc	12.4	Within the tolerance limit.
RFI1003v0.0	Arsenic	.65	Within the tolerance limit.
	Barium	317	Within the tolerance limit.
	Beryllium	.96	Within the tolerance limit.
	Chromium	9.5	Exceeds the tolerance limit by 13.8%.
	Cobalt	2.6	Within the tolerance limit.
	Copper	7.4	Exceeds the tolerance limit by 12.4%.
	Lead	8.4	Within the tolerance limit.
	Nickel	6.5	Within the tolerance limit.
	Potassium	1020	Within the tolerance limit.
	Vanadium	15.7	Within the tolerance limit.
	Zinc	16.4	Within the tolerance limit.
RFI1003v3.0	Arsenic	.9	Within the tolerance limit.
	Barium	292	Within the tolerance limit.
	Beryllium	.65	Within the tolerance limit.
	Chromium	6.1	Within the tolerance limit.
	Cobalt	2	Within the tolerance limit.
	Copper	4.3	Within the tolerance limit.
	Lead	5.5	Within the tolerance limit.
	Nickel	5.4	Within the tolerance limit.
	Potassium	856	Within the tolerance limit.
	Vanadium	15.2	Within the tolerance limit.
	Zinc	12.9	Within the tolerance limit.
RFI1003v6.0	Arsenic	.58	Within the tolerance limit.
	Barium	178	Within the tolerance limit.
	Beryllium	1	Within the tolerance limit.
	Chromium	6.5	Within the tolerance limit.
	Cobalt	2.8	Within the tolerance limit.
	Copper	6.1	Within the tolerance limit.
	Lead	6.5	Within the tolerance limit.
	Nickel	6.5	Within the tolerance limit.
	Potassium	1070	Within the tolerance limit.
	Vanadium	12.9	Within the tolerance limit.
	Zinc	13	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI1003v9.0	Arsenic	.52	Within the tolerance limit.
	Barium	152	Within the tolerance limit.
	Beryllium	1	Within the tolerance limit.
	Chromium	5.9	Within the tolerance limit.
	Cobalt	3.4	Within the tolerance limit.
	Copper	5.6	Within the tolerance limit.
	Lead	8.1	Within the tolerance limit.
	Nickel	6.8	Within the tolerance limit.
	Potassium	1340	Within the tolerance limit.
	Vanadium	14.3	Within the tolerance limit.
	Zinc	13.9	Within the tolerance limit.
RFI1003v12.5	Arsenic	nd	Within the tolerance limit.
	Barium	392	Exceeds the tolerance limit by 1.8%.
	Beryllium	1.1	Within the tolerance limit.
	Chromium	7.5	Within the tolerance limit.
	Cobalt	3.2	Within the tolerance limit.
	Copper	7	Within the tolerance limit.
	Lead	7.8	Within the tolerance limit.
	Nickel	8.5	Within the tolerance limit.
	Potassium	1410	Within the tolerance limit.
	Vanadium	17.5	Within the tolerance limit.
	Zinc	16.1	Within the tolerance limit.
RFI1004v0.0	Arsenic	.6	Within the tolerance limit.
	Barium	280	Within the tolerance limit.
	Beryllium	.93	Within the tolerance limit.
	Chromium	5.6	Within the tolerance limit.
	Cobalt	2.8	Within the tolerance limit.
	Copper	5.7	Within the tolerance limit.
	Lead	8.2	Within the tolerance limit.
	Nickel	6.1	Within the tolerance limit.
	Potassium	853	Within the tolerance limit.
	Vanadium	15.5	Within the tolerance limit.
	Zinc	14	Within the tolerance limit.
RFI1004v3.0	Arsenic	.64	Within the tolerance limit.
	Barium	195	Within the tolerance limit.
	Beryllium	.79	Within the tolerance limit.
	Chromium	11.6	Exceeds the tolerance limit by 38.9%.
	Cobalt	2.2	Within the tolerance limit.
	Copper	4.1	Within the tolerance limit.
	Lead	7	Within the tolerance limit.
	Nickel	5.3	Within the tolerance limit.
	Potassium	783	Within the tolerance limit.
	Vanadium	14.4	Within the tolerance limit.
	Zinc	15.2	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI1004v6.0	Arsenic	2.4	Within the tolerance limit.
	Barium	422	Exceeds the tolerance limit by 9.6%.
	Beryllium	.8	Within the tolerance limit.
	Chromium	398	Exceeds the tolerance limit by 4857.1%.
	Cobalt	4.8	Within the tolerance limit.
	Copper	29	Exceeds the tolerance limit by 310.0%.
	Lead	50	Exceeds the tolerance limit by 229.7%.
	Nickel	9	Within the tolerance limit.
	Potassium	2320	Exceeds the tolerance limit by 10.9%.
	Vanadium	18.6	Exceeds the tolerance limit by 4.9%.
	Zinc	81.2	Exceeds the tolerance limit by 385.3%.
RFI1004v9.0	Arsenic	.56	Within the tolerance limit.
	Barium	213	Within the tolerance limit.
	Beryllium	1	Within the tolerance limit.
	Chromium	21.7	Exceeds the tolerance limit by 170.3%.
	Cobalt	3.8	Within the tolerance limit.
	Copper	6.2	Within the tolerance limit.
	Lead	12.5	Within the tolerance limit.
	Nickel	7.9	Within the tolerance limit.
	Potassium	1200	Within the tolerance limit.
	Vanadium	13.9	Within the tolerance limit.
	Zinc	12.5	Within the tolerance limit.
RFI1004v12.5	Arsenic	nd	Within the tolerance limit.
	Barium	164	Within the tolerance limit.
	Beryllium	1.1	Within the tolerance limit.
	Chromium	7.2	Within the tolerance limit.
	Cobalt	4.4	Within the tolerance limit.
	Copper	6.9	Within the tolerance limit.
	Lead	13.3	Within the tolerance limit.
	Nickel	8	Within the tolerance limit.
	Potassium	1210	Within the tolerance limit.
	Vanadium	13.7	Within the tolerance limit.
	Zinc	12.5	Within the tolerance limit.
RFI1005v0.0	Arsenic	nd	Within the tolerance limit.
	Barium	315	Within the tolerance limit.
	Beryllium	.88	Within the tolerance limit.
	Chromium	6.8	Within the tolerance limit.
	Cobalt	4	Within the tolerance limit.
	Copper	9.2	Exceeds the tolerance limit by 39.8%.
	Lead	13.2	Within the tolerance limit.
	Nickel	5.8	Within the tolerance limit.
	Potassium	850	Within the tolerance limit.
	Vanadium	14.5	Within the tolerance limit.
	Zinc	11.8	Within the tolerance limit.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI1005v3.0	Arsenic	.52	Within the tolerance limit.
	Barium	321	Within the tolerance limit.
	Beryllium	.85	Within the tolerance limit.
	Chromium	6.3	Within the tolerance limit.
	Cobalt	4.4	Within the tolerance limit.
	Copper	4.6	Within the tolerance limit.
	Lead	11.8	Within the tolerance limit.
	Nickel	6.8	Within the tolerance limit.
	Potassium	834	Within the tolerance limit.
	Vanadium	14.1	Within the tolerance limit.
	Zinc	13.1	Within the tolerance limit.
RFI1005d3.0	Arsenic	.61	Within the tolerance limit.
	Barium	251	Within the tolerance limit.
	Beryllium	.68	Within the tolerance limit.
	Chromium	5.8	Within the tolerance limit.
	Cobalt	2.8	Within the tolerance limit.
	Copper	9.1	Exceeds the tolerance limit by 38.3%.
	Lead	11.1	Within the tolerance limit.
	Nickel	4.2	Within the tolerance limit.
	Potassium	531	Within the tolerance limit.
	Vanadium	13.3	Within the tolerance limit.
	Zinc	8.2	Within the tolerance limit.
RFI1005v6.0	Arsenic	27.9	Exceeds the tolerance limit by 128.1%.
	Barium	700	Exceeds the tolerance limit by 81.8%.
	Beryllium	.76	Within the tolerance limit.
	Chromium	4020	Exceeds the tolerance limit by 49969.3%
	Cobalt	8.4	Exceeds the tolerance limit by 67.8%.
	Copper	215	Exceeds the tolerance limit by 2940.0%.
	Lead	337	Exceeds the tolerance limit by 2122.3%.
	Nickel	19.2	Exceeds the tolerance limit by 62.8%.
	Potassium	3920	Exceeds the tolerance limit by 87.4%.
	Vanadium	24.2	Exceeds the tolerance limit by 36.4%.
	Zinc	538	Exceeds the tolerance limit by 3115.2%.
RFI1005v9.0	Arsenic	.58	Within the tolerance limit.
	Barium	48.7	Within the tolerance limit.
	Beryllium	1.4	Within the tolerance limit.
	Chromium	11.6	Exceeds the tolerance limit by 44.5%.
	Cobalt	5.7	Exceeds the tolerance limit by 13.8%.
	Copper	11.8	Exceeds the tolerance limit by 66.8%.
	Lead	16.1	Exceeds the tolerance limit by 6.2%.
	Nickel	11.3	Within the tolerance limit.
	Potassium	1450	Within the tolerance limit.
	Vanadium	18.7	Exceeds the tolerance limit by 5.4%.
	Zinc	17.9	Exceeds the tolerance limit by 7.0%.

RFI REPORT
COMPLIANCE DATA

GIANT REFINING COMPANY

RFI#	METAL	SAMPLE DATA	NOTE
RFI1005v12.5	Arsenic	nd	Within the tolerance limit.
	Barium	187	Within the tolerance limit.
	Beryllium	1.2	Within the tolerance limit.
	Chromium	8.9	Exceeds the tolerance limit by 10.9%.
	Cobalt	5.1	Exceeds the tolerance limit by 1.9%.
	Copper	7.2	Exceeds the tolerance limit by 1.8%.
	Lead	14.2	Within the tolerance limit.
	Nickel	9.3	Within the tolerance limit.
	Potassium	1250	Within the tolerance limit.
	Vanadium	16.2	Within the tolerance limit.
	Zinc	14.3	Within the tolerance limit.
RFI1005d12.5	Arsenic	nd	Within the tolerance limit.
	Barium	124	Within the tolerance limit.
	Beryllium	1.1	Within the tolerance limit.
	Chromium	6.1	Within the tolerance limit.
	Cobalt	3.9	Within the tolerance limit.
	Copper	7.8	Exceeds the tolerance limit by 10.3%.
	Lead	16	Exceeds the tolerance limit by 5.5%.
	Nickel	6.9	Within the tolerance limit.
	Potassium	1010	Within the tolerance limit.
	Vanadium	14	Within the tolerance limit.
	Zinc	12.4	Within the tolerance limit.

Section 8.0

Tabulated Analytical Summary for Soil Samples

An explanation of the sample number designation method on the computer printouts is as follows:

1	2	3
RFI	06	- Tank Farm

Sample Point #	01	[4]
Depth of Sample	A.3.5	[5+6]

#1=Sampling event
#2=SWMU number
#3=SWMU title
#4=specific sample bore number in each SWMU
#5=Type sample
- V=Verticle
- A=Angle
- D=Duplicate
- E=Equipment rinse

#6=Beginning depth of sample interval

RFI06 - Tank Farm

Sample point #		01	01	01	02	02	02	03	03	03
Depth of sample		A0.0	A3.5	A7.0	V0.0	V3.5	V7.0	A0.0	A3.5	A7.0
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result
Benzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	1500	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	2100	ND	ND	ND	ND	ND	ND
Xylenes (total)	ug/kg	ND	640	25000	ND	ND	ND	ND	ND	ND
Lead	mg/kg	14.9	16.6	13.0	ND	9.5	ND	27.7	6.5	ND
Nickel	mg/kg	5.3	6.6	ND	ND	4.6	ND	ND	ND	ND

Sample point #		04	04	04	05	05	05	06	06	06
Depth of sample		V0.0	V3.5	V7.0	A0.0	A3.5	A7.0	V0.0	V3.5	V7.0
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result
Benzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	750	ND	11000	ND	150	1200	4600
Ethylbenzene	ug/kg	ND	ND	ND	ND	10000	ND	ND	ND	6500
Xylenes (total)	ug/kg	ND	ND	1700	ND	98000	260	220	6400	43000
Lead	mg/kg	ND	ND	ND	138	ND	ND	28.5	ND	7.0
Nickel	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND

Sample point #		07	07	07	08	08	08	09	09	09
Depth of sample		A0.0	A3.5	A7.0	V0.0	V3.5	V7.0	A0.0	A3.5	A7.0
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result
Benzene	ug/kg	ND	ND	ND	ND	ND	1000	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	ND	ND	3000	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	ND	ND	ND	2300	ND	ND	ND
Xylenes (total)	ug/kg	ND	ND	ND	ND	ND	45000	ND	ND	ND
Lead	mg/kg	ND	ND	7.0	23.1	5.3	14.2	10.6	8.0	8.3
Nickel	mg/kg	ND	ND	6.0	ND	ND	9.7	4.5	6.3	4.3

RFI06 - Tank Farm

Sample point #		10	10	10	11	11	11	12	12	12
Depth of sample		V0.0	V3.5	V7.0	A0.0	A3.5	A7.0	V0.0	V3.5	V7.0
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result
Benzene	ug/kg	ND	ND	ND	ND	ND	7400	ND	17000	ND
Toluene	ug/kg	ND	600	1600	ND	73000	84000	1700	500000	46000
Ethylbenzene	ug/kg	ND	83	360	ND	16000	17000	280	150000	14000
Xylenes (total)	ug/kg	ND	2000	2700	ND	180000	140000	2900	1000000	100000
Lead	mg/kg	129	ND	10.3	44.6	21.4	23.9	736	11.0	9.4
Nickel	mg/kg	15.2	ND	5.4	ND	6.2	5.5	41.3	4.4	ND

Sample point #		13	13	13	13	14	14	14	15	15	15
Depth of sample		A0.0	D0.0	A3.5	A7.0	V0.0	V3.5	V7.0	A0.0	A3.5	A7.0
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Benzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	ND	1000	ND	75000	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	ND	ND	ND	ND	55000	ND	ND	ND
Xylenes (total)	ug/kg	ND	ND	ND	ND	580	28000	330000	ND	ND	ND
Lead	mg/kg	ND	ND	ND	5.2	57.4	9.0	12.0	17.0	6.7	ND
Nickel	mg/kg	ND	ND	ND	ND	10.3	5.0	7.3	ND	6.1	ND

Sample point #		16	16	16	17	17	17	18	18	18
Depth of sample		V0.0	V3.5	V7.0	A0.0	A3.5	A7.0	V0.0	V3.5	V7.0
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result
Benzene	ug/kg	ND	800	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/kg	260	2700	1500	ND	ND	ND	ND	ND	650
Ethylbenzene	ug/kg	ND	5800	2400	ND	ND	ND	ND	3600	2000
Xylenes (total)	ug/kg	210	32000	20000	ND	ND	ND	ND	110000	24000
Lead	mg/kg	238	301	55.3	ND	ND	ND	14.8	12.3	21.2
Nickel	mg/kg	32.9	58.2	6.5	ND	ND	ND	7.1	ND	ND

RFI0% - Tank Farm

Sample point #		19	19	19	20	20	20	TRIP	TRIP
Depth of sample		A0.0	A3.5	A7.0	V0.0	V3.5	V7.0	BLANK	BLANK
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result
Benzene	ug/kg	ND	ND	160	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	ND	4500	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	73	ND	5100	ND	ND	ND
Xylenes (total)	ug/kg	180000	ND	190	ND	95000	10000	ND	ND
Lead	mg/kg	19.1	ND	8.0	21.6	9.9	7.8		
Nickel	mg/kg	9.6	ND	7.1	49.9	4.9	6.8		

RFI08 - Railroad Rack Lagoon

Sample point number		01	01	01	02	02	02	02
Depth of sample		A05.0	A08.0	A10.5	A05.0	D05.0	A08.0	A10.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result
Method 8240								
Benzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/kg	ND	ND	ND	ND	ND	ND	ND
EDB (1,2-Dibromoethane)	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ug/kg	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	570	ND	ND	ND	ND	ND	590
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/kg	5200	ND	ND	ND	ND	500	ND
Method 8270								
Anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
Chrysene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Indene	ug/kg	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	ug/kg	19000	ND	ND	ND	ND	ND	ND
Naphthalene	ug/kg	7400	ND	ND	ND	ND	ND	ND
Phenanthrene	ug/kg	17000	ND	ND	ND	ND	ND	ND
Pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Pyridine	ug/kg	ND	ND	ND	ND	ND	ND	ND
Quinoline	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzenethiol	ug/kg	ND	ND	ND	ND	ND	ND	ND

RFI02 - Railroad Rack Lagoon

Sample point number		01	01	01	02	02	02	02
Depth of sample		A05.0	A08.0	A10.5	A05.0	D05.0	A08.0	A10.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result
Method 8270 (con't)								
Dibenz(a,h)acridine	ug/kg	ND	ND	ND	ND	ND	ND	ND
o-Cresol	ug/kg	ND	ND	ND	ND	ND	ND	ND
m & p-Cresol(s)	ug/kg	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
Phenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
Total Metals								
Antimony	mg/kg	ND	ND	ND	ND	ND	ND	ND
Arsenic	mg/kg	ND	ND	ND	ND	ND	ND	ND
Barium	mg/kg	275	432	309	232	259	330	276
Beryllium	mg/kg	0.97	1.1	1.1	1.1	1.1	1.1	1.2
Cadmium	mg/kg	ND	ND	ND	ND	ND	ND	ND
Chromium	mg/kg	7.9	10.9	6.2	7.5	8.7	9.5	8.4
Cobalt	mg/kg	2.7	2.5	2.2	3.4	3.5	3.0	3.3
Copper	mg/kg	4.5	5.9	7.0	5.7	5.3	5.8	6.7
Lead	mg/kg	7.1	7.2	8.6	11.7	10.8	6.9	8.5
Mercury	mg/kg	ND	ND	ND	ND	ND	ND	ND
Nickel	mg/kg	8.5	10.1	7.3	8.8	9.7	9.2	9.3
Potassium	mg/kg	1440	2430	960	1400	1610	2390	1350
Selenium	mg/kg	ND	ND	ND	ND	ND	ND	ND
Vanadium	mg/kg	13.9	16.9	13.5	15.0	15.9	17.1	15.8
Zinc	mg/kg	12.6	16.4	11.2	13.1	14.5	16.9	13.9

RFI08 - Railroad Rack Lagoon

Sample point number		03	03	03	04	04	04	05	05	05
Depth of sample		A05.0	A08.0	A10.5	V05.0	V08.0	V10.5	V05.0	V08.0	V10.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result
Method 8240										
Benzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
EDB (1,2-Dibromoethane)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	ND	ND	590	ND	ND	ND	ND
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/kg	6500	ND	ND	ND	4800	ND	ND	ND	ND
Method 8270										
Anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	ug/kg	18000	ND	ND	ND	37000	ND	ND	ND	ND
Naphthalene	ug/kg	5600	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ug/kg	14000	ND	ND	ND	27000	ND	ND	ND	ND
Pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyridine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Quinoline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzenethiol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND

RFI08 - Railroad Rack Lagoon

Sample point number		03	03	03	04	04	04	05	05	05
Depth of sample		A05.0	A08.0	A10.5	V05.0	V08.0	V10.5	V05.0	V08.0	V10.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result
Method 8270 (con't)										
Dibenz(a,h)acridine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Cresol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
m & p-Cresol(s)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Metals										
Antimony	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	mg/kg	223	242	277	291	276	216	302	300	226
Beryllium	mg/kg	0.90	1.2	0.67	0.95	0.95	1.1	0.93	1.1	0.61
Cadmium	mg/kg	ND	ND	ND	ND	ND	ND	0.70	ND	ND
Chromium	mg/kg	5.6	10.4	4.3	6.4	6.7	5.9	6.2	8.3	3.8
Cobalt	mg/kg	2.2	3.6	1.5	2.0	2.5	2.6	2.1	3.1	1.5
Copper	mg/kg	5.1	8.9	3.6	4.8	4.6	5.5	4.7	5.7	3.8
Lead	mg/kg	12.5	5.4	5.6	13.3	9.6	9.5	9.3	10.1	6.1
Mercury	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	mg/kg	6.7	9.7	4.7	7.6	7.5	6.8	6.6	9.1	4.3
Potassium	mg/kg	1320	2820	565	990	1030	1500	1060	2110	610
Selenium	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	mg/kg	14.0	17.6	13.1	15.0	15.5	15.8	14.8	16.9	11.5
Zinc	mg/kg	11.4	17.3	8.3	11.1	10.9	11.4	10.5	15.0	7.5

RFI08 - Railroad Rack Lagoon

Sample point number		06	06	06	07	07	07	08	08	08
Depth of sample		V05.0	V08.0	V10.5	V0.5	V2.5	V4.5	V0.5	V2.5	V4.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result
Method 8240										
Benzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
EDB (1,2-Dibromoethane)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Method 8270										
Anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	ug/kg	ND	ND	ND	ND	25000	ND	ND	35000	ND
Naphthalene	ug/kg	ND	ND	ND	ND	14000	ND	ND	20000	ND
Phenanthrene	ug/kg	ND	ND	ND	ND	11000	ND	ND	18000	ND
Pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyridine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Quinoline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzenethiol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND

RFI08 - Railroad Rack Lagoon

Sample point number		06	06	06	07	07	07	08	08	08
Depth of sample		V05.0	V08.0	V10.5	V0.5	V2.5	V4.5	V0.5	V2.5	V4.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result
Method 8270 (con't)										
Dibenz(a,h)acridine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Cresol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
m & p-Cresol(s)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Metals										
Antimony	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	mg/kg	264	281	203	258	257	604	206	246	210
Beryllium	mg/kg	0.77	0.99	1.2	1.0	0.98	3.0	0.83	0.91	0.62
Cadmium	mg/kg	ND	ND	ND	ND	ND	0.99	ND	ND	ND
Chromium	mg/kg	5.1	7.3	7.0	7.2	7.2	18.0	6.6	6.5	4.5
Cobalt	mg/kg	1.6	2.7	3.5	3.1	2.9	7.8	3.1	2.5	1.5
Copper	mg/kg	4.1	5.1	6.3	5.7	5.0	13.6	4.7	5.1	3.3
Lead	mg/kg	7.6	8.9	10.8	11.5	9.9	27.6	12.6	8.6	8.6
Mercury	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	mg/kg	5.7	8.5	9.3	9.3	8.3	20.9	8.0	7.4	4.7
Potassium	mg/kg	1140	1930	1290	1370	1190	3210	1470	1060	704
Selenium	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	mg/kg	13.2	15.0	13.8	14.7	15.0	41.1	13.2	14.1	12.0
Zinc	mg/kg	10.0	13.5	13.2	14.8	12.5	30.3	15.7	11.7	7.9

RFI08 - Railroad Rack Lagoon

Sample point number		09	09	09	10	10	10
Depth of sample		0-0.5	2-2.5	4-4.5	0-0.5	2-2.5	4-4.5
Parameter	Units	Result	Result	Result	Result	Result	Result
Method 8240							
Benzene	ug/kg	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND
Chloroform	ug/kg	ND	ND	ND	ND	ND	ND
EDB (1,2-Dibromoethane)	ug/kg	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ug/kg	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ND	ND
Styrene	ug/kg	ND	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/kg	ND	ND	ND	ND	ND	ND
Method 8270							
Anthracene	ug/kg	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/kg	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND
Chrysene	ug/kg	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND
Fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND
Indene	ug/kg	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	ug/kg	ND	57000	ND	ND	ND	ND
Naphthalene	ug/kg	ND	24000	6700	ND	ND	ND
Phenanthrene	ug/kg	ND	25000	ND	ND	ND	ND
Pyrene	ug/kg	ND	ND	ND	ND	ND	ND
Pyridine	ug/kg	ND	ND	ND	ND	ND	ND
Quinoline	ug/kg	ND	ND	ND	ND	ND	ND
Benzenethiol	ug/kg	ND	ND	ND	ND	ND	ND

RFI08 - Railroad Rack Lagoon

Sample point number		09	09	09	10	10	10
Depth of sample		V0.5	V2.5	V4.5	V0.5	V2.5	V4.5
Parameter	Units	Result	Result	Result	Result	Result	Result
Method 8270 (con't)							
Dibenz(a,h)acridine	ug/kg	ND	ND	ND	ND	ND	ND
o-Cresol	ug/kg	ND	ND	ND	ND	ND	ND
m & p-Cresol(s)	ug/kg	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ug/kg	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ND	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND
Phenol	ug/kg	ND	ND	ND	ND	ND	ND
Total Metals							
Antimony	mg/kg	ND	ND	ND	ND	ND	ND
Arsenic	mg/kg	ND	ND	ND	0.51	ND	ND
Barium	mg/kg	293	242	197	277	280	266
Beryllium	mg/kg	1.0	0.83	0.86	1.1	1.1	1.0
Cadmium	mg/kg	ND	ND	ND	ND	ND	ND
Chromium	mg/kg	8.5	5.7	4.7	5.5	5.6	3.8
Cobalt	mg/kg	2.6	2.5	2.2	2.1	2.3	1.4
Copper	mg/kg	5.7	4.2	4.8	5.4	6.0	5.2
Lead	mg/kg	11.7	8.2	8.5	10.1	10.2	7.7
Mercury	mg/kg	ND	ND	ND	ND	ND	ND
Nickel	mg/kg	8.4	7.0	3.3	7.1	7.8	4.7
Potassium	mg/kg	1580	1050	951	980	1000	937
Selenium	mg/kg	ND	ND	ND	ND	ND	ND
Vanadium	mg/kg	16.2	13.3	12.8	11.9	11.7	10.0
Zinc	mg/kg	17.2	11.0	8.9	9.8	12.0	8.5

RFI08 - Railroad Rack Lagoon

Sample point number		11	11	11	11	12	12	12
Depth of sample		V0.5	D0.5	V2.5	V4.5	V0.5	V2.5	V4.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result
Method 8240								
Benzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/kg	ND	ND	ND	ND	ND	ND	ND
EDB (1,2-Dibromoethane)	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ug/kg	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/kg	ND	ND	ND	ND	ND	ND	ND
Method 8270								
Anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
Chrysene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Indene	ug/kg	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	ug/kg	ND	ND	ND	71000	ND	ND	ND
Naphthalene	ug/kg	ND	ND	ND	27000	ND	ND	ND
Phenanthrene	ug/kg	ND	ND	ND	33000	ND	ND	ND
Pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Pyridine	ug/kg	ND	ND	ND	ND	ND	ND	ND
Quinoline	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzenethiol	ug/kg	ND	ND	ND	ND	ND	ND	ND

RFI08 - Railroad Rack Lagoon

Sample point number		11	11	11	11	12	12	12
Depth of sample		V0.5	D0.5	V2.5	V4.5	V0.5	V2.5	V4.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result
Method 8270 (con't)								
Dibenz(a,h)acridine	ug/kg	ND	ND	ND	ND	ND	ND	ND
o-Cresol	ug/kg	ND	ND	ND	ND	ND	ND	ND
m & p-Cresol(s)	ug/kg	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
Phenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
Total Metals								
Antimony	mg/kg	ND	ND	ND	ND	ND	ND	ND
Arsenic	mg/kg	0.57	ND	ND	ND	0.58	ND	ND
Barium	mg/kg	262	176	206	213	244	159	279
Beryllium	mg/kg	1.2	0.85	1.1	0.75	0.85	0.82	0.92
Cadmium	mg/kg	ND	ND	ND	ND	ND	ND	ND
Chromium	mg/kg	5.8	4.8	7.1	3.9	6.1	4.5	3.9
Cobalt	mg/kg	2.5	2.0	2.9	1.4	1.9	1.9	1.4
Copper	mg/kg	6.5	4.4	5.1	3.5	4.0	4.4	4.5
Lead	mg/kg	9.5	6.4	7.8	7.0	15.6	7.8	7.6
Mercury	mg/kg	ND	ND	ND	ND	ND	ND	ND
Nickel	mg/kg	7.7	5.8	8.2	4.4	5.9	5.1	5.2
Potassium	mg/kg	1550	831	1310	551	747	728	620
Selenium	mg/kg	ND	ND	ND	ND	ND	ND	ND
Vanadium	mg/kg	12.8	10.0	13.1	10.0	12.5	8.9	9.9
Zinc	mg/kg	13.2	9.5	12.6	7.0	9.5	7.4	7.8

RFI08 - Railroad Rack Lagoon

Sample point number		13	13	13	13		07	TRIP
Depth of sample		V0.5	V2.5	V4.5	D4.5		E2.5	BLANK
Parameter	Units	Result	Result	Result	Result	Units	Result	Result
Method 8240								
Benzene	ug/kg	ND	ND	ND	ND	ug/L	ND	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ug/L	7.8	ND
Chlorobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND	ND
Chloroform	ug/kg	ND	ND	ND	ND	ug/L	ND	ND
EDB (1,2-Dibromoethane)	ug/kg	ND	ND	ND	ND	ug/L	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ug/L	ND	ND
1,4-Dioxane	ug/kg	ND	ND	ND	ND	ug/L	ND	ND
Ethylbenzene	ug/kg	ND	ND	ND	ND	ug/L	ND	ND
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ug/L	ND	ND
Styrene	ug/kg	ND	ND	ND	ND	ug/L	ND	ND
Toluene	ug/kg	ND	ND	950	ND	ug/L	ND	ND
Xylenes (Total)	ug/kg	ND	ND	1800	ND	ug/L	ND	ND
Method 8270								
Anthracene	ug/kg	ND	ND	ND	ND	ug/L	ND	
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ug/L	ND	
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ug/L	ND	
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ug/L	ND	
Benzo(a)pyrene	ug/kg	ND	ND	ND	ND	ug/L	ND	
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ug/L	ND	
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ug/L	ND	
Chrysene	ug/kg	ND	ND	ND	ND	ug/L	ND	
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ug/L	ND	
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ug/L	ND	
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND	
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND	
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND	
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ug/L	ND	
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ug/L	ND	
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ug/L	ND	
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ug/L	ND	
Fluoranthene	ug/kg	ND	ND	ND	ND	ug/L	ND	
Indene	ug/kg	ND	ND	ND	ND	ug/L	ND	
1-Methylnaphthalene	ug/kg	ND	ND	ND	ND	ug/L	ND	
Naphthalene	ug/kg	ND	ND	ND	ND	ug/L	ND	
Phenanthrene	ug/kg	ND	ND	ND	ND	ug/L	ND	
Pyrene	ug/kg	ND	ND	ND	ND	ug/L	ND	
Pyridine	ug/kg	ND	ND	ND	ND	ug/L	ND	
Quinoline	ug/kg	ND	ND	ND	ND	ug/L	ND	
Benzenethiol	ug/kg	ND	ND	ND	ND	ug/L	ND	

RFI08 - Railroad Rack Lagoon

Sample point number		13	13	13	13		07
Depth of sample		V0.5	V2.5	V4.5	D4.5		E2.5
Parameter	Units	Result	Result	Result	Result	Units	Result
Method 8270 (con't)							
Dibenz(a,h)acridine	ug/kg	ND	ND	ND	ND	ug/L	ND
o-Cresol	ug/kg	ND	ND	ND	ND	ug/L	ND
m & p-Cresol(s)	ug/kg	ND	ND	ND	ND	ug/L	ND
2,4-Dimethylphenol	ug/kg	ND	ND	ND	ND	ug/L	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ug/L	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ug/L	ND
Phenol	ug/kg	ND	ND	ND	ND	ug/L	ND
Total Metals							
Antimony	mg/kg	ND	ND	ND	ND	mg/L	ND
Arsenic	mg/kg	ND	ND	ND	ND	mg/L	ND
Barium	mg/kg	260	237	183	218	mg/L	ND
Beryllium	mg/kg	1.1	0.87	0.95	0.99	mg/L	ND
Cadmium	mg/kg	ND	ND	ND	ND	mg/L	0.0056
Chromium	mg/kg	6.8	5.7	5.1	5.9	mg/L	ND
Cobalt	mg/kg	2.7	2.1	2.2	2.2	mg/L	ND
Copper	mg/kg	5.3	4.2	4.9	5.0	mg/L	ND
Lead	mg/kg	11.5	8.0	7.6	7.1	mg/L	ND
Mercury	mg/kg	ND	ND	ND	ND	mg/L	ND
Nickel	mg/kg	8.0	6.2	5.7	6.3	mg/L	ND
Potassium	mg/kg	1040	793	1160	1080	mg/L	ND
Selenium	mg/kg	ND	ND	ND	ND	mg/L	ND
Vanadium	mg/kg	14.2	11.9	10.9	11.6	mg/L	ND
Zinc	mg/kg	12.3	9.5	9.3	9.8	mg/L	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		01	01	01	01	02	02	02	02
Depth of sample		V0.0	V3.0	V5.0	V7.0	V0.0	V3.0	V5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result
Method 8240									
Chloromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (cis/trans)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane,	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ug/kg	ND	16000	ND	24000	ND	23000	ND	ND
Iodomethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl methacrylate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		01	01	01	01	02	02	02	02
Depth of sample		V0.0	V3.0	V5.0	V7.0	V0.0	V3.0	V5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result
Method 8270									
Acenarthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Aminobiphenyl	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Aniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)-methane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl) ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroisopropyl)-ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
o-Cresol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
m & p-Cresol(s)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
3,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
p-Dimethylaminoazobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
a,a-Dimethylphenethyl-amine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dinitrobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-o-cresol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Diphenylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		01	01	01	01	02	02	02	02
Depth of sample		V0.0	V3.0	V5.0	V7.0	V0.0	V3.0	V5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result
Method 8270 (con't)									
Ethyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
3-Methylcholanthrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Methyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1-Naphthylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Naphthylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-n-butylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosopiperidine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Pentachloronitrobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Phenacetin	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Picoline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Pronamide	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetrachloro-benzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic acid	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		01	01	01	01	02	02	02	02
Depth of sample		V0.0	V2.0	V5.0	V7.0	V0.0	V3.0	V5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result
Total Metals									
Antimony	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	mg/kg	0.86	ND	ND	ND	ND	ND	ND	ND
Barium	mg/kg	316	330	332	309	302	318	237	262
Beryllium	mg/kg	0.95	0.89	1.1	1.2	1.3	1.2	1.2	0.59
Cadmium	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	mg/kg	13.9	4.9	5.4	5.4	11.8	6.3	7.2	2.3
Cobalt	mg/kg	3.2	2.9	3.8	4.0	5.8	3.7	4.4	2.0
Copper	mg/kg	7.4	3.6	5.3	5.7	9.1	5.6	5.7	ND
Lead	mg/kg	13.4	11.4	9.8	13.2	16.1	13.9	13.4	11.9
Mercury	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	mg/kg	6.3	5.2	5.7	6.7	11.4	6.9	8.2	ND
Potassium	mg/kg	1210	712	1400	963	2110	1220	1640	ND
Selenium	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	mg/kg	12.9	12.9	14.1	14.7	20.4	16.0	15.9	9.5
Zinc	mg/kg	19.7	6.9	9.3	9.2	18.4	12.0	12.3	5.7

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		03	03	03	03	04	04	04	04
Depth of sample		V0.0	V3.0	V5.0	V7.0	V0.0	V3.0	V5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result
Method 8240									
Chloromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (cis/trans)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ug/kg	ND	ND	ND	ND	ND	20000	22000	12000
Iodomethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl methacrylate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		03	03	03	03	04	04	04	04
Depth of sample		V0.0	V3.0	V5.0	V7.0	V0.0	V3.0	V5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result
Method 8270									
Acenapthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Aminobiphenyl	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Aniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)-methane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl) ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroisopropyl)-ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
o-Cresol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
m & p-Cresol(s)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
3,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
p-Dimethylaminoazobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
a,a-Dimethylphenethyl-amine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dinitrobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-o-cresol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Diphenylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		03	03	03	03	04	04	04	04
Depth of sample		V0.0	V3.0	V5.0	V7.0	V0.0	V3.0	V5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result
Method 8270 (con't)									
Ethyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
3-Methylcholanthrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Methyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1-Naphthylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Naphthylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-n-butylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosopiperidine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Pentachloronitrobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Phenacetin	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2-Picoline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Pronamide	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetrachloro-benzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic acid	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		03	03	03	03	04	04	04	04
Depth of sample		V0.0	V3.0	V5.0	V7.0	V0.0	V3.0	V5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result
Total Metals									
Antimony	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	mg/kg	ND	ND	ND	0.58	2.1	ND	ND	ND
Barium	mg/kg	214	307	334	224	406	275	309	239
Beryllium	mg/kg	0.73	1.0	1.2	1.1	0.91	1.3	1.1	1.4
Cadmium	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	mg/kg	4.9	6.1	7.6	7.6	42.3	6.7	5.2	8.1
Cobalt	mg/kg	1.6	2.1	3.4	3.2	4.4	4.1	3.4	4.8
Copper	mg/kg	4.5	4.8	8.6	5.8	13.9	6.5	5.2	7.2
Lead	mg/kg	6.0	8.0	9.9	7.3	29.7	13.8	12.4	16.4
Mercury	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	mg/kg	5.1	6.7	9.1	8.2	10.0	7.4	5.1	7.8
Potassium	mg/kg	991	955	1300	1860	1250	1130	983	1560
Selenium	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	mg/kg	10.1	13.1	15.1	14.9	16.4	16.4	12.8	18.1
Zinc	mg/kg	8.7	9.6	13.4	13.3	69.6	11.1	9.1	14.0

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		05	05	05	05	05
Depth of sample		V0.0	V3.0	V5.0	D5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result
Method 8240						
Chloromethane	ug/kg	ND	ND	ND	ND	ND
Bromomethane	ug/kg	ND	ND	ND	ND	ND
Vinyl chloride	ug/kg	ND	ND	ND	ND	ND
Chloroethane	ug/kg	ND	ND	ND	ND	ND
Methylene chloride	ug/kg	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/kg	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/kg	ND	ND	ND	ND	ND
1,2-Dichloroethene (cis/trans)	ug/kg	ND	ND	ND	ND	ND
Chloroform	ug/kg	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/kg	ND	ND	ND	ND	ND
Carbon tetrachloride	ug/kg	ND	ND	ND	ND	ND
Bromodichloromethane	ug/kg	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/kg	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND
Trichloroethene	ug/kg	ND	ND	ND	ND	ND
Dibromochloromethane	ug/kg	ND	ND	ND	ND	ND
1,1,2-Trichloroethene	ug/kg	ND	ND	ND	ND	ND
Benzene	ug/kg	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	ug/kg	ND	ND	ND	ND	ND
Bromoform	ug/kg	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND	ND	ND	ND
Tetrachloroethene	ug/kg	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	ND	ND
Chlorobenzene	ug/kg	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	ND	ND	ND
Acetone	ug/kg	ND	ND	ND	ND	ND
Acrolein	ug/kg	ND	ND	ND	ND	ND
Acrylonitrile	ug/kg	ND	ND	ND	ND	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ND
Dibromomethane	ug/kg	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ug/kg	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ug/kg	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/kg	ND	ND	ND	ND	ND
Ethanol	ug/kg	ND	ND	ND	ND	ND
Iodomethane	ug/kg	ND	ND	ND	ND	ND
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND	ND	ND	ND
Styrene	ug/kg	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/kg	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/kg	ND	ND	ND	ND	ND
Vinyl acetate	ug/kg	ND	ND	ND	ND	ND
Ethyl methacrylate	ug/kg	ND	ND	ND	ND	ND
Xylenes (total)	ug/kg	ND	ND	ND	ND	ND
2-Hexanone	ug/kg	ND	ND	ND	ND	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		05	05	05	05	05
Depth of sample		V0.0	V3.0	V5.0	D5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result
Method 8270						
Acenaphthene	ug/kg	ND	ND	ND	ND	ND
Acenaphthylene	ug/kg	ND	ND	ND	ND	ND
Acetophenone	ug/kg	ND	ND	ND	ND	ND
4-Aminobiphenyl	ug/kg	ND	ND	ND	ND	ND
Aniline	ug/kg	ND	ND	ND	ND	ND
Anthracene	ug/kg	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ug/kg	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/kg	ND	ND	ND	ND	ND
Benzyl alcohol	ug/kg	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)-methane	ug/kg	ND	ND	ND	ND	ND
bis(2-Chloroethyl) ether	ug/kg	ND	ND	ND	ND	ND
bis(2-Chloroisopropyl)-ether	ug/kg	ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ND
4-Chloroaniline	ug/kg	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	ug/kg	ND	ND	ND	ND	ND
2-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND
2-Chlorophenol	ug/kg	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND
o-Cresol	ug/kg	ND	ND	ND	ND	ND
m & p-Cresol(s)	ug/kg	ND	ND	ND	ND	ND
Chrysene	ug/kg	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
3,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND
2,6-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ND
p-Dimethylaminoazobenzene	ug/kg	ND	ND	ND	ND	ND
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ND
a,a-Dimethylphenethyl-amine	ug/kg	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ug/kg	ND	ND	ND	ND	ND
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ND
1,3-Dinitrobenzene	ug/kg	ND	ND	ND	ND	ND
4,6-Dinitro-o-cresol	ug/kg	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ND
Diphenylamine	ug/kg	ND	ND	ND	ND	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		05	05	05	05	05
Depth of sample		V0.0	V3.0	V5.0	D5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result
Method 8270 (con't)						
Ethyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND
Fluoranthene	ug/kg	ND	ND	ND	ND	ND
Fluorene	ug/kg	ND	ND	ND	ND	ND
Hexachlorobenzene	ug/kg	ND	ND	ND	ND	ND
Hexachlorobutadiene	ug/kg	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	ug/kg	ND	ND	ND	ND	ND
Hexachloroethane	ug/kg	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	ug/kg	ND	ND	ND	ND	ND
Isophorone	ug/kg	ND	ND	ND	ND	ND
3-Methylcholanthrene	ug/kg	ND	ND	ND	ND	ND
Methyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND
2-Methylnaphthalene	ug/kg	ND	ND	ND	ND	ND
Naphthalene	ug/kg	ND	ND	ND	ND	ND
1-Naphthylamine	ug/kg	ND	ND	ND	ND	ND
2-Naphthylamine	ug/kg	ND	ND	ND	ND	ND
2-Nitroaniline	ug/kg	ND	ND	ND	ND	ND
3-Nitroaniline	ug/kg	ND	ND	ND	ND	ND
4-Nitroaniline	ug/kg	ND	ND	ND	ND	ND
Nitrobenzene	ug/kg	ND	ND	ND	ND	ND
2-Nitrophenol	ug/kg	ND	ND	ND	ND	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ND
N-Nitroso-di-n-butylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitrosopiperidine	ug/kg	ND	ND	ND	ND	ND
Pentachlorobenzene	ug/kg	ND	ND	ND	ND	ND
Pentachloronitrobenzene	ug/kg	ND	ND	ND	ND	ND
Pentachlorophenol	ug/kg	ND	ND	ND	ND	ND
Phenacetin	ug/kg	ND	ND	ND	ND	ND
Phenanthrene	ug/kg	ND	ND	ND	ND	ND
Phenol	ug/kg	ND	ND	ND	ND	ND
2-Picoline	ug/kg	ND	ND	ND	ND	ND
Pronamide	ug/kg	ND	ND	ND	ND	ND
Pyrene	ug/kg	ND	ND	ND	ND	ND
1,2,4,5-Tetrachloro-benzene	ug/kg	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	ug/kg	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ug/kg	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND
Benzidine	ug/kg	ND	ND	ND	ND	ND
Benzoic acid	ug/kg	ND	ND	ND	ND	ND
1-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	ug/kg	ND	ND	ND	ND	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		05	05	05	05	05
Depth of sample		V0.0	V3.0	V5.0	D5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result
Total Metals						
Antimony	mg/kg	ND	ND	ND	ND	ND
Arsenic	mg/kg	ND	ND	ND	ND	ND
Barium	mg/kg	285	418	333	375	313
Beryllium	mg/kg	1.2	0.77	0.94	0.91	1.3
Cadmium	mg/kg	ND	ND	ND	ND	ND
Chromium	mg/kg	8.1	32.2	6.1	6.8	8.5
Cobalt	mg/kg	4.6	5.0	3.5	3.9	4.5
Copper	mg/kg	5.5	11.9	3.5	4.2	6.4
Lead	mg/kg	14.9	31.0	13.7	14.4	12.9
Mercury	mg/kg	ND	ND	ND	ND	ND
Nickel	mg/kg	9.1	8.7	5.5	6.9	9.2
Potassium	mg/kg	1160	1100	925	935	1590
Selenium	mg/kg	ND	ND	ND	ND	ND
Vanadium	mg/kg	17.9	16.9	15.5	16.4	18.5
Zinc	mg/kg	12.1	55.6	8.4	10.1	13.3

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		06	06	06	06	06
Depth of sample		V0.0	V3.0	D3.0	V5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result
Method 8240						
Chloromethane	ug/kg	ND	ND	ND	ND	ND
Bromomethane	ug/kg	ND	ND	ND	ND	ND
Vinyl chloride	ug/kg	ND	ND	ND	ND	ND
Chloroethane	ug/kg	ND	ND	ND	ND	ND
Methylene chloride	ug/kg	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/kg	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/kg	ND	ND	ND	ND	ND
1,2-Dichloroethene (cis/trans)	ug/kg	ND	ND	ND	ND	ND
Chloroform	ug/kg	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/kg	ND	ND	ND	ND	ND
Carbon tetrachloride	ug/kg	ND	ND	ND	ND	ND
Bromodichloromethane	ug/kg	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/kg	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND
Trichloroethene	ug/kg	ND	ND	ND	ND	ND
Dibromochloromethane	ug/kg	ND	ND	ND	ND	ND
1,1,2-Trichloroethene	ug/kg	ND	ND	ND	ND	ND
Benzene	ug/kg	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	ug/kg	ND	ND	ND	ND	ND
Bromoform	ug/kg	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND	ND	ND	ND
Tetrachloroethene	ug/kg	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	ND	ND
Chlorobenzene	ug/kg	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	ND	ND	ND
Acetone	ug/kg	ND	ND	ND	ND	ND
Acrolein	ug/kg	ND	ND	ND	ND	ND
Acrylonitrile	ug/kg	ND	ND	ND	ND	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ND
Dibromomethane	ug/kg	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ug/kg	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ug/kg	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/kg	ND	ND	ND	ND	ND
Ethanol	ug/kg	ND	ND	ND	ND	ND
Iodomethane	ug/kg	ND	ND	ND	ND	ND
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND	ND	ND	ND
Styrene	ug/kg	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/kg	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/kg	ND	ND	ND	ND	ND
Vinyl acetate	ug/kg	ND	ND	ND	ND	ND
Ethyl methacrylate	ug/kg	ND	ND	ND	ND	ND
Xylenes (total)	ug/kg	ND	ND	ND	ND	ND
2-Hexanone	ug/kg	ND	ND	ND	ND	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		06	06	06	06	06
Depth of sample		V0.0	V3.0	D3.0	V5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result
Method 8270						
Acenapthene	ug/kg	ND	ND	ND	ND	ND
Acenaphthylene	ug/kg	ND	ND	ND	ND	ND
Acetophenone	ug/kg	ND	ND	ND	ND	ND
4-Aminobiphenyl	ug/kg	ND	ND	ND	ND	ND
Aniline	ug/kg	ND	ND	ND	ND	ND
Anthracene	ug/kg	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ug/kg	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/kg	ND	ND	ND	ND	ND
Benzyl alcohol	ug/kg	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)-methane	ug/kg	ND	ND	ND	ND	ND
bis(2-Chloroethyl) ether	ug/kg	ND	ND	ND	ND	ND
bis(2-Chloroisopropyl)-ether	ug/kg	ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ND
4-Chloroaniline	ug/kg	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	ug/kg	ND	ND	ND	ND	ND
2-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND
2-Chlorophenol	ug/kg	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND
o-Cresol	ug/kg	ND	ND	ND	ND	ND
m & p-Cresol(s)	ug/kg	ND	ND	ND	ND	ND
Chrysene	ug/kg	26000	ND	ND	ND	ND
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
3,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND
2,6-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ND
p-Dimethylaminoazobenzene	ug/kg	ND	ND	ND	ND	ND
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ND
a,a-Dimethylphenethyl-amine	ug/kg	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ug/kg	ND	ND	ND	ND	ND
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ND
1,3-Dinitrobenzene	ug/kg	ND	ND	ND	ND	ND
4,6-Dinitro-o-cresol	ug/kg	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ND
Diphenylamine	ug/kg	ND	ND	ND	ND	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		06	06	06	06	06
Depth of sample		V0.0	V3.0	D3.0	V5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result
Method 8270 (con't)						
Ethyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND
Fluoranthene	ug/kg	ND	ND	ND	ND	ND
Fluorene	ug/kg	ND	ND	ND	ND	ND
Hexachlorobenzene	ug/kg	ND	ND	ND	ND	ND
Hexachlorobutadiene	ug/kg	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	ug/kg	ND	ND	ND	ND	ND
Hexachloroethane	ug/kg	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	ug/kg	ND	ND	ND	ND	ND
Isophorone	ug/kg	ND	ND	ND	ND	ND
3-Methylcholanthrene	ug/kg	ND	ND	ND	ND	ND
Methyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND
2-Methylnaphthalene	ug/kg	ND	ND	ND	ND	ND
Naphthalene	ug/kg	ND	ND	ND	ND	ND
1-Naphthylamine	ug/kg	ND	ND	ND	ND	ND
2-Naphthylamine	ug/kg	ND	ND	ND	ND	ND
2-Nitroaniline	ug/kg	ND	ND	ND	ND	ND
3-Nitroaniline	ug/kg	ND	ND	ND	ND	ND
4-Nitroaniline	ug/kg	ND	ND	ND	ND	ND
Nitrobenzene	ug/kg	ND	ND	ND	ND	ND
2-Nitrophenol	ug/kg	ND	ND	ND	ND	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ND
N-Nitroso-di-n-butylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitrosopiperidine	ug/kg	ND	ND	ND	ND	ND
Pentachlorobenzene	ug/kg	ND	ND	ND	ND	ND
Pentachloronitrobenzene	ug/kg	ND	ND	ND	ND	ND
Pentachlorophenol	ug/kg	ND	ND	ND	ND	ND
Phenacetin	ug/kg	ND	ND	ND	ND	ND
Phenanthrene	ug/kg	ND	ND	ND	ND	ND
Phenol	ug/kg	ND	ND	ND	ND	ND
2-Picoline	ug/kg	ND	ND	ND	ND	ND
Pronamide	ug/kg	ND	ND	ND	ND	ND
Pyrene	ug/kg	20000	ND	ND	ND	ND
1,2,4,5-Tetrachloro-benzene	ug/kg	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	ug/kg	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ug/kg	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND
Benzidine	ug/kg	ND	ND	ND	ND	ND
Benzoic acid	ug/kg	ND	ND	ND	ND	ND
1-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	ug/kg	ND	ND	ND	ND	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		06	06	06	06	06
Depth of sample		V0.0	V3.0	D3.0	V5.0	V7.0
Parameter	Units	Result	Result	Result	Result	Result
Total Metals						
Antimony	mg/kg	ND	ND	ND	ND	ND
Arsenic	mg/kg	1.7	1.2	ND	ND	0.53
Barium	mg/kg	299	243	225	241	319
Beryllium	mg/kg	0.79	1.1	1.1	0.97	0.97
Cadmium	mg/kg	ND	ND	ND	ND	ND
Chromium	mg/kg	7.8	6.3	6.3	5.1	4.1
Cobalt	mg/kg	2.3	2.6	2.6	1.9	1.7
Copper	mg/kg	14.3	5.4	5.4	4.5	4.9
Lead	mg/kg	28.1	9.2	9.1	7.5	9.1
Mercury	mg/kg	ND	ND	ND	ND	ND
Nickel	mg/kg	11.4	7.0	7.2	5.3	5.0
Potassium	mg/kg	989	1110	1120	997	928
Selenium	mg/kg	ND	ND	ND	ND	ND
Vanadium	mg/kg	14.5	14.5	14.2	12.6	13.0
Zinc	mg/kg	22.8	10.6	10.4	8.4	7.8

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		07	07	07	07		01
Depth of sample		V0.0	V3.0	V5.0	V7.0		E5.0
Parameter	Units	Result	Result	Result	Result	Units	Result
Method 8240							
Chloromethane	ug/kg	ND	ND	ND	ND	ug/L	ND
Bromomethane	ug/kg	ND	ND	ND	ND	ug/L	ND
Vinyl chloride	ug/kg	ND	ND	ND	ND	ug/L	ND
Chloroethane	ug/kg	ND	ND	ND	ND	ug/L	ND
Methylene chloride	ug/kg	ND	ND	ND	ND	ug/L	ND
1,1-Dichloroethene	ug/kg	ND	ND	ND	ND	ug/L	ND
1,1-Dichloroethane	ug/kg	ND	ND	ND	ND	ug/L	ND
1,2-Dichloroethene (cis/trans)	ug/kg	ND	ND	ND	ND	ug/L	ND
Chloroform	ug/kg	ND	ND	ND	ND	ug/L	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ug/L	ND
1,1,1-Trichloroethane	ug/kg	ND	ND	ND	ND	ug/L	ND
Carbon tetrachloride	ug/kg	ND	ND	ND	ND	ug/L	ND
Bromodichloromethane	ug/kg	ND	ND	ND	ND	ug/L	ND
1,2-Dichloropropane	ug/kg	ND	ND	ND	ND	ug/L	ND
trans-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ug/L	ND
Trichloroethene	ug/kg	ND	ND	ND	ND	ug/L	ND
Dibromochloromethane	ug/kg	ND	ND	ND	ND	ug/L	ND
1,1,2-Trichloroethene	ug/kg	ND	ND	ND	ND	ug/L	ND
Benzene	ug/kg	ND	ND	ND	ND	ug/L	ND
cis-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ug/L	ND
2-Chloroethyl vinyl ether	ug/kg	ND	ND	ND	ND	ug/L	ND
Bromoform	ug/kg	ND	ND	ND	ND	ug/L	ND
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND	ND	ND	ug/L	ND
Tetrachloroethene	ug/kg	ND	ND	ND	ND	ug/L	ND
Toluene	ug/kg	ND	ND	ND	ND	ug/L	ND
Chlorobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND
Ethylbenzene	ug/kg	ND	ND	ND	ND	ug/L	ND
Acetone	ug/kg	ND	ND	ND	ND	ug/L	12
Acrolein	ug/kg	ND	ND	ND	ND	ug/L	ND
Acrylonitrile	ug/kg	ND	ND	ND	ND	ug/L	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ug/L	ND
Dibromomethane	ug/kg	ND	ND	ND	ND	ug/L	ND
trans-1,4-Dichloro-2-butene	ug/kg	ND	ND	ND	ND	ug/L	ND
Dichlorodifluoromethane	ug/kg	ND	ND	ND	ND	ug/L	ND
trans-1,2-Dichloroethene	ug/kg	ND	ND	ND	ND	ug/L	ND
Ethanol	ug/kg	ND	ND	ND	ND	ug/L	ND
Iodomethane	ug/kg	ND	ND	ND	ND	ug/L	ND
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ug/L	ND
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND	ND	ND	ug/L	ND
Styrene	ug/kg	ND	ND	ND	ND	ug/L	ND
Trichlorofluoromethane	ug/kg	ND	ND	ND	ND	ug/L	ND
1,2,3-Trichloropropane	ug/kg	ND	ND	ND	ND	ug/L	ND
Vinyl acetate	ug/kg	ND	ND	ND	ND	ug/L	ND
Ethyl methacrylate	ug/kg	ND	ND	ND	ND	ug/L	ND
Xylenes (total)	ug/kg	ND	ND	ND	ND		
2-Hexanone	ug/kg	ND	ND	ND	ND	ug/L	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		07	07	07	07		01
Depth of sample		V0.0	V3.0	V5.0	V7.0		E5.0
Parameter	Units	Result	Result	Result	Result	Units	Result
Method 8270							
Acenaphthene	ug/kg	ND	ND	ND	ND	ug/L	ND
Acenaphthylene	ug/kg	ND	ND	ND	ND	ug/L	ND
Acetophenone	ug/kg	ND	ND	ND	ND	ug/L	ND
4-Aminobiphenyl	ug/kg	ND	ND	ND	ND	ug/L	ND
Aniline	ug/kg	ND	ND	ND	ND	ug/L	ND
Anthracene	ug/kg	ND	ND	ND	ND	ug/L	ND
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ug/L	ND
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ug/L	ND
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ug/L	ND
Benzo(g,h,i)perylene	ug/kg	ND	ND	ND	ND	ug/L	ND
Benzo(a)pyrene	ug/kg	ND	ND	ND	ND	ug/L	ND
Benzyl alcohol	ug/kg	ND	ND	ND	ND	ug/L	ND
bis(2-Chloroethoxy)-methane	ug/kg	ND	ND	ND	ND	ug/L	ND
bis(2-Chloroethyl) ether	ug/kg	ND	ND	ND	ND	ug/L	ND
bis(2-Chloroisopropyl)-ether	ug/kg	ND	ND	ND	ND	ug/L	ND
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ug/L	ND
4-Bromophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ug/L	ND
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ug/L	ND
4-Chloroaniline	ug/kg	ND	ND	ND	ND	ug/L	ND
4-Chloro-3-methylphenol	ug/kg	ND	ND	ND	ND	ug/L	ND
2-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ug/L	ND
2-Chlorophenol	ug/kg	ND	ND	ND	ND	ug/L	ND
4-Chlorophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ug/L	ND
o-Cresol	ug/kg	ND	ND	ND	ND	ug/L	ND
m & p-Cresol(s)	ug/kg	ND	ND	ND	ND	ug/L	ND
Chrysene	ug/kg	ND	ND	ND	ND	ug/L	ND
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ug/L	ND
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ug/L	ND
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND
3,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND
2,4-Dichlorophenol	ug/kg	ND	ND	ND	ND	ug/L	ND
2,6-Dichlorophenol	ug/kg	ND	ND	ND	ND	ug/L	ND
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ug/L	ND
p-Dimethylaminoazobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ug/L	ND
a,a-Dimethylphenethyl-amine	ug/kg	ND	ND	ND	ND	ug/L	ND
2,4-Dimethylphenol	ug/kg	ND	ND	ND	ND	ug/L	ND
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ug/L	ND
1,3-Dinitrobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND
4,6-Dinitro-o-cresol	ug/kg	ND	ND	ND	ND	ug/L	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ug/L	ND
2,4-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ug/L	ND
2,6-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ug/L	ND
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ug/L	ND
Diphenylamine	ug/kg	ND	ND	ND	ND	ug/L	ND

RFI09 - Inactive Land Treatment Area and Drainage Ditch

Sample point number		07	07	07	07		01
Depth of sample		V0.0	V3.0	V5.0	V7.0		E5.0
Parameter	Units	Result	Result	Result	Result	Units	Result
Method 8270 (con't)							
Ethyl methanesulfonate	ug/kg	ND	ND	ND	ND	ug/L	ND
Fluoranthene	ug/kg	ND	ND	ND	ND	ug/L	ND
Fluorene	ug/kg	ND	ND	ND	ND	ug/L	ND
Hexachlorobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND
Hexachlorobutadiene	ug/kg	ND	ND	ND	ND	ug/L	ND
Hexachlorocyclopentadiene	ug/kg	ND	ND	ND	ND	ug/L	ND
Hexachloroethane	ug/kg	ND	ND	ND	ND	ug/L	ND
Indeno(1,2,3-cd)Pyrene	ug/kg	ND	ND	ND	ND	ug/L	ND
Isophorone	ug/kg	ND	ND	ND	ND	ug/L	ND
3-Methylcholanthrene	ug/kg	ND	ND	ND	ND	ug/L	ND
Methyl methanesulfonate	ug/kg	ND	ND	ND	ND	ug/L	ND
2-Methylnaphthalene	ug/kg	ND	ND	ND	ND	ug/L	ND
Naphthalene	ug/kg	ND	ND	ND	ND	ug/L	ND
1-Naphthylamine	ug/kg	ND	ND	ND	ND	ug/L	ND
2-Naphthylamine	ug/kg	ND	ND	ND	ND	ug/L	ND
2-Nitroaniline	ug/kg	ND	ND	ND	ND	ug/L	ND
3-Nitroaniline	ug/kg	ND	ND	ND	ND	ug/L	ND
4-Nitroaniline	ug/kg	ND	ND	ND	ND	ug/L	ND
Nitrobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND
2-Nitrophenol	ug/kg	ND	ND	ND	ND	ug/L	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ug/L	ND
N-Nitroso-di-n-butylamine	ug/kg	ND	ND	ND	ND	ug/L	ND
N-Nitrosodimethylamine	ug/kg	ND	ND	ND	ND	ug/L	ND
N-Nitrosodiphenylamine	ug/kg	ND	ND	ND	ND	ug/L	ND
N-Nitroso-di-n-propylamine	ug/kg	ND	ND	ND	ND	ug/L	ND
N-Nitrosopiperidine	ug/kg	ND	ND	ND	ND	ug/L	ND
Pentachlorobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND
Pentachloronitrobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND
Pentachlorophenol	ug/kg	ND	ND	ND	ND	ug/L	ND
Phenacetin	ug/kg	ND	ND	ND	ND	ug/L	ND
Phenanthrene	ug/kg	ND	ND	ND	ND	ug/L	ND
Phenol	ug/kg	ND	ND	ND	ND	ug/L	ND
2-Picoline	ug/kg	ND	ND	ND	ND	ug/L	ND
Pronamide	ug/kg	ND	ND	ND	ND	ug/L	ND
Pyrene	ug/kg	ND	ND	ND	ND	ug/L	ND
1,2,4,5-Tetrachloro-benzene	ug/kg	ND	ND	ND	ND	ug/L	ND
2,3,4,6-Tetrachlorophenol	ug/kg	ND	ND	ND	ND	ug/L	ND
1,2,4-Trichlorobenzene	ug/kg	ND	ND	ND	ND	ug/L	ND
2,4,5-Trichlorophenol	ug/kg	ND	ND	ND	ND	ug/L	ND
2,4,6-Trichlorophenol	ug/kg	ND	ND	ND	ND	ug/L	ND
Benzidine	ug/kg	ND	ND	ND	ND	ug/L	ND
Benzoic acid	ug/kg	ND	ND	ND	ND	ug/L	ND
1-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ug/L	ND
1,2-Diphenylhydrazine	ug/kg	ND	ND	ND	ND	ug/L	ND

RFI09 - Inactive Land Treatment Area and Drainage

Sample point number		07	07	07	07		01
Depth of sample		V0.0	V2.0	V5.0	V7.0		E5.0
Parameter	Units	Result	Result	Result	Result	Units	Result
Total Metals							
Antimony	mg/kg	ND	ND	ND	ND	mg/L	ND
Arsenic	mg/kg	1.4	0.66	0.61	0.58	mg/L	ND
Barium	mg/kg	447	224	209	240	mg/L	ND
Beryllium	mg/kg	0.59	0.97	0.66	1.0	mg/L	ND
Cadmium	mg/kg	ND	ND	ND	ND	mg/L	ND
Chromium	mg/kg	102	8.6	16.2	7.6	mg/L	ND
Cobalt	mg/kg	1.2	2.9	1.5	2.5	mg/L	ND
Copper	mg/kg	10.5	5.5	4.1	5.1	mg/L	ND
Lead	mg/kg	14.0	9.1	7.2	7.5	mg/L	ND
Mercury	mg/kg	ND	ND	ND	ND	mg/L	ND
Nickel	mg/kg	6.0	7.7	4.7	6.8	mg/L	ND
Potassium	mg/kg	953	1030	775	1390	mg/L	ND
Selenium	mg/kg	ND	ND	ND	ND	mg/L	ND
Vanadium	mg/kg	14.6	13.1	10.3	12.7	mg/L	ND
Zinc	mg/kg	157	14.3	22.8	13.4	mg/L	ND

RFI10 - Sludge Pits

Sample point number		01	01	01	02	02	02	02	02	02
Depth of sample		V0.0	V3.0	D3.0	V0.0	V3.0	V6.0	V9.0	V12.5	D12.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result
Method 8240										
Chloromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (cis/trans)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	680
Chlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethanol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	980
2-Hexanone	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl methacrylate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND

RFI10 - Sludge Pits

Sample point number		01	01	01	02	02	02	02	02	02
Depth of sample		V0.0	V3.0	D3.0	V0.0	V3.0	V6.0	V9.0	V12.5	D12.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result
Method 8270										
Acenaphthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Aminobiphenyl	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)-methane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl) ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroisopropyl)-ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Cresol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	16000
m & p-Cresol(s)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	28000
Chrysene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Dimethylaminoazobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
a,a-Dimethylphenethyl-amine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	5300
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dinitrobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-o-cresol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diphenylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND

RFI10 - Sludge Pits

Sample point number		01	01	01	02	02	02	02	02	02
Depth of sample		V0.0	V3.0	D3.0	V0.0	V3.0	V6.0	V9.0	V12.5	D12.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result
Method 8270 (con't)										
Ethyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Methylcholanthrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	ug/kg	ND	ND	ND	ND	56000	ND	ND	ND	ND
Naphthalene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Naphthylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Naphthylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-n-butylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosopiperidine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachloronitrobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenacetin	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ug/kg	ND	ND	ND	ND	28000	ND	ND	ND	ND
Phenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	28000
2-Picoline	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pronamide	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetrachloro-benzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzoic acid	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND

RFI10 - Sludge Pits

Sample point number		01	01	01	02	02	02	02	02	02
Depth of sample		V0.0	V3.0	D3.0	V0.0	V3.0	V6.0	V9.0	V12.5	D12.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result
Total Metals										
Antimony	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	mg/kg	0.97	ND	ND	0.52	0.79	0.58	ND	ND	ND
Barium	mg/kg	392	107	105	198	231	332	201	171	124
Beryllium	mg/kg	0.70	1.0	1.1	1.0	0.90	0.90	1.4	0.87	1.1
Cadmium	mg/kg	ND	0.70	ND	ND	ND	ND	ND	ND	ND
Chromium	mg/kg	60.1	6.1	7.8	7.0	117	6.7	8.0	6.4	6.1
Cobalt	mg/kg	2.0	3.6	4.6	4.3	4.4	3.9	6.0	5.4	3.9
Copper	mg/kg	10.3	5.9	7.4	6.4	16.5	5.2	7.7	7.7	7.8
Lead	mg/kg	11.1	5.5	6.3	13.8	19.3	13.5	14.9	11.9	16.0
Mercury	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	mg/kg	7.0	6.7	9.1	6.4	9.2	6.5	9.5	8.5	6.9
Potassium	mg/kg	972	1310	1660	906	1310	841	1380	1410	1010
Selenium	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	mg/kg	16.3	14.0	16.3	15.4	18.2	13.8	16.5	13.0	14.0
Zinc	mg/kg	81.3	14.7	17.7	13.4	228	11.2	15.2	15.0	12.4

RFI10 - Sludge Pits

Sample point number		03	03	03	03	03
Depth of sample		V0.0	V3.0	V6.0	V9.0	V12.5
Parameter	Units	Result	Result	Result	Result	Result
Method 8240						
Chloromethane	ug/kg	ND	ND	ND	ND	ND
Bromomethane	ug/kg	ND	ND	ND	ND	ND
Vinyl chloride	ug/kg	ND	ND	ND	ND	ND
Chloroethane	ug/kg	ND	ND	ND	ND	ND
Methylene chloride	ug/kg	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/kg	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/kg	ND	ND	ND	ND	ND
1,2-Dichloroethene (cis/trans)	ug/kg	ND	ND	ND	ND	ND
Chloroform	ug/kg	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/kg	ND	ND	ND	ND	ND
Carbon tetrachloride	ug/kg	ND	ND	ND	ND	ND
Bromodichloromethane	ug/kg	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/kg	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND
Trichloroethene	ug/kg	ND	ND	ND	ND	ND
Dibromochloromethane	ug/kg	ND	ND	ND	ND	ND
1,1,2-Trichloroethene	ug/kg	ND	ND	ND	ND	ND
Benzene	ug/kg	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	ug/kg	ND	ND	ND	ND	ND
Bromoform	ug/kg	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND	ND	ND	ND
Tetrachloroethene	ug/kg	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	ND	ND
Chlorobenzene	ug/kg	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	ND	ND	ND
Acetone	ug/kg	ND	ND	ND	ND	ND
Acrolein	ug/kg	ND	ND	ND	ND	ND
Acrylonitrile	ug/kg	ND	ND	ND	ND	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ND
Dibromomethane	ug/kg	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ug/kg	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ug/kg	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/kg	ND	ND	ND	ND	ND
Ethanol	ug/kg	ND	ND	ND	ND	ND
Iodomethane	ug/kg	ND	ND	ND	ND	ND
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND	ND	ND	ND
Styrene	ug/kg	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/kg	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/kg	ND	ND	ND	ND	ND
Vinyl acetate	ug/kg	ND	ND	ND	ND	ND
Xylenes (total)	ug/kg	ND	ND	ND	ND	ND
2-Hexanone	ug/kg	ND	ND	ND	ND	ND
Ethyl methacrylate	ug/kg	ND	ND	ND	ND	ND

RFI10 - Sludge Pits

Sample point number		03	03	03	03	03
Depth of sample		V0.0	V3.0	V6.0	V9.0	V12.5
Parameter	Units	Result	Result	Result	Result	Result
Method 8270						
Acenaphthene	ug/kg	ND	ND	ND	ND	ND
Acenaphthylene	ug/kg	ND	ND	ND	ND	ND
Acetophenone	ug/kg	ND	ND	ND	ND	ND
4-Aminobiphenyl	ug/kg	ND	ND	ND	ND	ND
Aniline	ug/kg	ND	ND	ND	ND	ND
Anthracene	ug/kg	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ug/kg	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/kg	ND	ND	ND	ND	ND
Benzyl alcohol	ug/kg	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)-methane	ug/kg	ND	ND	ND	ND	ND
bis(2-Chloroethyl) ether	ug/kg	ND	ND	ND	ND	ND
bis(2-Chloroisopropyl)-ether	ug/kg	ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ND
4-Chloroaniline	ug/kg	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	ug/kg	ND	ND	ND	ND	ND
2-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND
2-Chlorophenol	ug/kg	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND
o-Cresol	ug/kg	ND	ND	ND	ND	ND
m & p-Cresol(s)	ug/kg	ND	ND	ND	ND	ND
Chrysene	ug/kg	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
3,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND
2,6-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ND
p-Dimethylaminoazobenzene	ug/kg	ND	ND	ND	ND	ND
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ND
a,a-Dimethylphenethyl-amine	ug/kg	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ug/kg	ND	ND	ND	ND	ND
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ND
1,3-Dinitrobenzene	ug/kg	ND	ND	ND	ND	ND
4,6-Dinitro-o-cresol	ug/kg	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ND
Diphenylamine	ug/kg	ND	ND	ND	ND	ND

RFI10 - Sludge Pits

Sample point number Depth of sample		03 V0.0	03 V3.0	03 V6.0	03 V9.0	03 V12.5
Parameter	Units	Result	Result	Result	Result	Result
Method 8270 (con't)						
Ethyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND
Fluoranthene	ug/kg	ND	ND	ND	ND	ND
Fluorene	ug/kg	ND	ND	ND	ND	ND
Hexachlorobenzene	ug/kg	ND	ND	ND	ND	ND
Hexachlorobutadiene	ug/kg	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	ug/kg	ND	ND	ND	ND	ND
Hexachloroethane	ug/kg	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	ug/kg	ND	ND	ND	ND	ND
Isophorone	ug/kg	ND	ND	ND	ND	ND
3-Methylcholanthrene	ug/kg	ND	ND	ND	ND	ND
Methyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND
2-Methylnaphthalene	ug/kg	ND	ND	ND	ND	ND
Naphthalene	ug/kg	ND	ND	ND	ND	ND
1-Naphthylamine	ug/kg	ND	ND	ND	ND	ND
2-Naphthylamine	ug/kg	ND	ND	ND	ND	ND
2-Nitroaniline	ug/kg	ND	ND	ND	ND	ND
3-Nitroaniline	ug/kg	ND	ND	ND	ND	ND
4-Nitroaniline	ug/kg	ND	ND	ND	ND	ND
Nitrobenzene	ug/kg	ND	ND	ND	ND	ND
2-Nitrophenol	ug/kg	ND	ND	ND	ND	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ND
N-Nitroso-di-n-butylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitrosopiperidine	ug/kg	ND	ND	ND	ND	ND
Pentachlorobenzene	ug/kg	ND	ND	ND	ND	ND
Pentachloronitrobenzene	ug/kg	ND	ND	ND	ND	ND
Pentachlorophenol	ug/kg	ND	ND	ND	ND	ND
Phenacetin	ug/kg	ND	ND	ND	ND	ND
Phenanthrene	ug/kg	ND	ND	ND	ND	ND
Phenol	ug/kg	ND	ND	ND	ND	ND
2-Picoline	ug/kg	ND	ND	ND	ND	ND
Pronamide	ug/kg	ND	ND	ND	ND	ND
Pyrene	ug/kg	ND	ND	ND	ND	ND
1,2,4,5-Tetrachloro-benzene	ug/kg	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	ug/kg	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ug/kg	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND
Benzidine	ug/kg	ND	ND	ND	ND	ND
Benzoic acid	ug/kg	ND	ND	ND	ND	ND
1-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	ug/kg	ND	ND	ND	ND	ND

RFI10 - Sludge Pits

Sample point number		03	03	03	03	02
Depth of sample		V0.0	V3.0	V6.0	V9.0	V12.5
Parameter	Units	Result	Result	Result	Result	Result
Total Metals						
Antimony	mg/kg	ND	ND	ND	ND	ND
Arsenic	mg/kg	0.65	0.90	0.59	0.52	ND
Barium	mg/kg	317	292	178	152	392
Beryllium	mg/kg	0.96	0.65	1.0	1.0	1.1
Cadmium	mg/kg	ND	ND	ND	ND	0.73
Chromium	mg/kg	9.5	6.1	6.5	5.9	7.5
Cobalt	mg/kg	2.6	2.0	2.8	3.4	3.2
Copper	mg/kg	7.4	4.3	6.1	5.6	7.0
Lead	mg/kg	8.4	5.5	6.5	8.1	7.8
Mercury	mg/kg	ND	ND	ND	ND	ND
Nickel	mg/kg	6.5	5.4	6.5	6.8	8.5
Potassium	mg/kg	1020	856	1070	1340	1410
Selenium	mg/kg	ND	ND	ND	ND	ND
Vanadium	mg/kg	15.7	15.2	12.9	14.3	17.5
Zinc	mg/kg	16.4	12.9	13.0	13.9	16.1

RFI10 - Sludge Pits

Sample point number		04	04	04	04	04
Depth of sample		V0.0	V3.0	V6.0	V9.0	V12.5
Parameter	Units	Result	Result	Result	Result	Result
Method 8240						
Chloromethane	ug/kg	ND	ND	ND	ND	ND
Bromomethane	ug/kg	ND	ND	ND	ND	ND
Vinyl chloride	ug/kg	ND	ND	ND	ND	ND
Chloroethane	ug/kg	ND	ND	ND	ND	ND
Methylene chloride	ug/kg	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/kg	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/kg	ND	ND	ND	ND	ND
1,2-Dichloroethene (cis/trans)	ug/kg	ND	ND	ND	ND	ND
Chloroform	ug/kg	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/kg	ND	ND	ND	ND	ND
Carbon tetrachloride	ug/kg	ND	ND	ND	ND	ND
Bromodichloromethane	ug/kg	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/kg	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND
Trichloroethene	ug/kg	ND	ND	ND	ND	ND
Dibromochloromethane	ug/kg	ND	ND	ND	ND	ND
1,1,2-Trichloroethene	ug/kg	ND	ND	ND	ND	ND
Benzene	ug/kg	ND	1700	ND	14000	ND
cis-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	ug/kg	ND	ND	ND	ND	ND
Bromoform	ug/kg	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND	ND	ND	ND
Tetrachloroethene	ug/kg	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	14000	220000	120000	ND
Chlorobenzene	ug/kg	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	ND	5600	81000	43000	ND
Acetone	ug/kg	ND	ND	ND	ND	ND
Acrolein	ug/kg	ND	ND	ND	ND	ND
Acrylonitrile	ug/kg	ND	ND	ND	ND	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ND
Dibromomethane	ug/kg	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ug/kg	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ug/kg	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/kg	ND	ND	ND	ND	ND
Ethanol	ug/kg	ND	ND	ND	ND	ND
Iodomethane	ug/kg	ND	ND	ND	ND	ND
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND	ND	ND	ND
Styrene	ug/kg	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/kg	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/kg	ND	ND	ND	ND	ND
Vinyl acetate	ug/kg	ND	ND	ND	ND	ND
Xylenes (total)	ug/kg	ND	54000	470000	310000	ND
2-Hexanone	ug/kg	ND	ND	ND	ND	ND
Ethyl methacrylate	ug/kg	ND	ND	ND	ND	ND

RFI10 - Sludge Pits

Sample point number		04	04	04	04	04
Depth of sample		V0.0	V3.0	V6.0	V9.0	V12.5
Parameter	Units	Result	Result	Result	Result	Result
Method 8270						
Acenarthene	ug/kg	ND	ND	ND	ND	ND
Acenaphthylene	ug/kg	ND	ND	ND	ND	ND
Acetophenone	ug/kg	ND	ND	ND	ND	ND
4-Aminobiphenyl	ug/kg	ND	ND	ND	ND	ND
Aniline	ug/kg	ND	ND	ND	ND	ND
Anthracene	ug/kg	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ug/kg	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/kg	ND	ND	ND	ND	ND
Benzyl alcohol	ug/kg	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)-methane	ug/kg	ND	ND	ND	ND	ND
bis(2-Chloroethyl) ether	ug/kg	ND	ND	ND	ND	ND
bis(2-Chloroisopropyl)-ether	ug/kg	ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ND
4-Chloroaniline	ug/kg	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	ug/kg	ND	ND	ND	ND	ND
2-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND
2-Chlorophenol	ug/kg	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND
o-Cresol	ug/kg	ND	ND	16000	ND	ND
m & p-Cresol(s)	ug/kg	ND	ND	26000	ND	ND
Chrysene	ug/kg	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
3,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND
2,6-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ND
p-Dimethylaminoazobenzene	ug/kg	ND	ND	ND	ND	ND
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ND
a,a-Dimethylphenethyl-amine	ug/kg	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ug/kg	ND	ND	27000	ND	ND
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ND
1,3-Dinitrobenzene	ug/kg	ND	ND	ND	ND	ND
4,6-Dinitro-o-cresol	ug/kg	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ND
Diphenylamine	ug/kg	ND	ND	ND	ND	ND

RFI10 - Sludge Pits

Sample point number		04	04	04	04	04
North of sample		V0.0	V3.0	V6.0	V9.0	V12.5
Parameter	Units	Result	Result	Result	Result	Result
Method 8270 (con't)						
Ethyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND
Fluoranthene	ug/kg	ND	ND	ND	ND	ND
Fluorene	ug/kg	ND	ND	13000	ND	ND
Hexachlorobenzene	ug/kg	ND	ND	ND	ND	ND
Hexachlorobutadiene	ug/kg	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	ug/kg	ND	ND	ND	ND	ND
Hexachloroethane	ug/kg	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ug/kg	ND	ND	ND	ND	ND
Isophorone	ug/kg	ND	ND	ND	ND	ND
3-Methylcholanthrene	ug/kg	ND	ND	ND	ND	ND
Methyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND
2-Methylnaphthalene	ug/kg	ND	ND	290000	ND	5000
Naphthalene	ug/kg	ND	ND	54000	ND	ND
1-Naphthylamine	ug/kg	ND	ND	ND	ND	ND
2-Naphthylamine	ug/kg	ND	ND	ND	ND	ND
2-Nitroaniline	ug/kg	ND	ND	ND	ND	ND
3-Nitroaniline	ug/kg	ND	ND	ND	ND	ND
4-Nitroaniline	ug/kg	ND	ND	ND	ND	ND
Nitrobenzene	ug/kg	ND	ND	ND	ND	ND
2-Nitrophenol	ug/kg	ND	ND	ND	ND	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ND
N-Nitroso-di-n-butylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	ug/kg	ND	ND	ND	ND	ND
N-Nitrosopiperidine	ug/kg	ND	ND	ND	ND	ND
Pentachlorobenzene	ug/kg	ND	ND	ND	ND	ND
Pentachloronitrobenzene	ug/kg	ND	ND	ND	ND	ND
Pentachlorophenol	ug/kg	ND	ND	ND	ND	ND
Phenacetin	ug/kg	ND	ND	ND	ND	ND
Phenanthrene	ug/kg	ND	ND	23000	ND	ND
Phenol	ug/kg	ND	ND	ND	ND	ND
2-Picoline	ug/kg	ND	ND	ND	ND	ND
Pronamide	ug/kg	ND	ND	ND	ND	ND
Pyrene	ug/kg	ND	ND	ND	ND	ND
1,2,4,5-Tetrachloro-benzene	ug/kg	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	ug/kg	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ug/kg	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND
Benzidine	ug/kg	ND	ND	ND	ND	ND
Benzoic acid	ug/kg	ND	ND	ND	ND	ND
1-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	ug/kg	ND	ND	ND	ND	ND

RFI10 - Sludge Pits

Sample point number		04	04	04	04	04
Depth of sample		V0.0	V3.0	V6.0	V9.0	V12.5
Parameter	Units	Result	Result	Result	Result	Result
Total Metals						
Antimony	mg/kg	ND	ND	ND	ND	ND
Arsenic	mg/kg	0.60	0.64	2.4	0.56	ND
Barium	mg/kg	280	195	422	213	164
Beryllium	mg/kg	0.93	0.79	0.80	1.0	1.1
Cadmium	mg/kg	ND	0.56	ND	ND	ND
Chromium	mg/kg	5.6	11.6	398	21.7	7.2
Cobalt	mg/kg	2.8	2.2	4.8	3.8	4.4
Copper	mg/kg	5.7	4.1	29.0	6.2	6.9
Lead	mg/kg	8.2	7.0	50.0	12.5	13.3
Mercury	mg/kg	ND	ND	1.3	ND	ND
Nickel	mg/kg	6.1	5.3	9.0	7.9	8.0
Potassium	mg/kg	853	793	2329	1209	1210
Selenium	mg/kg	ND	ND	ND	ND	ND
Vanadium	mg/kg	15.5	14.4	18.6	13.9	13.7
Zinc	mg/kg	14.0	15.2	81.2	12.5	12.5

RFI10 - Sludge Pits

Sample point number		05	05	05	05	05	05	05
Depth of sample		V0.0	V3.0	D3.0	V6.0	V9.0	V12.5	D12.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result
Method 8240								
Chloromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ug/kg	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (cis/trans)	ug/kg	ND	ND	ND	ND	ND	ND	ND
Chloroform	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ug/kg	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ug/kg	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/kg	ND	ND	ND	37000	ND	ND	ND
cis-1,3-Dichloropropene	ug/kg	ND	ND	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	ug/kg	ND	ND	ND	ND	ND	ND	ND
Bromoform	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/kg	ND	ND	ND	290000	2600	980	680
Chlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	ND	ND	ND	76000	1200	ND	ND
Acetone	ug/kg	ND	ND	ND	ND	ND	ND	ND
Acrolein	ug/kg	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ug/kg	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/kg	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Ethanol	ug/kg	ND	ND	ND	ND	ND	ND	ND
Iodomethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	ug/kg	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ug/kg	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ug/kg	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	ug/kg	ND	ND	ND	540000	9700	1700	980
2-Hexanone	ug/kg	ND	ND	ND	ND	ND	ND	ND
Ethyl methacrylate	ug/kg	ND	ND	ND	ND	ND	ND	ND

RFI10 - Sludge Pits

Sample point number		05	05	05	05	05	05	05
Depth of sample		V0.0	V3.0	D3.0	V6.0	V9.0	V12.5	D12.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result
Method 8270								
Acenarthene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Acetophenone	ug/kg	ND	ND	ND	ND	ND	ND	ND
4-Aminobiphenyl	ug/kg	ND	ND	ND	ND	ND	ND	ND
Aniline	ug/kg	ND	ND	ND	ND	ND	ND	ND
Anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzyl alcohol	ug/kg	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)-methane	ug/kg	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl) ether	ug/kg	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroisopropyl)-ether	ug/kg	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl) phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND	ND	ND
Butyl benzyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	ug/kg	ND	ND	ND	ND	ND	ND	ND
o-Cresol	ug/kg	ND	ND	ND	ND	34000	19000	16000
m & p-Cresol(s)	ug/kg	ND	ND	ND	120000	68000	34000	28000
Chrysene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
3,3-Dichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
2,6-Dichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
p-Dimethylaminoazobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
7,12-Dimethylbenz(a)-anthracene	ug/kg	ND	ND	ND	ND	ND	ND	ND
a,a-Dimethylphenethyl-amine	ug/kg	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ug/kg	ND	ND	ND	ND	12000	7900	5300
Dimethyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,3-Dinitrobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-o-cresol	ug/kg	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ug/kg	ND	ND	ND	ND	ND	ND	ND
Diphenylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND

RFI10 - Sludge Pits

Sample point number		05	05	05	05	05	05	05
Depth of sample		V0.0	V3.0	D3.0	V6.0	V9.0	V12.5	D12.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result
Method 8270 (con't)								
Ethyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Fluorene	ug/kg	ND	ND	ND	100000	ND	ND	ND
Hexachlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ug/kg	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Isophorone	ug/kg	ND	ND	ND	ND	ND	ND	ND
3-Methylcholanthrene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Methyl methanesulfonate	ug/kg	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	ug/kg	ND	ND	ND	1400000	ND	ND	ND
Naphthalene	ug/kg	ND	ND	ND	34000	ND	ND	ND
1-Naphthylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND
2-Naphthylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	ug/kg	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-n-butylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	ug/kg	ND	ND	ND	ND	ND	ND	ND
N-Nitrosopiperidine	ug/kg	ND	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Pentachloronitrobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
Phenacetin	ug/kg	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ug/kg	ND	ND	ND	250000	ND	ND	ND
Phenol	ug/kg	ND	ND	ND	ND	71000	32000	28000
2-Picoline	ug/kg	ND	ND	ND	ND	ND	ND	ND
Pronamide	ug/kg	ND	ND	ND	ND	ND	ND	ND
Pyrene	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetrachloro-benzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ug/kg	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzidine	ug/kg	ND	ND	ND	ND	ND	ND	ND
Benzoic acid	ug/kg	ND	ND	ND	ND	ND	ND	ND
1-Chloronaphthalene	ug/kg	ND	ND	ND	ND	ND	ND	ND
1,2-Diphenylhydrazine	ug/kg	ND	ND	ND	ND	ND	ND	ND

RFI10 - Sludge Pits

Sample point number		05	05	05	05	05	05	05
Depth of sample		V0.0	V3.0	D3.0	V6.0	V9.0	V12.5	D12.5
Parameter	Units	Result	Result	Result	Result	Result	Result	Result
Total Metals								
Antimony	mg/kg	ND	ND	ND	ND	ND	ND	ND
Arsenic	mg/kg	ND	0.52	0.61	27.9	0.59	ND	ND
Barium	mg/kg	315	321	251	700	48.7	187	124
Beryllium	mg/kg	0.88	0.85	0.69	0.76	1.4	1.2	1.1
Cadmium	mg/kg	ND	ND	ND	1.5	ND	ND	ND
Chromium	mg/kg	6.8	6.3	5.8	4020	11.6	9.9	6.1
Cobalt	mg/kg	4.0	4.4	2.8	8.4	5.7	5.1	3.9
Copper	mg/kg	9.2	4.6	9.1	215	11.8	7.2	7.8
Lead	mg/kg	13.2	11.8	11.1	337	16.1	14.2	16.0
Mercury	mg/kg	ND	ND	ND	2.9	ND	ND	ND
Nickel	mg/kg	5.8	6.8	4.2	19.2	11.3	9.3	6.9
Potassium	mg/kg	950	934	531	3920	1450	1250	1010
Selenium	mg/kg	ND	ND	ND	ND	ND	ND	ND
Vanadium	mg/kg	14.5	14.1	13.3	24.2	18.7	16.2	14.0
Zinc	mg/kg	11.8	13.1	8.2	538	17.9	14.3	12.4

RFI10 - Sludge Pits

Sample point number		02	TRIP
Depth of sample		E3.0	BLANK
Parameter	Units	Result	Result
Method 8240			
Chloromethane	ug/L	ND	ND
Bromomethane	ug/L	ND	ND
Vinyl chloride	ug/L	ND	ND
Chloroethane	ug/L	ND	ND
Methylene chloride	ug/L	ND	ND
1,1-Dichloroethene	ug/L	ND	ND
1,1-Dichloroethane	ug/L	ND	ND
1,2-Dichloroethene (cis/trans)	ug/L	ND	ND
Chloroform	ug/L	ND	ND
1,2-Dichloroethane	ug/L	ND	ND
1,1,1-Trichloroethane	ug/L	ND	ND
Carbon tetrachloride	ug/L	ND	ND
Bromodichloromethane	ug/L	ND	ND
1,2-Dichloropropane	ug/L	ND	ND
trans-1,3-Dichloropropene	ug/L	ND	ND
Trichloroethene	ug/L	ND	ND
Dibromochloromethane	ug/L	ND	ND
1,1,2-Trichloroethene	ug/L	ND	ND
Benzene	ug/L	ND	ND
cis-1,3-Dichloropropene	ug/L	ND	ND
2-Chloroethyl vinyl ether	ug/L	ND	ND
Bromoform	ug/L	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	ND	ND
Tetrachloroethene	ug/L	ND	ND
Toluene	ug/L	ND	ND
Chlorobenzene	ug/L	ND	ND
Ethylbenzene	ug/L	ND	ND
Acetone	ug/L	12	ND
Acrolein	ug/L	ND	ND
Acrylonitrile	ug/L	ND	ND
Carbon disulfide	ug/L	ND	ND
Dibromomethane	ug/L	ND	ND
trans-1,4-Dichloro-2-butene	ug/L	ND	ND
Dichlorodifluoromethane	ug/L	ND	ND
trans-1,2-Dichloroethene	ug/L	ND	ND
Ethanol	ug/L	ND	ND
Iodomethane	ug/L	ND	ND
2-Butanone (MEK)	ug/L	ND	ND
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND
Styrene	ug/L	ND	ND
Trichlorofluoromethane	ug/L	ND	ND
1,2,3-Trichloropropane	ug/L	ND	ND
Vinyl acetate	ug/L	ND	ND
Xylenes (total)	ug/L	ND	ND
2-Hexanone	ug/L	ND	ND
Ethyl methacrylate	ug/L	ND	ND

RFI10 - Sludge Pits

Sample point number		02	TRIP
Depth of sample		E3.0	BLANK
Parameter	Units	Result	Result
Method 8270			
Acenaphthene	ug/L	ND	
Acenaphthylene	ug/L	ND	
Acetophenone	ug/L	ND	
4-Aminobiphenyl	ug/L	ND	
Aniline	ug/L	ND	
Anthracene	ug/L	ND	
Benzo(a)anthracene	ug/L	ND	
Benzo(b)fluoranthene	ug/L	ND	
Benzo(k)fluoranthene	ug/L	ND	
Benzo(g,h,i)perylene	ug/L	ND	
Benzo(a)pyrene	ug/L	ND	
Benzyl alcohol	ug/L	ND	
bis(2-Chloroethoxy)-methane	ug/L	ND	
bis(2-Chloroethyl) ether	ug/L	ND	
bis(2-Chloroisopropyl)-ether	ug/L	ND	
bis(2-Ethylhexyl) phthalate	ug/L	ND	
4-Bromophenyl phenyl ether	ug/L	ND	
Butyl benzyl phthalate	ug/L	ND	
4-Chloroaniline	ug/L	ND	
4-Chloro-3-methylphenol	ug/L	ND	
2-Chloronaphthalene	ug/L	ND	
2-Chlorophenol	ug/L	ND	
4-Chlorophenyl phenyl ether	ug/L	ND	
o-Cresol	ug/L	ND	
m & p-Cresol(s)	ug/L	ND	
Chrysene	ug/L	ND	
Dibenz(a,h)anthracene	ug/L	ND	
Di-n-butyl phthalate	ug/L	ND	
1,2-Dichlorobenzene	ug/L	ND	
1,3-Dichlorobenzene	ug/L	ND	
1,4-Dichlorobenzene	ug/L	ND	
3,3-Dichlorobenzene	ug/L	ND	
2,4-Dichlorophenol	ug/L	ND	
2,6-Dichlorophenol	ug/L	ND	
Diethyl phthalate	ug/L	ND	
p-Dimethylaminoazobenzene	ug/L	ND	
7,12-Dimethylbenz(a)-anthracene	ug/L	ND	
a,a-Dimethylphenethyl-amine	ug/L	ND	
2,4-Dimethylphenol	ug/L	ND	
Dimethyl phthalate	ug/L	ND	
1,3-Dinitrobenzene	ug/L	ND	
4,6-Dinitro-o-cresol	ug/L	ND	
2,4-Dinitrophenol	ug/L	ND	
2,4-Dinitrotoluene	ug/L	ND	
2,6-Dinitrotoluene	ug/L	ND	
Di-n-octyl phthalate	ug/L	ND	
Diphenylamine	ug/L	ND	

RFI10 - Sludge Pits

Sample point number		02	TRIP
Depth of sample		E3.0	BLANK
Parameter	Units	Result	Result
Method 8270 (con't)			
Ethyl methanesulfonate	ug/L	ND	
Fluoranthene	ug/L	ND	
Fluorene	ug/L	ND	
Hexachlorobenzene	ug/L	ND	
Hexachlorobutadiene	ug/L	ND	
Hexachlorocyclopentadiene	ug/L	ND	
Hexachloroethane	ug/L	ND	
Indeno(1,2,3-cd)Pyrene	ug/L	ND	
Isophorone	ug/L	ND	
3-Methylcholanthrene	ug/L	ND	
Methyl methanesulfonate	ug/L	ND	
2-Methylnaphthalene	ug/L	ND	
Naphthalene	ug/L	ND	
1-Naphthylamine	ug/L	ND	
2-Naphthylamine	ug/L	ND	
2-Nitroaniline	ug/L	ND	
3-Nitroaniline	ug/L	ND	
4-Nitroaniline	ug/L	ND	
Nitrobenzene	ug/L	ND	
2-Nitrophenol	ug/L	ND	
4-Nitrophenol	ug/L	ND	
N-Nitroso-di-n-butylamine	ug/L	ND	
N-Nitrosodimethylamine	ug/L	ND	
N-Nitrosodiphenylamine	ug/L	ND	
N-Nitroso-di-n-propylamine	ug/L	ND	
N-Nitrosopiperidine	ug/L	ND	
Pentachlorobenzene	ug/L	ND	
Pentachloronitrobenzene	ug/L	ND	
Pentachlorophenol	ug/L	ND	
Phenacetin	ug/L	ND	
Phenanthrene	ug/L	ND	
Phenol	ug/L	ND	
2-Picoline	ug/L	ND	
Pronamide	ug/L	ND	
Pyrene	ug/L	ND	
1,2,4,5-Tetrachloro-benzene	ug/L	ND	
2,3,4,6-Tetrachlorophenol	ug/L	ND	
1,2,4-Trichlorobenzene	ug/L	ND	
2,4,5-Trichlorophenol	ug/L	ND	
2,4,6-Trichlorophenol	ug/L	ND	
Benzidine	ug/L	ND	
Benzoic acid	ug/L	ND	
1-Chloronaphthalene	ug/L	ND	
1,2-Diphenylhydrazine	ug/L	ND	

RFI10 - Sludge Pits

Sample point number		02	TRIP
Depth of sample		53.0	BLANK
Parameter	Units	Result	Result
Total Metals			
Antimony	mg/L	ND	
Arsenic	mg/L	ND	
Barium	mg/L	ND	
Beryllium	mg/L	ND	
Cadmium	mg/L	ND	
Chromium	mg/L	ND	
Cobalt	mg/L	ND	
Copper	mg/L	ND	
Lead	mg/L	ND	
Mercury	mg/L	ND	
Nickel	mg/L	ND	
Potassium	mg/L	ND	
Selenium	mg/L	ND	
Vanadium	mg/L	ND	
Zinc	mg/L	ND	