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SITE: Nat'l Smelting
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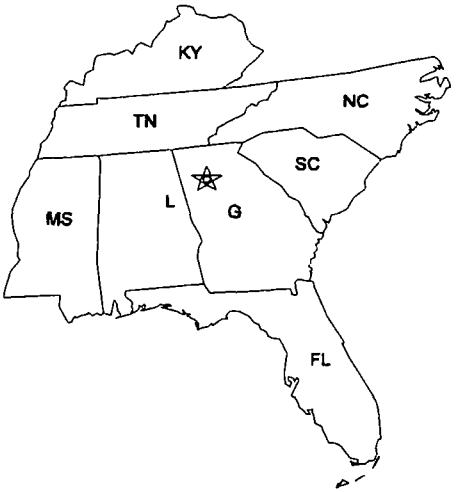
FINAL REPORT ON THE INVESTIGATION OF THE NATIONAL SMELTING AND REFINING COMPANY, INC. SITE ATLANTA, GEORGIA

PREPARED: OCTOBER 18,1999



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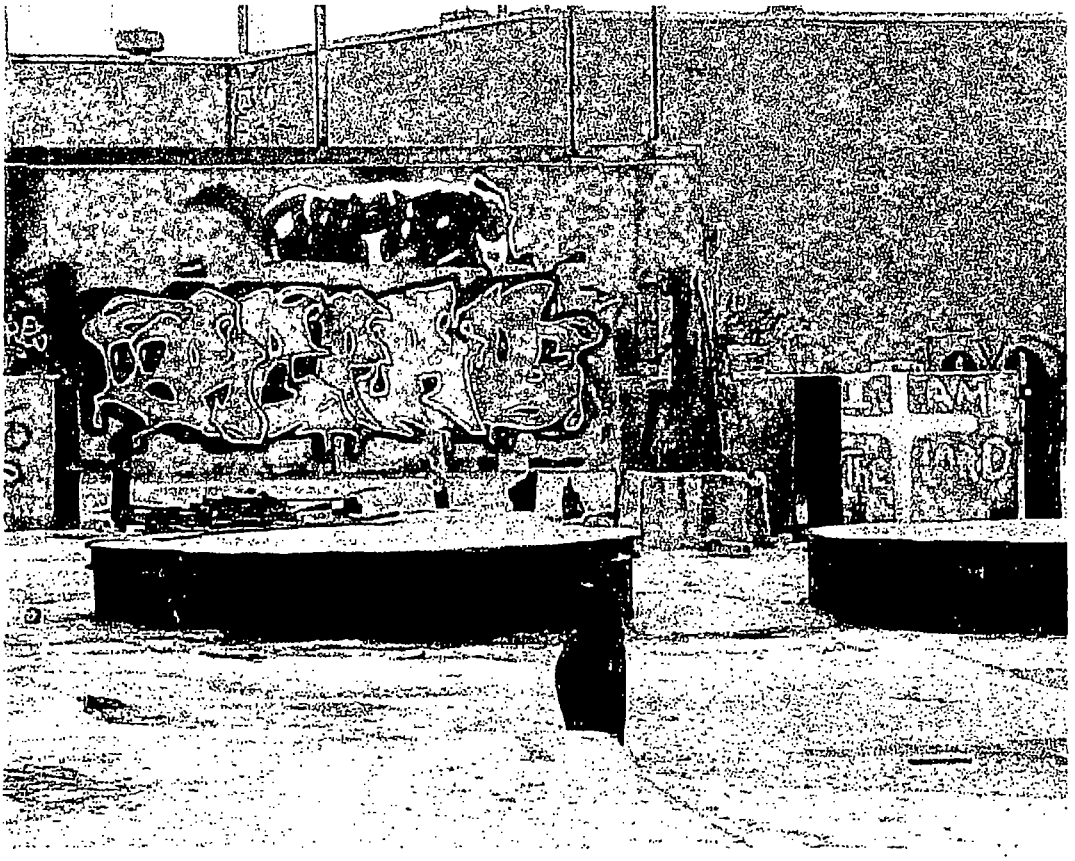

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REPORT ON THE INVESTIGATION OF THE NATIONAL SMELTING AND REFINING COMPANY, INC. SITE ATLANTA, GEORGIA

INTRODUCTION

On March 24, 1999 the United States Environmental Protection Agency (EPA), Region 4, Science and Ecosystem Support Division (SESD), Hazardous Waste Section (HWS), collected sediment samples from five locations in the runoff pathway of the railroad spur swale at the National Smelting and Refining site, located in Atlanta, Georgia. On June 2, 1999 HWS personnel concluded the sampling investigation with the collection of 34 surface and subsurface soil samples and one dust waste sample from the warehouse. The goals of this investigation as stated in the Quality Assurance Project Plan (QAPP) were: "1) assess the exposure of lead and other potential contaminants in soil from areas at the site that are not covered with concrete; 2) assess soil for lead from areas under the concrete in case the concrete is removed as a result of future development; and, 3) assess the sediments from site runoff for lead and other potential contaminants south of the site along the railroad spur". Given that the regulatory level for lead, which exceeds the human health risk assessment criteria is 400 mg/kg, the data quality objective decision rule in the QAPP was "if any of the lead analytical results exceed the regulatory limit of 400 mg/kg, then removal activities may be warranted".

BACKGROUND

National Lead Industries operated this site, located at 451 Bishop Street, Atlanta, Georgia from 1914 through 1981 as a lead smelting and refining operation. In 1981, the site was bought by National Smelting and Refining (Figure 1) for similar operations until they filed for bankruptcy in 1984. The site has also been known as Atlanta Forge and Foundry Company. In 1986, the Georgia Environmental Protection Division (EPD) collected samples of waste materials and found lead concentrations over 8 times above the 5 mg/L EP Toxicity level for lead found in 40 CFR part 261, Subpart C. In 1989, the United States Environmental Protection Agency (EPA) found lead concentrations over 1,100 times above the 5 mg/L EP Toxicity level for lead, resulting in various removals, assessments, investigations and monitoring at the site until 1991. Several Administrative Orders of Consent were issued by EPA in 1990 and 1991 to the potentially responsible parties requiring clean up of the aboveground waste at the site. By 1992, most of the site waste had been removed by the potentially responsible parties. As a result of a meeting with an Environmental Justice (EJ) Focus Group, EPA decided to revisit the environmental and public health protections at the site because of a proposed Atlantic Steel redevelopment south of the site, which would potentially bring an additional 20,000 people to the local area.

SUMMARY

Based on the results of the investigation, two main points can be made concerning the contamination on the National Smelting and Refining site. 1) It appears that lead could be migrating from the surface of the site to the railroad spur swale and further away from the site via the storm water runoff pathway. And 2) It is not possible at this time to determine if migration is occurring in the subsurface environment below the site surface, since the observed lead concentrations vary with depth. The concentrations of lead in the subsurface soil samples are probably related to fill material as well as seepage from spills and past site activities.

The highest lead concentrations were found on the site and the concentrations tend to show a slight decreasing trend at the runoff pathway. All of the surface soil samples exceeded the 400 mg/kg human health risk assessment criteria regulatory limit for lead. The surface soil lead concentrations were estimated to range between 2,000 and 140,000 mg/kg. The lead concentration in sixteen out of 27 subsurface soil samples exceeded 400 mg/kg with a range between an estimated 6.5 and 230,000 mg/kg. The dust waste sample, from the floor of the warehouse building, showed the highest lead concentration of 270,000 mg/kg. The sediment samples, which represent the runoff pathway, exceeded 400 mg/kg also, ranging from 59,000 to 190,000 mg/kg. Figure 2 presents the lead concentrations detected at the surface soil and sediment sample locations and Figure 3 presents the lead concentrations detected at the various depths from the subsurface borehole locations. Note that location SB301 corresponds with the former location of the battery cracking operations and the lead concentration, even at 15 feet below the concrete, is 14000 mg/kg.

Several other metals, for example, appear at their highest concentration at certain locations across the site in the surface soils or the off-site sediments on the ground near the railroad spur. Arsenic was found elevated at surface soil location SF103 (2100 mg/kg), cadmium was found at 460 mg/kg at sediment location SD202 and total mercury was detected at 10 mg/kg at surface soil location SF106.

Several extractable and volatile organic compounds, as well as some pesticide and PCBs, were detected in the two surface soil and two sediment sample locations where analyses for these other organic contaminants was requested. Most of the organic compounds detected were extractable polynuclear aromatic hydrocarbons (PAHs). All six of the carcinogenic PAHs (benzo(a)anthracene, benzo(b and/or k)fluoranthene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene) were detected either in the surface soils or sediment samples. Surface soil location SF106 had the highest number and highest concentrations of extractable organic compounds. Only six volatile organic compounds and seven pesticides/PCBS were detected.

DISCUSSION

Based on aerial photography and visual observation, several soil and sediment sample locations were identified both on and off-site to address the goals of this investigation. The horizontal location of the physical sampling locations and /or designated map point (the dust waste location is shown as the center of the warehouse building although the sample was a composite of several locations in the warehouse) was determined in the field by aerial photography and differential Global Positioning System (GPS) techniques. All of the samples were analyzed through the Contract Laboratory Program (CLP). The laboratory analytical data sheets are in Appendix A. Figure 4 shows the photographs taken at the National Smelting Site during the investigation, (from top left to right and downward, the photographs were taken in order 1 through 22).

Six sediment samples (SD201-SD206) were collected from areas where the potential exposure of lead and other potential contaminants are in the sediments as a result of site storm water runoff, and possibly other activities, south of the site along the railroad spur. The analytical data summary is listed in Table 1. A rain water runoff divide is present midway between location SD201 and SD202 where site storm water runoff from the site flows to the southwest away from a point between these two locations and runoff from the site flows to the northeast away from this same point location. Based on this observation, the results from sample location SD201 represent the historical contaminants that leave the site and flow towards the southwest direction and the results from sample locations SD202, SD203, SD204 and SD205 represent the historical contaminants that leave the site and flow towards the northeast direction along the railroad spur. Please note

that sample SD206 is a split of SD201 and was collected as a quality control check of sample mixing in the field and the results from the two samples compare very closely. All six samples were to be analyzed for total metals, however only five actually were since one sample, SD205, was reported missing in the shipment by the inorganic lab. Samples from two of the locations (SD201 and SD205) were selected to be analyzed for the complete Target Compound and Target Analyte Lists (TCL/TAL).

Seven surface soil samples (SF101-SF107) were collected from areas where the potential exposure of lead and other potential contaminants in soil are from locations at the site that is not covered with concrete. All seven samples were grab samples and analyzed for total metals with two of the locations (SF102 and SF106) analyzed for the complete Target Compound and Target Analyte Lists (TCL/TAL). The analytical data summary is listed in Table 2.

Twenty-seven subsurface soil samples were collected from boring locations (SB301-SB304) where there would be a potential exposure of lead from areas under the concrete if the concrete is removed as a result of future development. Seven subsurface samples were collected from each boring location except boring location SB302 where only six subsurface soil samples were collected due to obstructions. Each subsurface soil sample was a grab sample collected from the first three inches of soil at discrete depths of 0', 1', 2', 4', 6', 7', 8', 10', or 15' below the concrete. All twenty-seven samples were analyzed for total metals only. Table 3 lists the analytical data summary of the subsurface soil samples. Subsurface depth identification at each borehole is ascertained in the table by adding the above depths to end of SB301 through SB304 (i.e., SB4044 is a sample collected four feet below the concrete at borehole location SB404).

One dust waste sample (WA401) was collected from where there is a potential exposure of lead if the warehouse, located on the east portion of the property, is demolished. One composite sample of the dust on the warehouse floor was analyzed for total metals only and the analytical data summary is listed in Table 4.

METHODOLOGY

All environmental media samples (soil and sediment) were collected, preserved, handled and documented according to the requirements and procedures specified in the EPA, Region 4, *Environmental Investigations Standard Operating Procedures and Quality Assurance Manual* (EISOPQAM), May, 1996. All analyses and quality control and quality assurance procedures were conducted according to the Contract Laboratory Program (CLP) Statement of Work or the EPA, Region 4, *Laboratory Operations and Quality Control Manual* (LOQCM), October, 1990.

REFERENCES

United States Environmental Protection Agency, Region 4, Science and Ecosystem Support Division, *Environmental Investigations Standard Operating Procedures and Quality Assurance Manual* (EISOPQAM), May, 1996.

United States Environmental Protection Agency, Region 4, Science and Ecosystems Support Division, *Laboratory Operations and Quality Control Manual* (LOQCM), October, 1990.

United States Geological Survey, 7.5 minute Northwest Atlanta Quadrangle, Georgia.

Table 1. Analytical Data Summary of Sediment Locations, National Smelting and Refining, Atlanta, Georgia, March, 1999.

		SD201		SD202		SD203		SD204		SD205		SD206	
		03/24/1999		03/24/1999		03/24/1999		03/24/1999		03/24/1999		03/24/1999	
EXTRACTABLES		1215		1230		1245		1300		1315		1330	
% MOISTURE	%	18		NR		NR		NR		23		20	
1 UNIDENTIFIED UNSATURATED HYDROCARB	UG/KG		NR	NR		NR		NR		780	J		NR
1-METHYLNAPHTHALENE	UG/KG	360	JN	NR		NR		NR			NR	230	JN
2 UNIDENTIFIED CARBOXYLIC ACIDS	UG/KG		NR	NR		NR		NR		6500	J		NR
2-METHYL-4,6-DINITROPHENOL	UG/KG		U	NR		NR		NR		360	J		U
2-METHYLNAPHTHALENE	UG/KG	650	J	NR		NR		NR		400	J	160	J
2-METHYLPHENOL	UG/KG	400	J	NR		NR		NR			U		U
20 UNIDENTIFIED PAHS	UG/KG	11000	J	NR		NR		NR			NR		NR
21 UNIDENTIFIED PAHS	UG/KG		NR	NR		NR		NR			NR	9600	J
22 UNIDENTIFIED PAHS	UG/KG		NR	NR		NR		NR		19000	J		NR
5 UNIDENTIFIED ALKYL-SUBSTITUTED PHENO	UG/KG	2000	J	NR		NR		NR			NR	2300	J
ACENAPHTHENE	UG/KG	150	J	NR		NR		NR			U	87	J
ALKANES	UG/KG	3800	J	NR		NR		NR		12000	J		NR
ANTHRACENE	UG/KG	340	J	NR		NR		NR		130	J	390	J
BENZO(A)ANTHRACENE	UG/KG	1800		NR		NR		NR		900		2100	
BENZO(B)FLUORANTHENE	UG/KG	3000		NR		NR		NR		1300		3000	
BENZO(GHI)PERYLENE	UG/KG	1200		NR		NR		NR		490	J	1700	
BENZO(K)FLUORANTHENE	UG/KG	950		NR		NR		NR		280	J	970	
BENZO-A-PYRENE	UG/KG	1400		NR		NR		NR		570	J	1800	
BENZONAPHTHOFURAN	UG/KG		NR	NR		NR		NR			NR	220	JN
BIS(2-CHLOROETHYL) ETHER	UG/KG		UJ	NR		NR		NR		230	J		UJ
BIS(2-ETHYLHEXYL) PHTHALATE	UG/KG	3900	J	NR		NR		NR		1000	J	2100	J
CARBAZOLE	UG/KG	290	J	NR		NR		NR			U	220	J
CHRYSENE	UG/KG	1900		NR		NR		NR		1400		2200	
DIBENZO(A,H)ANTHRACENE	UG/KG	310	J	NR		NR		NR		150	J	410	J
DIBENZOFURAN	UG/KG	190	J	NR		NR		NR		88	J		U
FLUORANTHENE	UG/KG	2700	J	NR		NR		NR		820	J	3400	J
FLUORENE	UG/KG	140	J	NR		NR		NR			U	91	J
HEXADECANOIC ACID	UG/KG	2000	JN	NR		NR		NR			NR		NR
INDENO (1,2,3-CD) PYRENE	UG/KG	1400		NR		NR		NR		480	J	1900	
METHYL DIBENZOFURAN	UG/KG	260	JN	NR		NR		NR			NR		NR
N-NITROSODIPHENYLAMINE/DIPHENYLAMINE	UG/KG		U	NR		NR		NR		560	J		U
NAPHTHALENE	UG/KG	470	J	NR		NR		NR		410	J	130	J
PHENANTHRENE	UG/KG	2000		NR		NR		NR		810	J	2000	
PHENOL	UG/KG		U	NR		NR		NR		230	J		U
PYRENE	UG/KG	3000		NR		NR		NR		1400		3600	
TETRADECANOIC ACID	UG/KG		NR	NR		NR		NR		1100	JN		NR
TRIS (METHYL) PHOSPHORIC	UG/KG		NR	NR		NR		NR			NR	510	JN
TRIS (METHYL) PHOSPHORIC ACID	UG/KG	640	JN	NR		NR		NR			NR		NR
UNIDENTIFIED KETONE	UG/KG	260	J	NR		NR		NR			NR		NR
PESTICIDES/PCB													
4,4'-DDE (P,P'-DDE)	UG/KG	15	N	NR		NR		NR		12	N	15	N
ALPHA-BHC	UG/KG		U	NR		NR		NR		0.54	JN		U
DELTA-BHC	UG/KG	2.1	J	NR		NR		NR			U		U
ENDRIN ALDEHYDE	UG/KG	6.6	N	NR		NR		NR		4.3		7.3	N
HEPTACHLOR	UG/KG		U	NR		NR		NR		1.6	JN		U
PCB-1254 (AROCLOR 1254)	UG/KG	720		NR		NR		NR		330		800	

Table 1. Analytical Data Summary of Sediment Locations, National Smelting and Refining, Atlanta, Georgia, March, 1999.

		SD201	SD202	SD203	SD204	SD205	SD206
		03/24/1999	03/24/1999	03/24/1999	03/24/1999	03/24/1999	03/24/1999
METALS		1215	1230	1245	1300	1315	1330
% MOISTURE	%	11	16	7	6	NA	10
ALUMINUM	MG/KG	5800	10000	5700	3400	NA	6900
ANTIMONY	MG/KG	690 J	2300 J	1100 J	810 J	NA	730 J
ARSENIC	MG/KG	260	730	330	240	NA	310
BARIUM	MG/KG	490	650	290	130	NA	540
CADMIUM	MG/KG	4.3 J	460 J	33 J	19 J	NA	4 J
CALCIUM	MG/KG	850 J	6500 J	1100 J	2500 J	NA	820 J
CHROMIUM	MG/KG	37 J	62 J	35 J	29 J	NA	39 J
COBALT	MG/KG	5 J	12	6.9 J	5.3 J	NA	4.9 J
COPPER	MG/KG	530 J	1500 J	680 J	160 J	NA	490 J
IRON	MG/KG	65000	52000	53000	52000	NA	70000
LEAD	MG/KG	97000 J	190000 J	120000 J	59000 J	NA	79000 J
MAGNESIUM	MG/KG	1700	3000	1500	960	NA	1700
MANGANESE	MG/KG	470 J	530 J	390 J	300 J	NA	270 J
NICKEL	MG/KG	25	130	29	31	NA	20
POTASSIUM	MG/KG	2300	2400	1700	1000	NA	2200
SELENIUM	MG/KG	UJ	UJ	UJ	2.7 J	NA	UJ
SILVER	MG/KG	2.7	4.3	2.7	1.3 J	NA	2.9
SODIUM	MG/KG	240	140	70	52	NA	330
THALLIUM	MG/KG	U	U	34	U	NA	U
TOTAL MERCURY	MG/KG	0.99	1.9	0.45	0.38	NA	1
VANADIUM	MG/KG	41	55	25	17	NA	47
ZINC	MG/KG	310 J	3700 J	470 J	340 J	NA	300 J

Data Qualifiers

A-Average value. NA-Not analyzed. NAI-Interferences. J-Estimated value.

N-Presumptive evidence of presence of material.

NR-Not Reported

K-Actual value is known to be less than value given.

L-Actual value is known to be greater than value given.

U-Material was analyzed for but not detected.

R-QC indicates that data unusable. Compound may or may not be present. Resampling and reanalysis is necessary for verification.

C-Confirmed by GCMS.

1.When no value is reported, see chlordane constituents.

2.Constituents or metabolites of technical chlordane.

Table 2. Analytical Data Summary of Surface Soil Locations, National Smelting and Refining, Atlanta, Georgia, June, 1999.

		SF101		SF102		SF103		SF104		SF105		SF106		SF107	
		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999	
VOLATILES		1130		1155		1200		1212		1157		1135		1126	
BENZOIC ACID, 2-[(TRIMETHYLSILYL)-OXY-]	UG/KG	NR	37	JN	NR		NR		NR		NR		NR		NR
BENZOIC ACID, 2-[(TRIMETHYLSILYL)-OXY-]	UG/KG	NR		NR	NR		NR		NR		NR	36	JN		NR
CARBON DISULFIDE	UG/KG	NR	2	J	NR		NR		NR		NR	2	J		NR
CYCLOTETRASILOXANE, OCTAMETHYL	UG/KG	NR	95	JN	NR		NR		NR		NR	80	JN		NR
CYCLOTRISILOXANE, HEXAMETHYL	UG/KG	NR		NR	NR		NR		NR		NR	7	JN		NR
CYCLOTRISILOXANE, HEXAMETHYL-	UG/KG	NR	10	JN	NR		NR		NR		NR		NR		NR
SILANOL, TRIMETHYL-	UG/KG	NR	6	JN	NR		NR		NR		NR		NR		NR
TOLUENE	UG/KG	NR	40		NR		NR		NR		NR	18	J		NR
EXTRACTABLES															
1, 1' :2', 1' '-TERPHENYL + UNKNOWN PCB	UG/KG	NR		NR	NR		NR		NR		NR	1800	JN		NR
1,1'-BIPHENYL, 2, 2', 4, 4', 6-PENTACHLORO	UG/KG	NR		NR	NR		NR		NR		NR	2500	JN		NR
1,2;3,4-DIBENZOANTHRACENE + UNKNOWN	UG/KG	NR		NR	NR		NR		NR		NR	2500	JN		NR
1-AZAPYRENE + UNKNOWN	UG/KG	NR	230	J	NR		NR		NR		NR		NR		NR
11H-BENZO (A) CARBAZOLE + UNKNOWN	UG/KG	NR		NR	NR		NR		NR		NR	3700	JN		NR
11H-BENZO [B] FLUORENE	UG/KG	NR		NR	NR		NR		NR		NR	3900	JN		NR
1H-INDENE, 1,1'-(1,2-ETHANEDIYLIDENE)BIS-	UG/KG	NR		NR	NR		NR		NR		NR	4400	JN		NR
1H-INDENE, 1-(PHENYLMETHYLENE)	UG/KG	NR	220	JN	NR		NR		NR		NR		NR		NR
2-METHYLNAPHTHALENE	UG/KG	NR	75	J	NR		NR		NR		NR	1200	J		NR
2-METHYLPHENOL	UG/KG	NR		U	NR		NR		NR		NR	220	J		NR
2-PHENYLNAPHTHALENE	UG/KG	NR	950	JN	NR		NR		NR		NR	2800	JN		NR
4-CHLOROANILINE	UG/KG	NR	94	J	NR		NR		NR		NR		U		NR
4-NITROANILINE	UG/KG	NR	140	J	NR		NR		NR		NR		U		NR
4-TOLUENESULFONAMIDE + UNKNOWN	UG/KG	NR	190	JN	NR		NR		NR		NR		NR		NR
4H-CYCLOPENTA [DEF] PHENANTHRENE	UG/KG	NR	1100	JN	NR		NR		NR		NR		NR		NR
7H-BENZ [DE] ANTHRACEN-7-ONE	UG/KG	NR		NR	NR		NR		NR		NR	3000	JN		NR
9, 10-ANTHRACENEDIONE	UG/KG	NR	760	JN	NR		NR		NR		NR		NR		NR
9H-FLUOREN-9-ONE	UG/KG	NR	340	JN	NR		NR		NR		NR		NR		NR
ACENAPHTHENE	UG/KG	NR	270	J	NR		NR		NR		NR	900	J		NR
ACENAPHTHYLENE	UG/KG	NR	100	J	NR		NR		NR		NR	310	J		NR
ACRIDINE	UG/KG	NR	240	JN	NR		NR		NR		NR		NR		NR
ANTHRACENE	UG/KG	NR	640		NR		NR		NR		NR	1800			NR
ANTHRACENE, 1-METHYL-	UG/KG	NR	260	JN	NR		NR		NR		NR		NR		NR
BENZ [A] ANTHRACENE, 7, 12-DIMETHYL	UG/KG	NR		NR	NR		NR		NR		NR	2200	JN		NR

Table 2. Analytical Data Summary of Surface Soil Locations, National Smelting and Refining, Atlanta, Georgia, June, 1999.

		SF101		SF102		SF103		SF104		SF105		SF106		SF107	
		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999	
EXTRACTABLES		1130		1155		1200		1212		1157		1135		1126	
BENZO (A) PYRENE-4, 5-OXIDE + UNKNOWN	UG/KG	NR		NR		NR		NR		NR		2800	J	NR	
BENZO (C) CARBAZOLE + UNKNOWN	UG/KG	NR		NR		NR		NR		NR		3500	JN	NR	
BENZO (E) PYRENE	UG/KG	NR		NR		NR		NR		NR		14000	JN	NR	
BENZO [B] NAPHTHO [2, 1-D] THIOPHENE	UG/KG	NR		NR		NR		NR		NR		5000	JN	NR	
BENZO [B] NAPHTHO [2,3-D] FURAN	UG/KG	NR		370	JN	NR		NR		NR			NR	NR	
BENZO [C] PHENANTHRENE	UG/KG	NR		NR		NR		NR		NR		2700	JN	NR	
BENZO [GHI] FLUORANTHENE	UG/KG	NR		NR		NR		NR		NR		3600	JN	NR	
BENZO [J] FLUORANTHENE	UG/KG	NR		NR		NR		NR		NR		7300	JN	NR	
BENZO(A)ANTHRACENE	UG/KG	NR		2500		NR		NR		NR		8300		NR	
BENZO(B)FLUORANTHENE	UG/KG	NR		3600		NR		NR		NR		13000		NR	
BENZO(GHI)PERYLENE	UG/KG	NR		950		NR		NR		NR		2900		NR	
BENZO(K)FLUORANTHENE	UG/KG	NR		2600		NR		NR		NR		7500		NR	
BENZO-A-PYRENE	UG/KG	NR		2200		NR		NR		NR		11000		NR	
BENZYL BUTYL PHTHALATE	UG/KG	NR		520	J	NR		NR		NR			UJ	NR	
BIS(2-ETHYLHEXYL) PHTHALATE	UG/KG	NR		3100	J	NR		NR		NR		6800	J	NR	
BRANCHED ALKANES	UG/KG	NR		91	J	NR		NR		NR			NR	NR	
CARBAZOLE	UG/KG	NR		530		NR		NR		NR		760	J	NR	
CHRYSENE	UG/KG	NR		3900	J	NR		NR		NR		11000	J	NR	
CYCLIC ALKANES	UG/KG	NR		240	J	NR		NR		NR			NR	NR	
CYCLOPENTA (DEF) PHENANTHRENONE	UG/KG	NR		680	JN	NR		NR		NR			NR	NR	
CYCLOPENTA (DEF) PHENANTHRENONE + UNKNOWN PCB	UG/KG	NR			NR	NR		NR		NR		2000	JN	NR	
DIBENZOFURAN	UG/KG	NR		130	J	NR		NR		NR		820	J	NR	
DIBENZOFURAN, 4-METHYL- + UNKNOWN	UG/KG	NR		250	JN	NR		NR		NR			NR	NR	
DIBENZOTHIOPHENE	UG/KG	NR		390	JN	NR		NR		NR			NR	NR	
FLUORANTHENE	UG/KG	NR		6700		NR		NR		NR		11000		NR	
FLUORENE	UG/KG	NR		230	J	NR		NR		NR		750	J	NR	
INDENO (1,2,3-CD) PYRENE	UG/KG	NR		1200		NR		NR		NR		5000		NR	
N-ALKANES	UG/KG	NR		1000	J	NR		NR		NR			NR	NR	
N-NITROSODIPHENYLAMINE/DIPHENYLAMINE	UG/KG	NR			U	NR		NR		NR		1300	J	NR	
NAPHTHALENE	UG/KG	NR		110	J	NR		NR		NR		1000	J	NR	
NONYLPHENOL ISOMER + UNKNOWN	UG/KG	NR		180	J	NR		NR		NR			NR	NR	
PERYLENE	UG/KG	NR			NR	NR		NR		NR		3900	JN	NR	
PHENANTHRENE	UG/KG	NR		2500		NR		NR		NR		5500		NR	
PHENANTHRENE, 2,7-DIMETHYL-	UG/KG	NR		490	JN	NR		NR		NR			NR	NR	

Table 2. Analytical Data Summary of Surface Soil Locations, National Smelting and Refining, Atlanta, Georgia, June, 1999.

		SF101		SF102		SF103		SF104		SF105		SF106		SF107	
		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999	
EXTRACTABLES		1130		1155		1200		1212		1157		1135		1126	
PHENANTHRENE, 3-METHYL-	UG/KG	NR		840	JN	NR		NR		NR		NR		NR	
PHENANTHRENE, 4,5-DIMETHYL-	UG/KG	NR		250	JN	NR		NR		NR		NR		NR	
PHENANTHRO [4,5-BCD] THIOPHENE	UG/KG	NR		590	JN	NR		NR		NR		3000	JN	NR	
PHENOL, NONYL-	UG/KG	NR		270	JN	NR		NR		NR		NR		NR	
PHOSPHORIC ACID, TRIETHYL ESTER	UG/KG	NR		240	JN	NR		NR		NR		NR		NR	
PYRENE	UG/KG	NR		5000	J	NR		NR		NR		8900	J	NR	
PYRENE, 1-METHYL- + UNKNOWN PCB	UG/KG	NR			NR	NR		NR		NR		1900	JN	NR	
TRIPHENYLENE, 2-METHYL-	UG/KG	NR			NR	NR		NR		NR		4800	JN	NR	
UNKNOWN	UG/KG	NR		640	J	NR		NR		NR		5000	J	NR	
UNKNOWN ACID TYPE	UG/KG	NR			NR	NR		NR		NR		2000	J	NR	
UNKNOWN HYDROCARBON	UG/KG	NR			NR	NR		NR		NR		5200	J	NR	
UNKNOWN PAH	UG/KG	NR			NR	NR		NR		NR		5200	J	NR	
UNKNOWN PAH + PCB	UG/KG	NR			NR	NR		NR		NR		3400	J	NR	
UNKNOWN PHENOLIC COMPOUND	UG/KG	NR		160	J	NR		NR		NR		NR		NR	
PESTICIDES/PCB															
GAMMA-BHC (LINDANE)	UG/KG	NR		0.82	J	NR		NR		NR		U		NR	
PCB-1254 (AROCLOR 1254)	UG/KG	NR		600		NR		NR		NR		6300		NR	

Table 2. Analytical Data Summary of Surface Soil Locations, National Smelting and Refining, Atlanta, Georgia, June, 1999.

		SF101	SF102	SF103	SF104	SF105	SF106	SF107
		06/02/1999	06/02/1999	06/02/1999	06/02/1999	06/02/1999	06/02/1999	06/02/1999
METALS		1130	1155	1200	1212	1157	1135	1126
% MOISTURE	%	15	2	8	7	8	9	1
ALUMINUM	MG/KG	23000 J	13000 J	12000 J	10000 J	7400 J	4000 J	2000 J
ANTIMONY	MG/KG	51 J	1100 J	3800 J	810 J	2000 J	870 J	31 J
ARSENIC	MG/KG	37 J	650 J	2100 J	74 J	310 J	180 J	12 J
BARIUM	MG/KG	150 J	410 J	230 J	160 J	130 J	210 J	17 J
BERYLLIUM	MG/KG	0.84 J	0.53 J	0.43 J	0.59 J	0.39 J	0.31 J	0.15 J
CADMIUM	MG/KG	8.7	100	290	98	72	74	0.59 J
CALCIUM	MG/KG	4500	4600	6300	3900	30000	5500	120
CHROMIUM	MG/KG	60	100	47	30	56	53	12
COBALT	MG/KG	15 J	15	10 J	15	8.9 J	3.9 J	3.3 J
COPPER	MG/KG	74	610	1200	560	360	110	8
IRON	MG/KG	37000 J	51000 J	35000 J	32000 J	22000 J	25000 J	5100 J
LEAD	MG/KG	3700 J	100000 J	140000 J	25000 J	80000 J	140000 J	2000 J
MAGNESIUM	MG/KG	5100 J	5100 J	5600 J	2200 J	1800 J	1500 J	310 J
MANGANESE	MG/KG	750	660	460	540	490	350	250
NICKEL	MG/KG	23	140	140	26	40	19	3.6 J
POTASSIUM	MG/KG	4000 J	4100 J	5600 J	1600 J	1200 J	1100 J	350 J
SELENIUM	MG/KG	UJ	71 J	3.8 J	2 J	2.6	2.4	U
SILVER	MG/KG	1.8 J	5.3	11	2.2	3.6	4.4	0.37 J
SODIUM	MG/KG	290	1200	310	220	190	200	92
THALLIUM	MG/KG	U	3.2	15	U	5 J	6.8	U
TOTAL MERCURY	MG/KG	0.18	2.8	2.1	1.5	3.7	10	U
VANADIUM	MG/KG	99 J	94 J	43 J	63 J	32 J	16 J	9.9 J
ZINC	MG/KG	360 J	2100 J	2800 J	520 J	620 J	310 J	17 J

Data Qualifiers

A-Average value. NA-Not analyzed. NAI-Interferences. J-Estimated value.

N-Presumptive evidence of presence of material.

NR-Not Reported

K-Actual value is known to be less than value given.

L-Actual value is known to be greater than value given.

U-Material was analyzed for but not detected.

R-QC indicates that data unusable. Compound may or may not be present. Resampling and reanalysis is necessary for verification.

C-Confirmed by GCMS. 1.When no value is reported, see chlordane constituents. 2.Constituents or metabolites of technical chlordane.

Table 3. Analytical Data Summary of Subsurface Soil Locations, National Smelting and Refining, Atlanta, Georgia, June, 1999.

		SB3010		SB3011		SB30115		SB3012		SB3014		SB3016		SB3018	
		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999	
METALS		1441		1451		1730		1455		1650		1655		1715	
% MOISTURE	%	27		15		24		23		27		22		16	
ALUMINUM	MG/KG	8600	J	13000	J	19000	J	26000	J	18000	J	23000	J	13000	J
ANTIMONY	MG/KG	120	J	8300	J	250	J		UJ		UJ	54	J	720	J
ARSENIC	MG/KG	120	J	420	J	24	J	3.1	J	4.1	J	24	J	52	J
BARIUM	MG/KG	210	J	640	J	370	J	260	J	160	J	220	J	640	J
BERYLLIUM	MG/KG	0.18	J	0.6	J		U	1	J		U		U		U
CADMIUM	MG/KG	1.5		110		1.5	J		U	17	J	5.1	J	2	J
CALCIUM	MG/KG	15000		3900		2200	J	640		1500	J	1900	J	11000	J
CHROMIUM	MG/KG	16		30		39		53		52		39		26	
COBALT	MG/KG	40		6	J	20		11	J	15		17		35	
COPPER	MG/KG	80		220		1200	J	64		220	J	140	J	5000	J
IRON	MG/KG	28000	J	26000	J	76000	J	48000	J	51000	J	48000	J	200000	J
LEAD	MG/KG	16000	J	230000	J	14000	J	330	J	210	J	7800		54000	J
MAGNESIUM	MG/KG	2600	J	3000	J	5400	J	2600	J	1500	J	2900	J	2000	J
MANGANESE	MG/KG	81		150		480	J	240		720	J	580	J	930	J
NICKEL	MG/KG	7.9	J	16		63	J	18		39	J	22	J	210	J
POTASSIUM	MG/KG	5400	J	3800	J	4200	J	1700	J	1100	J	2400	J	1900	J
SELENIUM	MG/KG		U		U		UJ		U		U		UJ	10	J
SILVER	MG/KG	2	J	9		3.7		2.1	J	2.3	J	2.4	J	11	
SODIUM	MG/KG	570		510		400		280		260		340		630	
THALLIUM	MG/KG		U	8.9			U		U		U		U		U
TOTAL MERCURY	MG/KG	0.18			U	0.24			U		U	0.16		0.15	
VANADIUM	MG/KG	52	J	51	J	120	J	140	J	110	J	140	J	88	J
ZINC	MG/KG	60	J	130	J	430	J	64	J	580	J	170	J	1500	J

Table 3. Analytical Data Summary of Subsurface Soil Locations, National Smelting and Refining, Atlanta, Georgia, June, 1999.

		SB3020		SB3022		SB3024		SB3027		SB30210		SB30215	
		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999	
METALS		1350		1525		1530		1550		1600		1605	
% MOISTURE	%	18		16		16		15		38		41	
ALUMINUM	MG/KG	16000	J	16000	J	16000	J	25000	J	29000	J	26000	J
ANTIMONY	MG/KG	1600	J	1400	J	1400	J	570	J	81	J		UJ
ARSENIC	MG/KG	46	J	78	J	66	J	27	J	6.4	J		UJ
BARIUM	MG/KG	1100	J	450	J	330	J	260	J	290	J	350	J
BERYLLIUM	MG/KG	1.1	J		U		U		U		U		U
CADMIUM	MG/KG	3.1			UJ	2	J		UJ		UJ		UJ
CALCIUM	MG/KG	29000		4900	J	3600	J	2200	J	760	J	560	J
CHROMIUM	MG/KG	22		47		43		47		26		25	
COBALT	MG/KG	15		22		27		23		19		18	
COPPER	MG/KG	1300		830	J	900	J	300	J	97	J	40	J
IRON	MG/KG	91000	J	42000	J	40000	J	42000	J	40000	J	36000	J
LEAD	MG/KG	45000	J	28000	J	32000	J	12000	J	2600	J	46	
MAGNESIUM	MG/KG	3700	J	1200	J	1200	J	5400	J	12000	J	15000	J
MANGANESE	MG/KG	1000		670	J	920	J	1000	J	770	J	700	J
NICKEL	MG/KG	49		55	J	54	J	22	J	14	J	8.2	J
POTASSIUM	MG/KG	3200	J	920	J	980	J	4800	J	10000	J	14000	J
SELENIUM	MG/KG	8.7	J	39	J	62	J	22	J	3.9	J		UJ
SILVER	MG/KG	5.7		2.6		2.5		2.1	J	2.1	J	1.6	J
SODIUM	MG/KG	810		870		590		530		530		580	
THALLIUM	MG/KG		U		U		U		U		U		U
TOTAL MERCURY	MG/KG	0.44		0.13		0.14			U		U		U
VANADIUM	MG/KG	48	J	52	J	56	J	110	J	120	J	100	J
ZINC	MG/KG	1400	J	1000	J	840	J	260	J	90	J	74	J

Table 3. Analytical Data Summary of Subsurface Soil Locations, National Smelting and Refining, Atlanta, Georgia, June, 1999.

		SB3030		SB3031		SB3032		SB3034		SB3036		SB30310		SB30315	
		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999	
METALS		1345		1355		1400		1410		1425		1435		1445	
% MOISTURE	%	24		12		10		23		18		38		39	
ALUMINUM	MG/KG	43000	J	47000	J	42000	J	34000	J	34000	J	28000	J	20000	J
ANTIMONY	MG/KG	20	J		UJ		UJ		UJ		UJ		UJ		UJ
ARSENIC	MG/KG	59	J		U		U		UJ		UJ		U		UJ
BARIUM	MG/KG	250	J	420	J	400	J	150	J	300		310	J	350	J
BERYLLIUM	MG/KG	1	J	1.1		1	J	1.7		1.4		0.77	J	0.57	J
CADMIUM	MG/KG	34			U		U		U		U		U		U
CALCIUM	MG/KG	6400		220		280		530		390		650		1000	
CHROMIUM	MG/KG	34		27		44		36		32		28		12	
COBALT	MG/KG	12	J	16		17		20		16		12	J	11	J
COPPER	MG/KG	37		9.7		43		34		25		24		16	
IRON	MG/KG	43000	J	42000	J	43000	J	45000	J	40000	J	33000	J	26000	J
LEAD	MG/KG	520	J	24	J	39	J	9.5	J	17	J	10	J	6.5	J
MAGNESIUM	MG/KG	13000	J	17000	J	16000	J	6300	J	11000	J	12000	J	11000	J
MANGANESE	MG/KG	440		690		1000		750		660		620		540	
NICKEL	MG/KG	11		11	J	13		12		12		10	J	7	J
POTASSIUM	MG/KG	13000	J	18000	J	17000	J	4300	J	11000	J	13000	J	12000	J
SELENIUM	MG/KG	1.5	J		UJ		UJ		UJ		UJ		U		U
SILVER	MG/KG	1.8	J	1.5	J	1.7	J	2.1	J	1.6	J	1.6	J	1.4	J
SODIUM	MG/KG	550		680		620		390		480		540		460	
THALLIUM	MG/KG	7.4			U		U		U		U		U		U
TOTAL MERCURY	MG/KG		U		U		U		U		U		U		U
VANADIUM	MG/KG	98	J	120	J	140	J	160	J	120	J	90	J	73	J
ZINC	MG/KG	110	J	42	J	65	J	44	J	190	J	130	J	64	J

Table 3. Analytical Data Summary of Subsurface Soil Locations, National Smelting and Refining, Atlanta, Georgia, June, 1999.

		SB3040		SB3041		SB3042		SB3044		SB3046		SB30410		SB30415	
		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999		06/02/1999	
METALS		1815		1825		1840		1842		1845		1850		1900	
% MOISTURE	%	4		10		15		25		17		29		26	
ALUMINUM	MG/KG	8400	J	4200	J	3100	J	19000	J	16000	J	37000	J	35000	J
ANTIMONY	MG/KG	300	J	1400	J	890	J	27	J	130	J		UJ		UJ
ARSENIC	MG/KG	51	J	66	J	120	J	66	J	23	J		UJ		UJ
BARIUM	MG/KG	190	J	300	J	330	J	170	J	150	J	160	J	210	J
BERYLLIUM	MG/KG		U		U		U		U		U		U		U
CADMIUM	MG/KG	8.3	J	4.4	J	1.1	J		UJ		UJ		UJ		UJ
CALCIUM	MG/KG	1200	J	16000	J	20000	J	2900	J	3700	J	2800	J	1500	J
CHROMIUM	MG/KG	57		16		15		88		54		260		190	
COBALT	MG/KG	8.1	J	2.9	J	3	J	4.7	J	5.5	J	12	J	20	
COPPER	MG/KG	110	J	250	J	350	J	57	J	83	J	170	J	52	J
IRON	MG/KG	27000	J	23000	J	70000	J	64000	J	36000	J	40000	J	66000	J
LEAD	MG/KG	85000		110000		110000	J	2000	J	20000	J	190	J	350	J
MAGNESIUM	MG/KG	5300	J	1300	J	1000	J	3400	J	2200	J	12000	J	16000	J
MANGANESE	MG/KG	340	J	150	J	100	J	140	J	130	J	240	J	320	J
NICKEL	MG/KG	26	J	8.4	J	8.2	J	12	J	9.9	J	47	J	53	J
POTASSIUM	MG/KG	5400	J	2800	J	4100	J	7000	J	2300	J	6100	J	6300	J
SELENIUM	MG/KG		UJ	1.2	J		U		U		U		UJ		UJ
SILVER	MG/KG	2.8		4.3		5.3		2.7		2.5		1.7	J	2.6	J
SODIUM	MG/KG	320		490		2800		1900		730		390		320	
THALLIUM	MG/KG	2.6		3.3			U		U		U		U		U
TOTAL MERCURY	MG/KG	0.36		0.39		0.38		0.25			U		U		U
VANADIUM	MG/KG	39	J	32	J	25	J	110	J	91	J	160	J	200	J
ZINC	MG/KG	150	J	170	J	140	J	36	J	56	J	86	J	150	J

Data Qualifiers

A-Average value. NA-Not analyzed. NAI-Interferences. J-Estimated value.

N-Presumptive evidence of presence of material. NR-Not Reported

K-Actual value is known to be less than value given. L-Actual value is known to be greater than value given.

U-Material was analyzed for but not detected. R-QC indicates that data unusable. Compound may or may not be present. Resampling and reanalysis is necessary for verification.

C-Confirmed by GCMS. 1.When no value is reported, see chlordane constituents. 2.Constituents or metabolites of technical chlordane.

Table 4. Analytical Data Summary of Dust Waste Location, National Smelting and Refining, Atlanta, Georgia, June, 1999.

	WA401		
	06/02/1999		
METALS	1338		
% MOISTURE	%	1	
ALUMINUM	MG/KG	1400	J
ANTIMONY	MG/KG	2000	J
ARSENIC	MG/KG	260	J
BARIUM	MG/KG	450	J
BERYLLIUM	MG/KG	0.1	J
CADMIUM	MG/KG	100	
CALCIUM	MG/KG	5100	
CHROMIUM	MG/KG	37	
COBALT	MG/KG	5.6	J
COPPER	MG/KG	860	
IRON	MG/KG	38000	J
LEAD	MG/KG	270000	J
MAGNESIUM	MG/KG	910	J
MANGANESE	MG/KG	310	
NICKEL	MG/KG	100	
POTASSIUM	MG/KG	640	J
SELENIUM	MG/KG	13	J
SILVER	MG/KG	38	
SODIUM	MG/KG	470	
THALLIUM	MG/KG	8.9	
TOTAL MERCURY	MG/KG	1.9	
VANADIUM	MG/KG	6.3	J
ZINC	MG/KG	620	J

Data Qualifiers

A-Average value. NA-Not analyzed, NAI-Interferences. J-Estimated value.

N-Presumptive evidence of presence of material.

NR-Not Reported

K-Actual value is known to be less than value given.

L-Actual value is known to be greater than value given.

U-Material was analyzed for but not detected.

R-QC indicates that data unusable. Compound may or may not be present. Resampling and reanalysis is necessary for verification.

C-Confirmed by GCMS.

1.When no value is reported, see chlordane constituents.

2.Constituents or metabolites of technical chlordane.

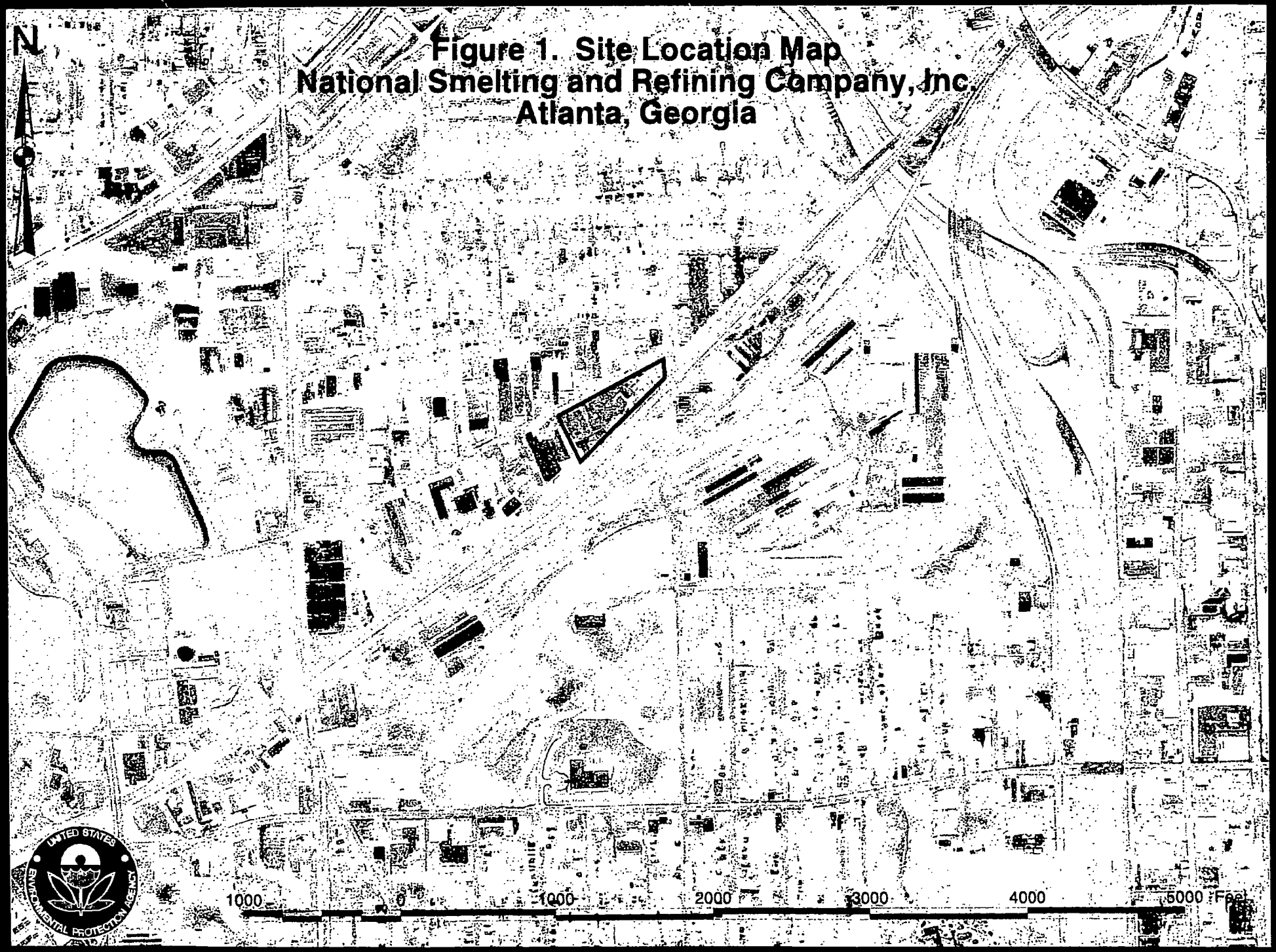


Figure 1. Site Location Map
National Smelting and Refining Company, Inc.
Atlanta, Georgia

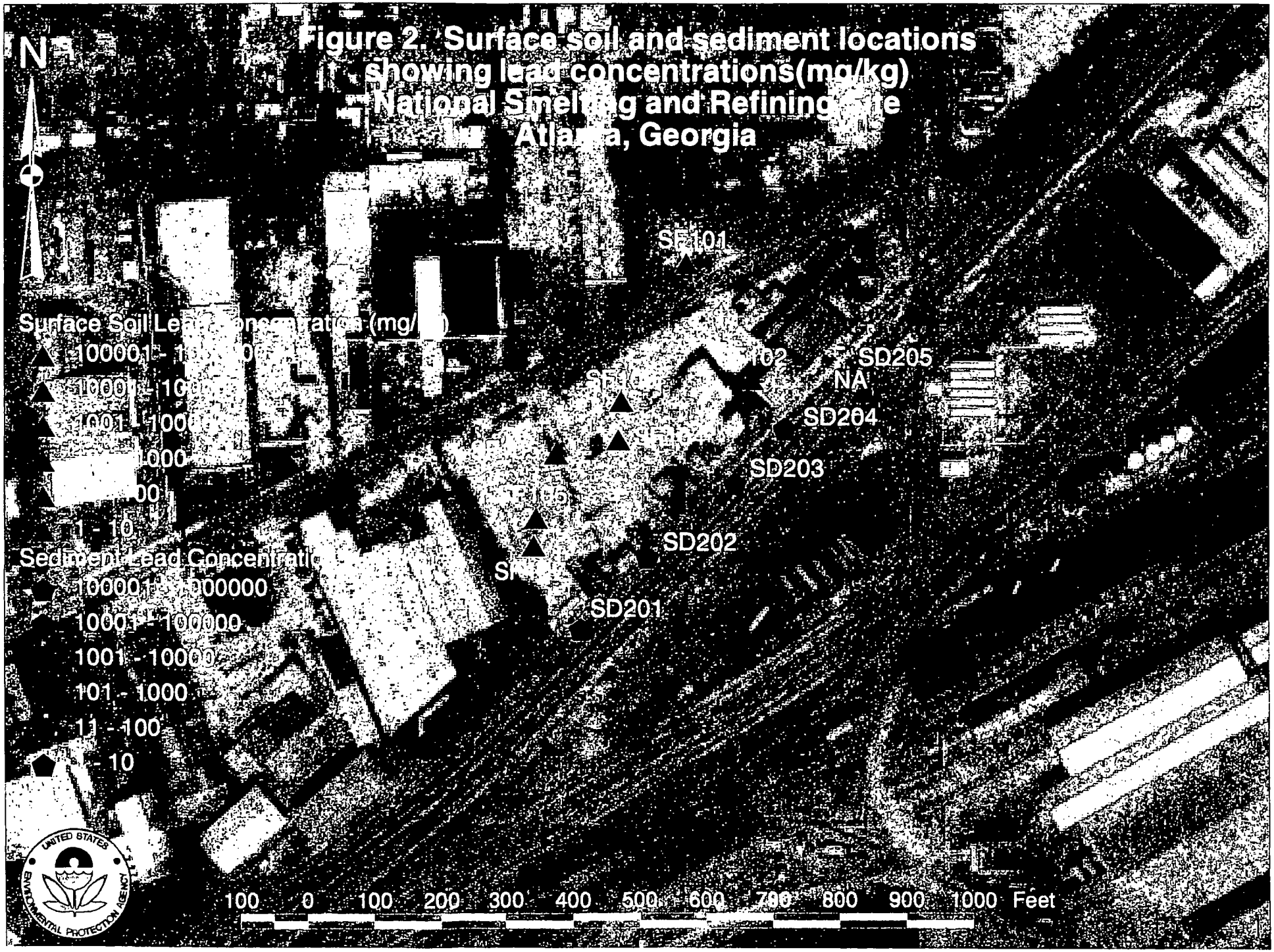
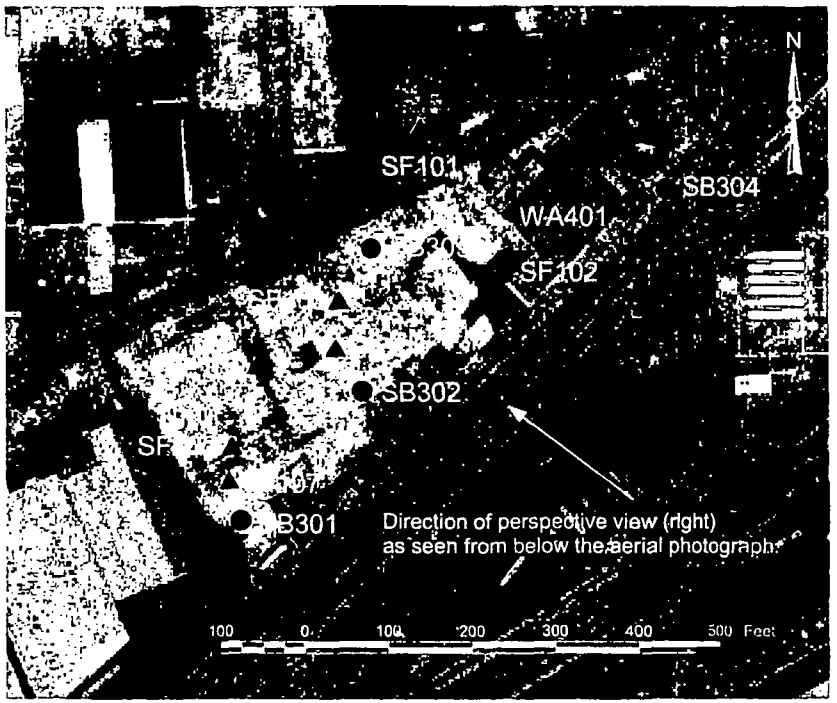
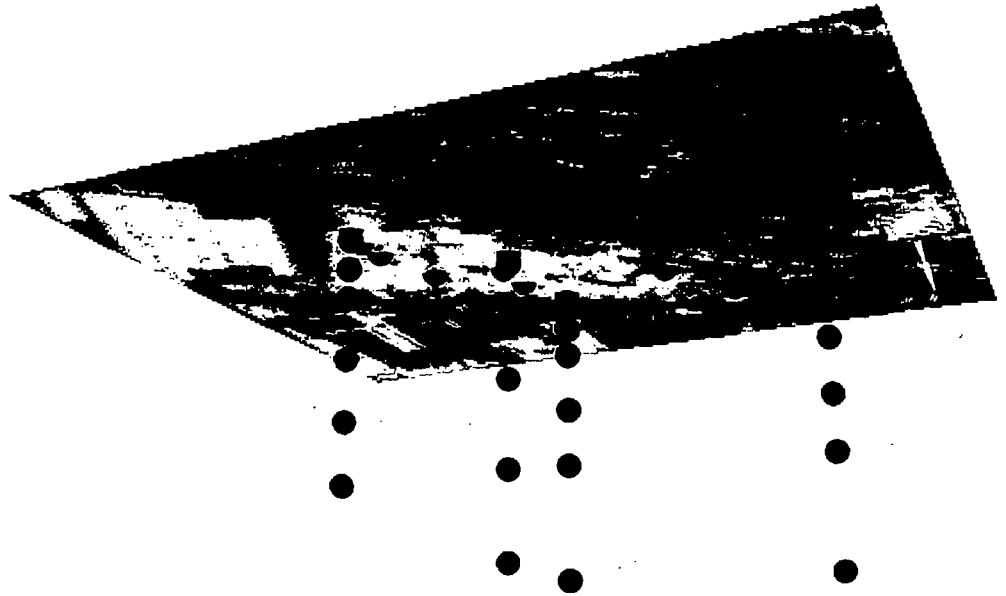


Figure 2. Surface soil and sediment locations showing lead concentrations(mg/kg) National Smelting and Refining Site Atlanta, Georgia

2 2 0085





LEGEND

Dust Waste Lead Concentration (mg/kg)
- ■ 270000

Surface Soil Lead Concentration (mg/kg)
- ▲ 100001 - 1000000
- ▲ 10001 - 100000
- ▲ 1001 - 10000
- ▲ 101 - 1000
- ▲ 11 - 100
- ▲ 1 - 10

Subsurface Soil Lead Concentration (mg/kg)
- ● 100001 - 1000000
- ● 10001 - 100000
- ● 1001 - 10000
- ● 101 - 1000
- ● 11 - 100
- ● 1 - 10

	SB301		SB302		SB303		SB304	
DEPTH	AMOUNT	NOTE	AMOUNT	NOTE	AMOUNT	NOTE	AMOUNT	NOTE
0	16000	J	46000	J	520	J	85000	
1	230000	J			24	J	110000	
2	330	J	28000	J	39	J	110000	J
4	210	J	32000	J	9.5	J	2000	J
6	7800				17	J	20000	J
7			12000	J				
8	54000	J						
10			2600	J	10	J	190	J
15	14000	J	46		6.5	J	350	J

Figure 3. Map (left) and perspective view (above) showing lead concentrations (mg/kg) in surface soil above the concrete, dust waste in the warehouse building, and subsurface soil below the concrete. National Smelting and Refining Superfund Site, Atlanta, Georgia.

FIGURE 4. PHOTOGRAPHS 1 THROUGH 22
NATIONAL SMELTING AND REFINING COMPANY, INC. SITE
ATLANTA, GEORGIA

APPENDIX A
ANALYTICAL DATA SHEETS

Sample 3319 FY 1999 Project: 99-0367

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF
Id/Station: SD201 /
Media: SEDIMENT

Case No: 26889
MD No: QK01
D No: QK01

Inorg Contractor: ARI
Org Contractor: DATAC

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 12:15
Ending:

RESULTS	UNITS	ANALYTE
5800	MG/KG	ALUMINUM
690J	MG/KG	ANTIMONY
260	MG/KG	ARSENIC
490	MG/KG	BARIUM
0.22U	MG/KG	BERYLLIUM
4.3J	MG/KG	CADMIUM
850J	MG/KG	CALCIUM
37J	MG/KG	CHROMIUM
5.0J	MG/KG	COBALT
530J	MG/KG	COPPER
65000	MG/KG	IRON
97000J	MG/KG	LEAD
1700	MG/KG	MAGNESIUM
470J	MG/KG	MANGANESE
0.99	MG/KG	TOTAL MERCURY
25	MG/KG	NICKEL
2300	MG/KG	POTASSIUM
3.5UJ	MG/KG	SELENIUM
2.7	MG/KG	SILVER
240	MG/KG	SODIUM
2.2U	MG/KG	THALLIUM
41	MG/KG	VANADIUM
310J	MG/KG	ZINC
NA	MG/KG	CYANIDE
11	%	% MOISTURE

22 0089

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1 when no value is reported, see chlordane constituents. 2 constituents or metabolites of technical chlordane

Sample 3320 FY 1999 Project: 99-0367

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 26889
Id/Station: SD206 / MD No: QK02 Inorg Contractor: ARI
Media: SEDIMENT D No: QK02 Org Contractor: DATAC

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 13:30
Ending:

RESULTS	UNITS	ANALYTE
6900	MG/KG	ALUMINUM
730J	MG/KG	ANTIMONY
310	MG/KG	ARSENIC
540	MG/KG	BARIUM
0.27U	MG/KG	BERYLLIUM
4.0J	MG/KG	CADMIUM
820J	MG/KG	CALCIUM
39J	MG/KG	CHROMIUM
4.9J	MG/KG	COBALT
490J	MG/KG	COPPER
70000	MG/KG	IRON
79000J	MG/KG	LEAD
1700	MG/KG	MAGNESIUM
270J	MG/KG	MANGANESE
1.0	MG/KG	TOTAL MERCURY
20	MG/KG	NICKEL
2200	MG/KG	POTASSIUM
3.4UJ	MG/KG	SELENIUM
2.9	MG/KG	SILVER
330	MG/KG	SODIUM
2.2U	MG/KG	THALLIUM
47	MG/KG	VANADIUM
300J	MG/KG	ZINC
NA	MG/KG	CYANIDE
10	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 3321 FY 1999 Project: 99-0367

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 26889
Id/Station: SD202 / MD No: QK03 Inorg Contractor: ARI
Media: SEDIMENT

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 12:30
Ending:

RESULTS	UNITS	ANALYTE
10000	MG/KG	ALUMINUM
2300J	MG/KG	ANTIMONY
730	MG/KG	ARSENIC
650	MG/KG	BARIUM
0.50U	MG/KG	BERYLLIUM
460J	MG/KG	CADMIUM
6500J	MG/KG	CALCIUM
62J	MG/KG	CHROMIUM
12	MG/KG	COBALT
1500J	MG/KG	COPPER
52000	MG/KG	IRON
190000J	MG/KG	LEAD
3000	MG/KG	MAGNESIUM
530J	MG/KG	MANGANESE
1.9	MG/KG	TOTAL MERCURY
130	MG/KG	NICKEL
2400	MG/KG	POTASSIUM
4.3UJ	MG/KG	SELENIUM
4.3	MG/KG	SILVER
140	MG/KG	SODIUM
3.7U	MG/KG	THALLIUM
55	MG/KG	VANADIUM
3700J	MG/KG	ZINC
NA	MG/KG	CYANIDE
16	%	% MOISTURE

2 2 0091

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents. 2.constituents or metabolites of technical chlordane

Sample 3322 FY 1999 Project: 99-0367

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 26889
Id/Station: SD203 / MD No: QK04 Inorg Contractor: ARI
Media: SEDIMENT

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 12:45
Ending:

RESULTS	UNITS	ANALYTE
5700	MG/KG	ALUMINUM
1100J	MG/KG	ANTIMONY
330	MG/KG	ARSENIC
290	MG/KG	BARIUM
0.36U	MG/KG	BERYLLIUM
33J	MG/KG	CADMIUM
1100J	MG/KG	CALCIUM
35J	MG/KG	CHROMIUM
6.9J	MG/KG	COBALT
680J	MG/KG	COPPER
53000	MG/KG	IRON
120000J	MG/KG	LEAD
1500	MG/KG	MAGNESIUM
390J	MG/KG	MANGANESE
0.45	MG/KG	TOTAL MERCURY
29	MG/KG	NICKEL
1700	MG/KG	POTASSIUM
2.8UJ	MG/KG	SELENIUM
2.7	MG/KG	SILVER
70	MG/KG	SODIUM
34	MG/KG	THALLIUM
25	MG/KG	VANADIUM
470J	MG/KG	ZINC
NA	MG/KG	CYANIDE
7	%	% MOISTURE

2 2 0092

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 3323 FY 1999 Project: 99-0367

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 26889
Id/Station: SD204 / MD No: QK05 Inorg Contractor: ARI
Media: SEDIMENT

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 13:00
Ending:

RESULTS	UNITS	ANALYTE
3400	MG/KG	ALUMINUM
810J	MG/KG	ANTIMONY
240	MG/KG	ARSENIC
130	MG/KG	BARIUM
0.21U	MG/KG	BERYLLIUM
19J	MG/KG	CADMIUM
2500J	MG/KG	CALCIUM
29J	MG/KG	CHROMIUM
5.3J	MG/KG	COBALT
160J	MG/KG	COPPER
52000	MG/KG	IRON
59000J	MG/KG	LEAD
960	MG/KG	MAGNESIUM
300J	MG/KG	MANGANESE
0.38	MG/KG	TOTAL MERCURY
31	MG/KG	NICKEL
1000	MG/KG	POTASSIUM
2.7J	MG/KG	SELENIUM
1.3J	MG/KG	SILVER
52	MG/KG	SODIUM
4.0U	MG/KG	THALLIUM
17	MG/KG	VANADIUM
340J	MG/KG	ZINC
NA	MG/KG	CYANIDE
6	%	% MOISTURE

22 0093

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents. 2 constituents or metabolites of technical chlordane

METALS S[illegible]PLE ANALYSIS EPA - REGION I[illegible]SD, ATHENS, GA Production Date: 05/2[illegible]/1999 14:34

Sample 3324 FY 1999 Project: 99-0367

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 26889

Id/Station: SD205 / MD No: QK06 Inorg Contractor: ARI

Media: SEDIMENT D No: QK04 Org Contractor: DATAC

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 03/24/1999 13:15

Ending:

RESULTS	UNITS	ANALYTE
NA	MG/KG	ALUMINUM
NA	MG/KG	ANTIMONY
NA	MG/KG	ARSENIC
NA	MG/KG	BARIUM
NA	MG/KG	BERYLLIUM
NA	MG/KG	CADMIUM
NA	MG/KG	CALCIUM
NA	MG/KG	CHROMIUM
NA	MG/KG	COBALT
NA	MG/KG	COPPER
NA	MG/KG	IRON
NA	MG/KG	LEAD
NA	MG/KG	MAGNESIUM
NA	MG/KG	MANGANESE
NA	MG/KG	TOTAL MERCURY
NA	MG/KG	NICKEL
NA	MG/KG	POTASSIUM
NA	MG/KG	SELENIUM
NA	MG/KG	SILVER
NA	MG/KG	SODIUM
NA	MG/KG	THALLIUM
NA	MG/KG	VANADIUM
NA	MG/KG	ZINC
NA	MG/KG	CYANIDE
NA	%	% MOISTURE

SAMPLES NOT RECEIVED BY LAB

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 3319 FY 1999 Project: 99-0367

VOLATILES SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 26889
Id/Station: SD201 / MD No: QK01 Inorg Contractor: ARI
Media: SEDIMENT D,No: QK01 Org Contractor: DATAC

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 12:15
Ending:

RESULTS	UNITS	ANALYTE
12U	UG/KG	CHLOROMETHANE
12U	UG/KG	BROMOMETHANE
12U	UG/KG	VINYL CHLORIDE
12U	UG/KG	CHLOROETHANE
12U	UG/KG	METHYLENE CHLORIDE
12U	UG/KG	ACETONE
12U	UG/KG	CARBON DISULFIDE
12U	UG/KG	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)
12U	UG/KG	1,1-DICHLOROETHANE
12U	UG/KG	1,2-DICHLOROETHENE (TOTAL)
12U	UG/KG	CHLOROFORM
12U	UG/KG	1,2-DICHLOROETHANE
12U	UG/KG	METHYL ETHYL KETONE
12U	UG/KG	1,1,1-TRICHLOROETHANE
12U	UG/KG	CARBON TETRACHLORIDE
12U	UG/KG	BROMODICHLOROMETHANE
12U	UG/KG	1,2-DICHLOROPROPANE
12U	UG/KG	CIS-1,3-DICHLOROPROPENE
12U	UG/KG	TRICHLOROETHENE (TRICHLOROETHYLENE)
12U	UG/KG	DIBROMOCHLOROMETHANE
12U	UG/KG	1,1,2-TRICHLOROETHANE
12U	UG/KG	BENZENE
12U	UG/KG	TRANS-1,3-DICHLOROPROPENE
12U	UG/KG	BROMOFORM
12U	UG/KG	METHYL ISOBUTYL KETONE
12U	UG/KG	METHYL BUTYL KETONE
12U	UG/KG	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
12U	UG/KG	1,1,2,2-TETRACHLOROETHANE
12U	UG/KG	TOLUENE
12U	UG/KG	CHLOROBENZENE
12U	UG/KG	ETHYL BENZENE
12U	UG/KG	STYRENE
12U	UG/KG	TOTAL XYLENES
18	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1 when no value is reported, see chlordane constituents. 2 constituents [illegible]

Sample 3320 FY 1999 Project: 99-0367

VOLATILES SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 26889

Id/Station: SD206 / MD No: QK02 Inorg Contractor: ARI

Media: SEDIMENT D.No: QK02 Org Contractor: DATAC

Produced by: Goddard, Denise

Requestor:

Project Leader: JVAIL

Beginning: 03/24/1999 13:30

Ending:

RESULTS	UNITS	ANALYTE
12U	UG/KG	CHLOROMETHANE
12U	UG/KG	BROMOMETHANE
12U	UG/KG	VINYL CHLORIDE
12U	UG/KG	CHLOROETHANE
12U	UG/KG	METHYLENE CHLORIDE
12U	UG/KG	ACETONE
12U	UG/KG	CARBON DISULFIDE
12U	UG/KG	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)
12U	UG/KG	1,1-DICHLOROETHANE
12U	UG/KG	1,2-DICHLOROETHENE (TOTAL)
12U	UG/KG	CHLOROFORM
12U	UG/KG	1,2-DICHLOROETHANE
12U	UG/KG	METHYL ETHYL KETONE
12U	UG/KG	1,1,1-TRICHLOROETHANE
12U	UG/KG	CARBON TETRACHLORIDE
12U	UG/KG	BROMODICHLOROMETHANE
12U	UG/KG	1,2-DICHLOROPROPANE
12U	UG/KG	CIS-1,3-DICHLOROPROPENE
12U	UG/KG	TRICHLOROETHENE (TRICHLOROETHYLENE)
12U	UG/KG	DIBROMOCHLOROMETHANE
12U	UG/KG	1,1,2-TRICHLOROETHANE
12U	UG/KG	BENZENE
12U	UG/KG	TRANS-1,3-DICHLOROPROPENE
12U	UG/KG	BROMOFORM
12U	UG/KG	METHYL ISOBUTYL KETONE
12U	UG/KG	METHYL BUTYL KETONE
12U	UG/KG	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
12U	UG/KG	1,1,2,2-TETRACHLOROETHANE
12U	UG/KG	TOLUENE
12U	UG/KG	CHLOROBENZENE
12U	UG/KG	ETHYL BENZENE
12U	UG/KG	STYRENE
12U	UG/KG	TOTAL XYLENES
20	%	% MOISTURE

2 2 0096

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 3324 FY 1999 Project: 99-0367

VOLATILES SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 26889
Id/Station: SD205 / MD No: QK06 Inorg Contractor: ARI
Media: SEDIMENT DiNo: QK04 Org Contractor: DATAC

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 13:15
Ending:

RESULTS	UNITS	ANALYTE
13U	UG/KG	CHLOROMETHANE
13U	UG/KG	BROMOMETHANE
13U	UG/KG	VINYL CHLORIDE
13U	UG/KG	CHLOROETHANE
13U	UG/KG	METHYLENE CHLORIDE
13U	UG/KG	ACETONE
13U	UG/KG	CARBON DISULFIDE
13U	UG/KG	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)
13U	UG/KG	1,1-DICHLOROETHANE
13U	UG/KG	1,2-DICHLOROETHENE (TOTAL)
13U	UG/KG	CHLOROFORM
13U	UG/KG	1,2-DICHLOROETHANE
13U	UG/KG	METHYL ETHYL KETONE
13U	UG/KG	1,1,1-TRICHLOROETHANE
13U	UG/KG	CARBON TETRACHLORIDE
13U	UG/KG	BROMODICHLOROMETHANE
13U	UG/KG	1,2-DICHLOROPROPANE
13U	UG/KG	CIS-1,3-DICHLOROPROPENE
13U	UG/KG	TRICHLOROETHENE (TRICHLOROETHYLENE)
13U	UG/KG	DIBROMOCHLOROMETHANE
13U	UG/KG	1,1,2-TRICHLOROETHANE
13U	UG/KG	BENZENE
13U	UG/KG	TRANS-1,3-DICHLOROPROPENE
13U	UG/KG	BROMOFORM
13U	UG/KG	METHYL ISOBUTYL KETONE
13U	UG/KG	METHYL BUTYL KETONE
13U	UG/KG	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
13U	UG/KG	1,1,2,2-TETRACHLOROETHANE
13U	UG/KG	TOLUENE
13U	UG/KG	CHLOROBENZENE
13U	UG/KG	ETHYL BENZENE
13U	UG/KG	STYRENE
13U	UG/KG	TOTAL XYLENES
23	%	% MOISTURE

2 2 0097

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification

Sample 3319 FY 1999 Project: 99-0367

EXTRACTABLES SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 26889
Id/Station: SD201 / MD No: QK01 Inorg Contractor: ARI
Media: SEDIMENT D No: QK01 Org Contractor: DATAC

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 12:15
Ending:

RESULTS	UNITS	ANALYTE
800U	UG/KG	PHENOL
800UJ	UG/KG	BIS(2-CHLOROETHYL) ETHER
800U	UG/KG	2-CHLOROPHENOL
800U	UG/KG	1,3-DICHLOROBENZENE
800U	UG/KG	1,4-DICHLOROBENZENE
800U	UG/KG	1,2-DICHLOROBENZENE
400J	UG/KG	2-METHYLPHENOL
800U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
800U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
800U	UG/KG	N-NITROSODI-N-PROPYLAMINE
800U	UG/KG	HEXACHLOROETHANE
800U	UG/KG	NITROBENZENE
800U	UG/KG	ISOPHORONE
800U	UG/KG	2-NITROPHENOL
800U	UG/KG	2,4-DIMETHYLPHENOL
800U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
800U	UG/KG	2,4-DICHLOROPHENOL
800U	UG/KG	1,2,4-TRICHLOROBENZENE
470J	UG/KG	NAPHTHALENE
800U	UG/KG	4-CHLOROANILINE
800UJ	UG/KG	HEXACHLOROBUTADIENE
800U	UG/KG	4-CHLORO-3-METHYLPHENOL
650J	UG/KG	2-METHYLNAPHTHALENE
800U	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
800U	UG/KG	2,4,6-TRICHLOROPHENOL
2000U	UG/KG	2,4,5-TRICHLOROPHENOL
800U	UG/KG	2-CHLORONAPHTHALENE
2000U	UG/KG	2-NITROANILINE
800U	UG/KG	DIMETHYL PHTHALATE
800U	UG/KG	ACENAPHTHYLENE
800U	UG/KG	2,6-DINITROTOLUENE
2000U	UG/KG	3-NITROANILINE
150J	UG/KG	ACENAPHTHENE
2000U	UG/KG	2,4-DINITROPHENOL
2000U	UG/KG	4-NITROPHENOL
190J	UG/KG	DIBENZOFURAN

RESULTS	UNITS	ANALYTE
800U	UG/KG	2,4-DINITROTOLUENE
800U	UG/KG	DIETHYL PHTHALATE
800U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
140J	UG/KG	FLUORENE
2000U	UG/KG	4-NITROANILINE
2000U	UG/KG	2-METHYL-4,6-DINITROPHENOL
800U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
800U	UG/KG	4-BROMOPHENYL PHENYL ETHER
800U	UG/KG	HEXACHLOROBENZENE (HCB)
2000U	UG/KG	PENTACHLOROPHENOL
2000	UG/KG	PHENANTHRENE
340J	UG/KG	ANTHRACENE
290J	UG/KG	CARBAZOLE
800U	UG/KG	DI-N-BUTYLPHTHALATE
2700J	UG/KG	FLUORANTHENE
3000	UG/KG	PYRENE
800UJ	UG/KG	BENZYL BUTYL PHTHALATE
800U	UG/KG	3,3'-DICHLOROBENZIDINE
1800	UG/KG	BENZO(A)ANTHRACENE
1900	UG/KG	CHRYSENE
3900J	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
800UJ	UG/KG	DI-N-OCTYLPHTHALATE
3000	UG/KG	BENZO(B)FLUORANTHENE
950	UG/KG	BENZO(K)FLUORANTHENE
1400	UG/KG	BENZO-A-PYRENE
1400	UG/KG	INDENO (1,2,3-CD) PYRENE
310J	UG/KG	DIBENZO(A,H)ANTHRACENE
1200	UG/KG	BENZO(GHI)PERYLENE
18	%	% MOISTURE

22 0098

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents, 2.constituents or metabolites of technical chlordane

Sample 3319 FY 1999 Project: 99-0367

MISCELLANEOUS COMPOUNDS

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 26889
Id/Station: SD201 / MD No: QK01 Inorg Contractor: ARI
Media: SEDIMENT D.No: QK01 Org Contractor: DATAC

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 12:15
Ending:

RESULTS	UNITS	ANALYTE
260J	UG/KG	UNIDENTIFIED KETONE
360JN	UG/KG	1-METHYLNAPHTHALENE
260JN	UG/KG	METHYL DIBENZOFURAN
2000J	UG/KG	5 UNIDENTIFIED ALKYL-SUBSTITUTED PHENOLS
11000J	UG/KG	20 UNIDENTIFIED PAHS
2000JN	UG/KG	HEXADECANOIC ACID
840JN	UG/KG	TRIS (METHYL) PHOSPHORIC ACID
3800J	UG/KG	ALKANES

2 2 0099

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1 when no value is reported, see chlordane constituents, 2 [illegible]

Sample 3320 FY 1999 Project: 99-0367

EXTRACTABLES SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 26889
Id/Station: SD206 / MD No: QK02 Inorg Contractor: ARI
Media: SEDIMENT D.No: QK02 Org Contractor: DATAC

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 13:30
Ending:

RESULTS	UNITS	ANALYTE
820U	UG/KG	PHENOL
820UJ	UG/KG	BIS(2-CHLOROETHYL) ETHER
820U	UG/KG	2-CHLOROPHENOL
820U	UG/KG	1,3-DICHLOROBENZENE
820U	UG/KG	1,4-DICHLOROBENZENE
820U	UG/KG	1,2-DICHLOROBENZENE
820U	UG/KG	2-METHYLPHENOL
820U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
820U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
820U	UG/KG	N-NITROSODI-N-PROPYLAMINE
820U	UG/KG	HEXACHLOROETHANE
820U	UG/KG	NITROBENZENE
820U	UG/KG	ISOPHORONE
820U	UG/KG	2-NITROPHENOL
820U	UG/KG	2,4-DIMETHYLPHENOL
820U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
820U	UG/KG	2,4-DICHLOROPHENOL
820U	UG/KG	1,2,4-TRICHLOROBENZENE
130J	UG/KG	NAPHTHALENE
820U	UG/KG	4-CHLOROANILINE
820UJ	UG/KG	HEXACHLOROBUTADIENE
820U	UG/KG	4-CHLORO-3-METHYLPHENOL
160J	UG/KG	2-METHYLNAPHTHALENE
820U	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
820U	UG/KG	2,4,6-TRICHLOROPHENOL
2100U	UG/KG	2,4,5-TRICHLOROPHENOL
820U	UG/KG	2-CHLORONAPHTHALENE
2100U	UG/KG	2-NITROANILINE
820U	UG/KG	DIMETHYL PHTHALATE
820U	UG/KG	ACENAPHTHYLENE
820U	UG/KG	2,6-DINITROTOLUENE
2100U	UG/KG	3-NITROANILINE
87J	UG/KG	ACENAPHTHENE
2100U	UG/KG	2,4-DINITROPHENOL
2100U	UG/KG	4-NITROPHENOL
820U	UG/KG	DIBENZOFURAN
820U	UG/KG	2,4-DINITROTOLUENE
820U	UG/KG	DIETHYL PHTHALATE
820U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
91J	UG/KG	FLUORENE
2100U	UG/KG	4-NITROANILINE
2100U	UG/KG	2-METHYL-4,6-DINITROPHENOL
820U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
820U	UG/KG	4-BROMOPHENYL PHENYL ETHER
820U	UG/KG	HEXACHLOROBENZENE (HCB)
2100U	UG/KG	PENTACHLOROPHENOL
2000	UG/KG	PHENANTHRENE
390J	UG/KG	ANTHRACENE
220J	UG/KG	CARBAZOLE
820U	UG/KG	DI-N-BUTYLPHTHALATE
3400J	UG/KG	FLUORANTHENE
3600	UG/KG	PYRENE
820UJ	UG/KG	BENZYL BUTYL PHTHALATE
820U	UG/KG	3,3'-DICHLOROBENZIDINE
2100	UG/KG	BENZO(A)ANTHRACENE
2200	UG/KG	CHRYSENE
2100J	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
820UJ	UG/KG	DI-N-OCTYLPHTHALATE
3000	UG/KG	BENZO(B)FLUORANTHENE
970	UG/KG	BENZO(K)FLUORANTHENE
1800	UG/KG	BENZO-A-PYRENE
1900	UG/KG	INDENO (1,2,3-CD) PYRENE
410J	UG/KG	DIBENZO(A,H)ANTHRACENE
1700	UG/KG	BENZO(GHI)PERYLENE
20	%	% MOISTURE

2 2 0100

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 3320 FY 1999 Project: 99-0367

MISCELLANEOUS COMPOUNDS

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 26889
Id/Station: SD206 / MD No: QK02 Inorg Contractor: ARI
Media: SEDIMENT D No: QK02 Org Contractor: DATAC

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 13:30
Ending:

RESULTS	UNITS	ANALYTE
230JN	UG/KG	1-METHYLNAPHTHALENE
2300J	UG/KG	5 UNIDENTIFIED ALKYL-SUBSTITUTED PHENOLS
9600J	UG/KG	21 UNIDENTIFIED PAHS
220JN	UG/KG	BENZONAPHTHOFURAN
510JN	UG/KG	TRIS (METHYL) PHOSPHORIC

2 2 0101

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 3324 FY 1999 Project: 99-0367

EXTRACTABLES SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 26889
Id/Station: SD205 / MD No: QK06 Inorg Contractor: ARI
Media: SEDIMENT D.No: QK04 Org Contractor: DATAC

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 13:15
Ending:

RESULTS	UNITS	ANALYTE
230J	UG/KG	PHENOL
230J	UG/KG	BIS(2-CHLOROETHYL) ETHER
860U	UG/KG	2-CHLOROPHENOL
860U	UG/KG	1,3-DICHLOROBENZENE
860U	UG/KG	1,4-DICHLOROBENZENE
860U	UG/KG	1,2-DICHLOROBENZENE
860U	UG/KG	2-METHYLPHENOL
860U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
860U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
860U	UG/KG	N-NITROSODI-N-PROPYLAMINE
860U	UG/KG	HEXACHLOROETHANE
860U	UG/KG	NITROBENZENE
860U	UG/KG	ISOPHORONE
860U	UG/KG	2-NITROPHENOL
860U	UG/KG	2,4-DIMETHYLPHENOL
860U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
860U	UG/KG	2,4-DICHLOROPHENOL
860U	UG/KG	1,2,4-TRICHLOROBENZENE
410J	UG/KG	NAPHTHALENE
860U	UG/KG	4-CHLOROANILINE
860UJ	UG/KG	HEXACHLOROBUTADIENE
860U	UG/KG	4-CHLORO-3-METHYLPHENOL
400J	UG/KG	2-METHYLNAPHTHALENE
860U	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
860U	UG/KG	2,4,6-TRICHLOROPHENOL
2200U	UG/KG	2,4,5-TRICHLOROPHENOL
860U	UG/KG	2-CHLORONAPHTHALENE
2200U	UG/KG	2-NITROANILINE
860U	UG/KG	DIMETHYL PHTHALATE
860U	UG/KG	ACENAPHTHYLENE
860U	UG/KG	2,6-DINITROTOLUENE
2200U	UG/KG	3-NITROANILINE
860U	UG/KG	ACENAPHTHENE
2200U	UG/KG	2,4-DINITROPHENOL
2200U	UG/KG	4-NITROPHENOL
88J	UG/KG	DIBENZOFURAN
860U	UG/KG	2,4-DINITROTOLUENE
860U	UG/KG	DIETHYL PHTHALATE
860U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
860U	UG/KG	FLUORENE
2200U	UG/KG	4-NITROANILINE
360J	UG/KG	2-METHYL-4,6-DINITROPHENOL
560J	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
860U	UG/KG	4-BROMOPHENYL PHENYL ETHER
860U	UG/KG	HEXACHLOROBENZENE (HCB)
2200U	UG/KG	PENTACHLOROPHENOL
810J	UG/KG	PHENANTHRENE
130J	UG/KG	ANTHRACENE
860U	UG/KG	CARBAZOLE
860U	UG/KG	DI-N-BUTYLPHTHALATE
820J	UG/KG	FLUORANTHENE
1400	UG/KG	PYRENE
860U	UG/KG	BENZYL BUTYL PHTHALATE
860U	UG/KG	3,3'-DICHLOROBENZIDINE
900	UG/KG	BENZO(A)ANTHRACENE
1400	UG/KG	CHRYSENE
1000J	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
860UJ	UG/KG	DI-N-OCTYLPHTHALATE
1300	UG/KG	BENZO(B)FLUORANTHENE
280J	UG/KG	BENZO(K)FLUORANTHENE
570J	UG/KG	BENZO-A-PYRENE
480J	UG/KG	INDENO (1,2,3-CD) PYRENE
150J	UG/KG	DIBENZO(A,H)ANTHRACENE
490J	UG/KG	BENZO(GHI)PERYLENE
23	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 3324 FY 1999 Project: 99-0367

MISCELLANEOUS COMPOUNDS

Facility: National Smelting and Refining Atlanta, GA
Program: SSF
Id/Station: SD205 /
Media: SEDIMENT

Case No: 26889
MD No: QK06
D,No: QK04

Inorg Contractor: ARI
Org Contractor: DATAC

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 13:15
Ending:

RESULTS	UNITS	ANALYTE
6500J	UG/KG	2 UNIDENTIFIED CARBOXYLIC ACIDS
1100JN	UG/KG	TETRADECANOIC ACID
1300U	UG/KG	PHENANTHRENE CARBOXYLIC ACID
780J	UG/KG	1 UNIDENTIFIED UNSATURATED HYDROCARBON
19000J	UG/KG	22 UNIDENTIFIED PAHS
12000J	UG/KG	ALKANES

2 2 0103

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 3319 FY 1999 Project: 99-0367

PESTICIDES SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 26889
Id/Station: SD201 / MD No: QK01 Inorg Contractor: ARI
Media: SEDIMENT D No: QK01 Org Contractor: DATAC

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 12:15
Ending:

RESULTS	UNITS	ANALYTE
2.1U	UG/KG	ALPHA-BHC
2.1U	UG/KG	BETA-BHC
2.1J	UG/KG	DELTA-BHC
2.1U	UG/KG	GAMMA-BHC (LINDANE)
2.1U	UG/KG	HEPTACHLOR
2.1U	UG/KG	ALDRIN
2.1U	UG/KG	HEPTACHLOR EPOXIDE
2.1U	UG/KG	ENDOSULFAN I (ALPHA)
9.5U	UG/KG	DIELDRIN
15N	UG/KG	4,4'-DDE (P,P'-DDE)
4.0U	UG/KG	ENDRIN
18U	UG/KG	ENDOSULFAN II (BETA)
4.0U	UG/KG	4,4'-DDD (P,P'-DDD)
4.0U	UG/KG	ENDOSULFAN SULFATE
25U	UG/KG	4,4'-DDT (P,P'-DDT)
21U	UG/KG	METHOXYCHLOR
4.0U	UG/KG	ENDRIN KETONE
6.6N	UG/KG	ENDRIN ALDEHYDE
2.1U	UG/KG	ALPHA-CHLORDANE /2
6.5U	UG/KG	GAMMA-CHLORDANE /2
210U	UG/KG	TOXAPHENE
40U	UG/KG	PCB-1016 (AROCLOR 1016)
82U	UG/KG	PCB-1221 (AROCLOR 1221)
40U	UG/KG	PCB-1232 (AROCLOR 1232)
40U	UG/KG	PCB-1242 (AROCLOR 1242)
40U	UG/KG	PCB-1248 (AROCLOR 1248)
720	UG/KG	PCB-1254 (AROCLOR 1254)
40U	UG/KG	PCB-1260 (AROCLOR 1260)
18	%	% MOISTURE

2 2 0104

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 3320 FY 1999 Project: 99-0367

PESTICIDES SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 26889
Id/Station: SD206 / MD No: QK02 Inorg Contractor: ARI
Media: SEDIMENT D No: QK02 Org Contractor: DATAC

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 13:30
Ending:

RESULTS	UNITS	ANALYTE
2.1U	UG/KG	ALPHA-BHC
2.1U	UG/KG	BETA-BHC
2.1U	UG/KG	DELTA-BHC
2.1U	UG/KG	GAMMA-BHC (LINDANE)
2.1U	UG/KG	HEPTACHLOR
2.1U	UG/KG	ALDRIN
2.1U	UG/KG	HEPTACHLOR EPOXIDE
2.1U	UG/KG	ENDOSULFAN I (ALPHA)
13U	UG/KG	DIELDRIN
15N	UG/KG	4,4'-DDE (P,P'-DDE)
4.1U	UG/KG	ENDRIN
20U	UG/KG	ENDOSULFAN II (BETA)
4.1U	UG/KG	4,4'-DDD (P,P'-DDD)
4.1U	UG/KG	ENDOSULFAN SULFATE
23U	UG/KG	4,4'-DDT (P,P'-DDT)
21U	UG/KG	METHOXYCHLOR
4.1U	UG/KG	ENDRIN KETONE
7.3N	UG/KG	ENDRIN ALDEHYDE
2.1U	UG/KG	ALPHA-CHLORDANE /2
7.0U	UG/KG	GAMMA-CHLORDANE /2
210U	UG/KG	TOXAPHENE
41U	UG/KG	PCB-1016 (AROCLOR 1016)
84U	UG/KG	PCB-1221 (AROCLOR 1221)
41U	UG/KG	PCB-1232 (AROCLOR 1232)
41U	UG/KG	PCB-1242 (AROCLOR 1242)
41U	UG/KG	PCB-1248 (AROCLOR 1248)
800	UG/KG	PCB-1254 (AROCLOR 1254)
41U	UG/KG	PCB-1260 (AROCLOR 1260)
20	%	% MOISTURE

22 0105

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1 when no value is reported, see chlordane constituents, 2 constituents or metabolites of the [illegible]

Sample 3324 FY 1999 Project: 99-0367

PESTICIDES SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 26889
Id/Station: SD205 / MD No: QK06 Inorg Contractor: ARI
Media: SEDIMENT D.No: QK04 Org Contractor: DATAC

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 03/24/1999 13:15
Ending:

RESULTS	UNITS	ANALYTE
0.54JN	UG/KG	ALPHA-BHC
2.2U	UG/KG	BETA-BHC
2.2U	UG/KG	DELTA-BHC
2.2U	UG/KG	GAMMA-BHC (LINDANE)
1.6JN	UG/KG	HEPTACHLOR
2.2U	UG/KG	ALDRIN
2.2U	UG/KG	HEPTACHLOR EPOXIDE
2.2U	UG/KG	ENDOSULFAN I (ALPHA)
4.3U	UG/KG	DIELDRIN
12N	UG/KG	4,4'-DDE (P,P'-DDE)
4.3U	UG/KG	ENDRIN
8.9U	UG/KG	ENDOSULFAN II (BETA)
4.3U	UG/KG	4,4'-DDD (P,P'-DDD)
4.3U	UG/KG	ENDOSULFAN SULFATE
20U	UG/KG	4,4'-DDT (P,P'-DDT)
22U	UG/KG	METHOXYCHLOR
4.3U	UG/KG	ENDRIN KETONE
4.3	UG/KG	ENDRIN ALDEHYDE
2.2U	UG/KG	ALPHA-CHLORDANE /2
3.1U	UG/KG	GAMMA-CHLORDANE /2
220U	UG/KG	TOXAPHENE
43U	UG/KG	PCB-1016 (AROCLOR 1016)
87U	UG/KG	PCB-1221 (AROCLOR 1221)
43U	UG/KG	PCB-1232 (AROCLOR 1232)
43U	UG/KG	PCB-1242 (AROCLOR 1242)
43U	UG/KG	PCB-1248 (AROCLOR 1248)
330	UG/KG	PCB-1254 (AROCLOR 1254)
43U	UG/KG	PCB-1260 (AROCLOR 1260)
23	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5521 FY 1999 Project: 99-0517

VOLATILES SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF
Id/Station: SF106 /
Media: SURFACE SOIL (0" - 12")

Case No: 27071
MD No: QQ84
D No: QQ83

Inorg Contractor: SENTIN
Org Contractor: CLAYTN

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 11:35
Ending:

RESULTS	UNITS	ANALYTE
11U	UG/KG	CHLOROMETHANE
11U	UG/KG	BROMOMETHANE
11U	UG/KG	VINYL CHLORIDE
11U	UG/KG	CHLOROETHANE
11U	UG/KG	METHYLENE CHLORIDE
12UJ	UG/KG	ACETONE
2J	UG/KG	CARBON DISULFIDE
11U	UG/KG	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)
11U	UG/KG	1,1-DICHLOROETHANE
11U	UG/KG	1,2-DICHLOROETHENE (TOTAL)
11U	UG/KG	CHLOROFORM
11U	UG/KG	1,2-DICHLOROETHANE
11U	UG/KG	METHYL ETHYL KETONE
11U	UG/KG	1,1,1-TRICHLOROETHANE
11U	UG/KG	CARBON TETRACHLORIDE
11U	UG/KG	BROMODICHLOROMETHANE
11U	UG/KG	1,2-DICHLOROPROPANE
11U	UG/KG	CIS-1,3-DICHLOROPROPENE
11U	UG/KG	TRICHLOROETHENE (TRICHLOROETHYLENE)
11U	UG/KG	DIBROMOCHLOROMETHANE
11U	UG/KG	1,1,2-TRICHLOROETHANE
11U	UG/KG	BENZENE
11U	UG/KG	TRANS-1,3-DICHLOROPROPENE
11U	UG/KG	BROMOFORM
11U	UG/KG	METHYL ISOBUTYL KETONE
11U	UG/KG	METHYL BUTYL KETONE
11U	UG/KG	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
11U	UG/KG	1,1,2,2-TETRACHLOROETHANE
18J	UG/KG	TOLUENE
11U	UG/KG	CHLOROBENZENE
11U	UG/KG	ETHYL BENZENE
11U	UG/KG	STYRENE
11U	UG/KG	TOTAL XYLENES
8	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5521 FY 1999 Project: 99-0517

MISCELLANEOUS COMPOUNDS

Facility: National Smelting and Refining Atlanta, GA
Program: SSF
Id/Station: SF106 /
Media: SURFACE SOIL (0" - 12")

Case No: 27071
MD No: QQ84
D No: QQ83

Inorg Contractor: SENTIN
Org Contractor: CLAYTN

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 11:35
Ending:

RESULTS	UNITS	ANALYTE
7JN	UG/KG	CYCLOTRISILOXANE, HEXAMETHYL
80JN	UG/KG	CYCLOTETRASILOXANE, OCTAMETHYL
36JN	UG/KG	BENZOIC ACID, 2-[(TRIMETHYLSILYL)-OXY-]

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5524 FY 1999 Project: 99-0517

VOLATILES SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF
Id/Station: SF102 /
Media: SURFACE SOIL (0" - 12")

Case No: 27071
MD No: QQ87
D No: QQ84

Inorg Contractor: SENTIN
Org Contractor: CLAYTN

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 11:55
Ending:

RESULTS	UNITS	ANALYTE
10U	UG/KG	CHLOROMETHANE
10U	UG/KG	BROMOMETHANE
10U	UG/KG	VINYL CHLORIDE
10U	UG/KG	CHLOROETHANE
14U	UG/KG	METHYLENE CHLORIDE
11UJ	UG/KG	ACETONE
2J	UG/KG	CARBON DISULFIDE
10U	UG/KG	1,1-DICHLOROETHENE (1,1-DICHLOROETHYLENE)
10U	UG/KG	1,1-DICHLOROETHANE
10U	UG/KG	1,2-DICHLOROETHENE (TOTAL)
10U	UG/KG	CHLOROFORM
10U	UG/KG	1,2-DICHLOROETHANE
10U	UG/KG	METHYL ETHYL KETONE
10U	UG/KG	1,1,1-TRICHLOROETHANE
10U	UG/KG	CARBON TETRACHLORIDE
10U	UG/KG	BROMODICHLOROMETHANE
10U	UG/KG	1,2-DICHLOROPROPANE
10U	UG/KG	CIS-1,3-DICHLOROPROPENE
10U	UG/KG	TRICHLOROETHENE (TRICHLOROETHYLENE)
10U	UG/KG	DIBROMOCHLOROMETHANE
10U	UG/KG	1,1,2-TRICHLOROETHANE
10U	UG/KG	BENZENE
10U	UG/KG	TRANS-1,3-DICHLOROPROPENE
10U	UG/KG	BROMOFORM
10U	UG/KG	METHYL ISOBUTYL KETONE
10U	UG/KG	METHYL BUTYL KETONE
10U	UG/KG	TETRACHLOROETHENE (TETRACHLOROETHYLENE)
10U	UG/KG	1,1,2,2-TETRACHLOROETHANE
40	UG/KG	TOLUENE
10U	UG/KG	CHLOROBENZENE
10U	UG/KG	ETHYL BENZENE
10U	UG/KG	STYRENE
10U	UG/KG	TOTAL XYLENES
1	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5524 FY 1999 Project: 99-0517

MISCELLANEOUS COMPOUNDS

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SF102 / MD No: QQ87 Inorg Contractor: SENTIN
Media: SURFACE SOIL (0" - 12") D No: QQ84 Org Contractor: CLAYTN

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 11:55
Ending:

RESULTS	UNITS	ANALYTE
6JN	UG/KG	SILANOL, TRIMETHYL-
10JN	UG/KG	CYCLOTRISILOXANE, HEXAMETHYL-
95JN	UG/KG	CYCLOTETRASILOXANE, OCTAMETHYL
37JN	UG/KG	BENZOIC ACID, 2-[(TRIMETHYLSILYL)-OXY-]

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5521 FY 1999 Project: 99-0517

EXTRACTABLES SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SF106 / MD No: QQ84 Inorg Contractor: SENTIN
Media: SURFACE SOIL (0" - 12") D No: QQ83 Org Contractor: CLAYTN

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 11:35
Ending:

RESULTS	UNITS	ANALYTE
1800U	UG/KG	PHENOL
1800U	UG/KG	BIS(2-CHLOROETHYL) ETHER
1800U	UG/KG	2-CHLOROPHENOL
1800U	UG/KG	1,3-DICHLOROBENZENE
1800U	UG/KG	1,4-DICHLOROBENZENE
1800U	UG/KG	1,2-DICHLOROBENZENE
220J	UG/KG	2-METHYLPHENOL
1800U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
1800U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
1800U	UG/KG	N-NITROSODI-N-PROPYLAMINE
1800U	UG/KG	HEXACHLOROETHANE
1800U	UG/KG	NITROBENZENE
1800U	UG/KG	ISOPHORONE
1800U	UG/KG	2-NITROPHENOL
1800U	UG/KG	2,4-DIMETHYLPHENOL
1800U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
1800U	UG/KG	2,4-DICHLOROPHENOL
1800U	UG/KG	1,2,4-TRICHLOROBENZENE
1000J	UG/KG	NAPHTHALENE
1800U	UG/KG	4-CHLOROANILINE
1800U	UG/KG	HEXACHLOROBUTADIENE
1800U	UG/KG	4-CHLORO-3-METHYLPHENOL
1200J	UG/KG	2-METHYLNAPHTHALENE
1800U	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
1800U	UG/KG	2,4,6-TRICHLOROPHENOL
4500U	UG/KG	2,4,5-TRICHLOROPHENOL
1800U	UG/KG	2-CHLORONAPHTHALENE
4500U	UG/KG	2-NITROANILINE
1800U	UG/KG	DIMETHYL PHTHALATE
310J	UG/KG	ACENAPHTHYLENE
1800U	UG/KG	2,6-DINITROTOLUENE
4500U	UG/KG	3-NITROANILINE
900J	UG/KG	ACENAPHTHENE
4500UJ	UG/KG	2,4-DINITROPHENOL
4500U	UG/KG	4-NITROPHENOL
820J	UG/KG	DIBENZOFURAN

RESULTS	UNITS	ANALYTE
1800UJ	UG/KG	2,4-DINITROTOLUENE
1800U	UG/KG	DIETHYL PHTHALATE
1800U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
750J	UG/KG	FLUORENE
4500U	UG/KG	4-NITROANILINE
4500UJ	UG/KG	2-METHYL-4,6-DINITROPHENOL
1300J	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
1800U	UG/KG	4-BROMOPHENYL PHENYL ETHER
1800U	UG/KG	HEXACHLOROBENZENE (HCB)
4500U	UG/KG	PENTACHLOROPHENOL
5500	UG/KG	PHENANTHRENE
1800	UG/KG	ANTHRACENE
760J	UG/KG	CARBAZOLE
1800U	UG/KG	DI-N-BUTYLPHTHALATE
11000	UG/KG	FLUORANTHENE
8900J	UG/KG	PYRENE
1800UJ	UG/KG	BENZYL BUTYL PHTHALATE
1800U	UG/KG	3,3'-DICHLOROBENZIDINE
8300	UG/KG	BENZO(A)ANTHRACENE
11000J	UG/KG	CHRYSENE
6800J	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
1800UJ	UG/KG	DI-N-OCTYLPHTHALATE
13000	UG/KG	BENZO(B)FLUORANTHENE
7500	UG/KG	BENZO(K)FLUORANTHENE
11000	UG/KG	BENZO-A-PYRENE
5000	UG/KG	INDENO (1,2,3-CD) PYRENE
1800U	UG/KG	DIBENZO(A,H)ANTHRACENE
2900	UG/KG	BENZO(GHI)PERYLENE
8	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5521 FY 1999 Project: 99-0517

MISCELLANEOUS COMPOUNDS

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SF106 / MD No: QQ84 Inorg Contractor: SENTIN
Media: SURFACE SOIL (0" - 12") D No: QQ83 Org Contractor: CLAYTN

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 11:35
Ending:

RESULTS	UNITS	ANALYTE
2000J	UG/KG	UNKNOWN
2000J	UG/KG	UNKNOWN ACID TYPE
3400J	UG/KG	UNKNOWN PAH + PCB
2800JN	UG/KG	2-PHENYLNAPHTHALENE
2000JN	UG/KG	CYCLOPENTA (DEF) PHENANTHRENONE + UNKNOWN PCB
3000JN	UG/KG	PHENANTHRO [4,5-BCD] THIOPHENE
3900JN	UG/KG	11H-BENZO [B] FLUORENE
2500JN	UG/KG	1,1'-BIPHENYL, 2, 2', 4, 4', 6-PENTACHLORO
1900JN	UG/KG	PYRENE, 1-METHYL- + UNKNOWN PCB
1800JN	UG/KG	1, 1' :2', 1' '-TERPHENYL + UNKNOWN PCB
3600JN	UG/KG	7H-BENZ [DE] ANTHRACEN-7-ONE
5000JN	UG/KG	BENZO [B] NAPHTHO [2, 1-D] THIOPHENE
2700JN	UG/KG	BENZO [C] PHENANTHRENE
3600JN	UG/KG	BENZO [GHI] FLUORANTHENE
3000JN	UG/KG	7H-BENZ [DE] ANTHRACEN-7-ONE
5200J	UG/KG	UNKNOWN PAH
3700JN	UG/KG	11H-BENZO (A) CARBAZOLE + UNKNOWN
3500JN	UG/KG	BENZO (C) CARBAZOLE + UNKNOWN
4800JN	UG/KG	TRIPHENYLENE, 2-METHYL-
4000J	UG/KG	UNKNOWN HYDROCARBON
5200J	UG/KG	UNKNOWN HYDROCARBON
2200JN	UG/KG	BENZ [A] ANTHRACENE, 7, 12-DIMETHYL
4400JN	UG/KG	1H-INDENE, 1,1'-(1,2-ETHANEDIYLIDENE)BIS-
3900JN	UG/KG	PERYLENE
2800J	UG/KG	BENZO (A) PYRENE-4, 5-OXIDE + UNKNOWN
14000JN	UG/KG	BENZO (E) PYRENE
7300JN	UG/KG	BENZO [J] FLUORANTHENE
2500J	UG/KG	UNKNOWN
5000J	UG/KG	UNKNOWN
2500JN	UG/KG	1,2;3,4-DIBENZOANTHRACENE + UNKNOWN

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5524 FY 1999 Project: 99-0517

EXTRACTABLES SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SF102 / MD No: QQ87 Inorg Contractor: SENTIN
Media: SURFACE SOIL (0" - 12") D No: QQ84 Org Contractor: CLAYTN

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 11:55
Ending:

RESULTS	UNITS	ANALYTE
380U	UG/KG	PHENOL
380U	UG/KG	BIS(2-CHLOROETHYL) ETHER
380U	UG/KG	2-CHLOROPHENOL
380U	UG/KG	1,3-DICHLOROBENZENE
380U	UG/KG	1,4-DICHLOROBENZENE
380U	UG/KG	1,2-DICHLOROBENZENE
380U	UG/KG	2-METHYLPHENOL
380U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
380U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
380U	UG/KG	N-NITROSODI-N-PROPYLAMINE
380U	UG/KG	HEXACHLOROETHANE
380U	UG/KG	NITROBENZENE
380U	UG/KG	ISOPHORONE
380U	UG/KG	2-NITROPHENOL
380U	UG/KG	2,4-DIMETHYLPHENOL
380U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
380U	UG/KG	2,4-DICHLOROPHENOL
380U	UG/KG	1,2,4-TRICHLOROBENZENE
110J	UG/KG	NAPHTHALENE
94J	UG/KG	4-CHLOROANILINE
380U	UG/KG	HEXACHLOROBUTADIENE
380U	UG/KG	4-CHLORO-3-METHYLPHENOL
75J	UG/KG	2-METHYLNAPHTHALENE
380U	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
380U	UG/KG	2,4,6-TRICHLOROPHENOL
960U	UG/KG	2,4,5-TRICHLOROPHENOL
380U	UG/KG	2-CHLORONAPHTHALENE
960U	UG/KG	2-NITROANILINE
380U	UG/KG	DIMETHYL PHTHALATE
100J	UG/KG	ACENAPHTHYLENE
380U	UG/KG	2,6-DINITROTOLUENE
960U	UG/KG	3-NITROANILINE
270J	UG/KG	ACENAPHTHENE
960UJ	UG/KG	2,4-DINITROPHENOL
960U	UG/KG	4-NITROPHENOL
130J	UG/KG	DIBENZOFURAN

RESULTS	UNITS	ANALYTE
380UJ	UG/KG	2,4-DINITROTOLUENE
380U	UG/KG	DIETHYL PHTHALATE
380U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
230J	UG/KG	FLUORENE
140J	UG/KG	4-NITROANILINE
960UJ	UG/KG	2-METHYL-4,6-DINITROPHENOL
380U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
380U	UG/KG	4-BROMOPHENYL PHENYL ETHER
380U	UG/KG	HEXACHLOROBENZENE (HCB)
960U	UG/KG	PENTACHLOROPHENOL
2500	UG/KG	PHENANTHRENE
640	UG/KG	ANTHRACENE
530	UG/KG	CARBAZOLE
380U	UG/KG	DI-N-BUTYLPHTHALATE
6700	UG/KG	FLUORANTHENE
5000J	UG/KG	PYRENE
520J	UG/KG	BENZYL BUTYL PHTHALATE
380U	UG/KG	3,3'-DICHLOROBENZIDINE
2500	UG/KG	BENZO(A)ANTHRACENE
3900J	UG/KG	CHRYSENE
3100J	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
380UJ	UG/KG	DI-N-OCTYLPHTHALATE
3600	UG/KG	BENZO(B)FLUORANTHENE
2600	UG/KG	BENZO(K)FLUORANTHENE
2200	UG/KG	BENZO-A-PYRENE
1200	UG/KG	INDENO (1,2,3-CD) PYRENE
450U	UG/KG	DIBENZO(A,H)ANTHRACENE
950	UG/KG	BENZO(GHI)PERYLENE
14	%	% MOISTURE

22 0113

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5524 FY 1999 Project: 99-0517

MISCELLANEOUS COMPOUNDS

Facility: National Smelting and Refining Atlanta, GA
Program: SSF
Id/Station: SF102 /
Media: SURFACE SOIL (0" - 12")

Case No: 27071
MD No: QQ87
D No: QQ84

Inorg Contractor: SENTIN
Org Contractor: CLAYTN

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 11:55
Ending:

RESULTS	UNITS	ANALYTE
240JN	UG/KG	PHOSPHORIC ACID, TRIETHYL ESTER
250JN	UG/KG	DIBENZOFURAN, 4-METHYL- + UNKNOWN
190JN	UG/KG	4-TOLUENESULFONAMIDE + UNKNOWN
170J	UG/KG	UNKNOWN PHENOLIC COMPOUND
180J	UG/KG	NONYLPHENOL ISOMER + UNKNOWN
270JN	UG/KG	PHENOL, NONYL-
160J	UG/KG	UNKNOWN PHENOLIC COMPOUND
340JN	UG/KG	9H-FLUOREN-9-ONE
390JN	UG/KG	DIBENZOTHIOPHENE
240JN	UG/KG	ACRIDINE
200J	UG/KG	UNKNOWN
220JN	UG/KG	1H-INDENE, 1-(PHENYLMETHYLENE)
170J	UG/KG	UNKNOWN
840JN	UG/KG	PHENANTHRENE, 3-METHYL-
260JN	UG/KG	ANTHRACENE, 1-METHYL-
1100JN	UG/KG	4H-CYCLOPENTA [DEF] PHENANTHRENE
990J	UG/KG	UNKNOWN
950JN	UG/KG	2-PHENYLNAPHTHALENE
760JN	UG/KG	9, 10-ANTHRACENEDIONE
250JN	UG/KG	PHENANTHRENE, 4,5-DIMETHYL-
490JN	UG/KG	PHENANTHRENE, 2,7-DIMETHYL-
680JN	UG/KG	CYCLOPENTA (DEF) PHENANTHRENONE
230J	UG/KG	1-AZAPYRENE + UNKNOWN
590JN	UG/KG	PHENANTHRO [4,5-BCD] THIOPHENE
370JN	UG/KG	BENZO [B] NAPHTHO [2,3-D] FURAN
6600J	UG/KG	UNKNOWN
3200J	UG/KG	UNKNOWN
1200J	UG/KG	UNKNOWN
590J	UG/KG	UNKNOWN
640J	UG/KG	UNKNOWN
1000J	UG/KG	N-ALKANES
91J	UG/KG	BRANCHED ALKANES
240J	UG/KG	CYCLIC ALKANES

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5521 FY 1999 Project: 99-0517

PESTICIDES SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SF106 / MD No: QQ84 Inorg Contractor: SENTIN
Media: SURFACE SOIL (0" - 12") D No: QQ83 Org Contractor: CLAYTN

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 11:35
Ending:

RESULTS	UNITS	ANALYTE
1.8U	UG/KG	ALPHA-BHC
1.8U	UG/KG	BETA-BHC
1.8U	UG/KG	DELTA-BHC
1.8U	UG/KG	GAMMA-BHC (LINDANE)
1.8UR	UG/KG	HEPTACHLOR
1.8UR	UG/KG	ALDRIN
1.8U	UG/KG	HEPTACHLOR EPOXIDE
2.5U	UG/KG	ENDOSULFAN I (ALPHA)
3.6U	UG/KG	DIELDRIN
3.6U	UG/KG	4,4'-DDE (P,P'-DDE)
3.6U	UG/KG	ENDRIN
3.6U	UG/KG	ENDOSULFAN II (BETA)
3.6U	UG/KG	4,4'-DDD (P,P'-DDD)
3.6U	UG/KG	ENDOSULFAN SULFATE
3.6U	UG/KG	4,4'-DDT (P,P'-DDT)
18U	UG/KG	METHOXYCHLOR
25U	UG/KG	ENDRIN KETONE
3.6U	UG/KG	ENDRIN ALDEHYDE
1.8U	UG/KG	ALPHA-CHLORDANE /2
1.8U	UG/KG	GAMMA-CHLORDANE /2
180U	UG/KG	TOXAPHENE
36U	UG/KG	PCB-1016 (AROCLOR 1016)
73U	UG/KG	PCB-1221 (AROCLOR 1221)
36U	UG/KG	PCB-1232 (AROCLOR 1232)
36U	UG/KG	PCB-1242 (AROCLOR 1242)
36U	UG/KG	PCB-1248 (AROCLOR 1248)
6300	UG/KG	PCB-1254 (AROCLOR 1254)
36U	UG/KG	PCB-1260 (AROCLOR 1260)
8	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents. 2.constituents or metabolites of technical chlordane

Sample 5524 FY 1999 Project: 99-0517

PESTICIDES SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF
Id/Station: SF102 /
Media: SURFACE SOIL (0" - 12")

Case No: 27071
MD No: QQ87
D No: QQ84

Inorg Contractor: SENTIN
Org Contractor: CLAYTN

Produced by: Goddard, Denise
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 11:55
Ending:

RESULTS	UNITS	ANALYTE
2.0U	UG/KG	ALPHA-BHC
2.2U	UG/KG	BETA-BHC
2.0U	UG/KG	DELTA-BHC
0.82J	UG/KG	GAMMA-BHC (LINDANE)
2.0U	UG/KG	HEPTACHLOR
2.0U	UG/KG	ALDRIN
2.0U	UG/KG	HEPTACHLOR EPOXIDE
2.0U	UG/KG	ENDOSULFAN I (ALPHA)
3.8U	UG/KG	DIELDRIN
3.8U	UG/KG	4,4'-DDE (P,P'-DDE)
3.8U	UG/KG	ENDRIN
3.8U	UG/KG	ENDOSULFAN II (BETA)
3.8U	UG/KG	4,4'-DDD (P,P'-DDD)
3.8U	UG/KG	ENDOSULFAN SULFATE
3.8U	UG/KG	4,4'-DDT (P,P'-DDT)
20U	UG/KG	METHOXYCHLOR
15U	UG/KG	ENDRIN KETONE
3.8U	UG/KG	ENDRIN ALDEHYDE
2.9U	UG/KG	ALPHA-CHLORDANE /2
5.7U	UG/KG	GAMMA-CHLORDANE /2
200U	UG/KG	TOXAPHENE
38U	UG/KG	PCB-1016 (AROCLOR 1016)
78U	UG/KG	PCB-1221 (AROCLOR 1221)
38U	UG/KG	PCB-1232 (AROCLOR 1232)
38U	UG/KG	PCB-1242 (AROCLOR 1242)
38U	UG/KG	PCB-1248 (AROCLOR 1248)
600	UG/KG	PCB-1254 (AROCLOR 1254)
38U	UG/KG	PCB-1260 (AROCLOR 1260)
14	%	% MOISTURE

2 2 0116

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification. .
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5520 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SF107 / MD No: QQ83 Inorg Contractor: SENTIN
Media: SURFACE SOIL (0" - 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 11:26
Ending:

RESULTS	UNITS	ANALYTE
2000J	MG/KG	ALUMINUM
31J	MG/KG	ANTIMONY
12J	MG/KG	ARSENIC
17J	MG/KG	BARIUM
0.15J	MG/KG	BERYLLIUM
0.59J	MG/KG	CADMIUM
120	MG/KG	CALCIUM
12	MG/KG	CHROMIUM
3.3J	MG/KG	COBALT
8.0	MG/KG	COPPER
5100J	MG/KG	IRON
2000J	MG/KG	LEAD
310J	MG/KG	MAGNESIUM
250	MG/KG	MANGANESE
0.05U	MG/KG	TOTAL MERCURY
3.6J	MG/KG	NICKEL
350J	MG/KG	POTASSIUM
0.59U	MG/KG	SELENIUM
0.37J	MG/KG	SILVER
92	MG/KG	SODIUM
1.1U	MG/KG	THALLIUM
9.9J	MG/KG	VANADIUM
17J	MG/KG	ZINC
NA	MG/KG	CYANIDE
1	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1 when no value is reported, see chlordane constituents, 2 constituents or metabolites of [illegible]

Sample 5521 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SF106 / MD No: QQ84 Inorg Contractor: SENTIN
Media: SURFACE SOIL (0" - 12") D No: QQ83 Org Contractor: CLAYTN

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 11:35
Ending:

RESULTS	UNITS	ANALYTE
4000J	MG/KG	ALUMINUM
870J	MG/KG	ANTIMONY
180J	MG/KG	ARSENIC
210J	MG/KG	BARIUM
0.31J	MG/KG	BERYLLIUM
74	MG/KG	CADMIUM
5500	MG/KG	CALCIUM
53	MG/KG	CHROMIUM
3.9J	MG/KG	COBALT
110	MG/KG	COPPER
25000J	MG/KG	IRON
140000J	MG/KG	LEAD
1500J	MG/KG	MAGNESIUM
350	MG/KG	MANGANESE
10	MG/KG	TOTAL MERCURY
19	MG/KG	NICKEL
1100J	MG/KG	POTASSIUM
2.4	MG/KG	SELENIUM
4.4	MG/KG	SILVER
200	MG/KG	SODIUM
6.8	MG/KG	THALLIUM
16J	MG/KG	VANADIUM
310J	MG/KG	ZINC
NA	MG/KG	CYANIDE
9	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

METALS S[illegible]LE ANALYSIS EPA - REGION IV SESD, ATHENS, GA Production Date: 08/13/1999 14:25

Sample 5522 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SF101 / MD No: QQ85 Inorg Contractor: SENTIN

Media: SURFACE SOIL (0" - 12")

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 06/02/1999 11:30

Ending:

RESULTS	UNITS	ANALYTE
23000J	MG/KG	ALUMINUM
51J	MG/KG	ANTIMONY
37J	MG/KG	ARSENIC
150J	MG/KG	BARIUM
0.84J	MG/KG	BERYLLIUM
8.7	MG/KG	CADMIUM
4500	MG/KG	CALCIUM
60	MG/KG	CHROMIUM
15J	MG/KG	COBALT
74	MG/KG	COPPER
37000J	MG/KG	IRON
3700J	MG/KG	LEAD
5100J	MG/KG	MAGNESIUM
750	MG/KG	MANGANESE
0.18	MG/KG	TOTAL MERCURY
23	MG/KG	NICKEL
4000J	MG/KG	POTASSIUM
1.1UJ	MG/KG	SELENIUM
1.8J	MG/KG	SILVER
290	MG/KG	SODIUM
1.3U	MG/KG	THALLIUM
99J	MG/KG	VANADIUM
360J	MG/KG	ZINC
NA	MG/KG	CYANIDE
15	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1 when no value is reported, see chlordane constituents. 2 [illegible]

2 2 0119

Sample 5523 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SF105 / MD No: QQ86 Inorg Contractor: SENTIN
Media: SURFACE SOIL (0" - 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 11:57
Ending:

RESULTS	UNITS	ANALYTE
7400J	MG/KG	ALUMINUM
2000J	MG/KG	ANTIMONY
310J	MG/KG	ARSENIC
130J	MG/KG	BARIUM
0.39J	MG/KG	BERYLLIUM
72	MG/KG	CADMIUM
30000	MG/KG	CALCIUM
56	MG/KG	CHROMIUM
8.9J	MG/KG	COBALT
360	MG/KG	COPPER
22000J	MG/KG	IRON
80000J	MG/KG	LEAD
1800J	MG/KG	MAGNESIUM
490	MG/KG	MANGANESE
3.7	MG/KG	TOTAL MERCURY
40	MG/KG	NICKEL
1200J	MG/KG	POTASSIUM
2.6	MG/KG	SELENIUM
3.6	MG/KG	SILVER
190	MG/KG	SODIUM
5.0J	MG/KG	THALLIUM
32J	MG/KG	VANADIUM
620J	MG/KG	ZINC
NA	MG/KG	CYANIDE
8	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5524 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SF102 / MD No: QQ87 Inorg Contractor: SENTIN
Media: SURFACE SOIL (0" - 12") D No: QQ84 Org Contractor: CLAYTN

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 11:55
Ending:

RESULTS	UNITS	ANALYTE
13000J	MG/KG	ALUMINUM
1100J	MG/KG	ANTIMONY
650J	MG/KG	ARSENIC
410J	MG/KG	BARIUM
0.53J	MG/KG	BERYLLIUM
100	MG/KG	CADMIUM
4600	MG/KG	CALCIUM
100	MG/KG	CHROMIUM
15	MG/KG	COBALT
610	MG/KG	COPPER
51000J	MG/KG	IRON
100000J	MG/KG	LEAD
5100J	MG/KG	MAGNESIUM
660	MG/KG	MANGANESE
2.8	MG/KG	TOTAL MERCURY
140	MG/KG	NICKEL
4100J	MG/KG	POTASSIUM
71J	MG/KG	SELENIUM
5.3	MG/KG	SILVER
1200	MG/KG	SODIUM
3.2	MG/KG	THALLIUM
94J	MG/KG	VANADIUM
2100J	MG/KG	ZINC
NA	MG/KG	CYANIDE
2	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1 when no value is reported, see [illegible]

Sample 5525 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SF103 / MD No: QQ88 Inorg Contractor: SENTIN

Media: SURFACE SOIL (0" - 12")

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 06/02/1999 12:00

Ending:

RESULTS	UNITS	ANALYTE
12000J	MG/KG	ALUMINUM
3800J	MG/KG	ANTIMONY
2100J	MG/KG	ARSENIC
230J	MG/KG	BARIUM
0.43J	MG/KG	BERYLLIUM
290	MG/KG	CADMIUM
6300	MG/KG	CALCIUM
47	MG/KG	CHROMIUM
10J	MG/KG	COBALT
1200	MG/KG	COPPER
35000J	MG/KG	IRON
140000J	MG/KG	LEAD
5600J	MG/KG	MAGNESIUM
460	MG/KG	MANGANESE
2.1	MG/KG	TOTAL MERCURY
140	MG/KG	NICKEL
5600J	MG/KG	POTASSIUM
3.8J	MG/KG	SELENIUM
11	MG/KG	SILVER
310	MG/KG	SODIUM
15	MG/KG	THALLIUM
43J	MG/KG	VANADIUM
2800J	MG/KG	ZINC
NA	MG/KG	CYANIDE
8	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5526 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SF104 / MD No: QQ89 Inorg Contractor: SENTIN

Media: SURFACE SOIL (0" - 12")

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 06/02/1999 12:12

Ending:

RESULTS	UNITS	ANALYTE
10000J	MG/KG	ALUMINUM
810J	MG/KG	ANTIMONY
74J	MG/KG	ARSENIC
160J	MG/KG	BARIUM
0.59J	MG/KG	BERYLLIUM
98	MG/KG	CADMIUM
3900	MG/KG	CALCIUM
30	MG/KG	CHROMIUM
15	MG/KG	COBALT
560	MG/KG	COPPER
32000J	MG/KG	IRON
25000J	MG/KG	LEAD
2200J	MG/KG	MAGNESIUM
540	MG/KG	MANGANESE
1.5	MG/KG	TOTAL MERCURY
26	MG/KG	NICKEL
1600J	MG/KG	POTASSIUM
2.0J	MG/KG	SELENIUM
2.2	MG/KG	SILVER
220	MG/KG	SODIUM
1.2U	MG/KG	THALLIUM
63J	MG/KG	VANADIUM
520J	MG/KG	ZINC
NA	MG/KG	CYANIDE
7	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

METALS SA[illegible]LE ANALYSIS EPA - REGION IV [illegible]D, ATHENS, GA Production Date: 08/13/1999 14:25

Sample 5527 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: WA401 / MD No: QQ90 Inorg Contractor: SENTIN

Media: WASTE

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 06/02/1999 13:38

Ending:

RESULTS	UNITS	ANALYTE
1400J	MG/KG	ALUMINUM
2000J	MG/KG	ANTIMONY
260J	MG/KG	ARSENIC
450J	MG/KG	BARIUM
0.10J	MG/KG	BERYLLIUM
100	MG/KG	CADMIUM
5100	MG/KG	CALCIUM
37	MG/KG	CHROMIUM
5.6J	MG/KG	COBALT
860	MG/KG	COPPER
38000J	MG/KG	IRON
270000J	MG/KG	LEAD
910J	MG/KG	MAGNESIUM
310	MG/KG	MANGANESE
1.9	MG/KG	TOTAL MERCURY
100	MG/KG	NICKEL
640J	MG/KG	POTASSIUM
13J	MG/KG	SELENIUM
38	MG/KG	SILVER
470	MG/KG	SODIUM
8.9	MG/KG	THALLIUM
6.3J	MG/KG	VANADIUM
620J	MG/KG	ZINC
NA	MG/KG	CYANIDE
1	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5528 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SB3020 / MD No: QQ91 Inorg Contractor: SENTIN

Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 06/02/1999 13:50

Ending:

RESULTS	UNITS	ANALYTE
16000J	MG/KG	ALUMINUM
1600J	MG/KG	ANTIMONY
46J	MG/KG	ARSENIC
1100J	MG/KG	BARIUM
1.1J	MG/KG	BERYLLIUM
3.1	MG/KG	CADMIUM
29000	MG/KG	CALCIUM
22	MG/KG	CHROMIUM
15	MG/KG	COBALT
1300	MG/KG	COPPER
91000J	MG/KG	IRON
45000J	MG/KG	LEAD
3700J	MG/KG	MAGNESIUM
1000	MG/KG	MANGANESE
0.44	MG/KG	TOTAL MERCURY
49	MG/KG	NICKEL
3200J	MG/KG	POTASSIUM
8.7J	MG/KG	SELENIUM
5.7	MG/KG	SILVER
810	MG/KG	SODIUM
1.4U	MG/KG	THALLIUM
48J	MG/KG	VANADIUM
1400J	MG/KG	ZINC
NA	MG/KG	CYANIDE
18	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5529 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB3030 / MD No: QQ92 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 13:45
Ending:

RESULTS	UNITS	ANALYTE
43000J	MG/KG	ALUMINUM
20J	MG/KG	ANTIMONY
59J	MG/KG	ARSENIC
250J	MG/KG	BARIUM
1.0J	MG/KG	BERYLLIUM
34	MG/KG	CADMIUM
6400	MG/KG	CALCIUM
34	MG/KG	CHROMIUM
12J	MG/KG	COBALT
37	MG/KG	COPPER
43000J	MG/KG	IRON
520J	MG/KG	LEAD
13000J	MG/KG	MAGNESIUM
440	MG/KG	MANGANESE
0.11U	MG/KG	TOTAL MERCURY
11	MG/KG	NICKEL
13000J	MG/KG	POTASSIUM
1.5J	MG/KG	SELENIUM
1.8J	MG/KG	SILVER
550	MG/KG	SODIUM
7.4	MG/KG	THALLIUM
98J	MG/KG	VANADIUM
110J	MG/KG	ZINC
NA	MG/KG	CYANIDE
24	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1 when no value is reported, see chlordane constituents [illegible]

Sample 5530 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB3031 / MD No: QQ93 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 13:55
Ending:

RESULTS	UNITS	ANALYTE
47000J	MG/KG	ALUMINUM
0.70UJ	MG/KG	ANTIMONY
0.95U	MG/KG	ARSENIC
420J	MG/KG	BARIUM
1.1	MG/KG	BERYLLIUM
0.09U	MG/KG	CADMIUM
220	MG/KG	CALCIUM
27	MG/KG	CHROMIUM
16	MG/KG	COBALT
9.7	MG/KG	COPPER
42000J	MG/KG	IRON
24J	MG/KG	LEAD
17000J	MG/KG	MAGNESIUM
690	MG/KG	MANGANESE
0.06U	MG/KG	TOTAL MERCURY
11J	MG/KG	NICKEL
18000J	MG/KG	POTASSIUM
0.68UJ	MG/KG	SELENIUM
1.5J	MG/KG	SILVER
680	MG/KG	SODIUM
1.3U	MG/KG	THALLIUM
120J	MG/KG	VANADIUM
42J	MG/KG	ZINC
NA	MG/KG	CYANIDE
12	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5531 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB3032 / MD No: QQ94 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 14:00
Ending:

RESULTS	UNITS	ANALYTE
42000J	MG/KG	ALUMINUM
0.84UJ	MG/KG	ANTIMONY
0.93U	MG/KG	ARSENIC
400J	MG/KG	BARIUM
1.0J	MG/KG	BERYLLIUM
0.09U	MG/KG	CADMIUM
280	MG/KG	CALCIUM
44	MG/KG	CHROMIUM
17	MG/KG	COBALT
43	MG/KG	COPPER
43000J	MG/KG	IRON
39J	MG/KG	LEAD
16000J	MG/KG	MAGNESIUM
1000	MG/KG	MANGANESE
0.05U	MG/KG	TOTAL MERCURY
13	MG/KG	NICKEL
17000J	MG/KG	POTASSIUM
0.66UJ	MG/KG	SELENIUM
1.7J	MG/KG	SILVER
620	MG/KG	SODIUM
1.2U	MG/KG	THALLIUM
140J	MG/KG	VANADIUM
65J	MG/KG	ZINC
NA	MG/KG	CYANIDE
10	%	% MOISTURE

2 2 0128

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms. 1 when no value is reported, see chlordane [illegible]

Sample 5532 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB3034 / MD No: QQ95 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 14:10
Ending:

RESULTS	UNITS	ANALYTE
34000J	MG/KG	ALUMINUM
0.77UJ	MG/KG	ANTIMONY
1.3UJ	MG/KG	ARSENIC
150J	MG/KG	BARIUM
1.7	MG/KG	BERYLLIUM
0.10U	MG/KG	CADMIUM
530	MG/KG	CALCIUM
36	MG/KG	CHROMIUM
20	MG/KG	COBALT
34	MG/KG	COPPER
45000J	MG/KG	IRON
9.5J	MG/KG	LEAD
6300J	MG/KG	MAGNESIUM
750	MG/KG	MANGANESE
0.07U	MG/KG	TOTAL MERCURY
12	MG/KG	NICKEL
4300J	MG/KG	POTASSIUM
0.77UJ	MG/KG	SELENIUM
2.1J	MG/KG	SILVER
390	MG/KG	SODIUM
1.4U	MG/KG	THALLIUM
160J	MG/KG	VANADIUM
44J	MG/KG	ZINC
NA	MG/KG	CYANIDE
23	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5533 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB3036 / MD No: QQ96 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 14:25
Ending:

RESULTS	UNITS	ANALYTE
34000J	MG/KG	ALUMINUM
0.88UJ	MG/KG	ANTIMONY
1.8UJ	MG/KG	ARSENIC
300	MG/KG	BARIUM
1.4	MG/KG	BERYLLIUM
0.42U	MG/KG	CADMIUM
390	MG/KG	CALCIUM
32	MG/KG	CHROMIUM
16	MG/KG	COBALT
25	MG/KG	COPPER
40000J	MG/KG	IRON
17J	MG/KG	LEAD
11000J	MG/KG	MAGNESIUM
660	MG/KG	MANGANESE
0.06U	MG/KG	TOTAL MERCURY
12	MG/KG	NICKEL
11000J	MG/KG	POTASSIUM
0.72UJ	MG/KG	SELENIUM
1.6J	MG/KG	SILVER
480	MG/KG	SODIUM
1.3U	MG/KG	THALLIUM
120J	MG/KG	VANADIUM
190J	MG/KG	ZINC
NA	MG/KG	CYANIDE
18	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5534 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB30310 / MD No: QQ97 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 14:35
Ending:

RESULTS	UNITS	ANALYTE
28000J	MG/KG	ALUMINUM
1.1UJ	MG/KG	ANTIMONY
1.4U	MG/KG	ARSENIC
310J	MG/KG	BARIUM
0.77J	MG/KG	BERYLLIUM
0.34U	MG/KG	CADMIUM
650	MG/KG	CALCIUM
28	MG/KG	CHROMIUM
12J	MG/KG	COBALT
24	MG/KG	COPPER
33000J	MG/KG	IRON
10J	MG/KG	LEAD
12000J	MG/KG	MAGNESIUM
620	MG/KG	MANGANESE
0.07U	MG/KG	TOTAL MERCURY
10J	MG/KG	NICKEL
13000J	MG/KG	POTASSIUM
0.97U	MG/KG	SELENIUM
1.6J	MG/KG	SILVER
540	MG/KG	SODIUM
1.8U	MG/KG	THALLIUM
90J	MG/KG	VANADIUM
130J	MG/KG	ZINC
NA	MG/KG	CYANIDE
38	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents. 2.constituents or metabolites of

METALS S[illegible]LE ANALYSIS EPA - REGION I[illegible]SD, ATHENS, GA Production Date: 08/1[illegible]/1999 14:25

Sample 5535 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SB30315 / MD No: QQ98 Inorg Contractor: SENTIN

Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 06/02/1999 14:45

Ending:

RESULTS	UNITS	ANALYTE
20000J	MG/KG	ALUMINUM
1.0UJ	MG/KG	ANTIMONY
2.7UJ	MG/KG	ARSENIC
350J	MG/KG	BARIUM
0.57J	MG/KG	BERYLLIUM
0.13U	MG/KG	CADMIUM
1000	MG/KG	CALCIUM
12	MG/KG	CHROMIUM
11J	MG/KG	COBALT
16	MG/KG	COPPER
26000J	MG/KG	IRON
6.5J	MG/KG	LEAD
11000J	MG/KG	MAGNESIUM
540	MG/KG	MANGANESE
0.07U	MG/KG	TOTAL MERCURY
7.0J	MG/KG	NICKEL
12000J	MG/KG	POTASSIUM
0.96U	MG/KG	SELENIUM
1.4J	MG/KG	SILVER
460	MG/KG	SODIUM
1.8U	MG/KG	THALLIUM
73J	MG/KG	VANADIUM
64J	MG/KG	ZINC
NA	MG/KG	CYANIDE
39	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5536 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SB3010 / MD No: QS37 Inorg Contractor: SENTIN

Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 06/02/1999 14:41

Ending:

RESULTS	UNITS	ANALYTE
8600J	MG/KG	ALUMINUM
120J	MG/KG	ANTIMONY
120J	MG/KG	ARSENIC
210J	MG/KG	BARIUM
0.18J	MG/KG	BERYLLIUM
1.5	MG/KG	CADMIUM
15000	MG/KG	CALCIUM
16	MG/KG	CHROMIUM
40	MG/KG	COBALT
80	MG/KG	COPPER
28000J	MG/KG	IRON
16000J	MG/KG	LEAD
2600J	MG/KG	MAGNESIUM
81	MG/KG	MANGANESE
0.18	MG/KG	TOTAL MERCURY
7.9J	MG/KG	NICKEL
5400J	MG/KG	POTASSIUM
1.3U	MG/KG	SELENIUM
2.0J	MG/KG	SILVER
570	MG/KG	SODIUM
1.5U	MG/KG	THALLIUM
52J	MG/KG	VANADIUM
60J	MG/KG	ZINC
NA	MG/KG	CYANIDE
27	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5537 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB3011 / MD No: QS38 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 14:51
Ending:

RESULTS	UNITS	ANALYTE
13000J	MG/KG	ALUMINUM
8300J	MG/KG	ANTIMONY
420J	MG/KG	ARSENIC
640J	MG/KG	BARIUM
0.60J	MG/KG	BERYLLIUM
110	MG/KG	CADMIUM
3900	MG/KG	CALCIUM
30	MG/KG	CHROMIUM
6.0J	MG/KG	COBALT
220	MG/KG	COPPER
26000J	MG/KG	IRON
230000J	MG/KG	LEAD
3000J	MG/KG	MAGNESIUM
150	MG/KG	MANGANESE
0.09U	MG/KG	TOTAL MERCURY
16	MG/KG	NICKEL
3800J	MG/KG	POTASSIUM
1.0U	MG/KG	SELENIUM
9.0	MG/KG	SILVER
510	MG/KG	SODIUM
8.9	MG/KG	THALLIUM
51J	MG/KG	VANADIUM
130J	MG/KG	ZINC
NA	MG/KG	CYANIDE
15	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5538 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB3012 / MD No: QS39 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 14:55
Ending:

RESULTS	UNITS	ANALYTE
26000J	MG/KG	ALUMINUM
9.4UJ	MG/KG	ANTIMONY
3.1J	MG/KG	ARSENIC
260J	MG/KG	BARIUM
1.0J	MG/KG	BERYLLIUM
0.22U	MG/KG	CADMIUM
640	MG/KG	CALCIUM
53	MG/KG	CHROMIUM
11J	MG/KG	COBALT
64	MG/KG	COPPER
48000J	MG/KG	IRON
330J	MG/KG	LEAD
2600J	MG/KG	MAGNESIUM
240	MG/KG	MANGANESE
0.10U	MG/KG	TOTAL MERCURY
18	MG/KG	NICKEL
1700J	MG/KG	POTASSIUM
0.76U	MG/KG	SELENIUM
2.1J	MG/KG	SILVER
280	MG/KG	SODIUM
1.4U	MG/KG	THALLIUM
140J	MG/KG	VANADIUM
64J	MG/KG	ZINC
NA	MG/KG	CYANIDE
23	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5539 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SB3022 / MD No: QS40 Inorg Contractor: SENTIN

Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 06/02/1999 15:25

Ending:

RESULTS	UNITS	ANALYTE
16000J	MG/KG	ALUMINUM
1400J	MG/KG	ANTIMONY
78J	MG/KG	ARSENIC
450J	MG/KG	BARIUM
0.86U	MG/KG	BERYLLIUM
1.2UJ	MG/KG	CADMIUM
4900J	MG/KG	CALCIUM
47	MG/KG	CHROMIUM
22	MG/KG	COBALT
830J	MG/KG	COPPER
42000J	MG/KG	IRON
28000J	MG/KG	LEAD
1200J	MG/KG	MAGNESIUM
670J	MG/KG	MANGANESE
0.13	MG/KG	TOTAL MERCURY
55J	MG/KG	NICKEL
920J	MG/KG	POTASSIUM
39J	MG/KG	SELENIUM
2.6	MG/KG	SILVER
870	MG/KG	SODIUM
1.3U	MG/KG	THALLIUM
52J	MG/KG	VANADIUM
1000J	MG/KG	ZINC
NA	MG/KG	CYANIDE
16	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5540 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SB3024 / MD No: QS41 Inorg Contractor: SENTIN

Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 06/02/1999 15:30

Ending:

RESULTS	UNITS	ANALYTE
16000J	MG/KG	ALUMINUM
1400J	MG/KG	ANTIMONY
66J	MG/KG	ARSENIC
330J	MG/KG	BARIUM
0.84U	MG/KG	BERYLLIUM
2.0J	MG/KG	CADMIUM
3600J	MG/KG	CALCIUM
43	MG/KG	CHROMIUM
27	MG/KG	COBALT
900J	MG/KG	COPPER
40000J	MG/KG	IRON
32000J	MG/KG	LEAD
1200J	MG/KG	MAGNESIUM
920J	MG/KG	MANGANESE
0.14	MG/KG	TOTAL MERCURY
54J	MG/KG	NICKEL
980J	MG/KG	POTASSIUM
62J	MG/KG	SELENIUM
2.5	MG/KG	SILVER
590	MG/KG	SODIUM
1.3U	MG/KG	THALLIUM
56J	MG/KG	VANADIUM
840J	MG/KG	ZINC
NA	MG/KG	CYANIDE
16	%	% MOISTURE

22 0137

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlor

Sample 5541 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB3027 / MD No: QS42 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 15:50
Ending:

RESULTS	UNITS	ANALYTE
25000J	MG/KG	ALUMINUM
570J	MG/KG	ANTIMONY
27J	MG/KG	ARSENIC
260J	MG/KG	BARIUM
0.83U	MG/KG	BERYLLIUM
0.24UJ	MG/KG	CADMIUM
2200J	MG/KG	CALCIUM
47	MG/KG	CHROMIUM
23	MG/KG	COBALT
300J	MG/KG	COPPER
42000J	MG/KG	IRON
12000J	MG/KG	LEAD
5400J	MG/KG	MAGNESIUM
1000J	MG/KG	MANGANESE
0.10U	MG/KG	TOTAL MERCURY
22J	MG/KG	NICKEL
4800J	MG/KG	POTASSIUM
22J	MG/KG	SELENIUM
2.1J	MG/KG	SILVER
530	MG/KG	SODIUM
1.3U	MG/KG	THALLIUM
110J	MG/KG	VANADIUM
260J	MG/KG	ZINC
NA	MG/KG	CYANIDE
15	%	% MOISTURE

2 2 0138

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5542 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SB30210 / MD No: QS43 Inorg Contractor: SENTIN

Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 06/02/1999 16:00

Ending:

RESULTS	UNITS	ANALYTE
29000J	MG/KG	ALUMINUM
81J	MG/KG	ANTIMONY
6.4J	MG/KG	ARSENIC
290J	MG/KG	BARIUM
1.0U	MG/KG	BERYLLIUM
0.13UJ	MG/KG	CADMIUM
760J	MG/KG	CALCIUM
26	MG/KG	CHROMIUM
19	MG/KG	COBALT
97J	MG/KG	COPPER
40000J	MG/KG	IRON
2600J	MG/KG	LEAD
12000J	MG/KG	MAGNESIUM
770J	MG/KG	MANGANESE
0.14U	MG/KG	TOTAL MERCURY
14J	MG/KG	NICKEL
10000J	MG/KG	POTASSIUM
3.9J	MG/KG	SELENIUM
2.1J	MG/KG	SILVER
530	MG/KG	SODIUM
1.8U	MG/KG	THALLIUM
120J	MG/KG	VANADIUM
90J	MG/KG	ZINC
NA	MG/KG	CYANIDE
38	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5543 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB30215 / MD No: QS44 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 16:05
Ending:

RESULTS	UNITS	ANALYTE
26000J	MG/KG	ALUMINUM
2.6UJ	MG/KG	ANTIMONY
1.6UJ	MG/KG	ARSENIC
350J	MG/KG	BARIUM
0.97U	MG/KG	BERYLLIUM
0.13UJ	MG/KG	CADMIUM
560J	MG/KG	CALCIUM
25	MG/KG	CHROMIUM
18	MG/KG	COBALT
40J	MG/KG	COPPER
36000J	MG/KG	IRON
46	MG/KG	LEAD
15000J	MG/KG	MAGNESIUM
700J	MG/KG	MANGANESE
0.13U	MG/KG	TOTAL MERCURY
8.2J	MG/KG	NICKEL
14000J	MG/KG	POTASSIUM
0.98UJ	MG/KG	SELENIUM
1.6J	MG/KG	SILVER
580	MG/KG	SODIUM
1.8U	MG/KG	THALLIUM
100J	MG/KG	VANADIUM
74J	MG/KG	ZINC
NA	MG/KG	CYANIDE
41	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1 when no value is reported, see chlordane constituents 2

METALS SA[illegible]E ANALYSIS EPA - REGION IV [illegible]D, ATHENS, GA Production Date: 08/13/1999 14:25

Sample 5544 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SB3014 / MD No: QS45 Inorg Contractor: SENTIN

Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 06/02/1999 16:50

Ending:

RESULTS	UNITS	ANALYTE
18000J	MG/KG	ALUMINUM
7.3UJ	MG/KG	ANTIMONY
4.1J	MG/KG	ARSENIC
160J	MG/KG	BARIUM
0.98U	MG/KG	BERYLLIUM
17J	MG/KG	CADMIUM
1500J	MG/KG	CALCIUM
52	MG/KG	CHROMIUM
15	MG/KG	COBALT
220J	MG/KG	COPPER
51000J	MG/KG	IRON
210J	MG/KG	LEAD
1500J	MG/KG	MAGNESIUM
720J	MG/KG	MANGANESE
0.12U	MG/KG	TOTAL MERCURY
39J	MG/KG	NICKEL
1100J	MG/KG	POTASSIUM
1.5U	MG/KG	SELENIUM
2.3J	MG/KG	SILVER
260	MG/KG	SODIUM
1.5U	MG/KG	THALLIUM
110J	MG/KG	VANADIUM
580J	MG/KG	ZINC
NA	MG/KG	CYANIDE
27	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5545 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB3016 / MD No: QS46 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 16:55
Ending:

RESULTS	UNITS	ANALYTE
23000J	MG/KG	ALUMINUM
54J	MG/KG	ANTIMONY
24J	MG/KG	ARSENIC
220J	MG/KG	BARIUM
1.0U	MG/KG	BERYLLIUM
5.1J	MG/KG	CADMIUM
1900J	MG/KG	CALCIUM
39	MG/KG	CHROMIUM
17	MG/KG	COBALT
140J	MG/KG	COPPER
48000J	MG/KG	IRON
7800	MG/KG	LEAD
2900J	MG/KG	MAGNESIUM
580J	MG/KG	MANGANESE
0.16	MG/KG	TOTAL MERCURY
22J	MG/KG	NICKEL
2400J	MG/KG	POTASSIUM
0.76UJ	MG/KG	SELENIUM
2.4J	MG/KG	SILVER
340	MG/KG	SODIUM
1.4U	MG/KG	THALLIUM
140J	MG/KG	VANADIUM
170J	MG/KG	ZINC
NA	MG/KG	CYANIDE
22	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents

Sample 5548 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB3018 / MD No: QS47 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 17:15
Ending:

RESULTS	UNITS	ANALYTE
13000J	MG/KG	ALUMINUM
720J	MG/KG	ANTIMONY
52J	MG/KG	ARSENIC
640J	MG/KG	BARIUM
1.2U	MG/KG	BERYLLIUM
2.0J	MG/KG	CADMIUM
11000J	MG/KG	CALCIUM
26	MG/KG	CHROMIUM
35	MG/KG	COBALT
5000J	MG/KG	COPPER
200000J	MG/KG	IRON
54000J	MG/KG	LEAD
2000J	MG/KG	MAGNESIUM
930J	MG/KG	MANGANESE
0.15	MG/KG	TOTAL MERCURY
210J	MG/KG	NICKEL
1900J	MG/KG	POTASSIUM
10J	MG/KG	SELENIUM
11	MG/KG	SILVER
630	MG/KG	SODIUM
1.3U	MG/KG	THALLIUM
88J	MG/KG	VANADIUM
1500J	MG/KG	ZINC
NA	MG/KG	CYANIDE
16	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5547 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SB30115 / MD No: QS48 Inorg Contractor: SENTIN

Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 06/02/1999 17:30

Ending:

RESULTS	UNITS	ANALYTE
19000J	MG/KG	ALUMINUM
250J	MG/KG	ANTIMONY
24J	MG/KG	ARSENIC
370J	MG/KG	BARIUM
1.0U	MG/KG	BERYLLIUM
1.5J	MG/KG	CADMIUM
2200J	MG/KG	CALCIUM
39	MG/KG	CHROMIUM
20	MG/KG	COBALT
1200J	MG/KG	COPPER
76000J	MG/KG	IRON
14000J	MG/KG	LEAD
5400J	MG/KG	MAGNESIUM
480J	MG/KG	MANGANESE
0.24	MG/KG	TOTAL MERCURY
63J	MG/KG	NICKEL
4200J	MG/KG	POTASSIUM
1.2UJ	MG/KG	SELENIUM
3.7	MG/KG	SILVER
400	MG/KG	SODIUM
1.4U	MG/KG	THALLIUM
120J	MG/KG	VANADIUM
430J	MG/KG	ZINC
NA	MG/KG	CYANIDE
24	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5548 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SB3040 / MD No: QS49 Inorg Contractor: SENTIN

Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 18:15
Ending:

RESULTS	UNITS	ANALYTE
8400J	MG/KG	ALUMINUM
300J	MG/KG	ANTIMONY
51J	MG/KG	ARSENIC
190J	MG/KG	BARIUM
0.18U	MG/KG	BERYLLIUM
8.3J	MG/KG	CADMIUM
1200J	MG/KG	CALCIUM
57	MG/KG	CHROMIUM
8.1J	MG/KG	COBALT
110J	MG/KG	COPPER
27000J	MG/KG	IRON
85000	MG/KG	LEAD
5300J	MG/KG	MAGNESIUM
340J	MG/KG	MANGANESE
0.36	MG/KG	TOTAL MERCURY
26J	MG/KG	NICKEL
5400J	MG/KG	POTASSIUM
0.62UJ	MG/KG	SELENIUM
2.8	MG/KG	SILVER
320	MG/KG	SODIUM
2.6	MG/KG	THALLIUM
39J	MG/KG	VANADIUM
150J	MG/KG	ZINC
NA	MG/KG	CYANIDE
4	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents. 2.constituents or metabolites of technical chlordane

Sample 5549 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SB3041 / MD No: QS50 Inorg Contractor: SENTIN

Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 06/02/1999 18:25

Ending:

RESULTS	UNITS	ANALYTE
4200J	MG/KG	ALUMINUM
1400J	MG/KG	ANTIMONY
66J	MG/KG	ARSENIC
300J	MG/KG	BARIUM
0.13U	MG/KG	BERYLLIUM
4.4J	MG/KG	CADMIUM
16000J	MG/KG	CALCIUM
16	MG/KG	CHROMIUM
2.9J	MG/KG	COBALT
250J	MG/KG	COPPER
23000J	MG/KG	IRON
110000	MG/KG	LEAD
1300J	MG/KG	MAGNESIUM
150J	MG/KG	MANGANESE
0.39	MG/KG	TOTAL MERCURY
8.4J	MG/KG	NICKEL
2800J	MG/KG	POTASSIUM
1.2J	MG/KG	SELENIUM
4.3	MG/KG	SILVER
490	MG/KG	SODIUM
3.3	MG/KG	THALLIUM
32J	MG/KG	VANADIUM
170J	MG/KG	ZINC
NA	MG/KG	CYANIDE
10	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5550 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB3042 / MD No: QS51 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 18:40
Ending:

RESULTS	UNITS	ANALYTE
3100J	MG/KG	ALUMINUM
890J	MG/KG	ANTIMONY
120J	MG/KG	ARSENIC
330J	MG/KG	BARIUM
0.07U	MG/KG	BERYLLIUM
1.1J	MG/KG	CADMIUM
20000J	MG/KG	CALCIUM
15	MG/KG	CHROMIUM
3.0J	MG/KG	COBALT
350J	MG/KG	COPPER
70000J	MG/KG	IRON
110000J	MG/KG	LEAD
1000J	MG/KG	MAGNESIUM
100J	MG/KG	MANGANESE
0.38	MG/KG	TOTAL MERCURY
8.2J	MG/KG	NICKEL
4100J	MG/KG	POTASSIUM
0.69UJ	MG/KG	SELENIUM
5.3	MG/KG	SILVER
2800	MG/KG	SODIUM
1.3U	MG/KG	THALLIUM
25J	MG/KG	VANADIUM
140J	MG/KG	ZINC
NA	MG/KG	CYANIDE
15	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1 when no value is reported, see chlordane constituents, 2 constituents or metabolites of technical chlordane

Sample 5551 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB3044 / MD No: QS52 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 18:42
Ending:

RESULTS	UNITS	ANALYTE
19000J	MG/KG	ALUMINUM
27J	MG/KG	ANTIMONY
66J	MG/KG	ARSENIC
170J	MG/KG	BARIUM
0.33U	MG/KG	BERYLLIUM
0.11UJ	MG/KG	CADMIUM
2900J	MG/KG	CALCIUM
88	MG/KG	CHROMIUM
4.7J	MG/KG	COBALT
57J	MG/KG	COPPER
64000J	MG/KG	IRON
2000J	MG/KG	LEAD
3400J	MG/KG	MAGNESIUM
140J	MG/KG	MANGANESE
0.25	MG/KG	TOTAL MERCURY
12J	MG/KG	NICKEL
7000J	MG/KG	POTASSIUM
0.79UJ	MG/KG	SELENIUM
2.7	MG/KG	SILVER
1900	MG/KG	SODIUM
1.5U	MG/KG	THALLIUM
110J	MG/KG	VANADIUM
36J	MG/KG	ZINC
NA	MG/KG	CYANIDE
25	%	% MOISTURE

2 2 0148

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents [illegible]

Sample 5552 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA
Program: SSF Case No: 27071
Id/Station: SB3046 / MD No: QS53 Inorg Contractor: SENTIN
Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 18:45
Ending:

RESULTS	UNITS	ANALYTE
16000J	MG/KG	ALUMINUM
130J	MG/KG	ANTIMONY
23J	MG/KG	ARSENIC
150J	MG/KG	BARIUM
0.36U	MG/KG	BERYLLIUM
0.30UJ	MG/KG	CADMIUM
3700J	MG/KG	CALCIUM
54	MG/KG	CHROMIUM
5.5J	MG/KG	COBALT
83J	MG/KG	COPPER
36000J	MG/KG	IRON
20000J	MG/KG	LEAD
2200J	MG/KG	MAGNESIUM
130J	MG/KG	MANGANESE
0.10U	MG/KG	TOTAL MERCURY
9.9J	MG/KG	NICKEL
2300J	MG/KG	POTASSIUM
0.70UJ	MG/KG	SELENIUM
2.5	MG/KG	SILVER
730	MG/KG	SODIUM
1.3U	MG/KG	THALLIUM
91J	MG/KG	VANADIUM
56J	MG/KG	ZINC
NA	MG/KG	CYANIDE
17	%	% MOISTURE

2 2 0149

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported. see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5553 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SB30410 / MD No: QS54 Inorg Contractor: SENTIN

Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane
Requestor:
Project Leader: JVAIL
Beginning: 06/02/1999 18:50
Ending:

RESULTS	UNITS	ANALYTE
37000J	MG/KG	ALUMINUM
2.2UJ	MG/KG	ANTIMONY
1.4UJ	MG/KG	ARSENIC
160J	MG/KG	BARIUM
0.55U	MG/KG	BERYLLIUM
0.11UJ	MG/KG	CADMIUM
2800J	MG/KG	CALCIUM
260	MG/KG	CHROMIUM
12J	MG/KG	COBALT
170J	MG/KG	COPPER
40000J	MG/KG	IRON
190J	MG/KG	LEAD
12000J	MG/KG	MAGNESIUM
240J	MG/KG	MANGANESE
0.08U	MG/KG	TOTAL MERCURY
47J	MG/KG	NICKEL
6100J	MG/KG	POTASSIUM
0.94UJ	MG/KG	SELENIUM
1.7J	MG/KG	SILVER
390	MG/KG	SODIUM
1.5U	MG/KG	THALLIUM
160J	MG/KG	VANADIUM
86J	MG/KG	ZINC
NA	MG/KG	CYANIDE
29	%	% MOISTURE

2 2 0150

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

Sample 5554 FY 1999 Project: 99-0517

METALS SCAN

Facility: National Smelting and Refining Atlanta, GA

Program: SSF Case No: 27071

Id/Station: SB30415 / MD No: QS55 Inorg Contractor: SENTIN

Media: SUBSURFACE SOIL (> 12")

Produced by: Guthrie, Diane

Requestor:

Project Leader: JVAIL

Beginning: 06/02/1999 19:00

Ending:

RESULTS	UNITS	ANALYTE
35000J	MG/KG	ALUMINUM
1.6UJ	MG/KG	ANTIMONY
1.8UJ	MG/KG	ARSENIC
210J	MG/KG	BARIUM
1.1U	MG/KG	BERYLLIUM
0.11UJ	MG/KG	CADMIUM
1500J	MG/KG	CALCIUM
190	MG/KG	CHROMIUM
20	MG/KG	COBALT
52J	MG/KG	COPPER
66000J	MG/KG	IRON
350J	MG/KG	LEAD
16000J	MG/KG	MAGNESIUM
320J	MG/KG	MANGANESE
0.07U	MG/KG	TOTAL MERCURY
53J	MG/KG	NICKEL
6300J	MG/KG	POTASSIUM
0.80UJ	MG/KG	SELENIUM
2.6J	MG/KG	SILVER
320	MG/KG	SODIUM
1.5U	MG/KG	THALLIUM
200J	MG/KG	VANADIUM
150J	MG/KG	ZINC
NA	MG/KG	CYANIDE
26	%	% MOISTURE

2 2 0151

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane