Niagara Mohawk®

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December 18, 1998

Mr. Amen M. Omorogbe, P.E.
Bureau of Construction Services
Division of Environmental Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233-7010

Subject: Troy (Smith Avenue) MGP Site, Off-Site area, Troy, New York

Dear Mr. Omorogbe:

Niagara Mohawk Power Corporation submits this letter as an update concerning the company's response to NYSDEC's request regarding an area along Ingalls Avenue in the City of Troy, New York, just south of the company's service center on Smith Avenue.

Attached please find a copy of a letter report prepared by Foster Wheeler Environmental Corporation, under contract to Niagara Mohawk, to collect and analyze three samples of the material along the Ingalls Avenue right-of-way (Attachment 1 – Waste Characterization, Ingalls Avenue, Troy, New York).

In response to the findings of Foster Wheeler, Niagara Mohawk Power Corporation proposes to excavate and dispose of these limited surface materials along the Ingalls Avenue right of way in accordance with the attached proposal (Proposal to Conduct Waste Removal, Ingalls Avenue, Troy, New York). It is the intention of this office to remove the material within three weeks of your approval of a future work plan, pending the receipt of an access agreement from the City of Troy, New York.

These actions do not constitute an admission of any liability by Niagara Mohawk Power Corporation. Moreover, by undertaking these actions Niagara Mohawk has not, and will not, waive any of its rights with respect to any third parties.

Any inquiries regarding the company's effort at this site can be directed to the undersigned at telephone number 315-428-5386.

Sincerely,

Douglas A. Mayer
Environmental Affairs Department

Copy w/attachments: Mr. Walter Vandeloo, City Engineer, City of Troy, NY

Waste Characterization Report

for the

Ingalls Avenue Site
Troy, New York

Prepared for

Niagara Mohawk Power Corporation

Prepared by

FOSTER WHEELER ENVIRONMENTAL CORPORATION

December 1998

Waste Characterization
Ingalls Avenue, Troy, New York

Introduction

On October 19, 1998, Foster Wheeler Environmental Corporation (Foster Wheeler Environmental) personnel collected samples at the western extent of Ingalls Avenue in Troy, New York. The purpose of the sampling was to characterize apparent waste material on the ground surface and determine whether it may be related to the Troy (Smith Avenue) Former manufactured gas plant (MGP) Site, which is located approximately 300 yards to the north.

The sampled material was a dark brown tarry substance that contained wood chips, and exuded a creosote-like odor. This material was exposed in a small mound on the north side of Ingalls Avenue, and in a layer approximately 0.5 feet thick along a section of the road. The mound was approximately 8 to 10 feet in diameter and approximately 2 feet thick. A layer of brown to light brown ash and clinker underlay the tarry material in the mound.

Two samples, SS01 and SS02, were collected of the tarry material; and one sample, SS03, was collected of the underlying material. The approximate sample locations are indicated on Figure 1, which presents a sketch map of the area prepared by the New York State Department of Environmental Conservation (NYSDEC). The three samples were submitted to Envirotech Research Inc. in Edison, New Jersey, for laboratory analysis of the following chemical parameters: NYSDEC ASP Target Compound List (TCL) Volatile Organic Compounds (VOCs); NYSDEC ASP TCL Semi-Volatile Organic Compounds (SVOCs); NYSDEC ASP TCL Pesticides and Polychlorinated Biphenyls (PCBs); NYSDEC ASP Target Analyte List (TAL) Metals and Cyanide; and Toxicity Characteristic Leaching Procedure (TCLP) testing. Sample SS01, which generally had the highest concentrations of the constituents of concern, was also analyzed for Resource Conservation and Recovery Act (RCRA) characteristics. Foster Wheeler Environmental performed a data validation review, and the tabulated results with all pertinent validation qualifiers are presented by analyte class in Tables A-1 through A-5.

Results of Laboratory Analyses

As shown on Table A-1, four VOCs, toluene, ethylbenzene, styrene and xylenes, were detected in at least one of the three samples collected from Ingalls Avenue. Concentrations ranged from 0.0007 parts per million (ppm) (styrene in SS03) to 83 ppm (xylenes in SS02). Tentatively identified compounds (TICs) were also detected in the samples, with a maximum total volatile TIC concentration of 554 ppm in sample SS01. The TICs were generally aromatic or aliphatic hydrocarbons.

The Ingalls Avenue samples also contained numerous polycyclic aromatic hydrocarbon (PAH) compounds (see Table A-2). The PAHs ranged in concentration from 52 ppm to 20,000 ppm in sample SS01 and from 48 ppm to 10,000 ppm in sample SS02. As shown in Table A-2, analysis of sample SS03 from the underlying ash and clinker material indicated a decrease in PAH

concentrations by two to three orders of magnitude (e.g., concentration range of 0.1 ppm to 14 ppm). In addition, 4-methylphenol was detected in SS03 at 0.079 ppm. Tentatively identified compounds for the SVOC fraction were generally aromatic hydrocarbons or naphthalene derivatives, and had total concentrations of 33,440 ppm (SS01); 28,160 ppm (SS02); and 210.4 ppm (SS03).

Eight pesticides (alpha-BHC, beta-BHC, 4,4'-DDD, dieldrin, ensosulfan sulfate, endrin, endrin ketone, and methoxychlor) were present in the Ingalls Avenue samples, at concentrations up to 2.5 ppm, as shown in Table A-3. No polychlorinated biphenyls (PCBs) were detected.

Analysis of the Ingalls Avenue samples indicated the presence of up to 20 metals; see Table A-4. Cyanide was detected in all three samples, at concentrations of 558 ppm (SS01), 446 ppm (SS02) and 29.6 ppm (SS03).

TCLP testing for VOCs, SVOCs and metals was also conducted for the three Ingalls Avenue samples. As shown on Table A-5, no VOC constituents were detected. For the SVOC fraction, only o-cresol was present, at concentrations of 0.009 ppm in SS01 and 0.012 ppm in SS02. These concentrations are significantly below the TCLP regulatory limit of 200 ppm for o-cresol. Barium and lead occurred in all three samples, while chromium was detected in SS01 only. Concentrations for the metals ranged from 0.009 ppm to 0.5 ppm, and were also below TCLP regulatory limits.

Sample SS01 was analyzed for RCRA characteristics (i.e., corrosivity, ignitability, reactive cyanide and reactive sulfide). The sample had a pH of 3.12, and was thus not characteristically hazardous for corrosivity. The flash point was 134 degrees Fahrenheit. However, this limit does not apply to a waste material that is solid at standard temperature and pressure, i.e., at 20 degrees Celsius and 1 atmosphere. Therefore, the material is not characteristically hazardous for ignitability. No reactive cyanide or sulfide was present in SS01.

Comparison of Results to Troy (Smith Avenue) Former MGP Wastes

The physical constitution of the material found on Ingalls Avenue (hard tar containing wood chips) precludes its migration through the subsurface. However, the concentrations of constituents of concern in this material were compared to those measured at the Smith Avenue Former MGP Site to determine whether the Ingalls Avenue material may be related to the former MGP. As indicated on Table 1, eighteen constituents were selected for comparison of the Ingalls Avenue sample data to data previously acquired from the Troy (Smith Avenue) Site during the Remedial Investigation/Feasibility Study (RI/FS; May 1998). Two samples from soil boring SB-10, which penetrated a former gas holder at the Troy (Smith Avenue) Site were chosen as representative of the highest concentrations of the constituents of concern at the former MGP site. These samples were collected from 4 to 6 feet and 6 to 8 feet below the ground surface and contained elevated concentrations of BTEX (benzene, toluene, ethylbenzene and xylenes) and PAH compounds. The constituents on Table 1 were selected for the comparison because: (1) they are generally characteristic of MGP residuals, and (2) they were detected in all three Ingalls Avenue samples and both Smith Avenue samples chosen for comparison. As discussed above,

cyanide, which is a common constituent in MGP purifier wastes, was also detected in all three Ingalls Avenue samples, but was not detected in the RI/FS samples from SB-10.

Figure 2 presents a graphical "fingerprint" comparison of the concentrations of the chosen constituents in the three Ingalls Avenue samples. This figure illustrates the similarity of samples SS01 and SS02, both in terms of the absolute concentrations of the constituents of concern and in terms of relative constituent abundances. Sample SS03 exhibits a very similar fingerprint pattern, i.e., has similar relative constituent abundances, with absolute concentrations approximately two to three orders of magnitude lower.

A comparison of the two higher concentration Ingalls Avenue samples (SS01 and SS02) and the RI/FS samples is presented in Figure 3. With the exception of the first two constituents (xylenes and total BTEX), the fingerprint patterns are generally similar. The xylenes and total BTEX concentrations (Figure 3 constituent numbers 1 and 2) are over an order of magnitude lower in the Ingalls Avenue samples. However, this difference in BTEX concentrations may reflect the fact that the Ingalls Avenue material has been exposed at the surface for an extended period, while the RI/FS soil boring samples were collected from below 4 feet. Volatilization of BTEX from the surface samples is likely to have occurred at a greater rate than from the deeper samples.

Summary

The relative and absolute concentrations of organic constituents of concern in the material found on Ingalls Avenue are similar to those in material residing in a former gas holder at the Troy (Smith Avenue) Site, and to those generally observed in MGP residuals. However, the physical nature of this material, e.g., a hard tar containing wood chips, precludes its migration from the Troy (Smith Avenue) Site through the subsurface. This material may represent a mixture of various waste streams. The occurrence of cyanide, along with the presence of wood chips, which were a common medium used in MGP gas purifiers, suggests this material could possibly contain MGP purifier wastes. The high levels of naphthalene (20,000 ppm in sample SS01) raise the additional possibility that the material could contain residues from a naphthalene scrubber.

TABLE 1
Data Used for Graphic Comparison

Sample ID	Constituent Graph Number	WASTE PILE SAMPLES DATA			RI/FS DATA	
		IA-SS01	IA-SS02	IA-SS03	SB-10 (4'-6')	SB-10 (6'-8')
Laboratory ID		91035	91036	91037	2534501	2534401
Date Sampled		10/19/98	10/19/98	10/19/98	10/16/95	10/16/95
Units		ppm	ppm	ppm	ppm	ppm
Xylene (total)	1	49	83	0.0089	840	1100
Total BTEX	2	57.4	83	0.0123	2550	3480
Naphthalene	3	20000	10000	14	6400	4400
Acenaphthylene	4	340	280	3.1	1600	830
Acenaphthene	5	300	240	0.32	340	280
Fluorene	6	1500	1200	1.6	1400	810
Phenanthrene	7	4600	3700	12	2800	1800
Anthracene	8	230	200	1.2	960	560
Fluoranthene	9	1400	1100	7.4	440	450
Pyrene	10	1900	1600	13	1100	680
Benzo(a)anthracene	11	600	510	4.4	330	240
Chrysene	12	740	580	5.6	290	220
Benzo(b)fluoranthene	13	400	320	3.9	120	69
Benzo(k)fluoranthene	14	180	130	1.3	140	94
Benzo(a)pyrene	15	110	96	1.8	210	150
Indeno(1,2,3-cd)pyrene	16	140	120	1.4	52	46
Benzo(g,h,i)perylene	17	130	110	1.3	56	27
Total PAHs	18	42082	26664	78.64	16246.7	13330

Figure 1. Sample Location Map

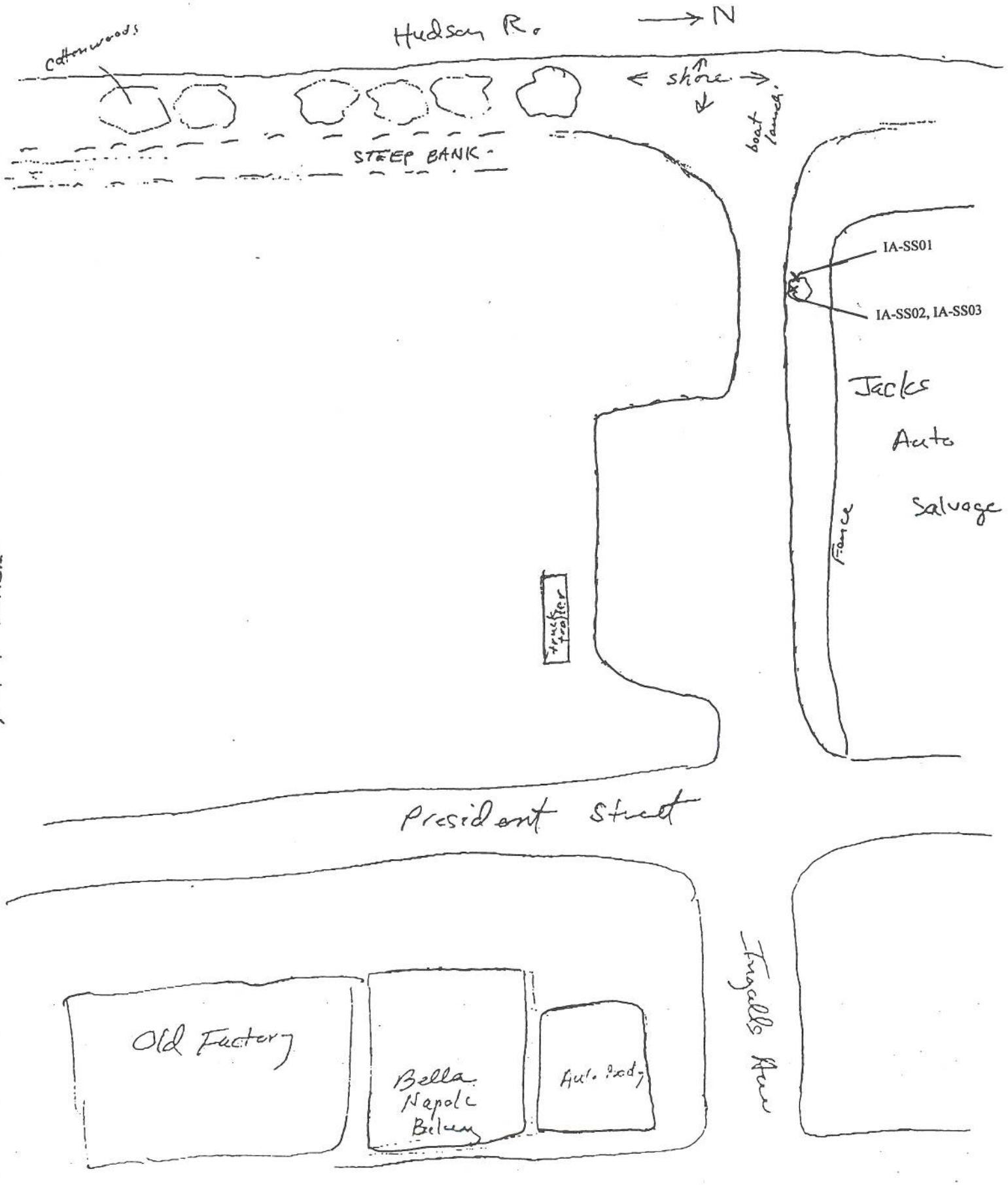


FIGURE 2
Ingalls Avenue Samples

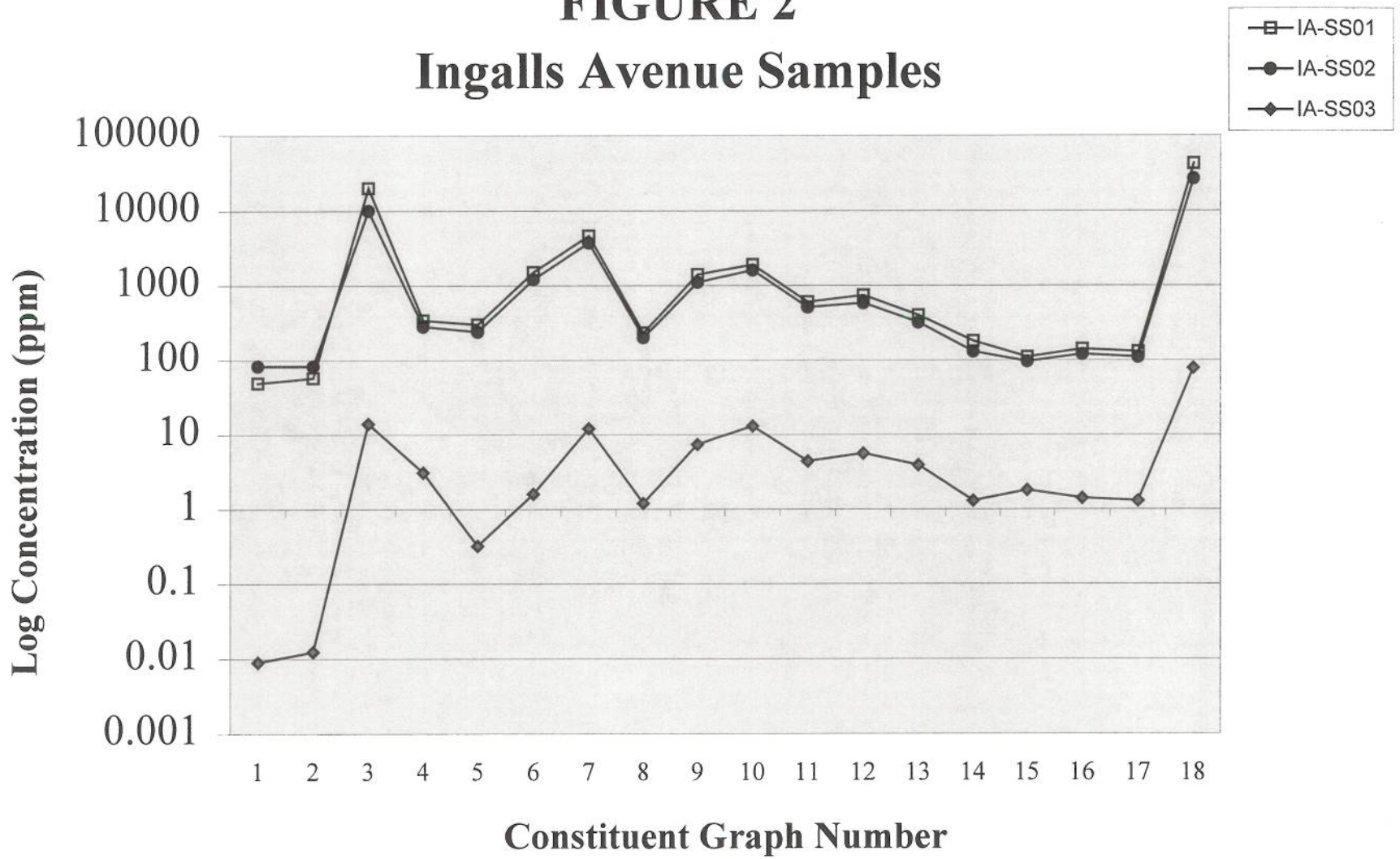
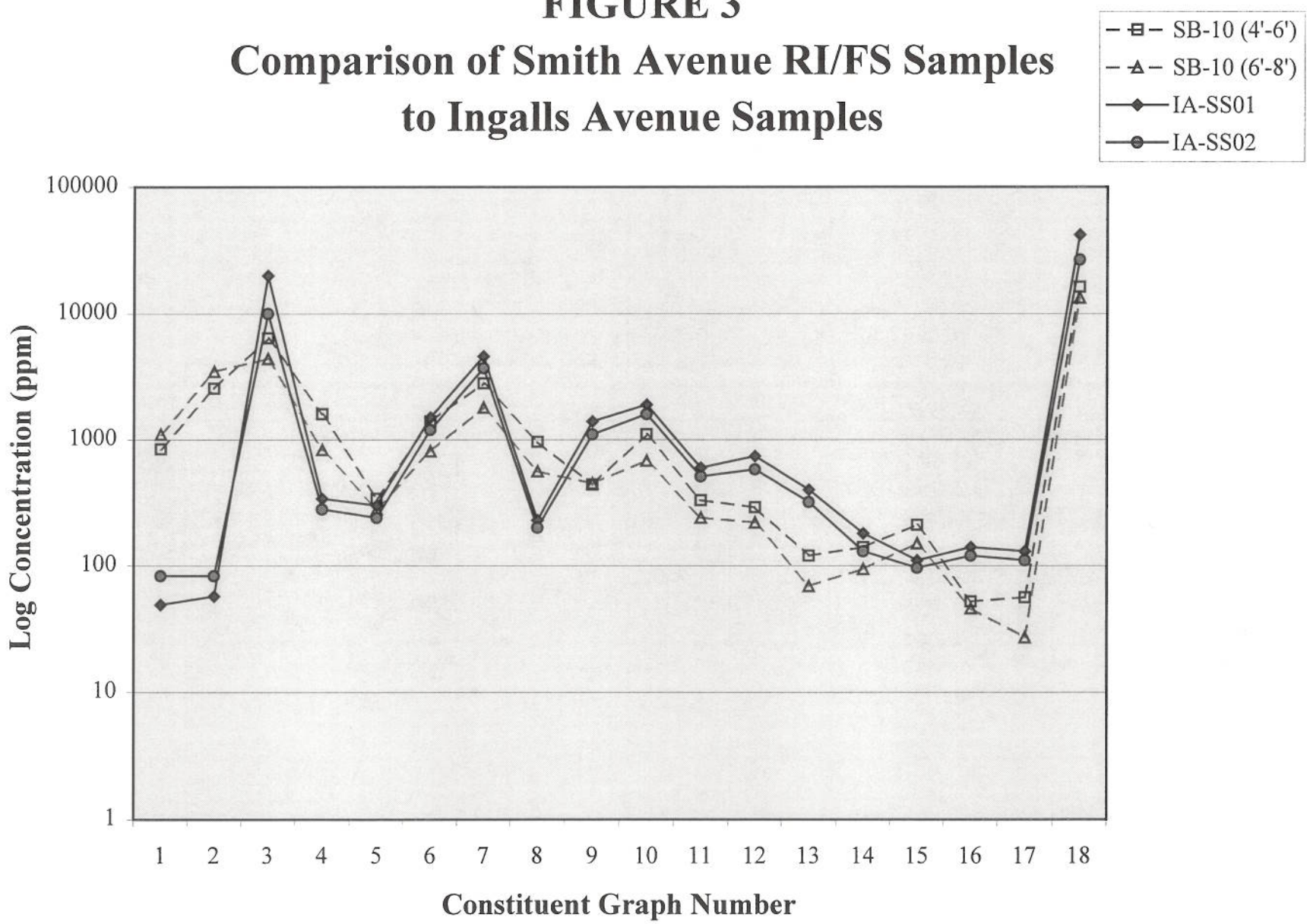


FIGURE 3
Comparison of Smith Avenue RI/FS Samples to Ingalls Avenue Samples



APPENDIX A

ANALYTICAL DATA RESULTS

TABLE A-1
Volatile Organic Compounds
Waste Pile Samples, Ingalls Avenue

Sample ID	IA-SS01	IA-SS02	IA-SS03
Lab Sample Number	91035	91036	91037
Sampling Date	10/19/98	10/19/98	10/19/98
Matrix	SOLID	SOLID	SOLID
Dilution Factor	1000.0	10000.0	1.0
Units	ug/kg	ug/kg	ug/kg
Chloromethane	12000 U	110000 U	7.2 U
Bromomethane	12000 U	110000 U	7.2 U
Vinyl Chloride	12000 U	110000 U	7.2 U
Chloroethane	12000 U	110000 U	7.2 U
Methylene Chloride	7400 U	66000 U	4.3 U
Acetone	R	R	7.2 U
Carbon Disulfide	12000 U	110000 U	7.2 U
1,1-Dichloroethene	5000 U	44000 U	2.9 U
1,1-Dichloroethane	12000 U	110000 U	7.2 U
trans-1,2-Dichloroethene	12000 U	110000 U	7.2 U
cis-1,2-Dichloroethene	12000 U	110000 U	7.2 U
Chloroform	12000 U	110000 U	7.2 U
1,2-Dichloroethane	5000 U	44000 U	2.9 U
2-Butanone	R	R	R
1,1,1-Trichloroethane	12000 U	110000 U	7.2 U
Carbon Tetrachloride	5000 U	44000 U	2.9 U
Bromodichloromethane	2500 U	22000 U	1.4 U
1,2-Dichloropropane	2500 U	22000 U	1.4 U
cis-1,3-Dichloropropene	12000 U	110000 U	7.2 U
Trichloroethene	2500 U	22000 U	1.4 U
Dibromochloromethane	12000 U	110000 U	7.2 U
1,1,2-Trichloroethane	7400 U	66000 U	4.3 U
Benzene	2500 U	22000 U	1.4 U
trans-1,3-Dichloropropene	12000 U	110000 U	7.2 U
Bromoform	9900 U	88000 U	5.7 U
4-Methyl-2-Pentanone	12000 U	110000 U	7.2 U
2-Hexanone	12000 U	110000 U	7.2 U
Tetrachloroethene	2500 U	22000 U	1.4 U
1,1,2,2-Tetrachloroethane	2500 U	22000 U	1.4 U
Toluene	3200 J	110000 U	2.7 J
Chlorobenzene	12000 U	110000 U	7.2 U
Ethylbenzene	2600 J	88000 U	5.7 U
Styrene	2600 JN	110000 U	0.7 JN
Xylenes (total)	49000	83000 J	8.9
Total VOA TICs	554000	200000	54

Qualifiers:
U - The compound was not detected at the indicated concentration.
J - The concentration given is an approximate value.
R - The concentration is rejected and deemed unusable.
B - The analyte was found in the associated blank as well as the sample.
N - Presumptive evidence exists for the presence of the compound.
NR - Not analyzed.

Checked: ___ OK
___ Corrections Made
12/15/98

TABLE A-2
Semi-Volatile Organic Compounds
Waste Pile Samples, Ingalls Avenue

Sample ID	IA-SS01	IA-SS02	IA-SS03
Lab Sample Number	91035	91036	91037
Sampling Date	10/19/98	10/19/98	10/19/98
Matrix	SOLID	SOLID	SOLID
Dilution Factor	500.0	250.0	5.0
Units	ug/kg	ug/kg	ug/kg
Phenol	1000000 U	470000 U	2400 U
2-Chlorophenol	1000000 U	470000 U	2400 U
2-Methylphenol	1000000 U	470000 U	2400 U
4-Methylphenol	1000000 U	470000 U	79 J
2-Nitrophenol	1000000 U	470000 U	2400 U
2,4-Dimethylphenol	1000000 U	470000 U	2400 U
2,4-Dichlorophenol	1000000 U	470000 U	2400 U
4-Chloro-3-methylphenol	1000000 U	470000 U	2400 U
2,4,6-Trichlorophenol	1000000 U	470000 U	2400 U
2,4,5-Trichlorophenol	1000000 U	470000 U	2400 U
2,4-Dinitrophenol	4100000 U	1900000 U	9500 U
4-Nitrophenol	4100000 U	1900000 U	9500 U
4,6-Dinitro-2-methylphenol	4100000 U	1900000 U	9500 U
Pentachlorophenol	4100000 U	1900000 U	9500 U
bis(2-Chloroethyl)ether	100000 U	47000 U	240 U
1,3-Dichlorobenzene	1000000 U	470000 U	2400 U
1,4-Dichlorobenzene	1000000 U	470000 U	2400 U
1,2-Dichlorobenzene	1000000 U	470000 U	2400 U
bis(2-chloroisopropyl)ether	1000000 U	470000 U	2400 U
N-Nitroso-di-n-propylamine	100000 U	47000 U	240 U
Hexachloroethane	100000 U	47000 U	240 U
Nitrobenzene	100000 U	47000 U	240 U
Isophorone	1000000 U	470000 U	2400 U
bis(2-Chloroethoxy)methane	1000000 U	470000 U	2400 U
1,2,4-Trichlorobenzene	100000 U	47000 U	240 U
Naphthalene	20000000	10000000	14000
4-Chloroaniline	1000000 U	470000 U	2400 U
Hexachlorobutadiene	210000 U	94000 U	480 U
2-Methylnaphthalene	9300000	6300000	5500
Hexachlorocyclopentadiene	1000000 U	470000 U	2400 U
2-Chloronaphthalene	1000000 U	470000 U	2400 U
2-Nitroaniline	2100000 U	940000 U	4800 U
Dimethylphthalate	1000000 U	470000 U	2400 U
Acenaphthylene	340000 J	280000 J	3100
2,6-Dinitrotoluene	210000 U	94000 U	480 U
3-Nitroaniline	2100000 U	940000 U	4800 U
Acenaphthene	300000 J	240000 J	320 J
Dibenzofuran	160000 J	130000 J	200 J
2,4-Dinitrotoluene	210000 U	94000 U	480 U
Diethylphthalate	1000000 U	470000 U	2400 U

Checked: ___ OK
___ Corrections Made
12/15/98

TABLE A-2
Semi-Volatile Organic Compounds
Waste Pile Samples, Ingalls Avenue

Sample ID	IA-SS01	IA-SS02	IA-SS03
Lab Sample Number	91035	91036	91037
Sampling Date	10/19/98	10/19/98	10/19/98
Matrix	SOLID	SOLID	SOLID
Dilution Factor	500.0	250.0	5.0
Units	ug/kg	ug/kg	ug/kg
4-Chlorophenyl-phenylether	1000000 U	470000 U	2400 U
Fluorene	1500000	1200000	1600 J
4-Nitroaniline	2100000 U	940000 U	4800 U
N-Nitrosodiphenylamine	1000000 U	470000 U	2400 U
4-Bromophenyl-phenylether	1000000 U	470000 U	2400 U
Hexachlorobenzene	100000 U	47000 U	240 U
Phenanthrene	4600000	3700000	12000
Anthracene	230000 J	200000 J	1200 J
Carbazole	1000000 U	470000 U	100 J
Di-n-butylphthalate	1000000 U	470000 U	2400 U
Fluoranthene	1400000	1100000	7400
Pyrene	1900000	1600000	13000
Butylbenzylphthalate	1000000 U	470000 U	2400 U
3,3'-Dichlorobenzidine	2100000 U	940000 U	4800 U
Benzo(a)anthracene	600000	510000	4400
Chrysene	740000 J	580000	5600
bis(2-Ethylhexyl)phthalate	1000000 U	470000 U	2400 U
Di-n-octylphthalate	1000000 U	470000 U	2400 U
Benzo(b)fluoranthene	400000	320000	3900
Benzo(k)fluoranthene	180000	130000	1300
Benzo(a)pyrene	110000	96000	1800
Indeno(1,2,3-cd)pyrene	140000	120000	1400
Dibenz(a,h)anthracene	52000 J	48000	520
Benzo(g,h,i)perylene	130000 J	110000 J	1300 J
Total SVOC TICs	33440000	28160000	210400

Qualifiers:
U - The compound was not detected at the indicated concentration.
J - The concetration given is an approximate value.
B - The analyte was found in the associated blank as well as the sample.
NR - Not analyzed.

Checked: ___ OK
___ Corrections Made
12/15/98

TABLE A-3
Pesticide and PCB Compounds
Waste Pile Samples, Ingalls Avenue

Sample ID	IA-SS01	IA-SS02	IA-SS03
Lab Sample Number	91035	91036	91037
Sampling Date	10/19/98	10/19/98	10/19/98
Matrix	SOLID	SOLID	SOLID
Dilution Factor	2.0 (1.0 for PCBs)	2.0 (1.0 for PCBs)	1.0
Units	ug/kg	ug/kg	ug/kg
Aldrin	17 U	15 U	9.6 U
alpha-BHC	17 U	15 U	42 JNP*
beta-BHC	17 U	15 U	17 JNP*
delta-BHC	17 U	15 U	9.6 U
gamma-BHC(Lindane)	17 U	15 U	9.6 U
Chlordane	170 U	150 U	96 U
4,4'-DDD	460 JNP*	440 JNP*	50 JP*
4,4'-DDE	17 U	15 U	9.6 U
4,4'-DDT	17 U	15 U	9.6 U
Dieldrin	1300 JNP*	1600 JNP*	22 JNP*
EndosulfanI	17 U	15 U	9.6 U
EndosulfanII	17 U	15 U	9.6 U
Endosulfansulfate	160 JNP*	140 JNP*	9.6 U
Endrin	860 JNP*	830 JNP*	9.6 U
Endrinaldehyde	17 U	15 U	9.6 U
Endrinketone	17 U	15 U	29
Heptachlor	17 U	15 U	9.6 U
Heptachlorepoxide	17 U	15 U	9.6 U
Methoxychlor	2500 JNP*	2500 JP*	9.6 U
Toxaphene	170 U	150 U	96 U
Aroclor-1016	83 U	75 U	96 U
Aroclor-1221	83 U	75 U	96 U
Aroclor-1232	83 U	75 U	96 U
Aroclor-1242	83 U	75 U	96 U
Aroclor-1248	83 U	75 U	96 U
Aroclor-1254	83 U	75 U	96 U
Aroclor-1260	83 U	75 U	96 U
Aroclor-1262	83 U	75 U	96 U
Aroclor-1268	83 U	75 U	96 U

Qualifiers:

U - The compound was not detected at the indicated concentration.

J - The concentration given is an approximate value.

B - The analyte was found in the associated blank as well as the sample.

N - Presumptive evidence exists for the presence of the compound.

P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40 percent.

* - For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.

NR - Not analyzed.

Checked: ___ OK
___ Corrections Made
12/15/98

TABLE A-4
Metals and Cyanide
Waste Pile Samples, Ingalls Avenue

Sample ID	IA-SS01	IA-SS02	IA-SS03
Lab Sample Number	91035	91036	91037
Sampling Date	10/19/98	10/19/98	10/19/98
Matrix	SOLID	SOLID	SOLID
Dilution Factor	NA (50.0 for cyanide)	NA (50.0 for cyanide)	NA (4.0 for cyanide)
Units	mg/kg	mg/kg	mg/kg
Aluminum	6460	9150	871
Antimony	4.5 JB	5.7 J	1.4 JB
Arsenic	91.1 J	83.0 J	65.9 J
Barium	334	337	226
Beryllium	0.51 B	0.56 B	0.26 B
Cadmium	0.25 U	0.22 U	0.11 U
Calcium	1390 B	2290 B	176 B
Chromium	25.3 J	17.0 J	10.0 J
Cobalt	6.8 B	8.8 B	3.9 B
Copper	46.1 J	50.6 J	36.1 J
Iron	63500	62900	24300
Lead	341 J	283 J	379 J
Magnesium	93.7 B	135 B	113 B
Manganese	957 J	1430 J	45.1 J
Mercury	0.48 J	0.20 J	0.53 J
Nickel	23.5 B	18.9 B	11.3
Potassium	187 U	169 U	968 B
Selenium	3.0 U	2.7 U	15.1
Silver	0.87 U	0.79 U	0.40 U
Sodium	421 B	1440 B	206 B
Thallium	3.0 U	2.7 U	1.4 U
Vanadium	36.8 J	39.2 J	25.8 J
Zinc	165 J	178 J	35.8 J
Cyanide	558 J	446 J	29.6 J

Qualifiers:
U - The compound was not detected at the indicated concentration.
J - The concetration given is an approximate value.
B - Reported value is less than the Method Detection Limit but greater than or equal to the Instrument Detection Limit.
NR - Not analyzed.

Checked: ___ OK
JRV Corrections Made
12/15/98

TABLE A-5
Toxicity Characteristic Leaching Procedure (TCLP) and Resource Conservation and Recovery Act (RCRA) Constituents
Waste Pile Samples, Ingalls Avenue

Sample ID **Lab Sample Number** **Sampling Date** **Matrix** **Dilution Factor** **Units**	**Regulatory Maximum Concentration Level**	IA-SS01 91035 10/19/98 SOLID 10.0 for VOCs; 1.0 for SVOCs; NA for metals mg/l	IA-SS02 91036 10/19/98 SOLID 200.0 for VOCs; 1.0 for SVOCs; NA for metals mg/l	IA-SS03 91037 10/19/98 SOLID 1.0 for VOCs; 1.0 for SVOCs; NA for metals mg/l
Vinyl Chloride	0.2	0.050 U	1.0 U	0.0050 U
1,1-Dichloroethene	0.5	0.020 U	0.40 U	0.0020 U
Chloroform	6	0.050 U	1.0 U	0.0050 U
1,2-Dichloroethane	0.7	0.020 U	0.40 U	0.0020 U
Methyl Ethyl Ketone	200	0.050 U	1.0 U	0.0050 U
Carbon Tetrachloride	0.5	0.020 U	0.40 U	0.0020 U
Trichloroethene	0.5	0.010 U	0.20 U	0.0010 U
Benzene	0.5	0.010 U	0.20 U	0.0010 U
Tetrachloroethene	0.7	0.010 U	0.20 U	0.0010 U
Chlorobenzene	100	0.050 U	1.0 U	0.0050 U
o-Cresol	200	0.0090 J	0.012 J	0.040 U
m&p-Cresol	200	0.040 U	0.040 U	0.040 U
2,4,6-Trichlorophenol	2	0.040 U	0.040 U	0.040 U
2,4,5-Trichlorophenol	400	0.040 U	0.040 U	0.040 U
Pentachlorophenol	100	0.16 U	0.16 U	0.16 U
1,4-Dichlorobenzene	7.5	0.040 U	0.040 U	0.040 U
Hexachloroethane	3	0.0040 U	0.0040 U	0.0040 U
Nitrobenzene	2	0.0040 U	0.0040 U	0.0040 U
Hexachlorobutadiene	0.5	0.0080 U	0.0080 U	0.0080 U
2,4-Dinitrotoluene	0.13	0.0080 U	0.0080 U	0.0080 U
Hexachlorobenzene	0.13	0.0040 U	0.0040 U	0.0040 U
Pyridine	5	0.040 U	0.040 U	0.040 U
Arsenic	5	0.014 U	0.014 U	0.014 U
Barium	100	0.46 B	0.33 B	0.50 B
Cadmium	1	0.0020 U	0.0020 U	0.0020 U
Chromium	5	0.009 B	0.0055 U	0.0055 U
Lead	5	0.05 J	0.06 J	0.01 JB
Mercury	0.2	0.010 U	0.010 U	0.010 U
Selenium	1	0.021 U	0.021 U	0.021 U
Silver	5	0.0070 U	0.0070 U	0.0070 U
Corrosivity (as pH)	< 2 or > 12.5	3.12	NR	NR
Ignitibility (deg F)	< 140	134	NR	NR
Reactive Cyanide (mg/kg)	250	25 U	NR	NR
Reactive Sulfide (mg/kg)	500	25 U	NR	NR

Qualifiers:
U - The compound was not detected at the indicated concentration.
J - The concetration given is an approximate value.
B (organics) - The analyte was found in the associated blank as well as the sample.
B (inorganics) - Reported value is less than the MDL but greater than or equal to the IDL.
NR - Not analyzed.

Checked: ___ OK
Corrections Made
12/5/98