CITY OF BUFFALO
Department of Community Development
Division of Planning

FRANCZYK PARK SITE
SAMPLING AND ANALYSIS REPORT

JULY 1998

P12457.00

ACRES INTERNATIONAL CORPORATION
140 John James Audubon Parkway
Amherst, New York 14228-1180

July 8, 1998
P12457.20
T.07

Mr. Dennis G. Sutton
City of Buffalo
Department of Community Development
Division of Planning
901 City Hall
Buffalo, NY 14202

Franczyk Park Site
Sampling and Analysis Report

Dear Dennis:

This letter report presents a discussion of soil and groundwater sampling and analysis conducted on June 3 and 5, 1998 at the Franczyk Park site, Buffalo, New York. All work was performed in accordance to Contract No. 91951500 between the City of Buffalo and Acres International Corporation.

Near surface soil and groundwater samples were collected at two locations selected by City of Buffalo representative, Mr. Dennis Sutton:

- FP-1, southeast corner of the site, near Fleming and New Babcock Streets; and
- FP-2, southwest corner of the site, near Fleming and Lewis Streets.

Several shallow holes were excavated at each location on Wednesday, June 3, 1998.

Near surface soil (6 inches or less) and groundwater samples from two of the shallow holes were collected on Friday, June 5, 1998. All samples were chilled with ice and shipped under Chain of Custody to Galson Laboratories (Galson) via overnight air courier. Analyses were performed by Galson for Target Compound List (TCL) organic compounds and Target Analyte List (TAL) inorganics.

Analytical results are summarized in Tables 1 through 4 with comparison to New York State standards (groundwater) and NYSDEC recommended soil cleanup objectives (soil). The complete analytical report submitted by Galson is included in Attachment A.

Please call if you have any questions.

Very truly yours,

Larry Zamojski

Lawrence D. Zamojski, P.E.
Project Manager

JRS/slb
Enclosures

ACRES INTERNATIONAL CORPORATION
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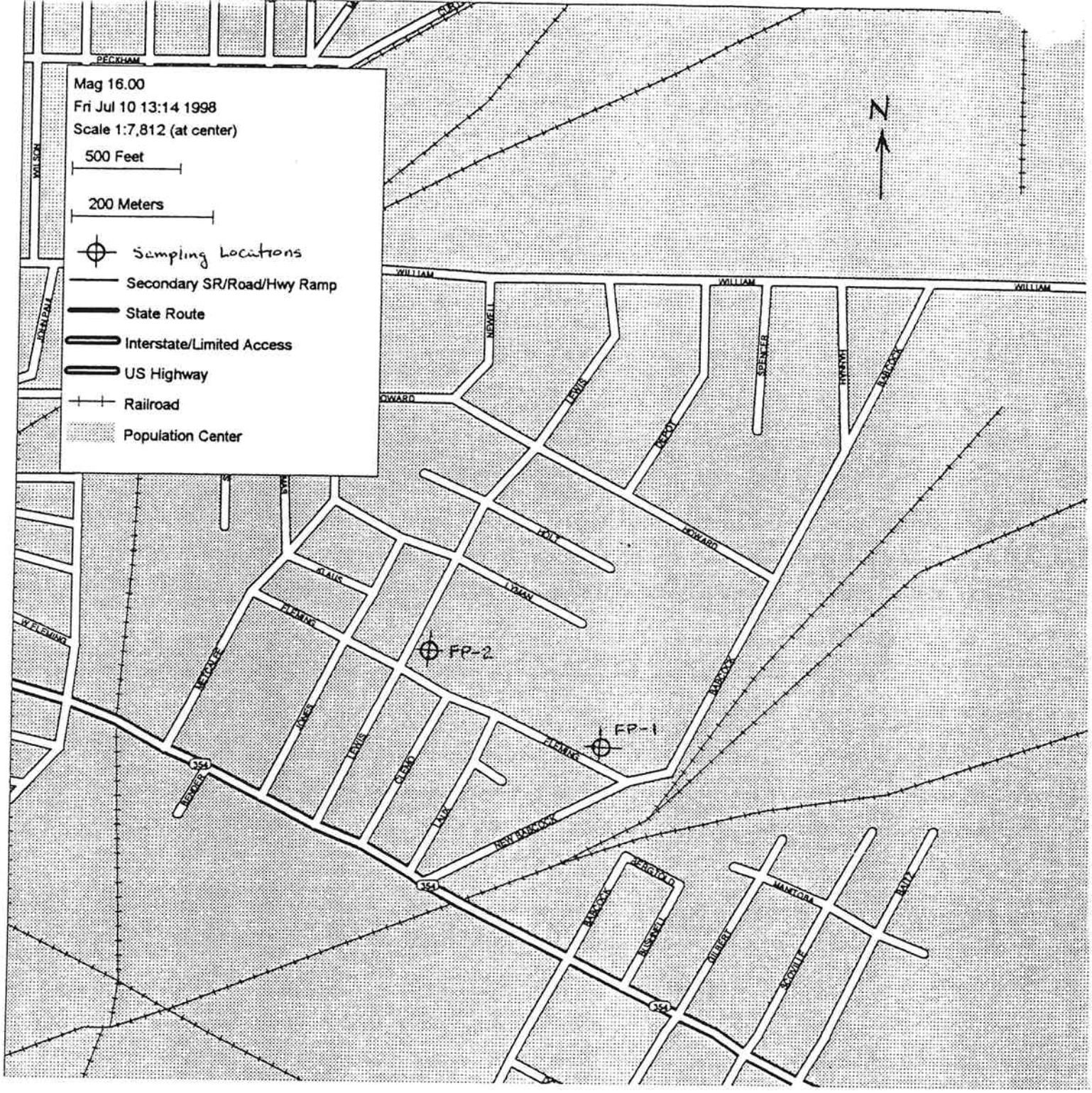
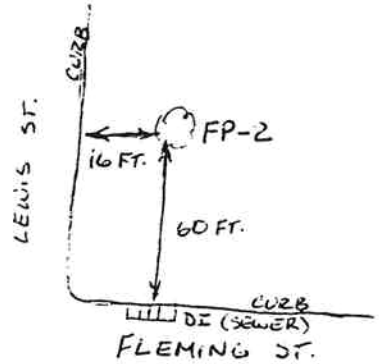


FRANCZYK PARK SAMPLING LOCATIONS



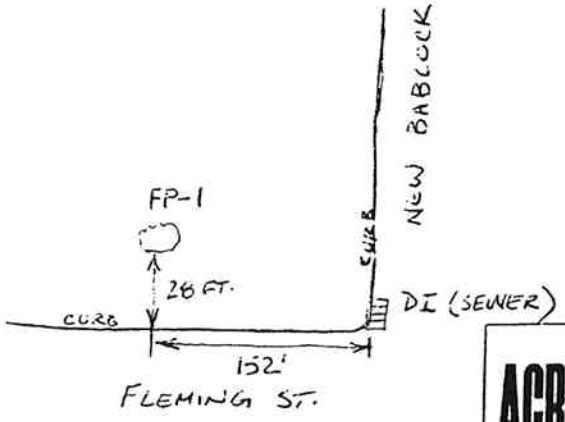


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TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Organic Compounds

Franczyk Park

Compound	Concentration ($\mu g/\ell$)		Water Quality Standard[1]
Volatiles			
Location	FP-1	FP-2	
Chloromethane	10U	10U	5
Bromomethane	10U	10U	5
Vinyl Chloride	10U	10U	2
Chloroethane	10U	10U	5
Methylene Chloride	10U	10U	4.7[4]
Acetone	10U	10	50
Carbon disulfide	10U	10U	50
1,1-Dichloroethene	10U	10U	5
1,1-Dichloroethane	10U	10U	0.4[4]
1,2-Dichloroethene (tot.)	10U	10U	5[5]
Chloroform	10U	10U	6[4]
1,2-Dichloroethane	10U	10U	5
2-Butanone	5J	10U	50
1,1,1-Trichloroethane	10U	10U	5
Carbon Tetrachloride	10U	10U	5
Bromodichloromethane	10U	10U	0.3[4]
1,2-Dichloropropane	10U	10U	0.5[4]
cis-1,3-Dichloropropene	10U	10U	5
Trichloroethene	10U	10U	3.2[4]
Dibromochloromethane	10U	10U	0.4[4]
1,1,2-Trichloroethane	10U	10U	5
Benzene	10U	10U	1.2[4]
trans-1,3-Dichloropropene	10U	10U	5

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Organic Compounds

Franczyk Park

Compound	Concentration ($\mu g/\ell$)		Water Quality Standard[1]
Volatiles			
Location	FP-1	FP-2	
Bromoform	10U	10U	4.4[4]
4-Methyl-2-Pentanone	10U	10U	50
2-Hexanone	10U	10U	50
Tetrachloroethene	10U	10U	0.69[4]
1,1,2,2-Tetrachloroethane	10U	10U	1.8[4]
Toluene	10U	10U	5
Chlorobenzene	10U	10U	5
Ethylbenzene	10U	10U	5
Styrene	10U	10U	1.2[4]
Xylenes (tot.)	10U	10U	5[5]

(1) 10NYCRR Part 5 unless noted otherwise

(2) 6NYCRR Part 703.5

(3) 10NYCRR Part 5 - Total concentration of these trihalomethanes shall not exceed 100 $\mu g/\ell$

(4) EPA Action Level, based on Health Effects Assessment Summary Tables

(5) Each isomer

Data Qualifier Codes

U Indicates the compound was analyzed for but not detected. The number is the minimum attained detection limit for the sample.

J Indicates the compound is present and the reported value is an estimate.

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Organic Compounds

Franczyk Park

Compound	Concentration ($\mu g/\ell$)		Water Quality Standard[1]
Semivolatiles			
Location	FP-1	FP-2	
Phenol	10U	10U	50
bis(2-Chloroethyl) Ether	10U	10U	1[2]
2-Chlorophenol	10U	10U	5
1,3-Dichlorobenzene	10U	10U	5
1,4-Dichlorobenzene	10U	10U	1.5[3]
1,2-Dichlorobenzene	10U	10U	5
2-Methylphenol	10U	10U	50
2,2'-oxybis (1-Chloropropane)	10U	10U	
4-Methylphenol	10U	10U	50
N-Nitroso-di-n-propylamine	10U	10U	0.005[3]
Hexachloroethane	10U	10U	5
Nitrobenzene	10U	10U	5
Isophorone	10U	10U	50
2-Nitrophenol	10U	10U	50
2,4-Dimethylphenol	10U	10U	50
2,4-Dichlorophenol	10U	10U	5
1,2,4-Trichlorobenzene	10U	10U	5
Naphthalene	10U	10U	50
4-Chloroaniline	10U	10U	5
bis (2-Chloroethoxy)methane	10U	10U	5
Hexachlorobutadiene	10U	10U	4.5[3]
4-Chloro-3-methylphenol	10U	10U	5
2-Methylnaphthalene	10U	10U	50

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Organic Compounds

Franczyk Park

Compound	Concentration ($\mu g/\ell$)		Water Quality Standard[1]
Semivolatiles			
Location	FP-1	FP-2	
Hexachlorocyclopentadiene	10U	10U	5
2,4,6-Trichlorophenol	10U	10U	1.8[3]
2,4,5-Trichlorophenol	26U	25U	5
2-Chloronaphthalene	10U	10U	5
2-Nitroaniline	26U	25U	5
Dimethylphthalate	10U	10U	50
Acenaphthylene	10U	3J	50
2,6-Dinitrotoluene	10U	10U	0.05[3]
3-Nitroaniline	26U	25U	5
Acenaphthene	10U	15	50
2,4-Dinitrophenol	26U	25U	50
4-Nitrophenol	26U	25U	50
Dibenzofuran	10U	10	50
2,4-Dinitrotoluene	10U	10U	0.05[3]
Diethylphthalate	10U	10U	50
4-Chlorophenyl-phenylether	10U	10U	50
Fluorene	10U	13	50
4-Nitroaniline	26U	25U	5
4,6-Dinitro-2-methylphenol	26U	25U	3.5[3]
N-nitrosodiphenylamine	10U	10U	7.1[3]
4-Bromophenyl-phenylether	10U	10U	50
Hexachlorobenzene	10U	10U	0.021[3]
Pentachlorophenol	26U	25U	5

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Organic Compounds

Franczyk Park

Compound	Concentration ($\mu g/\ell$)		Water Quality Standard[1]
Semivolatiles			
Location	FP-1	FP-2	
Phenanthrene	10U	4J	50
Anthracene	10U	4J	50
Carbazole	10U	8J	2[3]
Di-n-butylphthalate	10U	1J	50
Fluoranthene	10U	13	50
Pyrene	10U	6J	50
Butylbenzylphthalate	10U	10U	50
3,3'-Dichlorobenzidine	10U	10U	0.08[3]
Benzo (a) anthracene	10U	10U	0.011[3]
Chrysene	10U	10U	50
bis (2-Ethylhexyl) phthalate	10U	10U	2.5[3]
Di-n-octylphthalate	10U	10U	50
Benzo (b) fluoroanthene	10U	10U	50
Benzo (k) fluoroanthene	10U	10U	50
Benzo (a) pyrene	10U	10U	0.003[3]
Indeno (1,2,3-cd) pyrene	10U	10U	50
Dibenzo (a,h) anthracene	10U	10U	0.0007[3]
Benzo (g,h,i) perylene	10U	10U	50

(1) 10NYCRR Part 5 unless noted otherwise

(2) 6NYCRR Part 703.5

(3) EPA Action Level, based on Health Effects Assessment Summary Tables

Data Qualifier Codes

U Indicates the compound was analyzed for but not detected. The number is the minimum attained detection limit

for the sample.

J Indicates the compound is present and the reported value is an estimate.

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Organic Compounds

Franczyk Park

Compound	Concentration ($\mu g/\ell$)		Water Quality Standard[1]
Pesticides/PCBs			
Location	FP-1	FP-2	
alpha-BHC	0.05U	0.048U	0.0056[3]
beta-BHC	0.05U	0.048U	0.019[3]
delta-BHC	0.05U	0.048U	5
gamma-BHC (Lindane)	0.05U	0.048U	4
Heptachlor	0.05U	0.048U	0.0078[3]
Aldrin	0.05U	0.048U	0.002[3]
Heptachlor epoxide	0.05U	0.048U	0.0038[3]
Endosulfan I	0.05U	0.048U	50
Dieldrin	0.1U	0.1U	0.002[3]
4,4' -DDE	0.1U	0.1U	0.1[3]
Endrin	0.1U	0.1U	0.2
Endosulfan II	0.1U	0.1U	50
4,4' -DDD	0.1U	0.1U	0.15[3]
Endosulfan sulfate	0.1U	0.1U	50
4,4' -DDT	0.1U	0.1U	0.1[3]
Methoxychlor	0.5U	0.48U	35[2]
Endrin ketone	0.1U	0.1U	
Endrin aldehyde	0.1U	0.1U	5
alpha-Chlordane	0.05U	0.048U	
gamma-Chlordane	0.05U	0.048U	
Toxaphene	5.0U	4.8U	5
Aroclor-1016	1.0U	1.0U	0.0045[3]
Aroclor-1221	2.0U	1.9U	0.0045[3]

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Organic Compounds

Franczyk Park

Compound	Concentration ($\mu g/\ell$)		Water Quality Standard[1]
Pesticides/PCBs			
Location	FP-1	FP-2	
Aroclor-1232	1.0U	1.0U	0.0045[3]
Aroclor-1242	1.0U	1.0U	0.0045[3]
Aroclor-1248	1.0U	1.0U	0.0045[3]
Aroclor-1254	1.0U	1.0U	0.0045[3]
Aroclor-1260	1.0U	1.0U	0.0045[3]

(1) 10NYCRR Part 5 unless noted otherwise

(2) 6NYCRR Part 703.5

(3) EPA Action Level, based on Health Effects Assessment Summary Tables

Data Qualifier Codes

U Indicates the compound was analyzed for but not detected. The number is the minimum attained detection limit for the sample.

J Indicates the compound is present and the reported value is an estimate.

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
Inorganics

Franczyk Park

Analyte	Concentration (mg/ℓ)		Water Quality Standard[1]
	FP-1	FP-2	
Aluminum	9.17	25.2	---
Antimony	**0.0425B**	**0.0231B**	0.003
Arsenic	**43.7**	**0.132**	0.025
Barium	0.247	0.262	1
Beryllium	0.001U	0.0015B	0.003
Cadmium	**0.0166**	0.0076	0.01
Calcium	621	606	---
Chromium	0.0248	0.0278	0.05
Cobalt	0.0253B	0.0716	---
Copper	**0.264**	**0.264**	0.2[2]
Iron	**740**	**141**	0.3
Lead	**0.835**	**9.16**	0.025[3]
Magnesium	76.9	243	---
Manganese	**8.49**	**10.4**	0.3
Mercury	0.0013	**0.0024**	0.002
Nickel	0.0304B	0.0872	0.7[4]
Potassium	279	102	---
Selenium	0.012U	**0.0247**	0.01
Silver	0.003U	0.003U	0.05
Sodium	**35.5**	**67.6**	20
Thallium	0.006U	**0.0066B**	0.0025[4]
Vanadium	0.0395B	0.0557	0.25[4]
Zinc	**0.774**	**0.902**	0.3[2]
Cyanide	0.0102	0.01U	0.1[2]

(1) 10NYCRR Part 5 unless noted otherwise.

(2) 10NYCRR Part 170

(3) 6NYCRR Part 703.5

(4) EPA Action Level, based on Health Effects Assessment Summary Tables.

Data Qualifier Codes

U Not detected above the level of the associated value.

B Value is less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument detection limit (IDL).

TABLE 3
SOIL ANALYTICAL RESULTS
Organic Compounds

Franczyk Park

Compound	Concentration (μg/kg)		NYSDEC Guidance Value[1]
Volatiles			
Location	FP-1	FP-2	
Chloromethane	28U	19U	---
Bromomethane	28U	19U	---
Vinyl Chloride	28U	19U	200
Chloroethane	28U	19U	1,900
Methylene Chloride	8J	16J	100
Acetone	28U	14J	200
Carbon disulfide	28U	19U	2,700
1,1-Dichloroethene	28U	19U	400
1,1-Dichloroethane	28U	19U	200
1,2-Dichloroethene (tot.)	28U	19U	250/300[2]
Chloroform	28U	19U	300
1,2-Dichloroethane	28U	19U	100
2-Butanone	28U	19U	300
1,1,1-Trichloroethane	28U	19U	800
Carbon Tetrachloride	28U	19U	600
Bromodichloromethane	28U	19U	---
1,2-Dichloropropane	28U	19U	---
cis-1,3-Dichloropropene	28U	19U	---
Trichloroethene	28U	19U	700
Dibromochloromethane	28U	19U	---
1,1,2-Trichloroethane	28U	19U	---
Benzene	28U	19U	60
trans-1,3-Dichloropropene	28U	19U	---

TABLE 3
SOIL ANALYTICAL RESULTS
Organic Compounds

Franczyk Park

Compound	Concentration (μg/kg)		NYSDEC Guidance Value[1]
Volatiles			
Location	FP-1	FP-2	
Bromoform	28U	19U	---
4-Methyl-2-Pentanone	28U	19U	1,000
2-Hexanone	28U	19U	---
Tetrachloroethene	28U	19U	1,400
1,1,2,2-Tetrachloroethane	28U	19U	600
Toluene	28U	19U	1,500
Chlorobenzene	28U	19U	1,700
Ethylbenzene	28U	19U	5,500
Styrene	28U	19U	---
Xylenes (tot.)	28U	19U	1,200

(1) NYSDEC TAGM HWR-95-4046 (Rev. 4/95), recommended soil cleanup objectives

(2) cis & trans isomers, respectively

Data Qualifier Codes

U Indicates the compound was analyzed for but not detected. The number is the minimum attained detection limit for the sample.

J Indicates the compound is present and the reported value is an estimate.

TABLE 3
SOIL ANALYTICAL RESULTS
Organic Compounds

Franczyk Park

Compound	Concentration (μg/kg)		NYSDEC Guidance Value[1]
Semivolatiles			
Location	FP-1RE	FP-2RE	
Phenol	920U	630U	30 or MDL[2]
bis (2-Chloroethyl) Ether	920U	630U	---
2-Chlorophenol	920U	630U	800
1,3-Dichlorobenzene	920U	630U	1,600
1,4-Dichlorobenzene	920U	630U	8,500
1,2-Dichlorobenzene	920U	630U	7,900
2-Methylphenol	920U	630U	100 or MDL
2,2'-oxybis (1-Chloropropane)	920U	630U	---
4-Methylphenol	920U	630U	900
N-Nitroso-di-n-propylamine	920U	630U	---
Hexachloroethane	920U	630U	---
Nitrobenzene	920U	630U	200 or MDL
Isophorone	920U	630U	4,400
2-Nitrophenol	920U	630U	330 or MDL
2,4-Dimethylphenol	920U	630U	---
2,4-Dichlorophenol	920U	630U	400
1,2,4-Trichlorobenzene	920U	630U	3,400
Naphthalene	920U	630U	13,000
4-Chloroaniline	920U	630U	220 or MDL
bis (2-Chloroethoxy) methane	920U	630U	---
Hexachlorobutadiene	920U	630U	---
4-Chloro-3-methylphenol	920U	630U	240 or MDL
2-Methylnaphthalene	110J	630U	36,400

TABLE 3
SOIL ANALYTICAL RESULTS
Organic Compounds

Franczyk Park

Compound	Concentration (μg/kg)		NYSDEC Guidance Value[1]
Semivolatiles			
Location	FP-1RE	FP-2RE	
Hexachlorocyclopentadiene	920U	630U	---
2,4,6-Trichlorophenol	920U	630U	---
2,4,5-Trichlorophenol	2300U	1600U	100
2-Chloronaphthalene	920U	630U	---
2-Nitroaniline	2,300U	1,600U	430 or MDL
Dimethylphthalate	920U	630U	2,000
Acenaphthylene	920U	630U	41,000
2,6-Dinitrotoluene	920U	630U	1,000
3-Nitroaniline	2,300U	1,600U	500 or MDL
Acenaphthene	600J	630U	50,000
2,4-Dinitrophenol	2,300U	1,600U	200 or MDL
4-Nitrophenol	2,300U	1,600U	100 or MDL
Dibenzofuran	680J	630U	6,200
2,4-Dinitrotoluene	920U	630U	---
Diethylphthalate	920U	630U	7,100
4-Chlorophenyl-phenylether	920U	630U	---
Fluorene	1,200	630U	50,000
4-Nitroaniline	2,300U	1,600U	---
4,6-Dinitro-2-methylphenol	2,300U	1,600U	---
N-Nitrosodiphenylamine	920U	630U	---
4-Bromophenyl-phenylether	920U	630U	---
Hexachlorobenzene	920U	630U	410
Pentachlorophenol	2,300U	1,600U	1,000 or MDL

TABLE 3
SOIL ANALYTICAL RESULTS
Organic Compounds

Franczyk Park

Compound	Concentration (μg/kg)		NYSDEC Guidance Value[1]
Semivolatiles			
Location	FP-1RE	FP-2RE	
Phenanthrene	8,000	190J	50,000
Anthracene	1,400	630U	50,000
Carbazole	770J	630U	---
Di-n-butylphthalate	920U	630U	8,100
Fluoranthene	9,000	260J	50,000
Pyrene	5,900	220J	50,000
Butylbenzylphthalate	920U	630U	50,000
3,3'-Dichlorobenzidine	920U	630U	---
Benzo (a) anthracene	**3,100**	94J	224 or MDL
Chrysene	**2,800**	99J	400
bis (2-Ethylhexyl) phthalate	920U	200J	50,000
Di-n-octylphthalate	920U	630U	50,000
Benzo (b) fluoroanthene	**3,400**	120J	224 or MDL
Benzo (k) fluoroanthene	**1,400**	630U	224 or MDL
Benzo (a) pyrene	**2,200**	630U	61 or MDL
Indeno (1,2,3-cd) pyrene	780J	630U	3,200
Dibenzo (a,h) anthracene	920U	630U	14 or MDL
Benzo (g,h,i) perylene	780J	630U	50,000

(1) NYSDEC TAGM HWR-95-4046 (Rev. 4/95), recommended soil cleanup objectives

(2) MDL is Method Detection Limit

Data Qualifier Codes

U Indicates the compound was analyzed for but not detected. The number is the minimum attained detection limit for the sample.

J Indicates the compound is present and the reported value is an estimate.

TABLE 3
SOIL ANALYTICAL RESULTS
Organic Compounds

Franczyk Park

Compound	Concentration (μg/kg)		NYSDEC Guidance Value[1]
Pesticides/PCBs			
Location	FP-1	FP-2	
alpha-BHC	4.3U	3.2U	110
beta-BHC	4.3U	3.2U	200
delta-BHC	4.3U	3.2U	300
gamma-BHC (Lindane)	4.3U	3.2U	60
Heptachlor	4.3U	3.2U	100
Aldrin	4.3U	3.2U	41
Heptachlor epoxide	4.3U	3.2U	20
Endosulfan I	4.3U	3.2U	900
Dieldrin	8.6U	6.4U	44
4,4' -DDE	8.6U	6.4U	2,100
Endrin	8.6U	6.4U	100
Endosulfan II	8.6U	6.4U	900
4,4' -DDD	8.6U	6.4U	2,900
Endosulfan sulfate	8.6U	6.4U	1,000
4,4' -DDT	8.6U	6.4U	2,100
Methoxychlor	43U	32U	---
Endrin ketone	8.6U	6.4U	---
Endrin aldehyde	8.6U	6.4U	---
alpha-Chlordane	4.3U	3.2U	---
gamma-Chlordane	4.3U	3.2U	540
Toxaphene	430U	320U	---
Aroclor-1016	86U	64U	1,000
Aroclor-1221	170U	130U	1,000

TABLE 3
SOIL ANALYTICAL RESULTS
Organic Compounds

Franczyk Park

Compound	Concentration (μg/kg)		NYSDEC Guidance Value[1]
Pesticides/PCBs			
Location	FP-1	FP-2	
Aroclor-1232	86U	64U	1,000
Aroclor-1242	86U	64U	1,000
Aroclor-1248	86U	64U	1,000
Aroclor-1254	86U	64U	1,000
Aroclor-1260	86U	64U	1,000

(1) NYSDEC TAGM HWR-95-4046 (Rev. 4/95), recommended soil cleanup objectives

Data Qualifier Codes

U Indicates the compound was analyzed for but not detected. The number is the minimum attained detection limit for the sample.

J Indicates the compound is present and the reported value is an estimate.

TABLE 4
SOIL ANALYTICAL RESULTS
Inorganics

Franczyk Park

Analyte	Concentration (mg/kg)		NYSDEC Guidance Value[1]	Eastern USA Background
	FP-1	FP-2		
Aluminum	2,470	8,830	SB[2]	33,000
Antimony	16.3B	2.4B	SB	---
Arsenic	**8,280**	8.8	7.5 or SB	3 - 12
Barium	53.1B	54.1	300 or SB	15 - 600
Beryllium	0.27U	0.54B	0.16 or SB	0 - 1.75
Cadmium	4.7	1.4	10	0.1 - 1
Calcium	23,100	5,600	SB	130 - 35,000[3]
Chromium	5.3	11.4	50	1.5 - 40[3]
Cobalt	5.7B	11.9	30 or SB	2.5 - 60[3]
Copper	34.2	18.2	25 or SB	1 - 50
Iron	291,000	49,100	2,000 or SB	2,000 - 550,000
Lead	102	275	---	200 - 500[4]
Magnesium	2,160	2,530	SB	100 - 5,000
Manganese	892	489	SB	50 - 5,000
Mercury	0.19B	**0.79**	0.1	0.001 - 0.2
Nickel	7.3B	16.0	13 or SB	0.5 - 25
Potassium	1,970	1,400	SB	8,500 - 43,000[3]
Selenium	3.3U	0.96	2 or SB	0.1 - 3.9
Silver	0.82U	0.58U	SB	---
Sodium	127U	121B	SB	6,000 - 8,000
Thallium	6.6U	1.2U	SB	---
Vanadium	11.8B	21.7	150 or SB	1 - 300
Zinc	**90.1**	**150**	20 or SB	9 - 50
Cyanide	2.2	0.92U	---	---

(1) NYSDEC TAGM HWR-95-4046 (Rev. 4/95), recommended soil cleanup objectives

(2) SB is Site Background

(3) New York State Background

(4) Average for metropolitan or suburban areas near highways

Data Qualifier Codes

U Not detected above the level of the associated value.

B Value is less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument detection limit (IDL).