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LIMITED SITE DATA DOCUMENT

915145

REMEDIAL CONSTRUCTION
LEHIGH INDUSTRIAL PARK SITE
Lackawanna, New York

SITE NUMBER: 9-15-145

PREPARED FOR

Prepared for:

New York State
Department of
Environmental Conservation
50 Wolf Road, Albany, New York 12233
Michael D. Zagata, Commissioner

Division of Environmental Remediation
Michael J. O'Toole, Jr., P.E., Director

PREPARED BY

PARSONS ENGINEERING SCIENCE, INC.
Syracuse, New York

PARSONS

NOVEMBER 1996
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LIMITED SITE DATA
LEHIGH INDUSTRIAL PARK SITE
SITE NO. 9-15-145

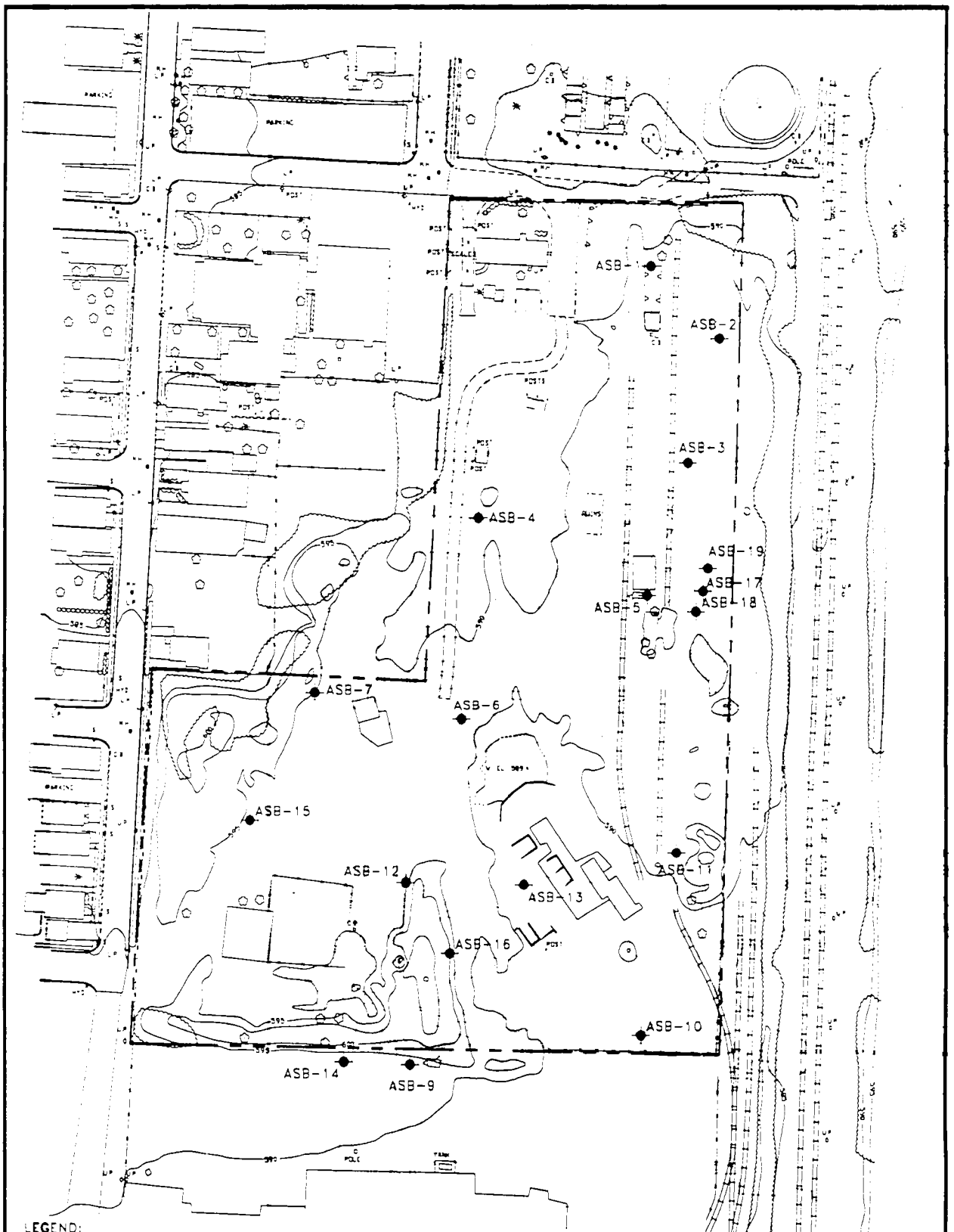
This document is NOT part of the Contract Documents for the building demolition and soil removal for the Lehigh Industrial Park Site. The DEPARTMENT neither represents that the characteristics of the waste material at the site will be the same as in the attached document nor considers the attached document as being a comprehensive and actual listing of contaminants which may be detected. The Contractor shall be responsible for the accurate and comprehensive characterization of waste materials to be properly removed, transported, and disposed.

NOVEMBER 1996

TABLE 3.7.1
ANALYTICAL RESULTS SUMMARY
SUSPECTED ASBESTOS – CONTAINING MATERIAL
LEHIGH INDUSTRIAL PARK SITE
LACKAWANNA, NEW YORK

SAMPLE NUMBER	DATE	SAMPLE DESCRIPTION	SAMPLE DEPTH (INCHES)	% ASBESTOS
ASB–1	07/01/92	Composite of three samples; one small piece of fabric, otherwise no suspect observed.	0–3	1–5
ASB–2	07/01/92	Composite of three samples; no suspect observed.	0–3	1–5
ASB–3	07/01/92	Composite of three samples; no suspect observed; mica–type material mixed with soil.	0–3	20
ASB–4	07/01/92	Composite of three samples; no suspect observed.	0–3	1–5
ASB–5	07/01/92	Composite of three samples; no suspect observed.	0–3	TRACE
ASB–6	07/01/92	Composite of three samples; no suspect observed.	0–3	1–5
ASB–7	07/01/92	Composite of three samples; no suspect observed.	0–3	ND
ASB–8	07/01/92	Composite of three samples; no suspect observed.	0–3	1–5
ASB–9	07/01/92	Composite of three samples; small semi–hard white fragments suspect.	0–5	TRACE
ASB–10	07/01/92	Composite of three samples; no suspect observed; mostly rocks and iron scrap.	0–3	TRACE
ASB–11	07/01/92	Composite of three samples; no suspect observed.	0–3	1–5
ASB–12	07/01/92	Composite of three samples from along west side of fluff pile; some suspect fabric.	0–3	ND
ASB–13	07/01/92	Composite of three samples; no suspect observed.	0–3	TRACE
ASB–14	07/01/92	Composite of three samples; no suspect observed.	0–3	ND
ASB–15	07/01/92	Composite of three samples from fluff pile; some suspect fabric.	0–3	TRACE
ASB–16	07/01/92	Composite of three samples from along east side of fluff pile; some suspect fabric.	0–3	1–5
ASB–17	07/01/92	Sheetrock debris.	–	ND
ASB–18	07/01/92	Floor tile debris	–	5
ASB–19	07/01/92	Surface soils with mica–type and fiberglass material mixed in.	–	1–5

ND = No asbestos fibers detected.
TRACE = Less than 1% detected in sample.



ENGINEERING-SCIENCE, INC.

NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION
PRELIMINARY REMEDIAL INVESTIGATION

ASBESTOS SAMPLE LOCATION MAP

LEHIGH INDUSTRIAL PARK
LACKAWANNA, NEW YORK

FIGURE 3.7.1

REVISED: 12/04/92
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Table 4.1
Lehigh Industrial Park–Additional Studies
Metal Debris Piles
Sample Analysis

PCBs (ug/kg) (ppb)	Action Level	Sample Location	
		TPM18 PCB	TPM22 PCB
Aroclor 1016		46 UJ	8000UJ
Aroclor 1221		93 UJ	16000UJ
Aroclor 1232		46 UJ	8000UJ
Aroclor 1242		46 UJ	4400J
Aroclor 1248		46 UJ	8000UJ
Aroclor 1254		330 J	8000UJ
Aroclor 1260		440 J	8000UJ
Total Aroclors	1000	770	4400

Metals (mg/kg) (ppm)	Action Level	Sample Location		
		TPM17W	TPM18W	TPM21W
Cadmium – Total	10	0.88 J	14.9 J	44.6 J
Chromium – Total	50	78.7 J	923 J	296 J
Lead – Total	500	277	194	1070

Shaded area indicates concentrations above NYSDEC Action Levels
All data corrected in accordance with data validation report

Table 4.2
Lehigh Industrial Park – Additional Studies
Fluff Piles
Sample Analysis

PCBs (ug/kg) (ppb)	Action Level	Sample Location					
		TPF23 PCB1	TPF23 PCB2	TPF24 PCB1	TPF24 PCB2	TPF25 PCB1	TPF25 PCB2
Aroclor 1016		2100 U	2400U	1900 U	4000U	370 U	3900U
Aroclor 1221		4200 U	4800U	3900 U	8100U	760 U	7900U
Aroclor 1232		2100 U	2400U	1900 U	4000U	370 U	3900U
Aroclor 1242		5000 J	25000J	1900 U	4000U	370 U	3900U
Aroclor 1248		2100 U	2400U	1900 U	4000U	370 U	3900U
Aroclor 1254		7700 J	7500J	4700	4400	810 J	6200J
Aroclor 1260		6900	3200J	970 J	4000U	310 J	2300J
Total Aroclors	1000	19600	35700	5670	4400	1120	8500

PCBs (ug/kg) (ppb)	Action Level	Sample Location					
		TPF26 PCB1	TPF26 PCB2	TPF27 PCB1	TPF27 PCB2	TPF28 PCB1	TPF28 PCB2
Aroclor 1016		800 U	1000U	200 UJ	230UJ	190 UJ	4200U
Aroclor 1221		1600 U	2100U	410 UJ	460UJ	390 UJ	8600U
Aroclor 1232		800 U	1000U	200 UJ	230UJ	190 UJ	4200U
Aroclor 1242		1000 J	2800J	180 J	210J	190 UJ	4200U
Aroclor 1248		800 U	1000U	200 UJ	230UJ	190 UJ	4200U
Aroclor 1254		3700 J	2400	340 J	420J	190 UJ	9900
Aroclor 1260		7900	1300J	490 J	490J	140 J	11000
Total Aroclors	1000	12600	6500	1010	1120	140	20900

Metals (mg/kg) (ppm)	Action Levels	Sample Location		
		TPF23W	TPF25W	TPF27W
Cadmium – Total	10	54.6 J	14.1 J	18.6 J
Chromium – Total	50	227 J	126 J	72.3 J
Lead – Total	500	2070	3570	2300

Shaded area indicates concentrations above NYSDEC Action Levels
All data corrected in accordance with data validation report

SY279.04/AMZ/LIPTPF revised 9/15/93

Table 4.3
Lehigh Industrial Park–Additional Studies
Waste Piles
TCLP Metals Analysis

TCLP Metals (ug/L) (ppb)	Federal Reg. limit	Sample Location TPS29EPT	TPF23EPT
Arsenic – Total	5000	4 U	4 U
Barium – Total	100000	1770 J	1600 J
Cadmium – Total	1000	624 J	124 J
Chromium – Total	5000	28 U	18 U
Lead – Total	5000	18600 J	257 J
Mercury – Total	200	0.2	0.2 U
Selenium – Total	1000	4 U	4 U
Silver – Total	5000	0.3 U	0.3 U

Shaded area indicates concentrations exceeding Federal Regulatory Limits
All data corrected in accordance with data validation report

Table 4.4
Lehigh Industrial Park – Additional Studies
Soil Covered Waste Piles
Sample Analysis

PCBs (ug/kg) (ppb)	Action Level	Sample Location				
		TPS29 PCB1	TPS29PCB2	TPS30PCB1	TPS30PCB2	TPS31PCB1
Aroclor 1016		R	2200U	1900 U	2000U	450 U
Aroclor 1221		R	4400U	3900 U	4100U	920 U
Aroclor 1232		R	2200U	1900 U	2000U	450 U
Aroclor 1242		R	1500J	1900 U	2000U	450 U
Aroclor 1248		R	2200U	1900 U	2000U	450 U
Aroclor 1254		R	4800	4500	2100	2100 J
Aroclor 1260		R	4200	2100	5300	450 U
Total Aroclors	1000	0	10500	6600	7400	2100

PCBs (ug/kg) (ppb)	Action Level	Sample Location				
		TPS31PCB2	TPS32PCB1	TPS32PCB2	TPS33 PCB1	TPS33 PCB2
Aroclor 1016		200 U	570UJ	45 U	380UJ	390 UJ
Aroclor 1221		400 U	1200UJ	91 U	780UJ	800 UJ
Aroclor 1232		200 U	570UJ	45 U	380UJ	390 UJ
Aroclor 1242		200 U	410J	43 J	320J	390 UJ
Aroclor 1248		200 U	570J	45 U	380UJ	390 UJ
Aroclor 1254		230	2200J	75 J	960J	2100 J
Aroclor 1260		250	3000J	300	760J	1400 J
Total Aroclors	1000	480	5610	418	2040	3500

Metals (mg/kg) (ppm)	Action Level	Sample Location				
		TPS29W	TPS30W	TPS31W	TPS32W	TPS33W
Cadmium – Total	10	131 J	76.3 J	130 J	97.8 J	5.7 J
Chromium – Total	50	146 J	154 J	127 J	239 J	26.3 U
Lead – Total	500	3440	4410	3550	3840	719

Shaded area indicates concentraitons exceeding NYSDEC Action Level
All data corrected in accordance with data validation report

Table 4.5
Lehigh Industrial Park– Additional Studies
Hot Spot 1
PCB Analysis

PCBs (ug/kg) (ppb)	Action Level	Sample Location			
		H1S1	H1S2	H1S3	H1S4
Aroclor 1016		77UJ	40U	300UJ	42U
Aroclor 1221		160UJ	81U	620UJ	85U
Aroclor 1232		77UJ	40U	300UJ	42U
Aroclor 1242		1800J	40U	14000J	42U
Aroclor 1248		77UJ	40U	300UJ	42U
Aroclor 1254		1700J	120	9700J	37J
Aroclor 1260		660J	64J	2800J	12J
Total Aroclors	1000	4160	184	26500	49

Shaded areas indicate concentrations exceeding NYSDEC Action Level
All data corrected in accordance of data validation report

Table 4.6
Lehigh Industrial Park – Additional Studies
Hot Spot 2
PCB Analysis

PCBs (ug/kg) (ppb)	Action Level	Sample Location				
		H2S1	H2S2	H2S3	H2S4	H2S5
Aroclor 1016		190U	43U	39 U	41U	38 U
Aroclor 1221		390U	87U	79 U	83U	77 U
Aroclor 1232		190U	43U	39 U	41U	38 U
Aroclor 1242		1900J	560	430 J	470	680
Aroclor 1248		190U	43U	39 U	41U	38 U
Aroclor 1254		2100	630	410 J	340	600
Aroclor 1260		2800	380J	280 J	160	310
Total Aroclors	1000	6800	1570	1120	970	1590

PCBs (ug/kg) (ppb)	Action Level	Sample Location		
		H2S6	H2S7	H2S8
Aroclor 1016		200U	190UJ	74 U
Aroclor 1221		400U	390UJ	150 U
Aroclor 1232		200U	190UJ	74 U
Aroclor 1242		2400J	3900J	1200
Aroclor 1248		200U	190UJ	74 U
Aroclor 1254		3800J	3100J	1200
Aroclor 1260		2100J	1400J	840
Total Aroclors	1000	8300	8400	3240

Shaded areas indicate concentrations exceeding NYSDEC Action Level
All data corrected in accordance with data validation report

Table 4.7
Lehigh Industrial Park – Additional Studies
Hot Spot 3
PCB Analysis

PCBs (ug/kg) (ppb)	Action Level	Sample Location						
		H3S1	H3S2	H3S3	H3S4	H3S5	H3S6	H3S7
Aroclor 1016		74 UJ	210UJ	200 UJ	87U	200 U	38U	73 U
Aroclor 1221		150 UJ	420UJ	410 UJ	180U	410 U	77U	150 U
Aroclor 1232		74 UJ	210UJ	200 UJ	87U	200 U	38U	73 U
Aroclor 1242		74 UJ	210UJ	1100 J	770J	4800 J	720	940 J
Aroclor 1248		74 UJ	210UJ	200 UJ	87U	200 U	38U	73 U
Aroclor 1254		850 J	3800J	2600 J	1500	1600 J	240	1600 J
Aroclor 1260		1400 J	9700J	3500 J	1200	770 J	100J	1400 J
Total Aroclors	1000	2250	13500	7200	3470	7170	1060	3940

PCBs (ug/kg) (ppb)	Action Level	Sample Location					
		H3S8	H3S9	H3S10	H3S11	H3S12	H3S13
Aroclor 1016		41U	290 UJ	37U	200UJ	80 U	72U
Aroclor 1221		84U	600 UJ	75U	410UJ	160 U	150U
Aroclor 1232		41U	290 UJ	37U	200UJ	80 U	72U
Aroclor 1242		360	7500 J	1400	2500J	2600	2700
Aroclor 1248		41U	290 UJ	37U	200UJ	80 U	72U
Aroclor 1254		180J	8400 J	720	1700J	1300	1200
Aroclor 1260		140J	3900 J	340J	740J	690 J	630
Total Aroclors	1000	680	19800	2460	4940	4590	4530

Shaded areas indicate concentrations exceeding NYSDEC Action Level
All data corrected in accordance with data validation report

Table 4.8
Lehigh Inustrial Park – Additional Studies
Hot Spot 4
PCB Analysis

PCBs (ug/kg) (ppb)	Action Level	Sample Location					
		H4S1	H4S2	H4S3	H4S4	H4S5	H4S6
Aroclor 1016		190U	92U	40 U	40U	39 U	180U
Aroclor 1221		380U	190U	81 U	82U	80 U	370U
Aroclor 1232		190U	92U	40 U	40U	39 U	180U
Aroclor 1242		1200	680	340	1700	180 J	370J
Aroclor 1248		190U	92U	40 U	40U	39 U	180U
Aroclor 1254		3400J	2100	230	890	260 J	1400J
Aroclor 1260		12000	1600J	190 J	350J	610 J	5100
Total Aroclors	1000	16600	4380	760	2940	1050	6870

PCBs (ug/kg) (ppb)	Action Level	Sample Location				
		H4S7	H4S8	H4S9	H4S10	H4S11
Aroclor 1016		37 U	200U	40U	40UJ	42U
Aroclor 1221		74 U	400U	81U	81UJ	86U
Aroclor 1232		37 U	200U	40U	40UJ	42U
Aroclor 1242		56 J	200U	69J	40UJ	42U
Aroclor 1248		37 U	200U	40U	39J	45J
Aroclor 1254		510 J	1900J	320J	55J	270J
Aroclor 1260		2100	7300	590J	70J	710
Total Aroclors	1000	2666	7490	979	164	965

Shaded areas indicate concentrations exceeding NYSDEC Action Level
All data corrected in accordance with data validation report

Table 4.9
Lehigh Industrial Park–Additional Studies
Hot Spot 5
Metals Analysis

Metals (mg/kg) (ppm)	Action Level	Sample Location			
		H5S1	H5S2	H5S3	H5S4
Cadmium – Total	10	3.3 J	1.7J	2.3 J	6.1J
Chromium – Total	50	735J	41.8J	199 J	43.3J
Lead – Total	500	321 J	1710J	259 J	218J

Shaded areas indicate concentrations exceeding NYSDEC Action Levels
All data corrected in accordance with data validation report

Table 4.10
Lehigh Industrial Park – Additional Studies
Hot Spot 6
Metals Analysis

Metals (mg/kg) (ppm)	Action Level	Sample Location				
		H6S1	H6S2	H6S3	H6S4	H6S5
Cadmium – Total	10	1.1 J	1.1J	1.1 J	0.76J	2.9 J
Chromium – Total	50	19.3J	766J	217 J	25.6J	317 J
Lead – Total	500	581 J	307J	625 J	271J	1930 J

Metals (mg/kg) (ppm)	Action Level	Sample Location				
		H6S6	H6S7	H6S8	H6S9	H6S10
Cadmium – Total	10	2.0 J	5.9J	1.9 J	8.1J	1.2 J
Chromium – Total	50	829J	112J	69.7 J	337J	636 J
Lead – Total	500	392 J	428J	240 J	253J	570 J

Shaded areas indicate concentrations exceeding NYSDEC Action Levels
All data corrected in accordance with data validation report

Table 4.11
Lehigh Industrial Park – Additional Studies
Reconnaissance Shallow Samples
PCB Analysis

PCBs (ug/kg) (ppb)	Action Level	Sample Location					
		R31	R32	R33	R34	R35	R36
Aroclor 1016		36 U	78U	37 U	37U	39 U	47U
Aroclor 1221		73 U	160U	74 U	76U	79 U	96U
Aroclor 1232		36 U	78U	37 U	37U	39 U	47U
Aroclor 1242		490 J	2300J	81 J	1400	340 J	47U
Aroclor 1248		36 U	78U	37 U	37U	39 U	47U
Aroclor 1254		550	2600J	310 J	450	470	24J
Aroclor 1260		370	1100J	1000 J	160J	180 J	47U
Total Aroclors	1000	1410	6000	1391	2010	990	24

PCBs (ug/kg) (ppb)	Action Level	Sample Location				
		R37	R38	R39	R40	R41
Aroclor 1016		45 U	200UJ	38 UJ	39U	46 U
Aroclor 1221		91 U	410UJ	77 UJ	80U	94 U
Aroclor 1232		45 U	200UJ	38 UJ	39U	46 U
Aroclor 1242		45 U	8200J	1100 J	39U	46 U
Aroclor 1248		45 U	200UJ	38 UJ	39U	46 U
Aroclor 1254		12 J	6800J	680 J	390	42 J
Aroclor 1260		45 U	1800J	180 J	120J	19 J
Total Aroclors	1000	12	16800	1960	510	61

Shaded areas indicate concentrations exceeding NYSDEC Action Levels
All data corrected in accordance with data validation report

Table 4.12
Lehigh Industrial Park–Additional Studies
Reconnaissance Shallow
Metals Analysis

Metals (mg/kg) (ppm)	Action Level	Sample Location						
		R31MET	R32MET	R33MET	R34MET	R35MET	R36MET	R37MET
Cadmium – Total	10	4.4 J	22.9J	4.4 J	2.3 J	5.8 BN	1.3J	0.53 J
Chromium – Total	50	209J	250J	378 J	1260 J	504 J	9.9U	16.5 J
Lead – Total	500	390 J	834J	355 J	126 J	134 J	59.2J	37.7 J

Shaded areas indicate concentrations exceeding NYSDEC Action Levels
All data corrected in accordance with data validation report

Table 4.13
Lehigh Industrial Park – Additional Studies
Waste Piles – Underlying Soils
Metals Analysis

Fluff Piles

Metals (mg/kg) (ppm)	Action Level	Sample Location		
		TPF23S	TPF25S	TPF27S
Cadmium – Total	10	7.8 J	2.2 J	0.26 J
Chromium – Total	50	35.9 J	31.2 J	7.6 U
Lead – Total	500	638 J	565 J	81.5 J

Metal Debris Piles

Metals (mg/kg) (ppm)	Action level	Sample Location		
		TPM17S	TPM18S	TPM21S
Cadmium – Total	10	0.33 J	0.52 J	0.68 J
Chromium – Total	50	9.1 J	30 J	10.8 U
Lead – Total	500	32.8 J	21.9 J	26.6 J

Soil Covered Waste Piles

Metals (mg/kg) (ppm)	Action Level	Sample Location				
		TPS29S	TPS30S	TPS31S	TPS32S	TPS33S
Cadmium – Total	10	2.7 J	0.24 J	6.2 J	1.4 J	0.72 J
Chromium – Total	50	68.2 J	9.6 U	10.8 U	17.3 J	17.2 J
Lead – Total	500	506 J	45 J	994 J	467 J	74 J

Shaded areas indicate concentrations exceeding NYSDEC Action Levels
All data corrected in accordance with data validation report

Table 4.14
Lehigh Industrial Park
Waste Piles–Underlying Soils
PCB Analysis

Fluff Piles

PCBs (ug/kg) (ppb)	Action Level	Sample Location		
		TPF23PCBS	TPF25PCBS	TPF27PCBS
Aroclor 1016		380 U	R	43 U
Aroclor 1221		780 U	R	88 U
Aroclor 1232		380 U	R	43 U
Aroclor 1242		3800 J	R	43 U
Aroclor 1248		380 U	R	43 U
Aroclor 1254		2400 J	R	43 U
Aroclor 1260		1100	R	43 U
Total Aroclors	1000	7300	0	0

Soil Covered Waste Piles

PCBs (ug/kg) (ppb)	Action Level	Sample Location		
		TPS29PCBS	TPS31PCBS	TPS33PCBS
Aroclor 1016		80 U	43U	40 U
Aroclor 1221		160 U	88U	82 U
Aroclor 1232		80 U	43U	40 U
Aroclor 1242		80 U	43U	40 U
Aroclor 1248		80 U	43U	40 U
Aroclor 1254		210 J	48	37 J
Aroclor 1260		80 U	150	34 J
Total Aroclors	1000	210	198	71

Shaded areas indicate concentrations exceeding NYSDEC Action Levels
All data corrected in accordance with data validation report

Table 4.15
Lehigh Industrial Park– Additional Studies
Test Trench Analysis
Volatile Organic Compounds

Parameter (ug/kg) (ppb)	Test Trench
1,1,1–Trichloroethane	11UJ
1,1,2,2–Tetrachloroethane	11UJ
1,1,2–Trichloroethane	11UJ
1,1–Dichloroethane	11U
1,1–Dichloroethene	11U
1,2–Dichloroethane	11U
1,2–Dichloroethene (Total)	11U
1,2–Dichloropropane	11UJ
2–Butanone	11UJ
2–Hexanone	11UJ
4–Methyl–2–pentanone	11UJ
Acetone	88U
Benzene	11UJ
Bromodichloromethane	11UJ
Bromoform	11UJ
Bromomethane	11U
Carbon Disulfide	11U
Carbon Tetrachloride	11UJ
Chlorobenzene	11UJ
Chloroethane	11U
Chloroform	11U
Chloromethane	11U
cis–1,3–Dichloropropene	11UJ
Dibromochloromethane	11UJ
Ethyl benzene	11UJ
Methylene chloride	11U
Styrene	11UJ
Tetrachloroethene	11UJ
Toluene	3J
Total Xylenes	11UJ
trans–1,3–Dichloropropene	11UJ
Trichloroethene	11UJ
Vinyl chloride	11U

All data corrected in accordance with data validation report

Table 4.16
Lehigh Industrial Park – Additional Studies
Test Trench Analysis
Semivolatile Organic Compounds

Parameter (ug/kg) (ppb)	Test Trench
1,2,4–Trichlorobenzene	1900U
1,2–Dichlorobenzene	1900U
1,3–Dichlorobenzene	1900U
1,4–Dichlorobenzene	1900U
2,4,5–Trichlorophenol	4500UJ
2,4,6–Trichlorophenol	1900UJ
2,4–Dichlorophenol	1900U
2,4–Dimethylphenol	1900U
2,4–Dinitrophenol	4500UJ
2,4–Dinitrotoluene	1900UJ
2,6–Dinitrotoluene	1900UJ
2–Chloronaphthalene	1900UJ
2–Chlorophenol	1900U
2–Methylnaphthalene	1900U
2–Methylphenol	1900U
2–Nitroaniline	4500UJ
2–Nitrophenol	1900U
3,3'–Dichlorobenzidine	1900UJ
3–Nitroaniline	4500UJ
4,6–Dinitro–2–methylphenol	4500UJ
4–Bromophenyl phenyl ether	1900UJ
4–Chloro–3–methylphenol	1900U
4–Chloroaniline	1900U
4–Chlorodiphenylether	1900UJ
4–Methylphenol	1900U
4–Nitroaniline	4500UJ
4–Nitrophenol	4500UJ
Acenaphthene	1900UJ
Acenaphthylene	1900UJ
Anthracene	1900UJ
Benzo(a)anthracene	170J
Benzo(a)pyrene	1900UJ
Benzo(b)fluoranthene	1900UJ
Benzo(ghi)perylene	1900UJ
Benzo(k)fluoranthene	1900UJ
Bis(2–chloroethoxy) methane	1900U
Bis(2–chloroethyl) ether	1900U
Bis(2–chloroisopropyl) ether	1900U
Bis(2–ethylhexyl) phthalate	6700J
Butyl benzyl phthalate	1900UJ
Carbazole	1900UJ
Chrysene	310J
Di–n–butyl phthalate	1900UJ
Di–n–octyl phthalate	1900UJ
Dibenzo(a,h)anthracene	1900UJ
Dibenzofuran	1900UJ
Diethyl phthalate	1900UJ
Dimethyl phthalate	1900UJ
Fluoranthene	480J
Fluorene	1900UJ
Hexachlorobenzene	1900UJ
Hexachlorobutadiene	1900U
Hexachlorocyclopentadiene	1900UJ
Hexachloroethane	1900U
Indeno(1,2,3–cd)pyrene	1900UJ
Isophorone	1900U
N–Nitroso–Di–n–propylamine	1900U
N–nitrosodiphenylamine	1900UJ
Naphthalene	1900U
Nitrobenzene	1900U
Pentachlorophenol	4500UJ
Phenanthrene	320J
Phenol	1900U
Pyrene	690UJ

All data corrected in accordance with data validation report

Table 4.17
Lehigh Industrial Park– Additional Studies
Test Trench Analysis
Pesticides/PCBs

Parameter (ug/kg) (ppb)	Action Level	Test Trench
4,4'–DDD		19UJ
4,4'–DDE		19UJ
4,4'–DDT		19UJ
Aldrin		9.7UJ
alpha–BHC		9.7UJ
alpha–Chlordane		9.7UJ
Aroclor 1016		190UJ
Aroclor 1221		380UJ
Aroclor 1232		190UJ
Aroclor 1242		190UJ
Aroclor 1248		110J
Aroclor 1254		190J
Aroclor 1260		200J
Total Aroclor	1000	500
beta–BHC		9.7UJ
delta–BHC		1.3J
Dieldrin		19UJ
Endosulfan I		9.7UJ
Endosulfan II		19UJ
Endosulfan Sulfate		19UJ
Endrin		19UJ
Endrin aldehyde		19UJ
Endrin ketone		19UJ
gamma–BHC (Lindane)		9.7UJ
gamma–Chlordane		9.7UJ
Heptachlor		1.9J
Heptachlor epoxide		9.7UJ
Methoxychlor		97UJ
Toxaphene		970UJ

All data corrected in accordance with data validation report

Table 4.18
Lehigh Industrial Park– Additional Studies
Test Trench Analysis
Metals Analysis

Metals (mg/kg) (ppm)	Action Level	Test Trench
Aluminum – Total		893 J
Antimony – Total		13.8 UJ
Arsenic – Total		52.5 J
Barium – Total		25.8 J
Beryllium – Total		1.2 U
Cadmium – Total	10	1.9 J
Calcium – Total		1350
Chromium – Total	50	1040 J
Cobalt – Total		29.0
Copper – Total		475 J
Iron – Total		670000 J
Lead – Total	500	433 J
Magnesium – Total		138 U
Manganese – Total		7990 J
Mercury – Total		0.11 UJ
Nickel – Total		725 J
Potassium – Total		69.1 U
Selenium – Total		0.93 U
Silver – Total		1.0 J
Sodium – Total		215 J
Thallium – Total		1.2 U
Vanadium – Total		R
Zinc – Total		230 U

Shaded area indicates concentrations exceeding NYSDEC Action Levels
All data corrected in accordance with the data validation report

Table 4.19
Lehigh Industrial Park– Additional Studies
Shallow Soil Zone
EP Tox. Results (ppm)

Metals (mg/kg)	Reg. Level (ppm)	LEPT–1S	LEPT–2S
Aluminum – Total			
Antimony – Total			
Arsenic – Total	5	5 U	5 U
Barium – Total	100	602	659
Beryllium – Total			
Cadmium – Total	1	4.5	20
Calcium – Total			
Chromium – Total	5	44	10 U
Cobalt – Total			
Copper – Total			
Iron – Total			
Lead – Total	5	21	83
Magnesium – Total			
Manganese – Total			
Mercury – Total	0.2	0.2 U	0.2 U
Nickel – Total			
Potassium – Total			
Selenium – Total	1	5 U	5 U
Silver – Total	5	1 U	1 U
Sodium – Total			
Thallium – Total			
Vanadium – Total			
Zinc – Total			

Shaded area indicates concentrations exceeding NYSDEC Action Levels
All data corrected in accordance with the data validation report

Table 4.20
Lehigh Industrial Park – Additional Studies
Shallow Soil Zone
TCLP Results (ppm)

Metals (mg/kg)	Reg. Level (ppm)	LTCLP-1S	LTCLP-2S	LTCLP-3S	LTCLP-4S	LTCLP-5S	LTCLP-5S
Aluminum – Total							
Antimony – Total							
Arsenic – Total	5	5 U	5 U	5 U	5 U	5 U	5 U
Barium – Total	100	272	1500	1500	1500	1500	1500
Beryllium – Total							
Cadmium – Total	1	2.8	9	9	9	9	9
Calcium – Total							
Chromium – Total	5	10 U	68	68	68	68	68
Cobalt – Total							
Copper – Total							
Iron – Total							
Lead – Total	5	3	126	126	126	126	126
Magnesium – Total							
Manganese – Total							
Mercury – Total	0.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel – Total							
Potassium – Total							
Selenium – Total	1	25 U	5 U	5 U	5 U	5 U	5 U
Silver – Total	5	1 U	1 U	1 U	1 U	1 U	1 U
Sodium – Total							
Thallium – Total							
Vanadium – Total							
Zinc – Total							

Shaded area indicates concentrations exceeding NYSDEC Action Levels
All data corrected in accordance with the data validation report

Table 4.21
Lehigh Industrial Park–Additional Studies
Deep Soil Samples

Hot Spot

PCBs (ug/kg) (ppb)	Action Level	Sample Location		
		H2D1	H3D1	H4D1
Aroclor 1016		40 U	37U	39U
Aroclor 1221		80 U	74U	79U
Aroclor 1232		40 U	37U	39U
Aroclor 1242		170	37U	48
Aroclor 1248		40 U	37U	39U
Aroclor 1254		160	63	190J
Aroclor 1260		130	36J	710
Total Aroclors	10000	460	99	948

Reconnaissance

PCBs (ug/kg) (ppb)	Action Level	Sample Location	
		RD31	RD32
Aroclor 1016		39 U	37U
Aroclor 1221		79 U	75U
Aroclor 1232		39 U	37U
Aroclor 1242		560 J	310J
Aroclor 1248		39 U	37U
Aroclor 1254		380	340
Aroclor 1260		260	160
Total Aroclors	10000	1200	810

Metals (mg/kg) (ppm)	Action Level	Sample Location	
		RD31MET	RD32MET
Cadmium – Total	10	0.33 U	3.1J
Chromium – Total	50	950J	36.4J
Lead – Total	500	261 J	107J

Shaded areas indicate concentrations exceeding NYSDEC Action Levels
All data corrected in accordance with data validation report

Table 4.22
Lehigh Industrial Park–Additional Studies
Groundwater Results
Volatile Organic Compounds

Parameter (ug/L) (ppb)	NYSDEC Part 703 ①	Sample Location MW1	MW2	MW3	MW4	MW5
1,1,1,2–Tetrachloroethane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
1,1,1–Trichloroethane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
1,1,2,2–Tetrachloroethane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
1,1,2–Trichloroethane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
1,1–Dichloroethane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
1,1–Dichloroethene	5	0.5U	0.5 U	0.5U	0.5 U	0.9
1,1–Dichloropropene	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
1,2,3–Trichlorobenzene		0.5U	0.5 U	0.5U	0.5 U	0.5U
1,2,3–Trichloropropane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
1,2,4–Trichlorobenzene		0.5U	0.5 U	0.5U	0.5 U	0.5U
1,2,4–Trimethylbenzene		0.5UJ	0.5 UJ	0.5UJ	0.5 UJ	0.5UJ
1,2–Dibromo–3–chloropropane	5	0.5U	0.5 U	0.5U	0.5 U	0.2J
1,2–Dibromoethane	5	0.5U	0.5 U	0.5U	0.5 UJ	0.5U
1,2–Dichlorobenzene	4.7	0.5U	0.5 U	0.5U	0.5 U	0.5U
1,2–Dichloroethane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
1,2–Dichloropropane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
1,3,5–Trimethylbenzene		0.5U	0.5 U	0.5U	0.5 U	0.5U
1,3–Dichlorobenzene	5	0.5U	0.5 U	0.5U	0.5 U	0.1J
1,3–Dichloropropane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
1,4–Dichlorobenzene	4.7	0.5U	0.5 U	0.5U	0.5 U	0.5U
2,2–Dichloropropane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Benzene	0.7	0.5U	0.5 U	0.5U	0.2 J	1
Bromobenzene	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Bromochloromethane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Bromodichloromethane	50	0.5U	0.5 U	0.5U	0.5 U	0.5U
Bromoform	50	0.5U	0.5 U	0.5U	0.5 U	0.5U
Bromomethane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Carbon Tetrachloride	5	0.5UJ	0.5 UJ	0.5UJ	0.5 UJ	0.5UJ
Chlorobenzene	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Chloroethane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Chloroform	100	0.5U	0.5 U	0.5U	0.5 U	0.5U
Chloromethane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
cis–1,2–Dichloroethene	5	0.5U	0.5 U	17	0.5 U	0.4J
cis–1,3–Dichloropropene	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Dibromochloromethane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Dibromomethane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Dichlorodifluoromethane	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Ethyl benzene	5	0.5U	0.5 U	0.5U	0.5 U	0.06J
Hexachlorobutadiene	5	0.5U	0.5 UJ	0.5U	0.5 U	0.5U
Isopropylbenzene	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Methylene chloride	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
n–Butylbenzene	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
n–Propylbenzene	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Naphthalene	10	0.5U	0.5 U	0.5U	0.5 U	0.5U
o–Chlorotoluene	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
p–Chlorotoluene	5	0.5UJ	0.5 U	0.5UJ	0.5 U	0.5UJ
p–Cymene		0.5U	0.5 U	0.5U	0.5 U	0.5U
sec–Butylbenzene	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Styrene	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
tert–Butylbenzene	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Tetrachloroethene	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Toluene	5	0.5U	0.5 U	0.5U	0.5 U	0.3J
Total Xylenes	5	0.5U	0.5 U	0.5U	0.5 U	0.2J
trans–1,2–Dichloroethene	5	0.5U	0.5 U	4	0.5 U	0.5U
trans–1,3–Dichloropropene	5	0.5U	0.5 UJ	0.5U	0.5 U	0.5U
Trichloroethene	5	0.5U	0.5 U	0.5U	0.5 U	0.5U
Trichlorofluoromethane	5	0.5U	0.5 U	0.5U	0.5 U	0.3J
Vinyl chloride	2	0.5U	0.5 U	0.5U	0.5 U	

① NYSDEC Ambient Water Quality Standards and Guidance Values, Class GA, Part 703, 1991
Shaded areas indicate concentrations exceeding Water Quality Standards
All data corrected in accordance with data validation report

Resin Pile

Full TCL/TAL analysis and TCLP analysis was performed on the material in a suspected resin pile noted on Figure 4.8. Several TCL parameters were detected in the resin-like material, including:

ORGANICS

- Toluene	450,000 ug/kg
- Phenol	13,000J ug/kg
- 2-Methylphenol	950J ug/kg
- 4-Methylphenol	2000J ug/kg
- 2,4-Dimethylphenol	2900J ug/kg
- Bis(2-ethylhexyl)phthalate	6600J ug/kg
- Benzo(b)fluoranthene	320J ug/kg
- Benzo(k)flouranthene	120J ug/kg
- Benzo(g,h,i)perylene	180J ug/kg
- Heptachlor Epoxide	17J ug/kg
- Endrin	13J ug/kg
- Alpha-chlordane	15J ug/kg

INORGANICS

- Aluminum	192 mg/kg
- Arsenic	1.4J mg/kg
- Barium	18.3J mg/kg
- Cadmium	.72J mg/kg
- Calcium	2440J mg/kg
- Chromium	7.8 mg/kg
- Copper	513 mg/kg
- Iron	22100 mg/kg
- Lead	62.8 mg/kg
- Magnesium	146J mg/kg
- Manganese	130 mg/kg
- Nickel	9J mg/kg
- Silver	.17J mg/kg
- Zinc	117 mg/kg

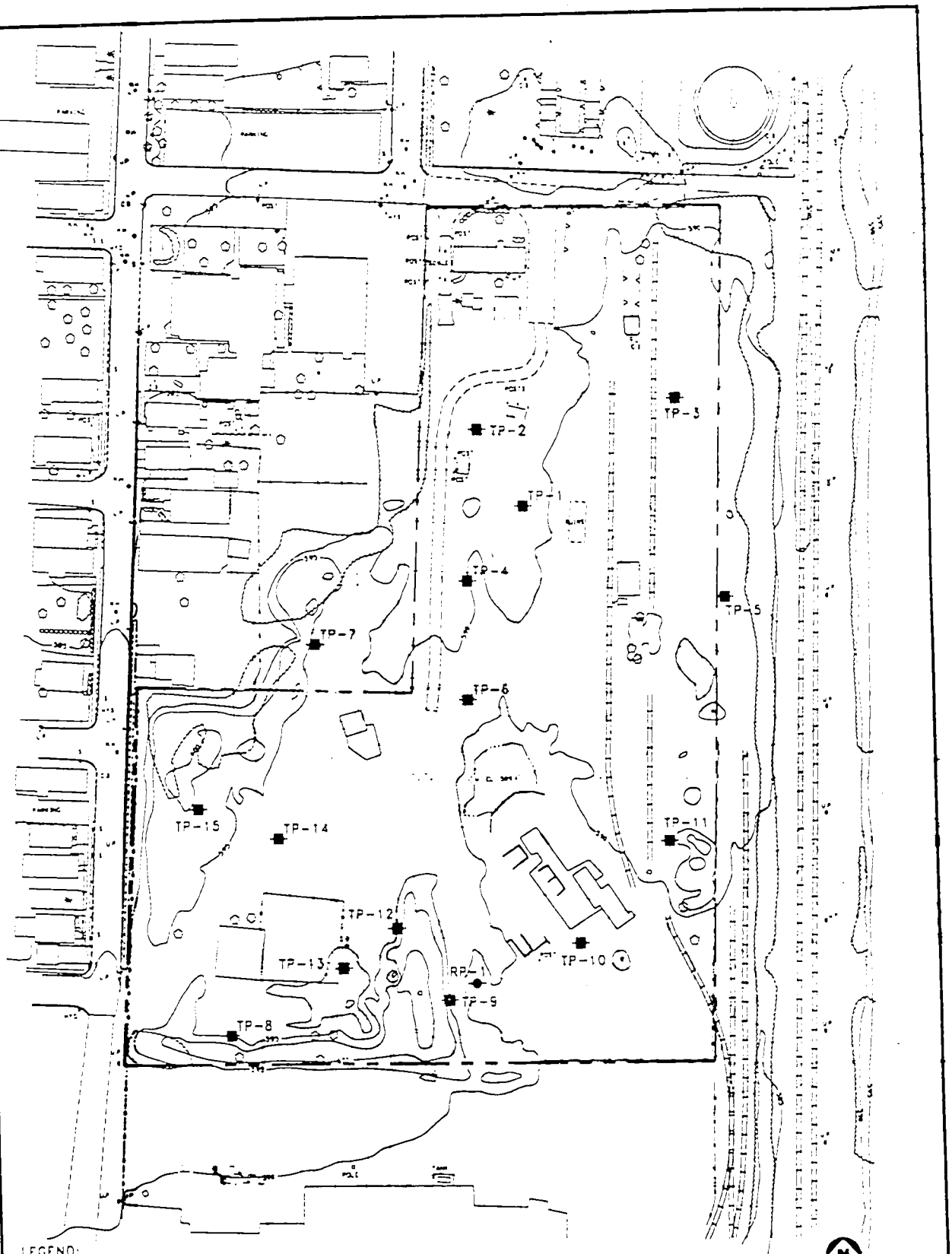
The same sample matrix was subjected to TCLP analysis which is an indicator of leachability. The TCLP extract indicated the presence of 2-Methylphenol at 3300 ug/L and 4-Methylphenol at 4500 ug/L in the sample extract (Table 4.6). Barium, cadmium, chromium and lead were also detected in the extract. These compounds do not appear to be above regulatory levels for the TCLP.

LIMITED SITE DATA
LEHIGH INDUSTRIAL PARK SITE
SITE NO. 9-15-145

Include the enclosed figures, generated during the Remedial Investigation, with the Limited Site Data Document provided with the Contract Documents. **Note that this document is not part of the Contract Documents for Remedial Construction at the Lehigh Industrial Park Site. The disclaimer highlighted on the cover page of the Limited Site Data Document for the Lehigh Industrial Park Site shall also apply to these additional figures.**

FIGURES TO BE ADDED

FIGURE #	*FIGURE TITLE*
3.8.1	Test Pit Location Map and Resin Pile Location Map
3.10.1	Reconnaissance Soil Sample Location Map
3.12	Sample Location Summary Map
4.1	Composite Waste Sample Location Map
4.2	Composite Soil Sample Location Composite Map
4.3	Deep Soil Horizon Composite Map
4.4	Monitoring Well Location Map



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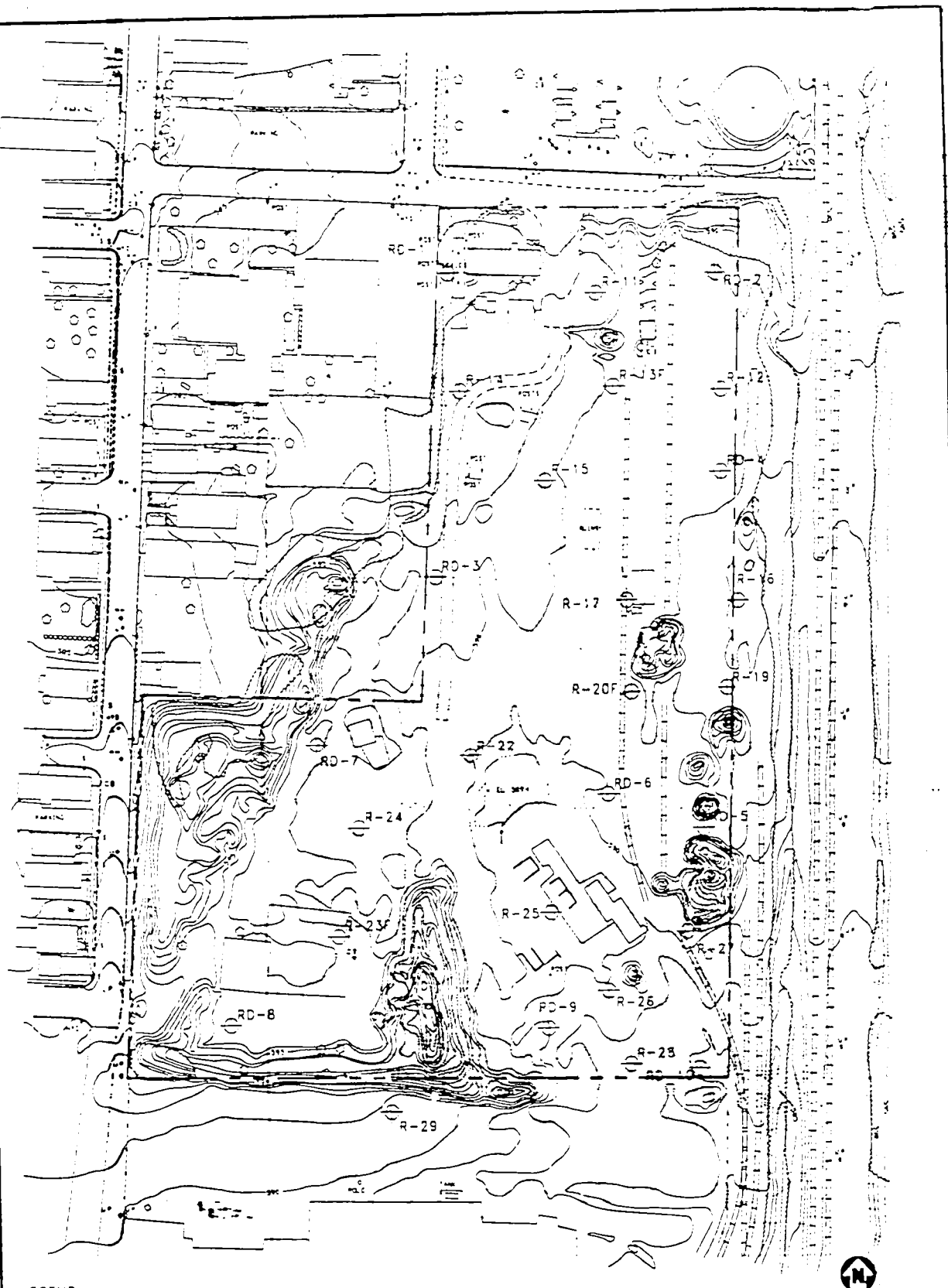
PRELIMINARY REMEDIAL INVESTIGATION

TEST PIT LOCATION MAP AND RESIN PILE LOCATION MAP
LEHIGH INDUSTRIAL PARK
LACKAWANNA, NEW YORK

FIGURE 3.8.1



LEGEND:

——— — — PROPERTY LINE

ϕ^{R-29} SOIL SAMPLE LOCATION

0 100' 200'

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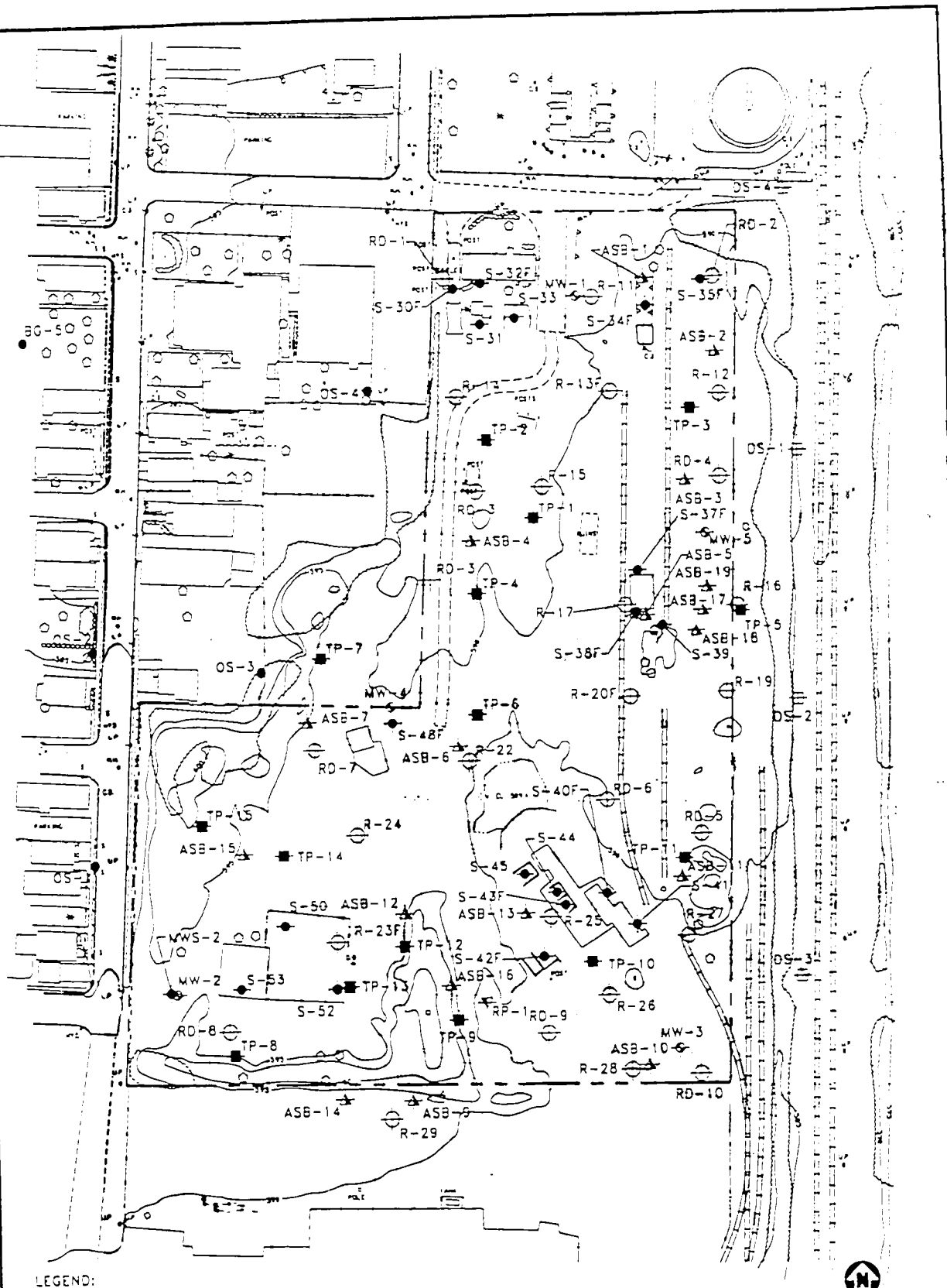
PRELIMINARY REMEDIAL INVESTIGATION

RECONNAISSANCE SOIL SAMPLE LOCATION MAP
LEHIGH INDUSTRIAL PARK
LACKAWANNA, NEW YORK

FIGURE 3.10.1



LEGEND:

- PROPERTY BOUNDARY
- CONTOUR INTERVALS AT 5 FOOT
- S-50 SITE SPECIFIC SAMPLE LOCATION
- TP-9 TEST PIT LOCATION
- R-29 SOIL SAMPLE LOCATION
- MW-3 MONITORING WELL LOCATION
- RP-1 RESIN PILE SAMPLE LOCATION
- OS-1 / BG-5 OFF-SITE SOIL SAMPLE LOCATION
- DS-1 DRAINAGE SWALE SAMPLE LOCATION
- ASB-14 ASBESTOS SAMPLE LOCATION MAP

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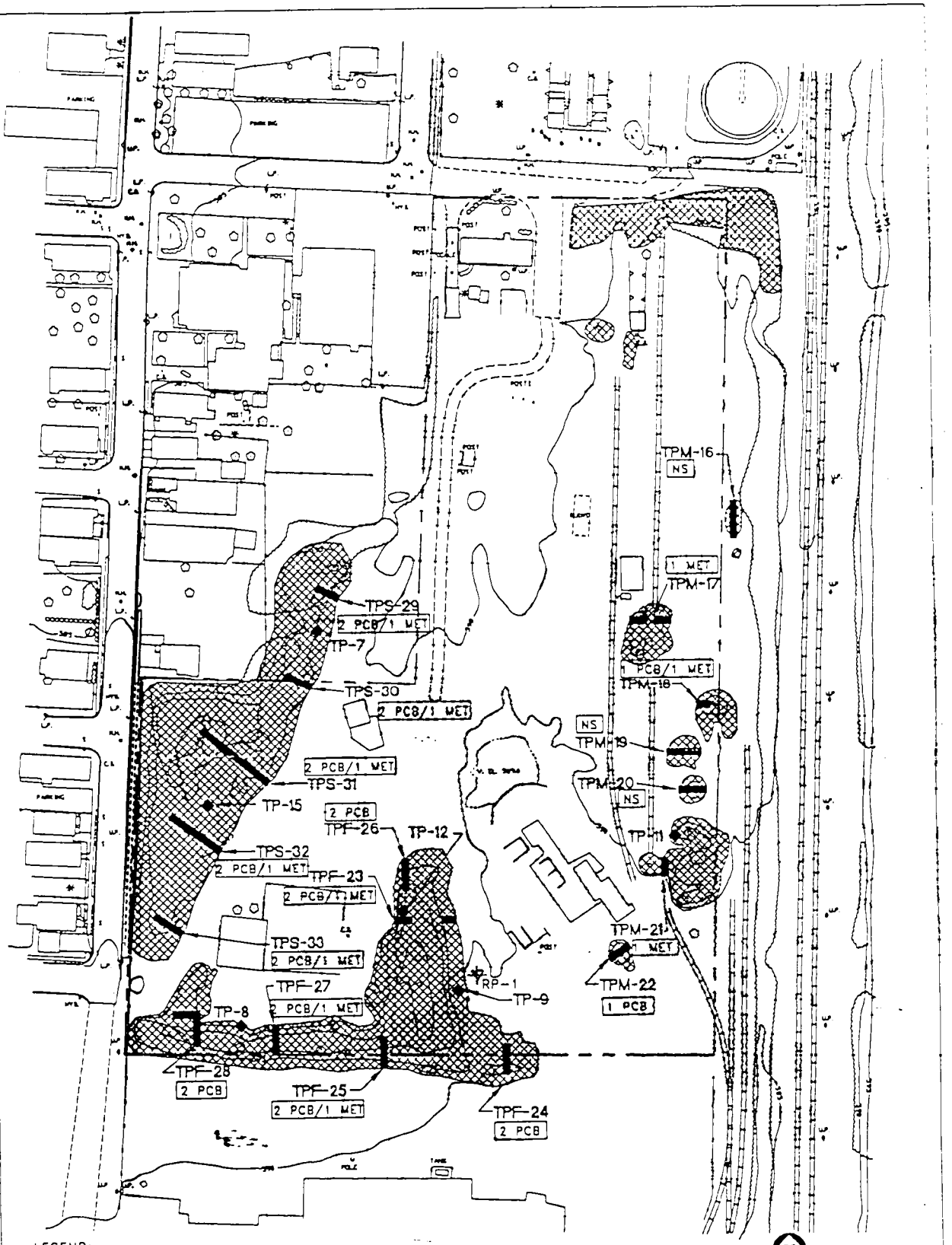
PRELIMINARY REMEDIAL INVESTIGATION

SAMPLE LOCATION SUMMARY MAP

LEHIGH INDUSTRIAL PARK
LACKAWANNA, NEW YORK

FIGURE 3.12



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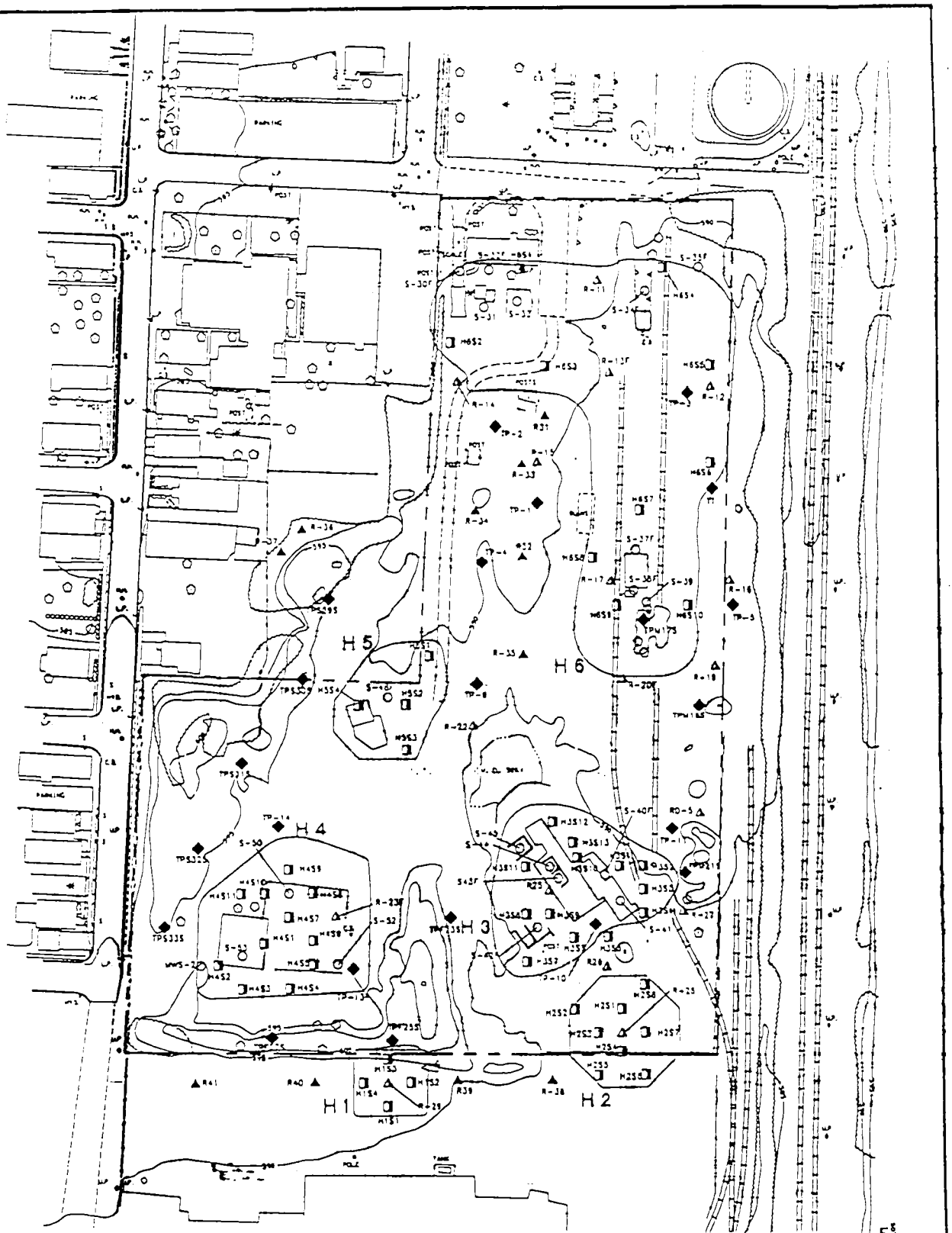
PRELIMINARY REMEDIAL INVESTIGATION

COMPOSITE WASTE SAMPLE LOCATION MAP
LEHIGH INDUSTRIAL PARK
LACKAWANNA, NEW YORK

FIGURE 4.1



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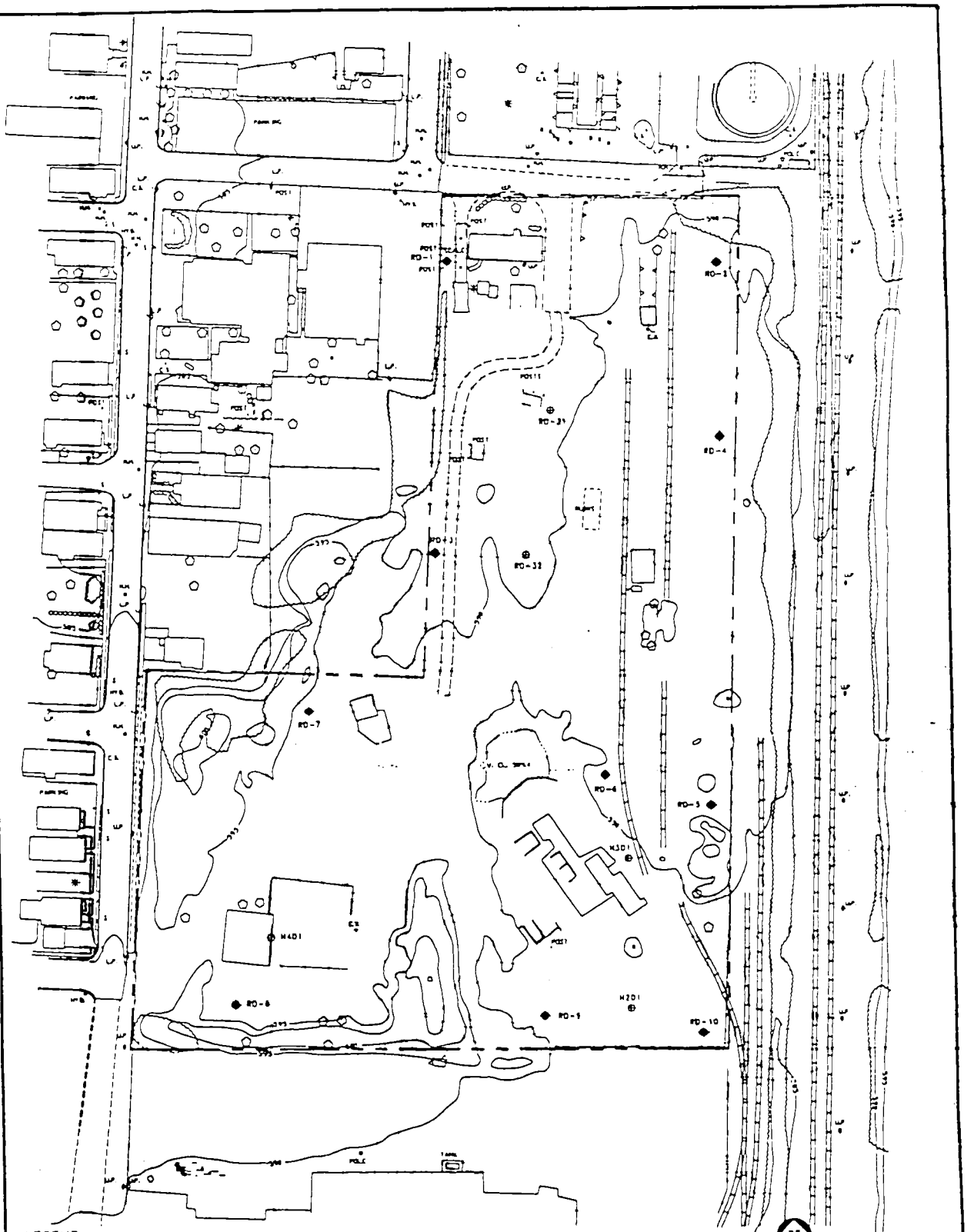
PRELIMINARY REMEDIAL INVESTIGATION

COMPOSITE SOIL SAMPLE LOCATION
COMPOSITE MAP
LEHIGH INDUSTRIAL PARK
LACKAWANNA, NEW YORK

FIGURE 4.2



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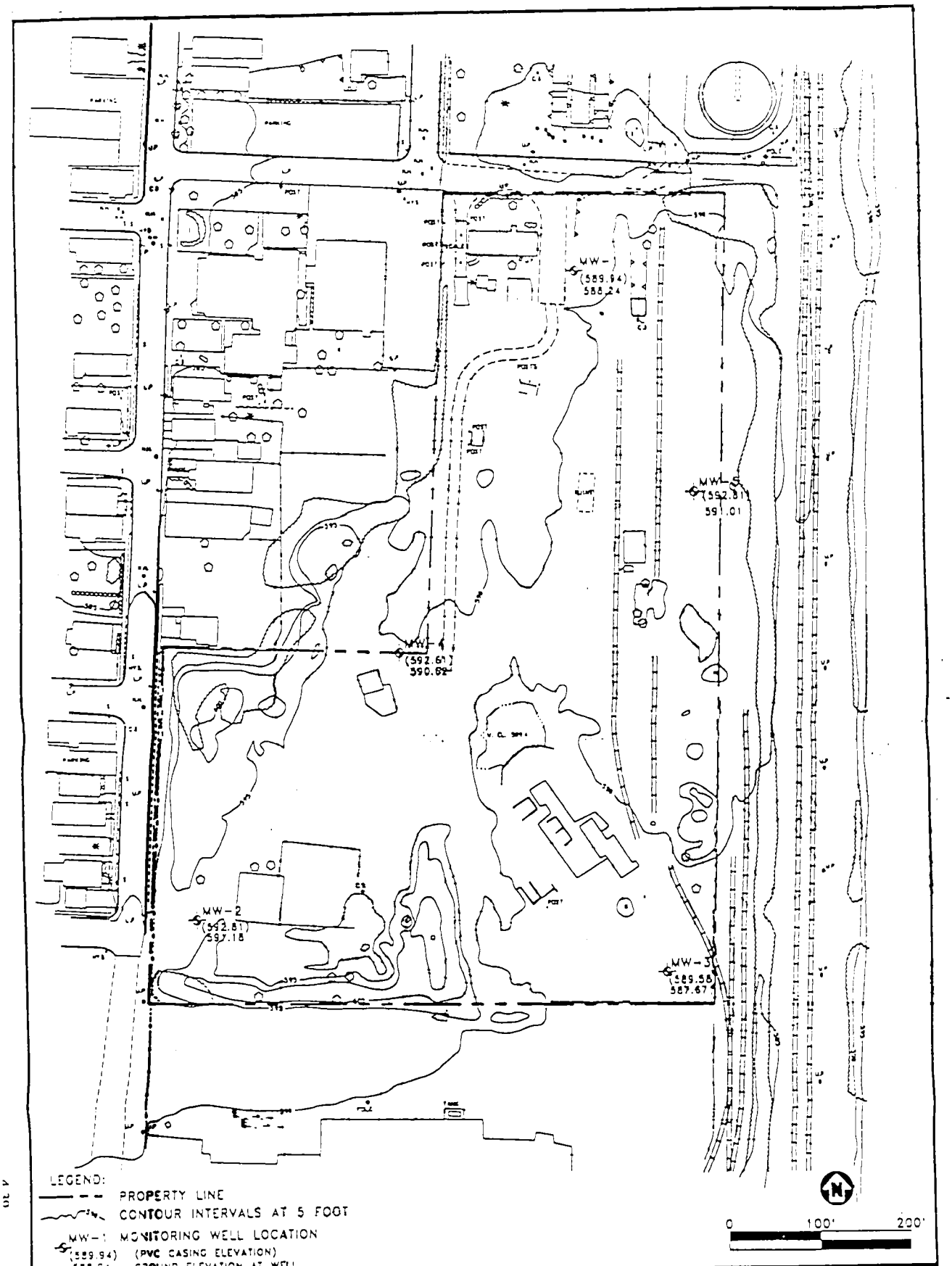
PRELIMINARY REMEDIAL INVESTIGATION

DEEP SOIL HORIZON
COMPOSITE MAP
LEHIGH INDUSTRIAL PARK
LACKAWANNA, NEW YORK

FIGURE 4.3



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PRELIMINARY REMEDIAL INVESTIGATION

MONITORING WELL LOCATION MAP

LEHIGH INDUSTRIAL PARK
LACKAWANNA, NEW YORK

FIGURE 4.4

ENGINEERING–SCIENCE DRILLING RECORD

BORING MW–1

Sheet 1 of 1

Contractor: S/B Drilling
Driller: Jim Lamb
Inspector: A. Zielinski
Rig Type: Soil Mat HSA

PROJECT NAME Lehigh
PROJECT NUMBER SY 279.02.02
Location: North Area

Weather Overcast 70's
Date/Time Start 7/13/92 3:00
Date/Time Finish 7/14/92 11:10

Site Grid
Northing 9986.0481
Easting 5132.8931
TOC (PVC) Elevation: 589.94 ft.
Ground Surface Elevation: 588.24 ft.

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Microtip Reading	Head Space	Sample Depth	Blow Ct. Recovery	Pct Rec.	FIELD IDENTIFICATION OF MATERIAL
		0			Light brown and black fine Sand, some (+) silt, trace fine gravel
0	1.1		5–14	24"	roots, moist to dry, loose (SM–SP)
		2	16–20		
0	1.6		16–14	24"	Black fine Sand, some silt, trace fine gravel, moist, organics to 20"
		4	12–10		changes to Brown fine Sand, some silt, wet at 22"
0	3.1		3–3	18"	Brown Sand, some silt to 4.25', 4.25 to 6.0' Gray Sand, some silt,
		6	4–7		Very well sorted, wet, dilatant
0	0		10–5	20"	Gray dilatent medium – fine Sand, trace (+) Silt, to 7', at 7' mottled (SM)
		8	4–3		Gray, brown, tan Silt, Little (–) Clay, trace fine sand, trace gravel, wet, soft
0	0		1–2	19"	mottled, varved, brown and gray Silt and fine Sand, trace (–) clay
		10	3–5		trace fine gravel, moist, dilatant/wet, iron staining (ML)
0	0		2–5	16"	Red brown Clay and Silt, trace fine sand, moist to 11' (CL)
		12	6–8		@11' Gray Sand, some silt, trace fine gravel, hard, moist (SM–SC)
0	0.9		8–9	15"	Gray coarse Sand and medium gravel, saturated
		14	13–14		
0	3.1		6–12	15"	Gray coarse Sand and medium Gravel, moist
		16	19–24		Gray medium sand, some coarse sand, moist, loose, to 16.9'
0	4.7		14–100/4	11"	16.9' bedrock, black shale (GM–GC)
		18			

WELL SCHEMATIC

COMMENTS

stick up = 1.7

Type 1 portland 0'–3.5'

2" PVC riser

3/8 bentonite pellets from 3.5' to 4.6'

2"PVC 10 slot screen from 6.0' to 15.0'

Sobby 1340 sand

Bottom of casing 15.5'

Total Depth 16.9'

Borehole diameter 10"

STANDARD PENETRATION TEST
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

Cuttings were drummed, schedule 40 pvc was used in the well installation.

ENGINEERING–SCIENCE DRILLING RECORD

Contractor: SJB Drilling
Driller: Jim Lamm
Inspector: Anne Zielinski
Rig Type: Soil Max HSA

PROJECT NAME Lehigh/NYSDEC
PROJECT NUMBER SY279.02.02

Weather Partly Sunny mid 70's
Date/Time Start 7/14/92 12:35pm
Date/Time Finish 7/14/92 4:45 pm

BORING MW–2

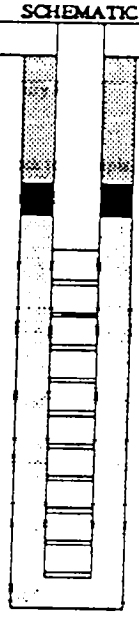
Sheet 1 of 1
Location:
Behind fenced area SW
Site Grid
Northing 9277.0764
Easting 4706.5529
TOC Elevation: 592.81 ft.
Ground Surface Elevation: 591.18

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Monitor Reading	Head Space	Sample Depth	Blow Counts	Pct Rec.	FIELD IDENTIFICATION OF MATERIAL
		0			Black Sand and Construction Material to .9'
0	0.2		38–24	13"	(FILL)
		2	10–13		Brown fine Sand and Silt, trace fine gravel, dry loose
0	4.1		79–38	8"	Brown fine Sand and Silt, .5' to Limestone
		4	24–40		augered through rock to 4.5'; split spoon to 6' (18")
			–21		Brown Silt and fine Sand, trace clay, limestone chunks
70	32.6	6	40–42	9"	damp, firm
15	53.4		8–14	12"	Green Silt and fine Sand, some (–) fine gravel, rock chips, damp, firm
		8	14–25		(SM)
0.3	29.8		18–26	17"	Gray brown fine Sand, some Silt, some(–) fine gravel to 9.1'
		10	32–70		Black mottling rocks coated black, damp
0	8.9		24–34	24"	Dark gray fine Sand, some Silt, some (–) fine gravel, firm, moist, wet at 10.5'
		12	38–50		(GC)
0.3	6		21–28	19"	Gray Sand, some coarse to fine gravel, trace silt, wet
		14	31–31		(GM–GP)
0	6.9		15–26	18"	Dark gray medium sand and gravel at 15' change to fine sand and gravel, wet
		16	32–45		
0	0.4		100–	6"	Gray sand and gravel, very damp at 16.5' black shale (SW)
		18	–50/0		at 16.5' SS refusal TOR 16.5'

WELL SCHEMATIC



COMMENTS

stickup = 1.63'
Type I Portland Cement to 3.5'
2" ID Sch40 PVC riser
3/8 Bentonite Pellets from 3.5' to 4.5'
2" ID 10 Slot Sch40 PVC Screen from 6.0' to 15.0'
Silica 1240 sand
Bottom of Well = 15.5'
Total Depth 16.5'

STANDARD PENETRATION TEST
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

ENGINEERING–SCIENCE DRILLING RECORD

BORING MW–3

Contractor: SJB Drilling
Driller: Jim Lamm
Inspector: Anne Zielinski
Rig Type: Soil Mat HSA

PROJECT NAME Lehigh / NYSDEC
PROJECT NUMBER SY279.02.02

Sheet 1 of 1
Location: South end of site

Site Grid
Northing 9211.8725
Easting 5223.7476
TOC Elevation: 589.58
Ground Surface Elevation: 587.67

Weather Rain low 70's
Date/Time Start 7/15/92 9:00 am
Date/Time Finish 7/15/92 12:35 pm

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Manometer Reading	Head Space	Sample Depth	Blow Counts	PCT Recov	FIELD IDENTIFICATION OF MATERIAL
		0			
0.9	1.3		8–	7"	Red brown Sand and fine Gravel, trace (+) Silt and Clay, C+D material
		2	–50/4		refusal at 18" augered through metal to 2' (FILL)
0	12.3		5–6	14"	Brown fine Sand, trace silt, well sorted, damp, at 3.1' 1" gravel layer
		4	5–6		
0	25.7		2–2	13"	Brown fine Sand, trace silt, saturated to 4.5', black shale chips to 4.7' (SM)
		6	4–6		to Brown gray clay, trace silt, trace sand, dry, dense
0	2.1		2–2	17"	Brown gray Clay, trace silt grading to gray clay, some sand, trace silt, wet
		8	4–6		(GC)
0.7	1.5		2–5	12"	Gray Clay and Sand, grading to gray fine Sand, some Clay, trace silt,
		10	5–7		trace coarse gravel, Dense, Moist (CL)
0	0		8–21	11"	Gray fine Sand, some silt and clay, trace gravel, grades to
		12	16–33		Gray sand, trace silt, trace (+) coarse gravel, dry to wet
0	0		5–5	9"	Gray Sand, some silt, trace coarse Gravel, firm, damp
		14	16–100/.4		(GM)
0	0		50/.4	0.4	Black shale, bedrock TOR 13.9
		16			spoon refusal at 14.4'

WELL SCHEMATIC

COMMENTS

- grout up = 1.9'
- Type I portland to 3.5'
- 2" pvc casing to 6.5'
- Bentonite Pellet seal 3.5' – 5.5'
- SIBLEY 1240 sand
- 2" ID SCH 40 PVC 10 slot screen 6.5' – 12.5'
- Bentonite seal 13' to 14'
- Total Depth = 14'

STANDARD PENETRATION TEST
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

Cuttings were Drummed

SY279.03/AMZ/LEHMW3

ENGINEERING–SCIENCE DRILLING RECORD

BORING MW–4

Contractor: SJB Drilling
Driller: Jim Lamm
Inspector: Anne Zielinski
Rig Type: Soil Max HSA

PROJECT NAME Lehigh NYSDEC
PROJECT NUMBER SY279.02.02

Sheet 1 of 1
Location: West/General
near old maintenance bldg
Site Grid
Northing 9573.4944
Easting 4933.7387
TOC Elevation: 592.61
Ground Surface Elevation: 590.62

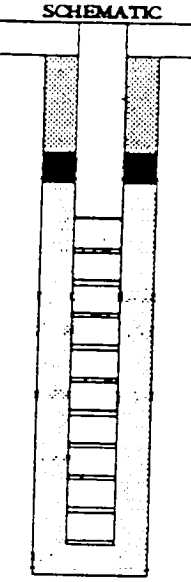
Weather: rain low 70's
Date/Time Start 7/15/92 2:50
Date/Time Finish 7/16/92 9:15 am

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Manotip Reading	Head Space	Sample Depth	Blow Counts	PCT Rec	FIELD IDENTIFICATION OF MATERIAL
		0			
8.3	81.2		11–11	18"	Black Sand, some silt and gravel
		2	26–28		Brick, Cement, pungent odor
0.7	6.7		21–31	18"	Brick to 2.8'
		4	21–16		to Black fine sand, some silt, dry Black silt and fill to 4.2' (FILL)
2	1.1		3–4	22"	Brown fine sand, some silt
		6	4–2		soft, moist
0	0.8		1–3	18"	Brown fine sand, some silt grading to
		8	4–5		Brown fine sand and silt, some clay, more gray color with depth
0	8		4–17	6"	Brown fine sand and silt, some clay, grading to dilatant gray brown fine sand
		10	24–37		Drove 2 spoons, little recovery in each
0	0.7		7–34	24"	Gray till, sand, some silt, some medium–fine gravel, dry, firm
		12	35–35		water 2' in hole
0	2.2		21–62	19"	Gray sand, some silt, some coarse–medium gravel
		14	65–68		Very dry, firm (SM–SC–SP)
0	1.2		18–27	14"	Gray sand, some silt and gravel to 14.6' TOR 15.5'
		16	27–50/.1		to Brown sand and silt, some gravel Spoon refusal
		18			

WELL SCHEMATIC



COMMENTS

stick up = 1.99'
Type I grout to 3.5'
2" Sch 40 PVC casing
Bentonite seal 3' to 4'
Sandy type 1240 sand
10 Slot
2" ID Sch 40 PVC
5.5' to 14.5'
bottom of well = 15.02'
Total Depth = 15.5'

STANDARD PENETRATION TEST
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

Cutting were paked in 55 gallon drums.

ENGINEERING–SCIENCE DRILLING RECORD

BORING MW–5

Contractor: S/B Drilling
Driller: Jim Lema
Inspector: Anne Zerinski
Rig Type: Soil Max HSA

PROJECT NAME Lehigh/NYSDEC
PROJECT NUMBER SY279.02.02

Sheet 1 of 1
Location:
East Central Area
Site Grid
Northing 9745.8512
Easting 5261.4841
TOC Elevation: 592.81
Ground Surface Elevation: 591.01

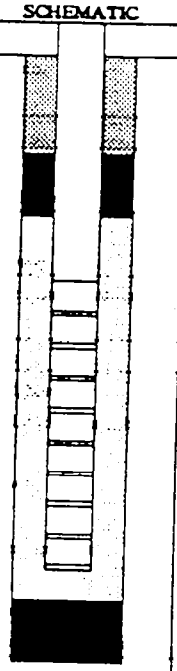
Weather Sunny mid 70's
Date/Time Start 7/16/92 10:05 am
Date/Time Finish 7/16/92 4:10 pm

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Monitor Reading	Head Space	Sample Depth	Blow Counts	PCT Rec	FIELD IDENTIFICATION OF MATERIAL
		0			
163	0		18–18	10"	Black Metal scraps, cement, oily pungent odor (FILL)
		2	58–50/.1		
6.7	0		8–8	16"	Brown dilatant sand, little silt to 3.1' (SP)
		4	4–6		to Red sand and silt, some clay, wet
0.8	0		2–15	11"	Brown sand and silt, some clay, trace gravel, moist (SC)
		6	13–15		gravel coated black
0	0		*		* Resistant object, augered to 7.0', much water (FILL)
0	0	8	6–8	20"	Brown sand, some silt, trace Clay and gravel, damp, firm to hard
			8–12		(GM)
0	0	10	16–25	21"	Brown sand, some silt and clay, damp, firm (SC)
			41–18		Grades to Gray sand, trace silt, some gravel, hard, dry
0	0	12	10–20	19"	Gray sand, some gravel, trace silt, dry, hard, rock chips at base
			35–30		damp to moist
0	0	14	15–32	21"	Gray Sand and Silt, some coarse–fine gravel
			34–30		moist to wet
0	0	16	15–22	22"	Dark gray Sand, some silt, some gravel, damp, grades to
			34–34		Dark gray fine Sand and Silt, some gravel
0	0	18	17–53	18"	Dark gray Sand and Silt, some gravel, dry to 17.5'
			53–100/0		Rock chips (limestone) to 18', trace sand and gravel, saturated (GM)
		20			new water bearing zone

WELL SCHEMATIC



COMMENTS

stick up = 1.80'
Type I Portland to 3.5'
Bentonite seal from 3.5' to 5.4'
2" ID Sch40 PVC to 6.5'
Sobby 1240 sand
2" ID Sch40 PVC
10 slot screen from 6.5' to 16.5'
Bentonite Seal from 17 to 18.5'
Total Depth = 18.5'

STANDARD PENETRATION TEST
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

- Cutting were drummed

SY279.03/AMZ/LEHMW5