



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
EDISON, NEW JERSEY 08837

MEM
90 Hopkins

November 5, 1998

NYSDEC - 2 copies
EPA-TIO/Tetra-Tech - 3 copies
City of Buffalo Corporation Counsel - 1 copy
City of Buffalo Office for the Environment - 1 copy
Buffalo Economic Renaissance Corporation - 1 copy
Allied Signal Corporation - 1 copy

Re: Sloan Auto/90 Hopkins Street

Gentlemen:

Enclosed please find copies of the Sloan Auto/90 Hopkins Street property that were taken by EPA in August, 1998. EPA is currently evaluating the data to determine removal action eligibility at the property but is providing this data preliminarily for your information. Please contact me at (716) 873-5042 if you have any questions.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Kevin M. Mathels".

Kevin M. Mathels
On Scene Coordinator
U.S. EPA Region II
Emergency and Remedial Response Division
Removal Action Branch



Roy F. Weston, Inc.
GSA Raritan Depot
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DATE: 29 October 1998

TO: Philip Campagna, U.S. EPA/ERTC Work Assignment Manager

THROUGH: Vinod Kansal, REAC Analytical Section Chief *JK*

FROM: Steven Schuetz, REAC Task Leader *SS*

SUBJECT: Soil Sampling, Sloan Auto, Buffalo, NY
WA# 3-382 - Trip Report

BACKGROUND

The Sloan Auto site is located in the City of Buffalo in the State of New York. The property is located northeast of the Marilla Street Landfill at 90 Hopkins Street. The property is currently owned by the City of Buffalo and was obtained through tax foreclosure in approximately 1987. Malcolm Pirnie, Inc. performed soil sampling on 8 and 10 December 1997 to characterize two "lime" piles located on the property. A total of nine test pits were excavated to depths of approximately 20 feet below the top grade on the "lime" piles to physically characterize the fill conditions and collect samples for laboratory analysis.

Samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semivolatile compounds (SVOCs), Target Analyte List (TAL) metals, total cyanide, and pH. The results indicated that the constituents of the "lime" piles are very consistent throughout the depth of each pile. Acetone was the only VOC detected, however, it was below the New York State Department of Environmental Conservation (NYSDEC) Soil Cleanup Objectives and Cleanup Levels in Technical and Administrative Guidance Memorandum (TAGM) #4046. No SVOCs were detected.

Of the TAL metals, only beryllium, chromium, iron, and zinc were detected in concentrations slightly exceeding the NYSDEC Soil Cleanup Guidelines. The pH measured between 12.6 and 12.7.

The United States Environmental Protection Agency (U. S. EPA) Region II requested the assistance of the U.S. EPA/Environmental Response Team Center (ERTC) in performing a preliminary investigation of the surface and subsurface soils on site. The U.S. EPA/ERTC tasked the Response Engineering and Analytical Contract (REAC) to conduct this preliminary investigation.

OBSERVATIONS AND ACTIVITIES

On 4 August 1998, REAC personnel mobilized to the Sloan Auto Site in Buffalo, NY. Sampling equipment was unpacked and a decon area was established. Thirteen sampling locations were chosen by the U.S. EPA/ERTC Work Assignment Manager (WAM) and the U.S. EPA Region II On Scene Coordinator (OSC) for surface and subsurface soil sampling. The thirteen locations were marked and numbered (1 through 13) with survey flags. In addition to the soil sampling, eight drums and one debris pile were sampled. Sampling locations are depicted in Figure 1.



Surface soil samples were collected using stainless-steel trowels and spoons. Soil samples, at depths of 6 inches to 3 feet, were collected using stainless-steel augers and spoons. Representative samples were placed into their appropriate glass jars for analysis. Samples were coded according to the depth sampled. Samples with an "A" were collected from the surface (0" to 6"), samples with a "B" were collected from 6" to 12" and samples with a "C" were collected from 12" to 36". Samples were analyzed for TCL VOCs, base neutral acid extractables (BNAs), TAL metals, and pesticides/polychlorinated biphenyls (PCBs). VOCs, BNAs, TAL metals, and pesticides/PCBs analysis was performed at the REAC laboratory in Edison, NJ.

Drums, located on site, were first labeled with an "R and a three digit number" using a "mean streak" grease marker. All the drums sampled were open to the elements. Contents of the drums were sampled using stainless-steel trowels and spoons. A representative sample was placed into an appropriate glass jar for analysis. Samples were analyzed for VOCs, BNAs, TAL metals, and pesticides/PCBs.

In addition to the soil and drum samples, surface (0" to 6") samples were collected from the two "lime" piles on site. Samples were collected using stainless-steel trowels and spoons. Samples were placed into appropriate glass jars and analyzed for pH, total cyanides, and pesticides/PCBs. Samples, for pH and total cyanides were analyzed by Blue Marsh Laboratories Inc., in Princeton, NJ. Samples for pesticides/PCBs were analyzed at the REAC laboratory.

All sampling equipment was decontaminated by the following steps: soap wash, rinse, nitric acid spray, hexane spray and air dry. Field Data Sheets are attached in Appendix A.

RESULTS

The REAC Final Analytical Report is attached in Appendix B.

Results of the sampling are summarized in tables 1 through 17. A total of 23 soils, 8 drum, 4 "lime" and 1 debris pile samples were collected and analyzed.

DISCUSSION OF RESULTS

Locations S-3 (surface), S-8, and S-10 were not sampled due to obstruction (i.e., concrete slab or gravel). The sample from S-5B was collected from an adjacent area (see Figure 1) due to a concrete slab at 3". Water was seen at locations S-4 and S-11 at depths of 3 feet and 1 foot, respectively.

R001 consisted of material (soils) composited from drums R001, R002 and R003. R004 consisted of material (soils) composited from drums R004, R005, and R006. Drum R007 contained a liquid with an oil layer.

Samples S-9B and S-9C are the only samples not to exceed the NYDEC TAGM #4046 Soil Cleanup Guidelines for all the parameters tested. The majority of the guideline exceedences took place in the TAL Metals and BNA analyses.

A high pH (12.4 to 12.45) was measured in the samples collected from the "lime" piles which is characteristic of a RCRA corrosive waste. Results of the total cyanides ranged from 1.9 milligrams per kilogram (mg/Kg) to 2.7 mg/Kg.

FUTURE ACTIVITIES

No future activities are expected at this time.

Table 1
 Summary of the Analysis for Volatile Organic Compounds in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location Sample Depth Compound	NYDEC TAGM	S-1A 0" - 6"	S-1B 6" - 12"	S-2A 0" - 6"	S-2B 6" - 8"	S-3B 6" - 12"	S-4A 0" - 6"	S-4B 6" - 12"	S-4C 12" - 36"
Acetone	200	ND	18	ND	ND	14	ND	100	19
Carbon Disulfide	2700	ND	ND	ND	ND	ND	ND	6.1	ND
Methyl-tertiary- butylether		ND	ND	ND	ND	ND	ND	ND	2.5
2-Butanone	300	ND	ND	ND	ND	ND	ND	33	6.2
Trichlorofluoromethane		ND	ND	ND	ND	ND	ND	0.9 J	ND
Toluene	1500	ND	ND	ND	ND	ND	ND	2.5	1.5
Ethylbenzene	5500	ND	ND	ND	ND	ND	ND	5.8	1.4
p & m-Xylene	Total 1200	ND	ND	ND	ND	ND	ND	51	13
o-Xylene		ND	ND	ND	ND	ND	ND	33	8.5
Isopropylbenzene		ND	ND	ND	ND	ND	ND	2.3	0.8 J
n-Propylbenzene		ND	ND	ND	ND	ND	ND	8.6	2.7
1,3,5-Trimethylbenzene		ND	ND	ND	ND	ND	ND	40	16
1,2,4-Trimethylbenzene		ND	ND	ND	ND	ND	ND	150	40
sec-Butylbenzene		ND	ND	ND	ND	ND	ND	2.5	1.1 J
p-Isopropyltoluene		ND	ND	ND	ND	ND	ND	15	6.7
Naphthalene	13000	ND	ND	ND	ND	ND	ND	7.1	ND

ND denotes not detected
 ug/Kg micrograms per kilogram

J The value is below the method detection limit and is estimated

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels.

Table 2
 Summary of the Analysis for Volatile Organic Compounds in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location Sample Depth Compound	NYDEC TAGM	S-5A 0" - 3"	S-5B 6" - 12"	S-6A 0" - 6"	S-6B 6" - 12"	S-7A 0" - 6"	S-7B 6" - 12"	S-9A 0" - 6"	S-9B 6" - 12"
Chlorobenzene	1700	ND	ND	4.4	ND	ND	ND	ND	ND
Acetone	200	ND	75	ND	90	51	53	ND	ND
Carbon Disulfide	2700	ND	4.1	ND	6.2	6.9	6.1	ND	ND
Methyl-tertiary- butylether		ND	1.6	ND	ND	36	59	ND	ND
2-Butanone	300	ND	21	ND	13	ND	12	ND	ND
Benzene	60	ND	ND	ND	0.7 J	1.8	14	ND	ND
Toluene	1500	ND	ND	ND	3.2	5.7	17	ND	ND
Ethylbenzene	5500	ND	ND	ND	2.9	2.4	1.9	ND	ND
p & m-Xylene	Total 1200	ND	1.1 J	ND	15	16	15	ND	ND
o-Xylene		ND	ND	ND	20	39	34	ND	ND
Isopropylbenzene		ND	ND	ND	ND	1.6	1.4 J	ND	ND
n-Propylbenzene		ND	ND	ND	2.3	ND	ND	ND	ND
1,3,5-Trimethylbenzene		ND	ND	ND	72	43	14	ND	ND

ND denotes not detected
 ug/Kg micrograms per kilogram

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NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels.

Table 2 (cont'd)
 Summary of the Analysis for Volatile Organic Compounds in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location Sample Depth Compound	NYDEC TAGM	S-5A 0" - 3"	S-5B 6" - 12"	S-6A 0" - 6"	S-6B 6" - 12"	S-7A 0" - 6"	S-7B 6" - 12"	S-9A 0" - 6"	S-9B 6" - 12"
1,2,4-Trimethylbenzene			4.0		63	36	15	ND	ND
n-Butylbenzene			4.1		ND	ND	ND	ND	ND
p-Isopropyltoluene			ND		14	3.9	2.7	ND	ND
Naphthalene	13000		2.2		3.8	27	6.2	ND	ND
sec-Butylbenzene			ND		2.5	ND	ND	ND	ND

ug/Kg micrograms per kilogram
 ND denotes not detected
 NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels.

Table 3
 Summary of the Analysis for Volatile Organic Compounds in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location Sample Depth Compound	NYDEC TAGM	S-9C 12" - 36"	S-11A 0" - 6"	S-11B 6" - 12"	S-12A 0" - 6"	S-12B 6" - 12"	S-13A 0" - 6"	S-13B 6" - 12"
Trichlorofluoromethane					3.3	ND	3.6	ND
Benzene	60					29 J	ND	77
Toluene	1500					120	ND	66
Ethylbenzene	5500					98	ND	48 J
p & m-Xylene	Total 1200					1400	ND	270
o-Xylene						1100	ND	120
Isopropylbenzene						130	ND	320
n-Propylbenzene						330	ND	580
1,3,5-Trimethylbenzene						1400	ND	370
1,2,4-Trimethylbenzene						4200	ND	7100
n-Butylbenzene						ND	ND	570
p-Isopropyltoluene						240	ND	ND
Naphthalene	13000					1100	ND	570
sec-Butylbenzene						90	ND	200

ND denotes not detected
 ug/Kg micrograms per kilogram

J The value is below the method detection limit and is estimated

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 4
 Summary of the Analysis for Volatile Organic Compounds in Waste
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location	NYDEC TAGM	Composite R001	Composite R004	R007*	R008	Debris Pile
Compound						
Acetone	200	67		237	ND	ND
2-Butanone	300	28		56	ND	ND
Benzene	60	11		ND	ND	ND
4-Methyl-2-Pentanone	1000	63		50	ND	ND
Toluene	1500	6		ND	ND	ND
2-Hexanone		ND		6.0	ND	ND
p & m-Xylene	1200	ND		0.5 J	ND	ND
1,2,4-Trimethylbenzene		ND		1.0	ND	ND
Naphthalene	13000	ND		1.6	ND	ND

ug/Kg micrograms per kilogram

ND denotes not detected

J The value is below the method detection limit and is estimated

* denotes concentrations in ug/L

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels.

Table 5
 Summary of the Analysis for Base Neutral Acid Extractables in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location Sample Depth Compound	NYDEC TAGM	S-1A 0" - 6"	S-1B 6" - 12"	S-2A 0" - 6"	S-2B 6" - 8"	S-3B 6" - 12"	S-4A 0" - 6"	S-4B 6" - 12"	S-4C 12" - 36"
4-Methylphenol	900	980 J	ND	ND	ND	ND	ND	ND	ND
Naphthalene	13000	840 J	ND	1500 J	980 J	ND	3600 J	ND	ND
2-Methylnaphthalene	36400	990 J	ND	1100 J	990 J	ND	ND	ND	ND
Acenaphthylene	41000	ND	ND	ND	390 J	ND	ND	ND	ND
Acenaphthene	50000	ND	ND	ND	4100	ND	9300 J	ND	ND
Dibenzofuran	6200	ND	ND	1100 J	2400	ND	4500 J	ND	ND
Fluorene	50000	ND	ND	1300 J	4600	ND	8400 J	ND	ND
Phenanthrene	50000	3300	ND	12000	29000	ND	54000	3900 J	ND
Anthracene	50000	700 J	ND	2000 J	8200	ND	18000	ND	ND
Carbazole	ND	570 J	ND	1900 J	3300	ND	9300 J	ND	ND
Fluoranthene	50000	3900	730 J	11000	44000	ND	57000	2800 J	ND
Pyrene	50000	3300	810 J	9000	37000	ND	51000	4100 J	ND
Butylbenzylphthalate	50000	1300 J	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	224	1600 J	780 J	ND	20000	ND	28000	ND	ND

ND denotes not detected
 ug/Kg micrograms per kilogram

J The value is below the method detection limit and is estimated

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 5 (cont'd)
 Summary of the Analysis for Base Neutral Acid Extractables in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location Sample Depth Compound	NYDEC TAGM	S-1A 0" - 6"	S-1B 6" - 12"	S-2A 0" - 6"	S-2B 6" - 8"	S-3B 6" - 12"	S-4A 0" - 6"	S-4B 6" - 12"	S-4C 12" - 36"
Chrysene	400	2000 J	1100 J	5000	19000	ND	26000	ND	ND
Bis(2- Ethylhexyl)phthalate	50000	1800 JB	920 JB	9400 B	630 JB	1200 JB	ND	10000 JB	1100 JB
Benzo(b)fluoranthene	1100	1900 J	800 J	5500	18000	ND	24000	ND	ND
Benzo(k)fluoranthene	1100	1700 J	440 J	4000 J	17000	ND	25000	ND	ND
Benzo(a)pyrene	61	1900 J	1100 J	4300 J	20000	ND	28000	ND	ND
Indeno(1,2,3-cd)pyrene	3200	1400 J	ND	3100 J	10000	ND	16000	ND	ND
Dibenzo(a,h)anthracene	14	ND	ND	1200 J	4200	ND	6900 J	ND	ND
Benzo(g,h,i)perylene	50000	1800 J	600 J	3700 J	10000	ND	18000	ND	ND

ND denotes not detected

J The value is below the method detection limit and is estimated

B The analyte was found in the blank

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 6
 Summary of the Analysis for Base Neutral Acid Extractables in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location Sample Depth Compound	NYDEC TAGM	S-5A 0" - 3"	S-5B 6" - 12"	S-6A 0" - 6"	S-6B 6" - 12"	S-7A 0" - 6"	S-7B 6" - 12"	S-9A 0" - 6"	S-9B 6" - 12"
Naphthalene	13000	ND	ND	ND	ND	4100	190 J	ND	ND
2-Methylnaphthalene	36400	ND	ND	ND	ND	1300 J	100 J	ND	ND
Phenol	30	ND	ND	ND	ND	ND	170 J	ND	ND
Dibenzofuran	6200	ND	2000 J	ND	ND	2600	110 J	ND	ND
Fluorene	50000	ND	3400 J	ND	ND	2500	120 J	ND	ND
Phenanthrene	50000	ND	18000	ND	1200 J	20000	810	ND	ND
Anthracene	50000	ND	6700	ND	ND	3400	140 J	ND	ND
Carbazole		ND	3200 J	ND	ND	3000	100 J	ND	ND
Fluoranthene	50000	3700 J	17000	ND	1800 J	17000	790	ND	ND
Pyrene	50000	3600 J	13000	5900 J	1500 J	13000	610	ND	ND
Benzo(a)anthracene	224	ND	7100	ND	850 J	6700	310 J	ND	ND

ND denotes not detected
 ug/Kg micrograms per kilogram

J The value is below the method detection limit and is estimated

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 6 (cont'd)
 Summary of the Analysis for Base Neutral Acid Extractables in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location Sample Depth Compound	NYDEC TAGM	S-5A 0" - 3"	S-5B 6" - 12"	S-6A 0" - 6"	S-6B 6" - 12"	S-7A 0" - 6"	S-7B 6" - 12"	S-9A 0" - 6"	S-9B 6" - 12"
Chrysene	400	ND	6300	ND	980 J	7100	360 J	ND	ND
Bis(2- Ethylhexyl)phthalate	50000	47000 B	5600 B	66000 B	490 JB	990 JB	ND	1000 JB	ND
Benzo(b)fluoranthene	1100	ND	5400	ND	850 J	6400	300 J	ND	ND
Benzo(k)fluoranthene	1100	ND	5700	ND	740 J	5700	280 J	ND	ND
Benzo(a)pyrene	61	ND	6300	ND	780 J	6200	260 J	ND	ND
Indeno(1,2,3-cd)pyrene	3200	ND	3600 J	ND	460 J	3600	190 J	ND	ND
Dibenzo(a,h)anthracene	14	ND	ND	ND	ND	1500 J	ND	ND	ND
Benzo(g,h,i)perylene	50000	ND	3400 J	ND	ND	3600	200 J	ND	ND

ug/Kg micrograms per kilogram B The analyte was found in the blank
 ND denotes not detected
 J The value is below the method detection limit and is estimated
 NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 7
 Summary of the Analysis for Base Neutral Acid Extractables in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location Sample Depth Compound	NYDEC TAGM	S-9C 12" - 36"	S-11A 0" - 6"	S-11B 6" - 12"	S-12A 0" - 6"	S-12B 6" - 12"	S-13A 0" - 6"	S-13B 6" - 12"
Naphthalene	13000	ND	ND	ND	1400 J	3200 J	2600	ND
2-Methylnaphthalene	36400	ND	390 J	ND	1400 J	6600 J	1600 J	7300 J
Acenaphthene	50000	ND	ND	ND	ND	ND	1600 J	ND
Dibenzofuran	6200	ND	ND	ND	950 J	ND	1700 J	ND
Diethylphthalate	7100	ND	ND	ND	ND	ND	4000	10000 J
Fluorene	50000	ND	ND	ND	1400 J	ND	1700 J	ND
Phenanthrene	50000	ND	ND	ND	9500	3300 J	15000	ND
Anthracene	50000	ND	ND	ND	2400	ND	2100	ND
Carbazole		ND	ND	ND	1300 J	ND	2100	ND
Fluoranthene	50000	ND	660 J	ND	10000	2600 J	13000	ND
Pyrene	50000	ND	680 J	ND	8500	ND	10000	ND
Butylbenzylphthalate	50000	ND	ND	ND	570 J	ND	1300 J	ND
Benzo(a)anthracene	224	ND	470 J	ND	4900	ND	5500	ND

ND denotes not detected
 ug/Kg micrograms per kilogram

J The value is below the method detection limit and is estimated

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 7 (cont'd)
 Summary of the Analysis for Base Neutral Acid Extractables in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998

concentrations in ug/Kg

Location Sample Depth Compound	NYDEC TAGM	S-9C 12" - 36"	S-11A 0" - 6"	S-11B 6" - 12"	S-12A 0" - 6"	S-12B 6" - 12"	S-13A 0" - 6"	S-13B 6" - 12"
Chrysene	400	ND	640 J	ND	5000	ND	6400	ND
Bis(2-Ethylhexyl)phthalate	50000	1800 B	650 JB	ND	1000 J	8300 J	2100	34000
Benzo(b)fluoranthene	1100	ND	840 J	ND	4500	ND	5300	ND
Benzo(k)fluoranthene	1100	ND	650 J	ND	4200	ND	5500	ND
Benzo(a)pyrene	61	ND	740 J	ND	5000	ND	5400	ND
Indeno(1,2,3-cd)pyrene	3200	ND	570 J	ND	2700	ND	3500	ND
Dibenzo(a,h)anthracene	14	ND	ND	ND	1100 J	ND	1400 J	ND
Benzo(g,h,i)perylene	50000	ND	700 J	ND	2900	ND	3900	ND

ND denotes not detected ug/Kg micrograms per kilogram

J The value is below the method detection limit and is estimated

B The analyte was found in the blank

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 8
 Summary of the Analysis for Base Neutral Acid Extractables in Waste
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location Compound	NYDEC TAGM	Composite R001	Composite R004	R007*	R008	Debris Pile
Naphthalene	13000	ND	ND	ND	860	2900
2-Methylnaphthalene	36400	ND	ND	ND	120 J	1100 J
Acenaphthylene	41000	ND	ND	ND	ND	410 J
4-Methylphenol	900	ND	ND	150/ND	ND	ND
Diethylphthalate	7100	4800 J	9100 J	390/29000 J	110 J	420 J
Pyrene	50000	ND	4500	64 J/28000 J	350 J	11000
Bis(2-Ethylhexyl)phthalate	50000	14000	38000	320 B/150000	ND	3100
Acenaphthene	50000	ND	ND	ND	ND	2000
Dibenzofuran	6200	ND	ND	ND	99 J	2100
Fluorene	50000	ND	ND	ND	110 J	2200
Phenanthrene	50000	ND	ND	ND	610	17000
Anthracene	50000	ND	ND	ND	97 J	3100
Carbazole		ND	ND	ND	ND	2400
Fluoranthene	50000	ND	ND	ND	480	14000
Butylbenzylphthalate	50000	ND	ND	ND	ND	380 J
Benzo(a)anthracene	224	ND	ND	ND	160 J	5900

ND denotes not detected ug/Kg micrograms per kilogram

J The value is below the method detection limit and is estimated

* denotes concentrations in ug/L, water phase/oil phase results B The analyte was found in the blank

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 8 (cont'd)
 Summary of the Analysis for Base Neutral Acid Extractables in Waste
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location	NYDEC TAGM	Composite R001	Composite R004	R007*	R008	Debris Pile
Compound						
Chrysene	400	ND	ND	ND	160 J	6700
Benzo(b)fluoranthene	1100	ND	ND	ND	130 J	5600
Benzo(k)fluoranthene	1100	ND	ND	ND	130 J	6000
Benzo(a)pyrene	61	ND	ND	ND	130 J	5800
Indeno(1,2,3-cd)pyrene	3200	ND	ND	ND	74 J	3800
Dibenzo(a,h)anthracene	14	ND	ND	ND	ND	1500 J
Benzo(g,h,i)perylene	50000	ND	ND	ND	74 J	3900
N-Nitrosodiphenylamine		ND	ND	9400 J	ND	ND

ND denotes not detected ug/Kg micrograms per kilogram

J The value is below the method detection limit and is estimated

* denotes concentrations in ug/L, water phase/oil phase results

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 9
 Summary of the Analysis for Pesticide/polychlorinated biphenyls in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location Sample Depth Compound	NYDEC TAGM	S-1A 0" - 6"	S-1B 6" - 12"	S-2A 0" - 6"	S-2B 6" - 8"	S-3B 6" - 12"	S-4A 0" - 6"	S-4B 6" - 12"	S-4C 12" - 36"
p,p'-DDE	2100	ND	ND	19	1.2 J	ND	9.0 J	ND	2.4 J
Dieldrin	44	ND	ND	ND	ND	ND	ND	ND	1.8 J
Aroclor 1242	Total	ND	ND	ND	ND	ND	530	ND	180
Aroclor 1248	1000(surf)	6200	ND	8600	180	71	ND	1500	ND
Aroclor 1260	10000(sub)	840	ND	1800	33 J	ND	100 J	53 J	19 JW

ND denotes not detected

ug/Kg micrograms per kilogram

J The value is below the method detection limit and is estimated

W Weathered sample; the results should be regarded as estimated

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 10
 Summary of the Analysis for Pesticide/polychlorinated biphenyls in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location Sample Depth Compound	NYDEC TAGM	S-5A 0" - 3"	S-5B 6" - 12"	S-6A 0" - 6"	S-6B 6" - 12"	S-7A 0" - 6"	S-7B 6" - 12"	S-9A 0" - 6"	S-9B 6" - 12"
p,p'-DDE	2100	5.1 J	13	ND	ND	3.6 J	ND	ND	ND
Dieldrin	44	3.3 J	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	Total	2200	9200	1300	ND	ND	ND	ND	ND
Arochlor 1248	1000(surf)	ND	ND	ND	ND	170	ND	490	66
Aroclor 1260	10000(sub)	130	600	ND	ND	57 J	ND	170	17 JW

ND denotes not detected ug/Kg micrograms per kilogram

J The value is below the method detection limit and is estimated

W Weathered sample, the results should be regarded as estimated

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 11
 Summary of the Analysis for Pesticide/polychlorinated biphenyls in Soil by Location

Sloan Auto Site
 Buffalo, NY
 October 1998

concentrations in ug/Kg

Location Sample Depth Compound	NYDEC TAGM	S-9C 12" - 36"	S-11A 0" - 6"	S-11B 6" - 12"	S-12A 0" - 6"	S-12B 6" - 12"	S-13A 0" - 6"	S-13B 6" - 12"
p,p'-DDE	2100	ND	ND	ND	14	ND	ND	ND
Aroclor 1242	Total	ND	ND	ND	ND	17000	ND	11000
Aroclor 1248	1000(surf)	ND	49	ND	1100	ND	990	ND
Aroclor 1260	10000(sub)	ND	53	ND	2200	ND	740	930

ND denotes not detected
 ug/Kg micrograms per kilogram
 NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup
 Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 12
 Summary of the Analysis for Pesticide/polychlorinated biphenyls in Waste
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in ug/Kg

Location Compound	NYDEC TAGM	Composite R001	Composite R004	R007*	R008	Debris File
Dieldrin	2100	ND	ND	ND	ND	12
Aroclor 1242	Total	1300	1800	320/140000	ND	ND
Aroclor 1248	1000(surf)	ND	2700	ND	ND	420
Aroclor 1260	10000(sub)	ND	ND	ND/9500	ND	610

ND denotes not detected
 ug/Kg micrograms per kilogram

* denotes concentrations in ug/L, water phase/oil phase results (ug/Kg)

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 13
 Summary of the Analysis for Metals in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in mg/Kg

Location Sample Depth Compound	NYDEC TAGM	S-1A 0" - 6"	S-1B 6" - 12"	S-2A 0" - 6"	S-2B 6" - 8"	S-3B 6" - 12"	S-4A 0" - 6"	S-4B 6" - 12"	S-4C 12" - 36"
Aluminum	33000	13000	8500	12000	15000	20000	3000	11000	7700
Antimony					180	ND	ND	ND	ND
Arsenic	12	31	12	24	14	8.9	17	7.3	6.3
Barium	600	370	120	530	290	600	330	100	37
Beryllium	1.75	2.3	0.64	2.0	2.2	3.2	ND	ND	ND
Cadmium	1.0	13	ND	16	1.3	0.64	15	0.85	ND
Calcium	35000	120000	49000	170000	92000	91000	200000	5500	3500
Chromium	40	98	9.9	140	17	15	28	13	9.4
Cobalt	60	8.7	5.0	6.7	5.9	5.9	4.8	4.6	7.1
Copper	50	280	15	400	89	19	230	21	22
Iron	550000	67000	58000	75000	53000	79000	59000	15000	16000
Lead	500	1400	40	2600	7800	86	1800	120	56

ND denotes not detected
 mg/Kg milligrams per kilogram

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 13 (cont'd)
 Summary of the Analysis for Metals in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in mg/Kg

Location Sample Depth Compound	NYDEC TAGM	S-1A 0"- 6"	S-1B 6"- 12"	S-2A 0"- 6"	S-2B 6"- 8"	S-3B 6"- 12"	S-4A 0"- 6"	S-4B 6"- 12"	S-4C 12"- 36"
Magnesium	5000	16000	7200	13000	8600	10000	3600	1200	1500
Manganese	5000	2800	670	3100	2300	1200	3100	230	210
Mercury	0.1	3.2	0.19	2.8	1.4	0.57	0.82	0.21	0.14
Nickel	25	49	12	45	24	14	22	12	16
Potassium	43000	980	550	810	1300	2000	ND	610	700
Selenium	3.9	0.90	ND	1.1	0.60	0.90	ND	1.3	ND
Sodium	8000	580	340	400	460	360	200	68	ND
Thallium	ND	0.62	ND	ND	ND	ND	ND	ND	ND
Vanadium	300	38	29	55	21	28	14	30	19
Zinc	50	1900	290	2400	470	290	3000	240	110

ND denotes not detected
 mg/Kg milligrams per kilogram

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 14
 Summary of the Analysis for Metals in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in mg/Kg

Location Sample Depth Compound	NYDEC TAGM	S-5A 0" - 3"	S-5B 6" - 12"	S-6A 0" - 6"	S-6B 6" - 12"	S-7A 0" - 6"	S-7B 6" - 12"	S-9A 0" - 6"	S-9B 6" - 12"
Aluminum	33000	4000	6400	19000	8700	2500	10000	6300	10000
Antimony		6.8	ND	ND	ND	ND	ND	ND	ND
Arsenic	12	14	29	24	170	30	15	14	3.1
Barium	600	350	210	710	150	220	73	280	33
Beryllium	1.75	ND	0.85	3.4	0.87	ND	ND	1.0	ND
Cadmium	1.0	15	4.5	15	4.5	3.6	ND	7.6	ND
Calcium	35000	220000	45000	150000	36000	320000	22000	300000	6500
Chromium	40	140	110	210	67	31	13	60	8.4
Cobalt	60	4.2	6.6	6.5	8.9	1.8	4.4	4.3	5.1
Copper	50	220	95	460	220	100	25	100	12
Iron	550000	110000	83000	88000	86000	23000	40000	55000	12000
Lead	500	3100	550	3800	290	690	81	620	17

ND denotes not detected
 mg/Kg milligrams per kilogram

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 14 (cont'd)
 Summary of the Analysis for Metals in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in mg/K-g

Location Sample Depth Compound	NYDEC TAGM	S-5A 0" - 3"	S-5B 6" - 12"	S-6A 0" - 6"	S-6B 6" - 12"	S-7A 0" - 6"	S-7B 6" - 12"	S-9A 0" - 6"	S-9B 6" - 12"
Magnesium	5000	8400	4200	30000	2700	4700	1000	5500	1500
Manganese	5000	4400	4200	6000	2000	930	460	2200	65
Mercury	0.1	0.40	60	0.06	33	7.1	2.2	0.29	0.08
Nickel	25	31	22	37	31	13	11	20	13
Potassium	43000	ND	490	1500	780	ND	780	ND	550
Selenium	3.9	0.70	ND	0.6	0.65	ND	ND	ND	ND
Sodium	8000	290	160	870	130	550	270	430	120
Vanadium	300	68	46	77	37	13	25	88	17
Thallium	ND	ND	ND	ND	0.82	ND	ND	ND	ND
Zinc	50	2500	1500	1600	890	560	210	660	49

ND denotes not detected
 mg/K-g milligrams per kilogram
 NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 15
 Summary of the Analysis for Metals in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in mg/Kg

Location Sample Depth Compound	NYDEC TAGM	S-9C 12" - 36"	S-11A 0" - 6"	S-11B 6" - 12"	S-12A 0" - 6"	S-12B 6" - 12"	S-13A 0" - 6"	S-13B 6" - 12"
Aluminum	33000	6200	5700	5400	10000	5700	13000	4000
Arsenic	12	2.6	8.0	13	29	16	19	65
Barium	600	20	880	110	270	170	620	180
Beryllium	1.75	ND	ND	1.0	1.3	0.97	2.1	0.93
Cadmium	1.0	ND	3.3	ND	15	0.90	15	1.2
Calcium	35000	4600	120000	32000	150000	81000	150000	3300
Chromium	40	6.2	920	26	110	36	130	88
Cobalt	60	4.5	8.2	5.6	8.7	24	11	5.2
Copper	50	11	230	30	510	30	370	52
Iron	550000	11000	140000	43000	71000	35000	110000	10000
Lead	500	9.7	300	28	850	71	3100	180

ND denotes not detected
 mg/Kg milligrams per kilogram

NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 15 (cont'd)
 Summary of the Analysis for Metals in Soil by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in mg/Kg

Location Sample Depth Compound	NYDEC TAGM	S-9C 12" - 36"	S-11A 0" - 6"	S-11B 6" - 12"	S-12A 0" - 6"	S-12B 6" - 12"	S-13A 0" - 6"	S-13B 6" - 12"
Magnesium	5000	1400	30000	3600	8300	2000	14000	370
Manganese	5000	78	26000	950	2500	1600	2600	53
Mercury	0.1	ND	0.21	ND	0.48	0.08	0.74	0.18
Nickel	25	13	38	20	88	44	53	20
Potassium	43000	510	380	ND	810	340	920	460
Selenium	3.9	ND	ND	ND	0.59	ND	1.2	1.4
Sodium	8000	85	410	170	340	170	460	100
Thallium	300	ND	ND	ND	0.67	ND	ND	0.84
Vanadium	50	13	420	35	39	21	38	19
Zinc	50	35	1000	100	2400	270	3300	310

ND denotes not detected
 mg/Kg milligrams per kilogram
 NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup
 Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 16
 Summary of the Analysis for Metals in Waste
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in mg/Kg

Location Compound	NYDEC TAGM	Composite R001	Composite R004	R007	R008	Debris Pile
Aluminum	33000	1900	1200	4.3	190000	61000
Antimony		ND	ND	ND	130	550
Arsenic	12	11	12	0.12	5.8	61
Barium	600	310	250	2.8	8400	1400
Beryllium	1.75	ND	ND	ND	ND	0.80
Cadmium	1.0	13	7.7	ND	220	120
Calcium	35000	300000	300000	1100	43000	46000
Chromium	40	16	11	0.23	89	400
Cobalt	60	1.9	ND	ND	11	10
Copper	50	150	110	1	8800	93000
Iron	550000	26000	19000	160	13000	82000
Lead	500	910	630	5.3	8500	87000

ND denotes not detected
 mg/Kg milligrams per kilogram
 NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 16 (cont'd)
 Summary of the Analysis for Metals in Waste
 Sloan Auto Site
 Buffalo, NY
 October 1998
 concentrations in mg/Kg

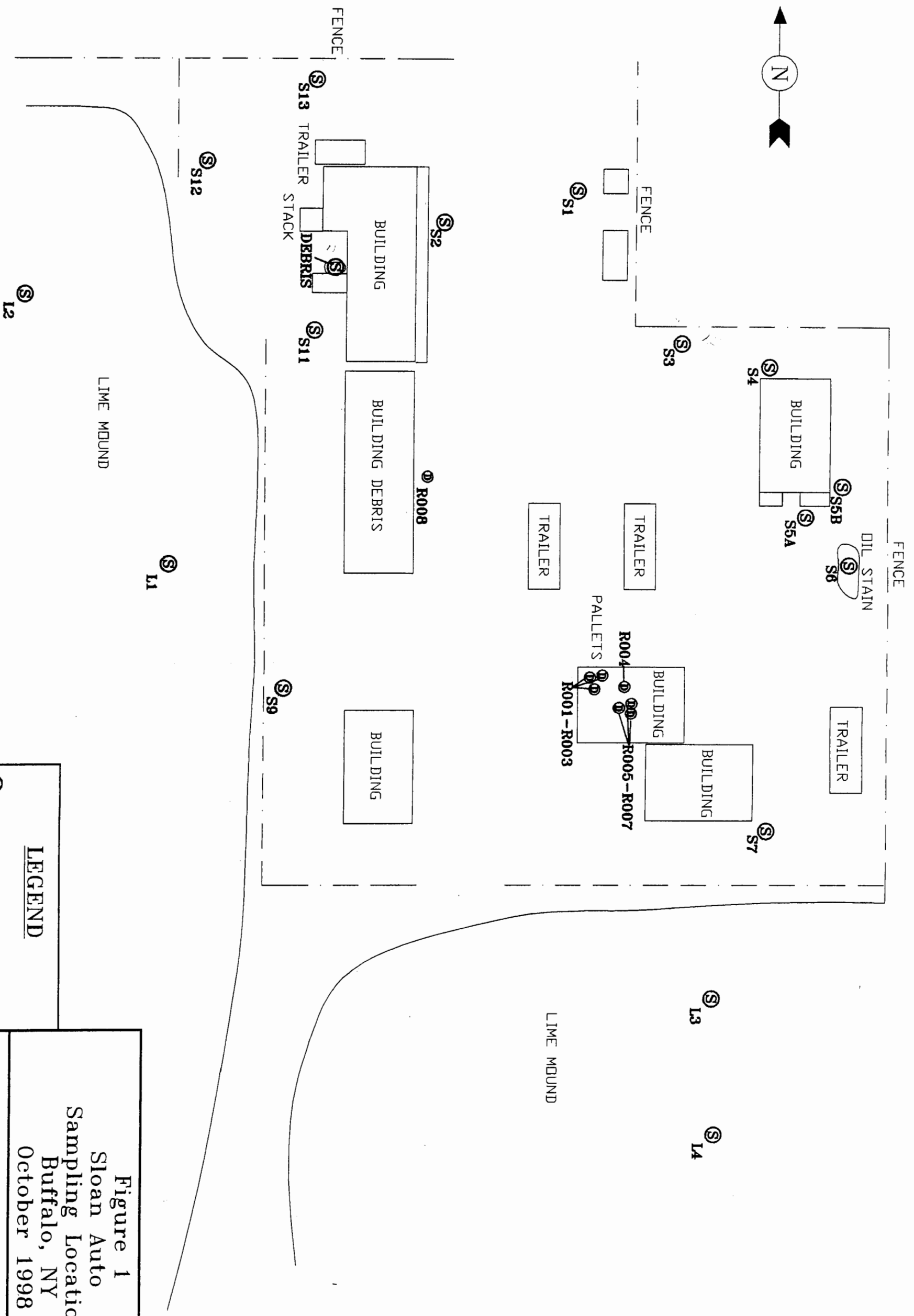
Location Compound	NYDEC TAGM	Composite R001	Composite R004	R007	R008	Debris Pile
Magnesium	5000	23000	14000	720	10000	8800
Manganese	5000	5200	3600	11	420	2200
Mercury	0.1	0.30	0.51	ND	ND	0.89
Nickel	25	15	13	ND	1000	1100
Potassium	43000	ND	ND	210	380	520
Selenium	3.9	0.72	0.68	ND	ND	7.0
Silver		ND	ND	ND	1.6	9.0
Sodium	8000	1800	860	1100	210	ND
Vanadium	300	8.6	6.9	ND	47	41
Zinc	50	1400	1200	4.3	34000	57000

ND denotes not detected
 mg/Kg milligrams per kilogram
 NYDEC TAGM New York Department of Environmental Conservation Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup
 Objectives and Cleanup Levels. Note: values in red exceed NYDEC TAGMs.

Table 17
 Lime Pile Analytical Summary by Location
 Sloan Auto Site
 Buffalo, NY
 October 1998

Location Sample Depth Analysis	L1 0" - 6"	L2 0" - 6"	L3 0" - 6"	L4 0" - 6"
Total Cyanides (mg/Kg)	1.9	2.1	2.4	2.7
pH	12.4	12.4	12.4	12.45
Pesticides/PCBs	ND	ND	ND	ND

ND denotes not detected
 mg/Kg milligrams per kilogram



LEGEND
 Ⓢ SOIL SAMPLE LOCATION
 Ⓜ DRUM SAMPLE LOCATION

Figure 1
 Sloan Auto
 Sampling Locations
 Buffalo, NY
 October 1998

U.S. EPA ENVIRONMENTAL RESPONSE TEAM
 RESPONSE ENGINEERING AND ANALYTICAL CONTRACT
 68-C4-0022
 V.I.# 03347-041-001-3382-01

NOT TO SCALE