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9-15-139

SUPERFUND CONTRACT SUPPORT TEAM

SAMPLING REPORT

for the

NEWSTEAD SITE

in NEWSTEAD, NEW YORK

July 10 - July 12, 2000

File

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1.0 BACKGROUND

The 6.6-acre Newstead Site (site) is located at 8471 Fletcher Road in the town of Newstead, Erie County, New York (the property location map and site plan are located in Appendix A). The site is located in a rural residential community, just south of Tonawanda Creek. The previous tenant used less than one-half of an acre in the northern portion of the site for disposal of waste materials including paint sludge and other paint related wastes. The U.S. Environmental Protection Agency (EPA) excavated drums and cans, some of which contained paints and solvents with Pratt and Lambert labels on them, from the site.

A 1987 investigation by New York Department of Environmental Conservation (NYDEC) found the following metals in the soil: lead, cadmium, barium, zinc, chromium and selenium. The investigation also revealed metal and volatile organic contamination in shallow groundwater wells at the site. A preliminary assessment was performed by EPA in July of 1989. In August 1989, EPA received a health advisory from the Agency for Toxic Substances and Disease Registry that the site presents a significant and imminent health threat which recommended dissociation of human contact with the contaminated area and biological testing of the site residents. By September of 1989 the site residents were permanently relocated to a comparable replacement dwelling.

From June 1993 to February 1997, a detailed investigation was undertaken at the site to define environmental conditions and evaluate the risk posed by the site to human health and the natural environment. This investigation resulted in the following findings: waste material/contaminated soil was found in the northwestern portion of the site; sediments in the Fletcher Road ditch contained elevated levels of polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls(PCBs) and metals; surface water in the same ditch had not been impacted by the site; and the contaminant concentrations in the groundwater were below the NYSDEC Class GA groundwater standards for potable water usage with the exception of monitoring well, MW2A-93.

In a letter dated October 24, 1997, Sherwin-Williams Company identified its intent to implement a voluntary Interim Response Act (IRA) at the site. This consisted of excavation and off-site disposal of waste, contaminated soils and sediment. A work plan was approved and annexed into an Administrative Order on Consent (AOC) by the EPA. The AOC requires formal agreement to cleanup goals that Sherwin-Williams did not agree to. Therefore, a "Background Soil Sampling Work Plan" was proposed and commented on by the EPA. The data from the background soil samples will be used as one of the considerations in determining the cleanup levels for inorganic constituents in background soils and at the site.

2.0 SAMPLING PROCEDURES

The sampling procedures were in accordance with the guidelines set forth in the Quality Assurance Project Plan (QAPP) which is located in Appendix B.

3.0 DESCRIPTION OF EVENTS

On July 10, 2000, two members from the U.S. EPA, Division of Environmental Science and Assessment (DESA), Superfund Contract Support Team (SCST) met with the U. S. EPA On-Scene Coordinator (OSC) of the project. They conducted a site reconnaissance , delineated approximately where all samples will be collected from and took photographs. On July 11, 2000, the same EPA employees met with a member of the PRP's contractor, Conestoga-Rovers and Associates, to begin the sampling event. The contractor collected split samples of the EPA employees' samples. However, they were not true split samples because the EPA used En Core™ samplers for target compound list (TCL) - volatile organic compound (VOC) samples whereas the contractor did not have such equipment. The EPA filled a glass jar for the contractor's VOC samples. For a map of sample locations refer to the Figure 1 in Appendix A. All samples were collected by U.S. EPA DESA/SCST personnel using an auger at one - two feet below soil surface. En Core™ samplers were used for TCL - VOCs and the remainder of the sample was homogenized in a stainless steal bowl. Two glass jars were collected from the bowl for TCL - base-neutral acids (BNAs), polychlorinated biphenyls (PCBs) and pesticides. One jar was collected from the bowl for target analyte list (TAL) - total metals. A picture was taken of each sample.

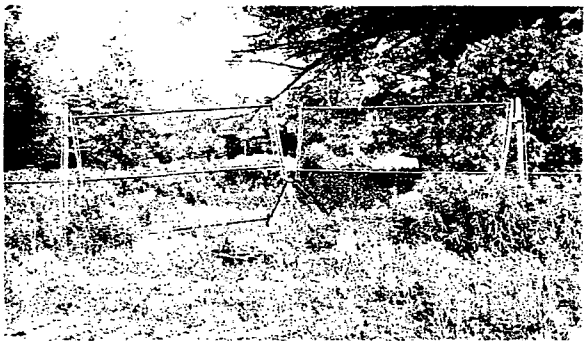
The first sample collected, SS-01, consisted of a grey clay and was located down Fletcher Road in the woodland area upgradient of the site. The sample was collected at 0855 and was located 219 feet south of the southern gate post and about 75 feet in from the road. The second soil sample, SS-02 was collected from the same area as SS-01, however, it was 50 feet in from the road. SS-02 was collected at 0925 and consisted of mostly clay with some silt. A rinsate blank was taken at 0950 by pouring distilled water over a stainless steal bowl, auger, scoop and an En Core™ sampler. At 1005, SS-03 was collected from the same area as the first two samples, however, it was located about 25 feet in from the Fletcher Road. This sample consisted of a sandy silt.

SS-04 was collected from the drainage ditch area across Fletcher Road, southwest of the site. A matrix spike/matrix spike duplicate (MS/MSD) was taken at this location. The sample was collected at 1050 and located 233 feet from the southern gate post and about 15 feet in from the road and consisted of a wet sandy soil. SS-05 was collected at 1110 and 242 feet from the southern gate post. SS-05 was also about 15 feet in from the Fletcher Road and was also a wet sandy, soft soil.

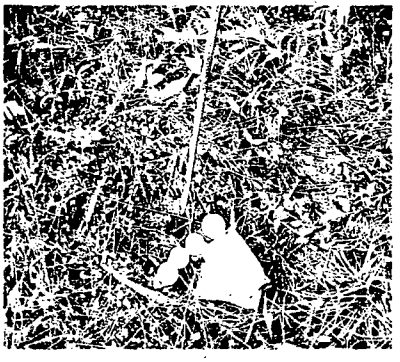
SS-06 was collected from the wetland area 109 feet north of the southern gate and about 20 feet in from the road, directly across from the site fence. The sample was taken at 1140 and consisted of dark, sandy soil. SS-07 and duplicate, SS-08, were collected at 1205 in the agricultural area across from the site gate. They were taken 311 feet south of the northern gate post. The soil consisted of a top clay layer and a sandy, silt lower layer. SS-09 was also taken from the agricultural area and was 291 feet south of the northern gate post. This sample was taken at 1230 and consisted of the same two layers as SS-07 and SS-08.

SS-10 was collected downgradient of the site in the drainage ditch located 54 feet north of the northern gate post and about 10 feet in from the road. It was collected at 1255 and consisted of a very wet, dark soil. SS-11 was also collected in the same location, however it was 103 feet north of the northern gate post and about 10 feet in from the road. The sample was collected at 1315 and also consisted of a wet silty soil. All samples were shipped to Contract Laboratory Program (CLP) laboratories on July 11, 2000 via federal express. The trip report for this sampling event can be found in Appendix G.

The following five pages are a picture log of the sampling locations and the actual samples taken. A sketched map of the sample locations can be found as Figure 1 in Appendix A.



Shown above is the front fence of the Newstead site. The first picture is the far north side of the fence and the rest follow sequentially to the far south side of the fence. The third picture is of the front gate to the site.



SS-01 **SS-02** **SS-03**

The first picture shown above is of the woodland area upgradient/south of the site on the same side of Fletcher Road. Three samples, SS-01, SS-02 and SS-03 were taken from this area and are also shown above.

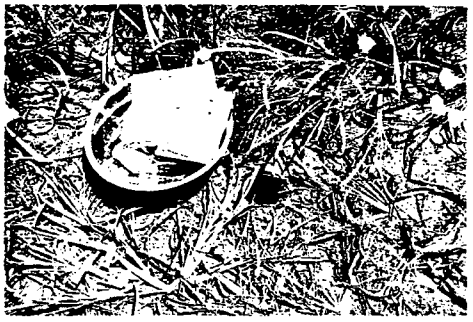
SS-04

SS-05

The first picture shown above is of the woodland area upgradient/south of the site on the opposite side of Fletcher Road. Two samples, SS-04 (MS/MSD) and SS-05, were taken from this area and are also shown above.

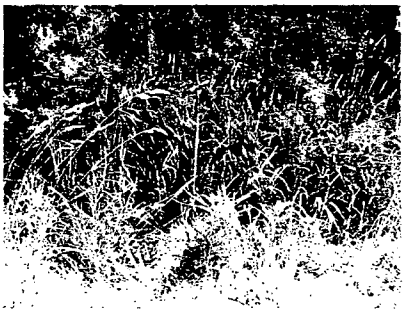
SS-06

The picture shown directly above is of the wetland area directly across from the southern gate post. Sample, SS-06, taken from the wetlands can be seen directly above and to the right.



SS-07/SS-08 **SS-09**

The first two pictures shown above are of the agricultural field directly across from the site. The following pictures are of the samples taken there: SS-07 and duplicate, SS-08 and SS-09.



SS-10 **SS-11**

The first picture is of the drainage ditch to the north of the site on the same side of Fletcher Road. The two pictures directly above are of the samples taken in the drainage ditch just north of the northern gate post, SS-10 and SS-11.

4.0 RESULTS

The equipment blank was taken for Quality Control and to determine if any outside contamination was introduced to the samples. According to Region II's Data Validation Standard Operating Procedure for CLP Data, when contaminants are found in the blank, the sample compound must be greater than five times the amount detected in the blank to consider attribution of that contaminant to the sample location. The only organic contaminant found in the equipment blank above the method detection limit was phenanthrene at 3 ppb. The following inorganic analytes were detected above the detection limits in the blanks: aluminum, barium, calcium, copper, magnesium, manganese, sodium and zinc.

The compounds in the blanks could have been introduced during decontamination of the sampling equipment or the laboratory equipment. The results of the blanks do not affect the overall results of the sampling event. The Quality Assurance/Quality Control sample data can be found in Table 1 on page 12.

All soil samples collected during this sampling event were collected for the purpose of determining contamination in the background soil. The samples were compared to the (New York Department of Environmental Conservation), *Division Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels Water Regulations* which can be found as Appendix F and the U.S. EPA Region III *Risk-Based Concentrations Table* which can be found as Appendix H.

The following table is a list of contaminants that exceed the *Division Technical and Administrative Guidance Memorandum on Determination of Soil Cleanup Objectives and Cleanup Levels Water Regulations*:

Beryllium	SS-01, SS-02, SS-03, SS-06, SS-09, SS-10
Chromium	SS-03
Iron	SS-01, SS-02, SS-03, SS-04, SS-05, SS-06, SS-07, SS-08, SS-09, SS-10, SS-11
Zinc	SS-02, SS-03, SS-04, SS-05, SS-06, SS-07, SS-08, SS-09, SS-10, SS-11

The following table is a list of contaminants that exceed the U.S. EPA Region III *Risk-Based Concentrations Table*:

Arsenic	SS-01, SS-02, SS-03, SS-04, SS-05, SS-06, SS-07, SS-09, SS-10, SS-11

The above compounds were only those compounds detected above the method detection limit and the state and federal Applicable or Relevant and Appropriate Requirements (ARARs) in the particular samples. There were more compounds identified in the sample data reports (see Appendix C, and D). Table 2, page 13, provides a summary of the results of the background soil VOC, BNA, pesticides, and PCBs analyses conducted by the CLP laboratories. Table 3, page 16 provides a summary of the results of the soil total metal analysis conducted by the CLP laboratories. The state criteria and standards can be found as Appendix F and the EPA Region III criteria can be found as Appendix H.

5.0 CONCLUSION:

Ten background soil samples were collected, SS01 - SS11, including the duplicate, and were analyzed for *U.S. EPA CLP SOW for Organic Analysis, Low Concentration Water (OLC0 2.1)*. There were no organic contaminants found above state or federal ARARs.

The same ten background soil samples were also analyzed for *U.S. EPA CLP SOW for Inorganic Analysis, Multi-Media, Multi-Concentration Water (OLM0 4.2)*. The following analytes were found to be above either the state or federal ARARs: arsenic, beryllium, chromium, iron and zinc. Soil sample, SS-03, found in the woodland area upgradient of the site contained every one of the above mentioned analytes; it was also the only occurrence of chromium. SS-02, also located in the woodland area upgradient of the site, SS-06, located in the wetlands across the street, SS-09, located in the agricultural area also across the street and SS-10, located in the drainage ditch downgradient contained the second highest frequency of analytes: arsenic, beryllium, iron and lead.

Figure 1 of Appendix A shows a sketched map of the locations of background soil samples. The area with the highest frequency of contaminants is the woodland area upgradient of the site, with soil samples, SS-01, SS-02 and SS-03. This area may not be the best location for background samples. Across the street from this location is the drainage ditch upgradient of the site with soil samples, SS-04 and SS-05. This area has the lowest frequency of contaminants and may be a better choice for background samples.

TABLE 1
QA/QC SAMPLE DATA

TYPE OF SAMPLE	ANALYSIS	SAMPLE NUMBERS	SAMPLE LOCATION
EQUIPMENT BLANK	Low Conc. Organic	B03MJ	N/A
	Inorganic	MB0385	
BLIND DUPLICATE	Low Conc. Organic	B03MS is a duplicate of B03MR	SS-08 is a duplicate of SS-07
	Inorganic	MB038G is a duplicate of MB038F	
MATRIX SPIKE/ MATRIX SPIKE DUPLICATE	Organic	B03MN	SS-04
	Inorganic	MB0389	

TABLE 2
ORGANIC SAMPLE SUMMARY

Sample Location	Sample Numbers	Organic Compounds & Concentrations (µg/L)			TAGM (µg/L)[1]	Region III RBC (µg/L)[2]
		Compounds	Conc.	QC		
Equipment Blank	B03MJ	Phenanthrene	3	J	50	
SS-01	B03MK	Trichlorofluoromethane	3	J		23,000,000
		Acetone	70	J	200	7,800,000
		Methylene Chloride	20		100	85,000
		2-Butanone	33	J	300	
		Toluene	2	J	1500	16,000,000
SS-02	B03ML	Trichlorofluoromethane	1	J		23,000,000
		2-Butanone	2	J	300	
		4-Methyl-2-Pentanone	2	J	1000	
		Toluene	1	J	1500	16,000,000
		bis(2-Ethylhexyl)phthalate	160	J	50,000	46,000
		Endrin	0.34	J	100	23,000
SS-03	B03MM	Trichlorofluoromethane	2	J		23,000,000
		Acetone	43	J	200	7,800,000
		Mehtyl Acetate	3	J		78,000,000
		2-Butanone	4	J	300	
		4-Methyl-2-Pentanone	3	J	1000	
		Toluene	2	J	1500	16,000,000
		bis(2-ethylhexyl)phthalate	270	J	50,000	46,000
		Methoxychlor	120			
SS-04 (MS/MSD)	B03MN	Trichlorofluoromethane	2	J		23,000,000
		Methyl Acetate	3	J		78,000,000
		2-Butanone	3	J	300	
		Cyclohexane	4	J		
		Benzene	2	J	60	22,000
		Methylcyclohexane	6	J		
		Toluene	6	J	1500	16,000,000
		Xylene (Total)	5	J	1200	160,000,000
		Fluoranthene	74	J	50,000	3,100,000
		Pyrene	66	J	50,000	2,300,000
		Chrysene	42	J	400	87,000
		bis(2-Ethylhexyl)phthalate	63	J	50,000	46,000

J - Analyte present. Reported value may not be accurate or precise.

[1]- From the *Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels, Appendix A: Recommended Soil Cleanup Objectives*. Jan. 1994 found in Appendix F.

[2]-From the EPA Region III *Risk-Based Concentration Table*. October 1999 found in Appendix H.

TABLE 2
ORGANIC SAMPLE SUMMARY CONTINUED

Sample Location	Sample Numbers	Organic Compounds & Concentrations (µg/L)			TAGM (µg/L)[1]	Region III RBC (µg/L)[2]
		Compounds	Conc.	QC		
SS-05	B03MP	Trichlorofluoromethane	3	J		23,000,000
		Methyl Acetate	4	J		78,000,000
		Toluene	2	J	1500	16,000,000
		Phenanthrene	58	J	50,000	
		Fluoranthene	89	J	50,000	3,100,000
		Pyrene	67	J	50,000	2,300,000
		Chrysene	43	J	400	87,000
		bis(2-Ethylhexyl)phthalate	330	J	50,000	46,000
SS-06	B03MQ	Trichlorofluoromethane	2	J		23,000,000
		2-Butanone	3	J	300	
		Toluene	1	J	1500	16,000,000
		bis(2-Ethylhexyl)phthalate	160	J	50,000	46,000
SS-07	B03MR	Trichlorofluoromethane	2	J		23,000,000
		Methyl Acetate	4	J		78,000,000
		2-Butanone	4	J	300	
		Toluene	2	J	1500	16,000,000
		bis(2-Ethylhexyl)phthalate	90	J	50,000	46,000
SS-08 Duplicate of SS-07	B03MS	Methyl Acetate	4	J		78,000,000
		2-Butanone	4	J	300	
		Toluene	2	J	1500	16,000,000
		bis(2-Ethylhexyl)phthalate	270	J	50,000	46,000
SS-09	B03MT	Methyl Acetate	7	J		78,000,000
		2-Butanone	2	J	300	
		Toluene	1	J	1500	16,000,000
		bis(2-Ethylhexyl)phthalate	120	J	50,000	46,000
		Methoxychlor	0.84	J		
SS-10	B03MW	Methyl Acetate	4	J		78,000,000
		2-Butanone	3	J	300	
		Toluene	2	J	1500	16,000,000
		Fluoranthene	50	J	50,000	3,100,000
		bis(2-Ethylhexyl)phthalate	1100		50,000	46,000

J - Analyte present. Reported value may not be accurate or precise.

[1]- From the *Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels, Appendix A: Recommended Soil Cleanup Objectives*. Jan. 1994 found in Appendix F.

[2]-From the EPA Region III *Risk-Based Concentration Table*. October 1999 found in Appendix H.

TABLE 2
ORGANIC SAMPLE SUMMARY CONTINUED

Sample Location	Sample Numbers	Organic Compounds & Concentrations (µg/L)			TAGM (µg/L)[1]	Region III RBC (µg/L)[2]
		Compounds	Conc.	QC		
SS-11	B03MX	cis-1,2-Dichloroethene	3	J		780,000
		2-Butanone	7	J	300	
		Cyclohexane	12			
		Benzene	6	J	60	22,000
		Trichloroethene	31		700	58,000
		Methylcyclohexane	19			
		Toluene	17		1500	16,000,000
		Tetrachloroethene	2	J	1400	12,000
		Ethylbenzene	2	J	5500	7,800,000
		Xylene (Total)	22		1200	160,000,000
		bis(2-Ethylhexyl)phthalate	180	J	50,000	46,000

J - Analyte present. Reported value may not be accurate or precise.

[1]- From the *Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels, Appendix A: Recommended Soil Cleanup Objectives*. Jan. 1994 found in Appendix F.

[2]-From the EPA Region III *Risk-Based Concentration Table*. October 1999 found in Appendix H.

TABLE 3
INORGANIC SAMPLE SUMMARY

Sample Location	Sample Numbers	Inorganic Compounds & Concentrations (mg/kg)			TAGM (mg/kg)[1]	Region III RBC (mg/kg)[2]
		Compounds	Conc.	QC		
Equipment Blank	MB0385	Aluminum	56.2	B	SB	78,000
		Barium	1.6	B	300 or SB	5500
		Calcium	69.2	B	SB	
		Copper	14.2	B	25 or SB	3100
		Magnesium	24.4	B	SB	
		Manganese	0.21	B	SB	1600
		Sodium	112	B	SB	
		Zinc	16.5	B	20 or SB	23,000
SS-01	MB0386	Aluminum	5530		SB	78,000
		Arsenic	2.5		7.5 or SB	0.43
		Barium	74.7		300 or SB	5500
		Beryllium	0.33	B	0.16 or SB	1600
		Calcium	2590		SB	
		Chromium	8.9	J	10 or SB	
		Cobalt	2.6	B	30 or SB	4700
		Copper	8.9		25 or SB	3100
		Iron	8480		2000 or SB	23,000
		Lead	7.2		SB	
		Magnesium	1330		SB	
		Manganese	74.9		SB	1600
		Mercury	0.10	BJ	0.1	
		Nickel	9.0	B	13 or SB	1600
		Potassium	209	B	SB	
		Sodium	99.6	B	SB	
		Vanadium	13.4		150 or SB	550
		Zinc	39.8		20 or SB	23,000

J - Analyte present. Reported value may not be accurate or precise.
B - Not detected substantially above the level reported in laboratory or field blanks.
[1]- From the *Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels, Appendix A: Recommended Soil Cleanup Objectives.* Jan. 1994 found in Appendix F.
[2]-From the EPA Region III *Risk-Based Concentration Table.* October 1999 found in Appendix H.
SB-Soil Background

TABLE 3
INORGANIC SAMPLE SUMMARY CONTINUED

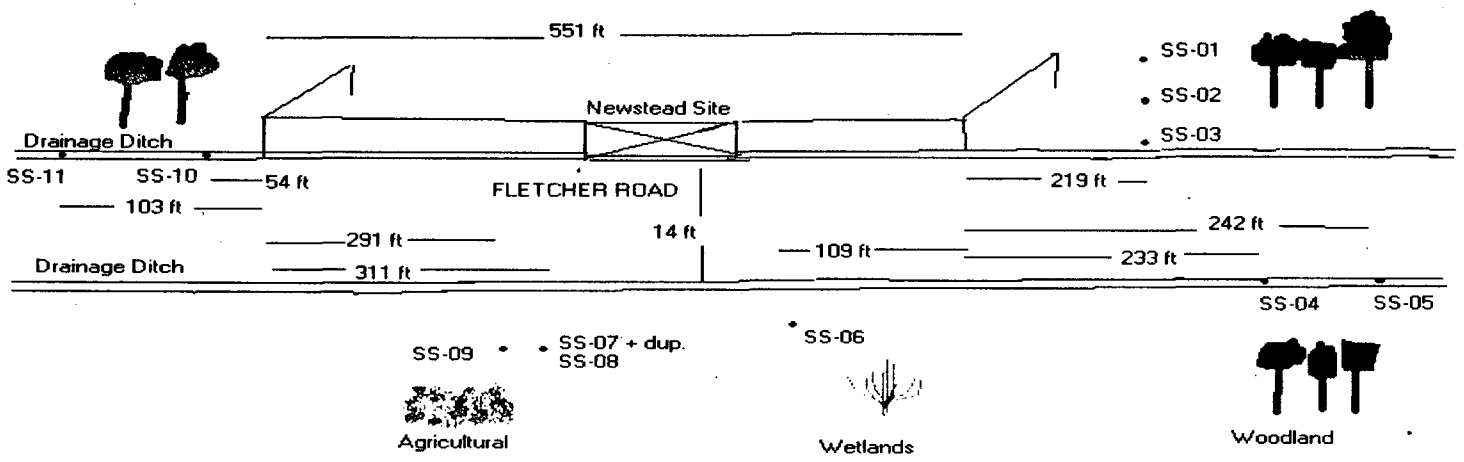
Sample Location	Sample Numbers	Inorganic Compounds & Concentrations (mg/kg)			TAGM (mg/kg)[1]	Region III RBC (mg/kg)[2]
		Compounds	Conc.	QC		
SS-02	MB0387	Aluminum	5930		SB	78,000
		Arsenic	4.4		7.5 or SB	0.43
		Barium	74.1		300 or SB	5500
		Beryllium	0.32	B	0.16 or SB	160
		Calcium	2660		SB	
		Chromium	9.9	J	10 or SB	
		Cobalt	4.0	B	30 or SB	4700
		Copper	9.9		25 or SB	3100
		Iron	14,000		2000 or SB	23,000
		Lead	7.1		SB	
		Magnesium	1650		SB	
		Manganese	92.8		SB	1600
		Nickel	11.0	J	13 or SB	1600
		Potassium	212	B	SB	
		Sodium	100	B	SB	
		Vanadium	15.4		150 or SB	550
		Zinc	49.5		20 or SB	23,000
SS-03	MB0388	Aluminum	9520		SB	78,000
		Arsenic	2.3	B	7.5 or SB	0.43
		Barium	127		300 or SB	5500
		Beryllium	0.42	B	0.16 or SB	160
		Calcium	3110		SB	
		Chromium	13.1	J	10 or SB	
		Cobalt	3.2	B	30 or SB	4700
		Copper	6.0		25 or SB	3100
		Iron	10,500		2000 or SB	23,000
		Lead	10.1		SB	
		Magnesium	2010		SB	
		Manganese	82.6		SB	1600
		Nickel	10.8	J	13 or SB	1600
		Potassium	343	B	SB	
		Sodium	128	B	SB	
		Vanadium	14.6		150 or SB	550
		Zinc	56.4		20 or SB	23,000

J - Analyte present. Reported value may not be accurate or precise.
[1]- From the *Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels, Appendix A: Recommended Soil Cleanup Objectives.* Jan. 1994 found in Appendix F.
[2]-From the EPA Region III *Risk-Based Concentration Table.* October 1999 found in Appendix H.
B - Not detected substantially above the level reported in laboratory or field blanks.
SB - Soil Background

APPENDIX A

SITE MAPS

FIGURE 1 - MAP OF NEWSTEAD SITE BACKGROUND SOIL LOCATIONS
(NOT TO SCALE)
AUGUST, 2000



DOWNGRADIENT

UPGRADIENT

N

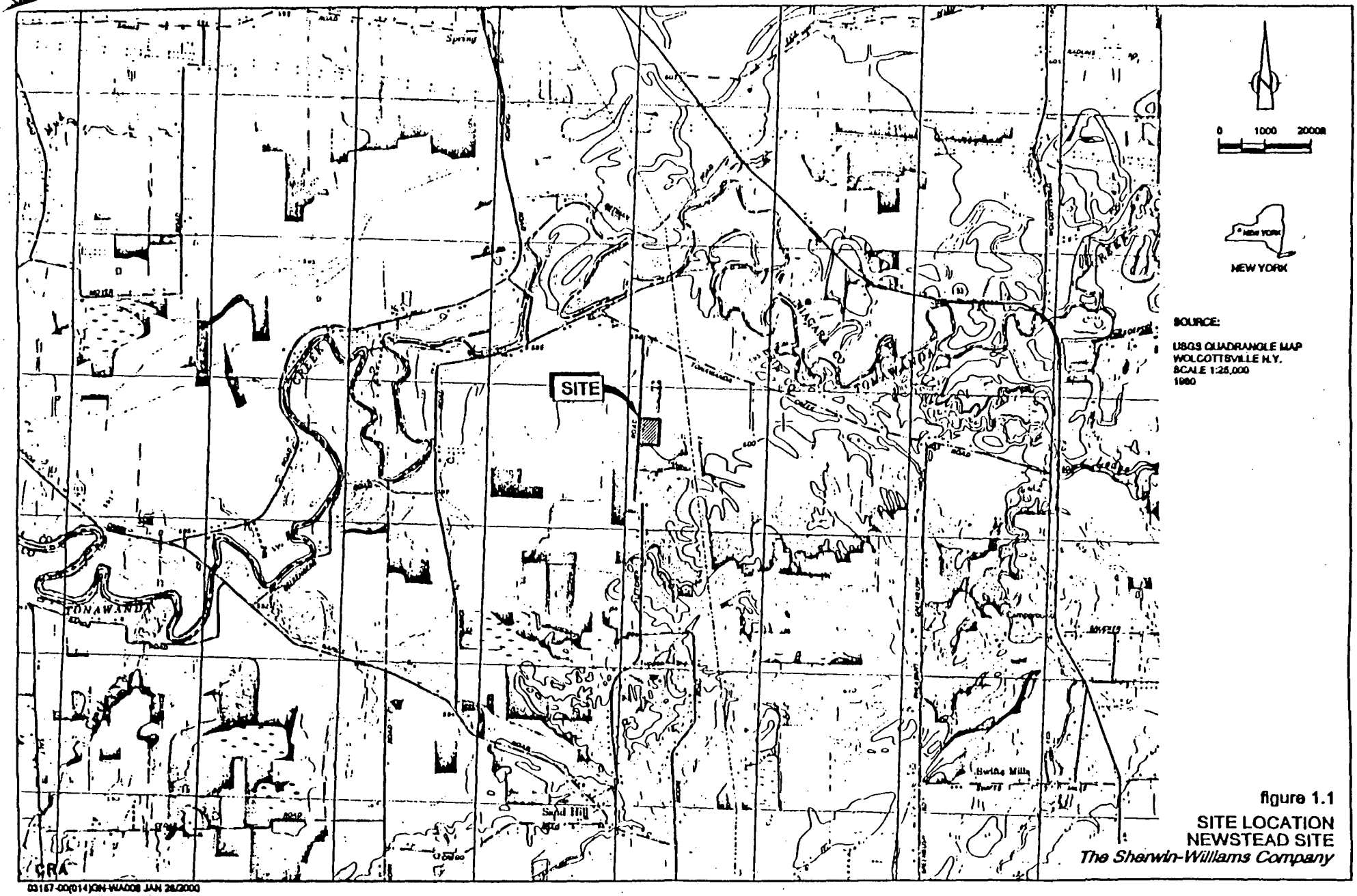


figure 1.1
SITE LOCATION
NEWSTEAD SITE
The Sherwin-Williams Company

03167-00(014)GN-WA008 JAN 26/2000

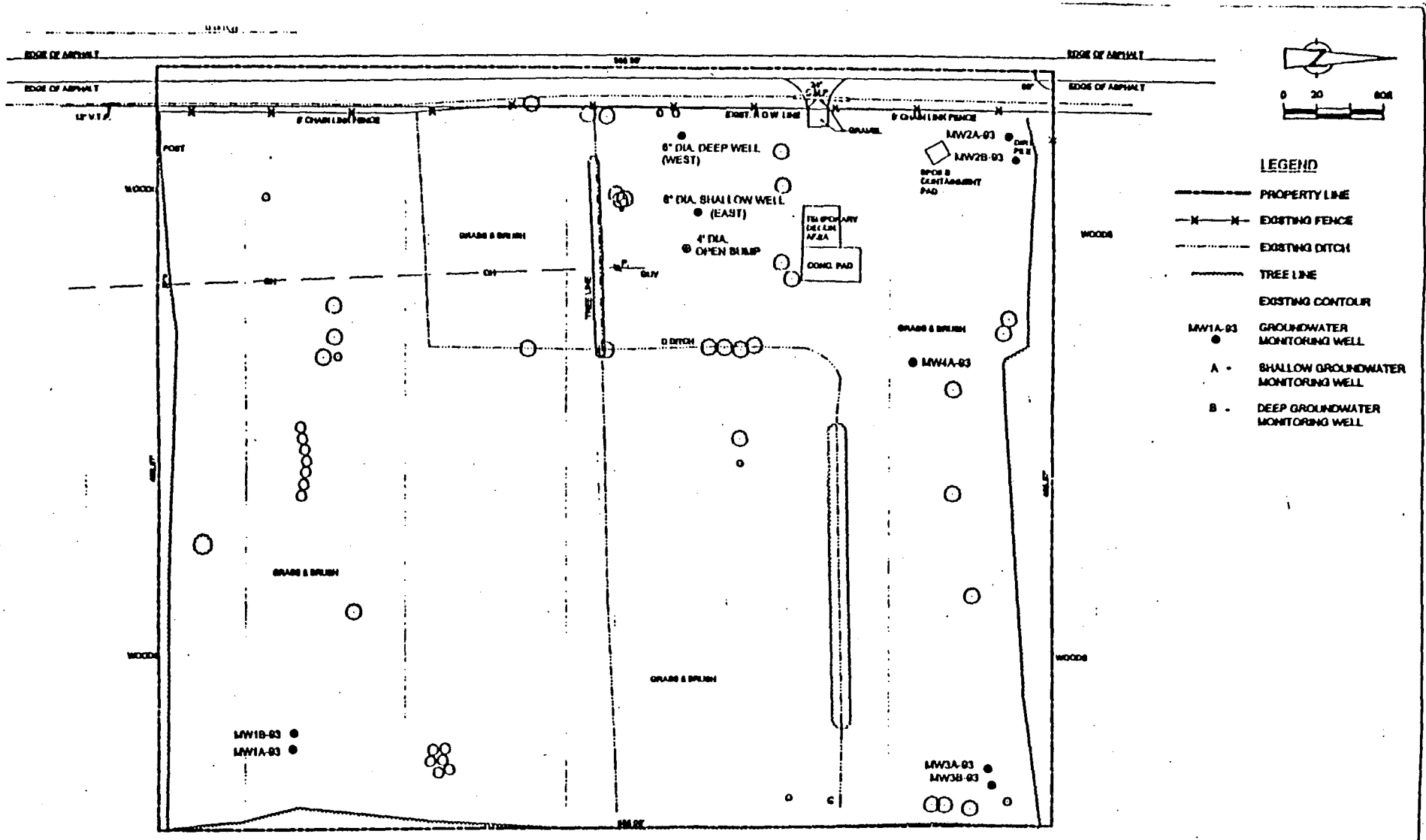


figure 1.2

SITE PLAN
NEWSTEAD SITE
The Sherwin-Williams Company

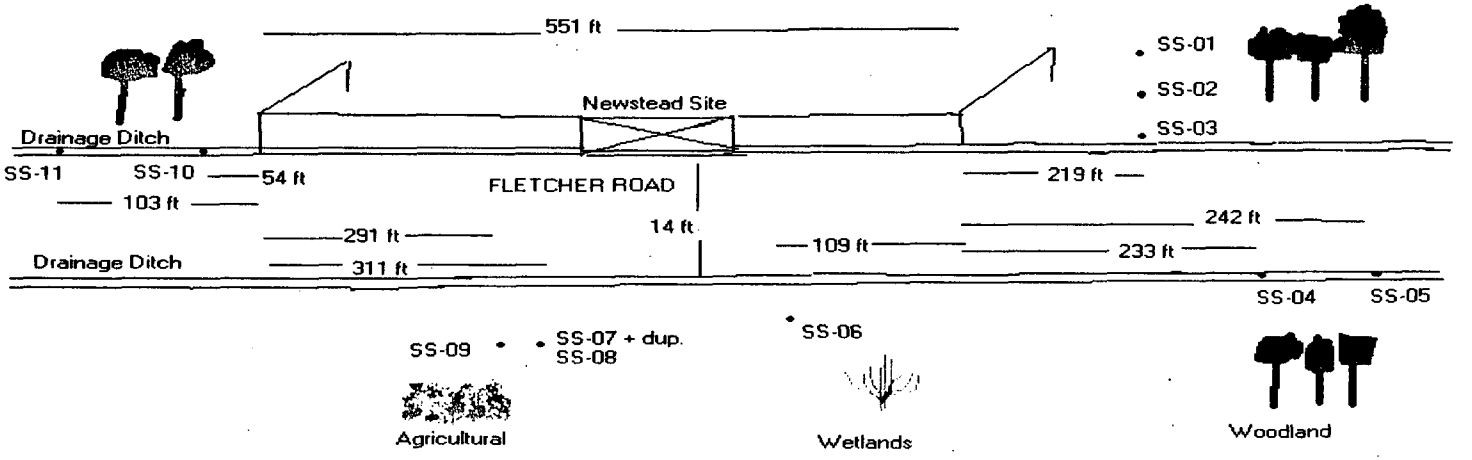
CRA

03167-00(014)GN-WA003 JAN 28/2000

APPENDIX A

SITE MAPS

FIGURE 1 - MAP OF NEWSTEAD SITE BACKGROUND SOIL LOCATIONS
(NOT TO SCALE)
AUGUST, 2000



DOWNGRADIENT

UPGRADIENT

N

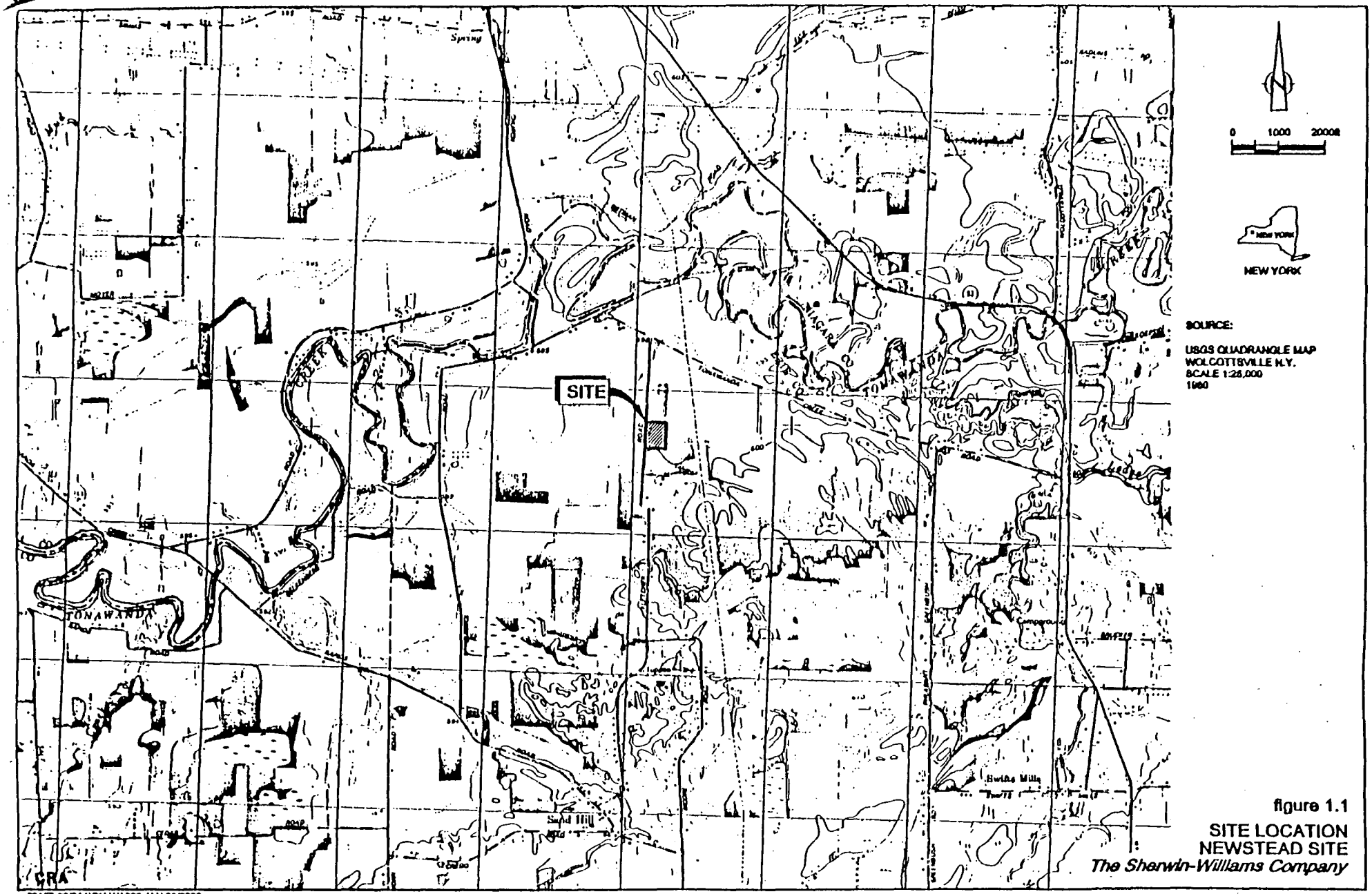


figure 1.1
SITE LOCATION
NEWSTEAD SITE
The Sherwin-Williams Company

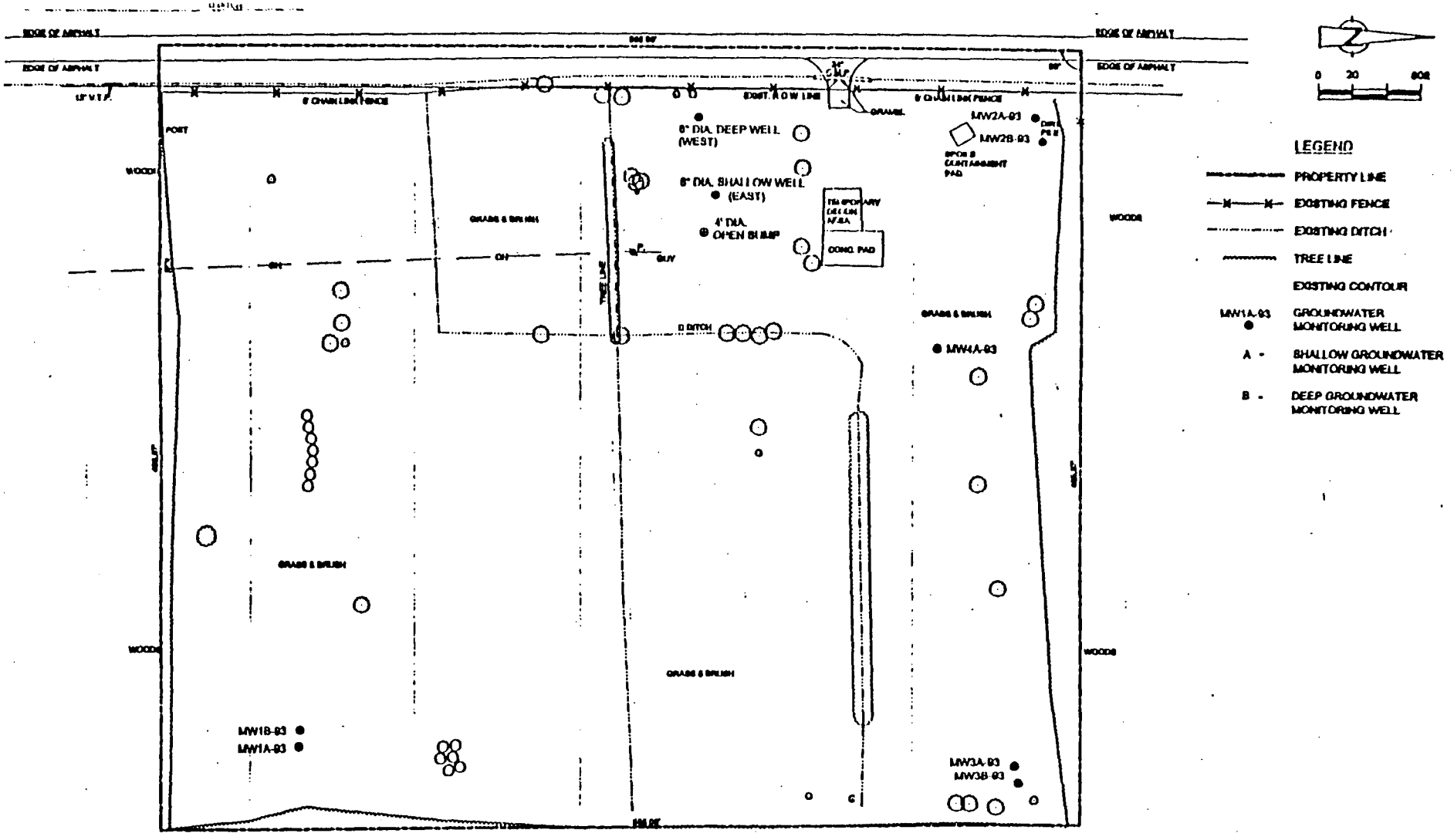


figure 1.2

SITE PLAN
NEWSTEAD SITE
The Sherwin-Williams Company

CRA

03157-00(014)GN-WA003 JAN 28/2000

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1

RB-01 QC Sample

EPA SAMPLE #

INORGANIC ANALYSIS DATA SHEET

MB0385

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68-W0-0089

Lab Code: CHEM Case No.: 28286 SAS No.: SDG No.: MB038B

Matrix (soil/water): WATER Lab Sample ID: 1079R-01S

Level (low/med): LOW Date Received: 07/12/00

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	56.2	B		P
7440-36-0	Antimony	4.9	U		P
7440-38-2	Arsenic	5.6	U		P
7440-39-3	Barium	1.6	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.50	U		P
7440-70-2	Calcium	69.2	B		P
7440-47-3	Chromium	1.5	U		P
7440-48-4	Cobalt	1.7	U		P
7440-50-8	Copper	14.2	B		P
7439-89-6	Iron	29.5	U		P
7439-92-1	Lead	2.6	U		P
7439-95-4	Magnesium	24.4	B		P
7439-96-5	Manganese	0.21	B		P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	1.0	U		P
7440-09-7	Potassium	41.0	U		P
7782-49-2	Selenium	3.9	U		P
7440-22-4	Silver	1.8	U		P
7440-23-5	Sodium	112	B		P
7440-28-0	Thallium	7.8	U		P
7440-62-2	Vanadium	1.4	U		P
7440-66-6	Zinc	16.5	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SS-01

U.S. EPA - CLP
1

EPA SAMPLE #

INORGANIC ANALYSIS DATA SHEET

MB0386

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68-W0-0089

Lab Code: CHEM Case No.: 28286 SAS No.: SDG No.: MB038B

Matrix (soil/water): SOIL Lab Sample ID: 1079R-02S

Level (low/med): LOW Date Received: 07/12/00

% Solids: 84.0

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5530			P
7440-36-0	Antimony	1.1	U		P
7440-38-2	Arsenic	2.5			P
7440-39-3	Barium	74.7			P
7440-41-7	Beryllium	0.33	B		P
7440-43-9	Cadmium	0.12	U		P
7440-70-2	Calcium	2590			P
7440-47-3	Chromium	8.9			P
7440-48-4	Cobalt	2.6	B		P
7440-50-8	Copper	8.9			P
7439-89-6	Iron	8480			P
7439-92-1	Lead	7.2			P
7439-95-4	Magnesium	1330			P
7439-96-5	Manganese	74.9			P
7439-97-6	Mercury	0.10	B		CV
7440-02-0	Nickel	9.0	B		P
7440-09-7	Potassium	209	B		P
7782-49-2	Selenium	0.90	U		P
7440-22-4	Silver	0.42	U		P
7440-23-5	Sodium	99.6	B		P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	13.4			P
7440-66-6	Zinc	39.8			P
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SS-02

U.S. EPA - CLP
1

EPA SAMPLE #

INORGANIC ANALYSIS DATA SHEET

MB0387

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68-W0-0089

Lab Code: CHEM Case No.: 28286 SAS No.: SDG No.: MB038B

Matrix (soil/water): SOIL Lab Sample ID: 1079R-03S

Level (low/med): LOW Date Received: 07/12/00

% Solids: 82.1

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5930			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	4.4			P
7440-39-3	Barium	74.1			P
7440-41-7	Beryllium	0.32	B		P
7440-43-9	Cadmium	0.12	U		P
7440-70-2	Calcium	2660			P
7440-47-3	Chromium	9.9			P
7440-48-4	Cobalt	4.0	B		P
7440-50-8	Copper	9.9			P
7439-89-6	Iron	14000			P
7439-92-1	Lead	7.1			P
7439-95-4	Magnesium	1650			P
7439-96-5	Manganese	92.8			P
7439-97-6	Mercury	0.06	U		CV
7440-02-0	Nickel	11.0			P
7440-09-7	Potassium	212	B		P
7782-49-2	Selenium	0.93	U		P
7440-22-4	Silver	0.43	U		P
7440-23-5	Sodium	100	B		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	15.4			P
7440-66-6	Zinc	49.5			P
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

1 SS-03

EPA SAMPLE #

MB0388

INORGANIC ANALYSIS DATA SHEET

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68-W0-0089

Lab Code: CHEM Case No.: 28286 SAS No.: SDG No.: MB038B

Matrix (soil/water): SOIL Lab Sample ID: 1079R-04S

Level (low/med): LOW Date Received: 07/12/00

% Solids: 82.9

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9520			P
7440-36-0	Antimony	1.1	U		P
7440-38-2	Arsenic	2.3	B		P
7440-39-3	Barium	127			P
7440-41-7	Beryllium	0.42	B		P
7440-43-9	Cadmium	0.12	U		P
7440-70-2	Calcium	3110			P
7440-47-3	Chromium	13.1			P
7440-48-4	Cobalt	3.2	B		P
7440-50-8	Copper	6.0			P
7439-89-6	Iron	10500			P
7439-92-1	Lead	10.1			P
7439-95-4	Magnesium	2010			P
7439-96-5	Manganese	82.6			P
7439-97-6	Mercury	0.06	U		CV
7440-02-0	Nickel	10.8			P
7440-09-7	Potassium	343	B		P
7782-49-2	Selenium	0.91	U		P
7440-22-4	Silver	0.42	U		P
7440-23-5	Sodium	128	B		P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	14.6			P
7440-66-6	Zinc	56.4			P
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SS-04

EPA SAMPLE #

INORGANIC ANALYSIS DATA SHEET

MB0389

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68-W0-0089

Lab Code: CHEM Case No.: 28286 SAS No.: SDG No.: MB038B

Matrix (soil/water): SOIL Lab Sample ID: 1079R-05S

Level (low/med): LOW Date Received: 07/12/00

% Solids: 79.1

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2530			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.4	B		P
7440-39-3	Barium	22.3	B		P
7440-41-7	Beryllium	0.14	B		P
7440-43-9	Cadmium	0.13	U		P
7440-70-2	Calcium	7070			P
7440-47-3	Chromium	4.7			P
7440-48-4	Cobalt	2.4	B		P
7440-50-8	Copper	12.1			P
7439-89-6	Iron	7100			P
7439-92-1	Lead	4.5			P
7439-95-4	Magnesium	3930			P
7439-96-5	Manganese	121			P
7439-97-6	Mercury	0.06	U		CV
7440-02-0	Nickel	7.0	B		P
7440-09-7	Potassium	229	B		P
7782-49-2	Selenium	0.98	U		P
7440-22-4	Silver	0.45	U		P
7440-23-5	Sodium	179	B		P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	8.6	B		P
7440-66-6	Zinc	33.8			P
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SS-05

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1

EPA SAMPLE #

INORGANIC ANALYSIS DATA SHEET

MB038B

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68-W0-0089

Lab Code: CHEM Case No.: 28286 SAS No.: SDG No.: MB038B

Matrix (soil/water): SOIL Lab Sample ID: 1079R-06S

Level (low/med): LOW Date Received: 07/12/00

% Solids: 82.7

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3070			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.0	B		P
7440-39-3	Barium	30.3	B		P
7440-41-7	Beryllium	0.16	B		P
7440-43-9	Cadmium	0.12	U		P
7440-70-2	Calcium	1820			P
7440-47-3	Chromium	5.2			P
7440-48-4	Cobalt	2.8	B		P
7440-50-8	Copper	9.5			P
7439-89-6	Iron	5650			P
7439-92-1	Lead	3.9			P
7439-95-4	Magnesium	1010	B		P
7439-96-5	Manganese	94.6			P
7439-97-6	Mercury	0.06	U		CV
7440-02-0	Nickel	7.1	B		P
7440-09-7	Potassium	144	B		P
7782-49-2	Selenium	0.93	U		P
7440-22-4	Silver	0.43	U		P
7440-23-5	Sodium	96.4	B		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	7.7	B		P
7440-66-6	Zinc	32.1			P
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SS-06

U.S. EPA - CLP
1

EPA SAMPLE #

INORGANIC ANALYSIS DATA SHEET

MB038C

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68-W0-0089

Lab Code: CHEM Case No.: 28286 SAS No.: SDG No.: MB038B

Matrix (soil/water): SOIL Lab Sample ID: 1079R-07S

Level (low/med): LOW Date Received: 07/12/00

% Solids: 83.5

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4250			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.0	B		P
7440-39-3	Barium	42.9	B		P
7440-41-7	Beryllium	0.26	B		P
7440-43-9	Cadmium	0.12	U		P
7440-70-2	Calcium	2000			P
7440-47-3	Chromium	7.2			P
7440-48-4	Cobalt	3.3	B		P
7440-50-8	Copper	9.1			P
7439-89-6	Iron	9400			P
7439-92-1	Lead	6.2			P
7439-95-4	Magnesium	1210			P
7439-96-5	Manganese	122			P
7439-97-6	Mercury	0.06	U		CV
7440-02-0	Nickel	9.3	B		P
7440-09-7	Potassium	202	B		P
7782-49-2	Selenium	0.92	U		P
7440-22-4	Silver	0.42	U		P
7440-23-5	Sodium	86.4	B		P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	13.2			P
7440-66-6	Zinc	41.0			P
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SS-07

U.S. EPA - CLP
1

EPA SAMPLE #

INORGANIC ANALYSIS DATA SHEET

MB038F

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68-W0-0089

Lab Code: CHEM Case No.: 28286 SAS No.: SDG No.: MB038B

Matrix (soil/water): SOIL Lab Sample ID: 1079R-08S

Level (low/med): LOW Date Received: 07/12/00

% Solids: 86.7

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3150			P
7440-36-0	Antimony	1.1	U		P
7440-38-2	Arsenic	1.4	B		P
7440-39-3	Barium	26.6	B		P
7440-41-7	Beryllium	0.12	B		P
7440-43-9	Cadmium	0.11	U		P
7440-70-2	Calcium	1700			P
7440-47-3	Chromium	5.4			P
7440-48-4	Cobalt	2.7	B		P
7440-50-8	Copper	6.8			P
7439-89-6	Iron	5000			P
7439-92-1	Lead	4.0			P
7439-95-4	Magnesium	920	B		P
7439-96-5	Manganese	51.6			P
7439-97-6	Mercury	0.06	U		CV
7440-02-0	Nickel	6.9	B		P
7440-09-7	Potassium	186	B		P
7782-49-2	Selenium	0.87	U		P
7440-22-4	Silver	0.40	U		P
7440-23-5	Sodium	88.0	B		P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	7.4	B		P
7440-66-6	Zinc	35.1			P
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SS-08

EPA SAMPLE #

MB038G

INORGANIC ANALYSIS DATA SHEET

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68-W0-0089

Lab Code: CHEM Case No.: 28286 SAS No.: SDG No.: MB038B

Matrix (soil/water): SOIL Lab Sample ID: 1079R-09S

Level (low/med): LOW Date Received: 07/12/00

% Solids: 86.2

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2560			P
7440-36-0	Antimony	1.1	U		P
7440-38-2	Arsenic	1.3	U		P
7440-39-3	Barium	23.7	B		P
7440-41-7	Beryllium	0.12	B		P
7440-43-9	Cadmium	0.11	U		P
7440-70-2	Calcium	1640			P
7440-47-3	Chromium	4.5			P
7440-48-4	Cobalt	1.9	B		P
7440-50-8	Copper	6.2			P
7439-89-6	Iron	4110			P
7439-92-1	Lead	4.5			P
7439-95-4	Magnesium	748	B		P
7439-96-5	Manganese	48.4			P
7439-97-6	Mercury	0.06	U		CV
7440-02-0	Nickel	5.7	B		P
7440-09-7	Potassium	143	B		P
7782-49-2	Selenium	0.89	U		P
7440-22-4	Silver	0.41	U		P
7440-23-5	Sodium	131	B		P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	6.2	B		P
7440-66-6	Zinc	29.5			P
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SS-09

EPA SAMPLE #

MB038H

INORGANIC ANALYSIS DATA SHEET

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68-W0-0089

Lab Code: CHEM Case No.: 28286 SAS No.: SDG No.: MB038B

Matrix (soil/water): SOIL Lab Sample ID: 1079R-10S

Level (low/med): LOW Date Received: 07/12/00

% Solids: 83.6

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6660			P
7440-36-0	Antimony	1.1	U		P
7440-38-2	Arsenic	2.1	U		P
7440-39-3	Barium	85.5			P
7440-41-7	Beryllium	0.40	B		P
7440-43-9	Cadmium	0.12	U		P
7440-70-2	Calcium	2690			P
7440-47-3	Chromium	9.9			P
7440-48-4	Cobalt	2.4	B		P
7440-50-8	Copper	8.8			P
7439-89-6	Iron	9110			P
7439-92-1	Lead	12.0			P
7439-95-4	Magnesium	1410			P
7439-96-5	Manganese	65.7			P
7439-97-6	Mercury	0.06	U		CV
7440-02-0	Nickel	8.8	B		P
7440-09-7	Potassium	362	B		P
7782-49-2	Selenium	0.91	U		P
7440-22-4	Silver	0.42	U		P
7440-23-5	Sodium	148	B		P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	11.8			P
7440-66-6	Zinc	46.8			P
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SS-10

EPA SAMPLE #

MB038J

INORGANIC ANALYSIS DATA SHEET

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68-W0-0089

Lab Code: CHEM Case No.: 28286 SAS No.: SDG No.: MB038B

Matrix (soil/water): SOIL Lab Sample ID: 1079R-11S

Level (low/med): LOW Date Received: 07/12/00

% Solids: 79.8

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2040			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	3.9			P
7440-39-3	Barium	16.8	B		P
7440-41-7	Beryllium	0.21	B		P
7440-43-9	Cadmium	0.12	U		P
7440-70-2	Calcium	1500			P
7440-47-3	Chromium	4.0			P
7440-48-4	Cobalt	2.3	B		P
7440-50-8	Copper	9.6			P
7439-89-6	Iron	8990			P
7439-92-1	Lead	6.3			P
7439-95-4	Magnesium	685	B		P
7439-96-5	Manganese	63.4			P
7439-97-6	Mercury	0.10	B		CV
7440-02-0	Nickel	6.1	B		P
7440-09-7	Potassium	143	B		P
7782-49-2	Selenium	0.97	U		P
7440-22-4	Silver	0.45	U		P
7440-23-5	Sodium	156	B		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	10.3	B		P
7440-66-6	Zinc	32.4			P
	Cyanide				NR

D

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

SS-11

U.S. EPA - CLP
1

EPA SAMPLE #

INORGANIC ANALYSIS DATA SHEET

MB038K

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68-W0-0089

Lab Code: CHEM Case No.: 28286 SAS No.: SDG No.: MB038B

Matrix (soil/water): SOIL Lab Sample ID: 1079R-12S

Level (low/med): LOW Date Received: 07/12/00

% Solids: 80.6

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1550			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	1.8	B		P
7440-39-3	Barium	13.9	B		P
7440-41-7	Beryllium	0.11	B		P
7440-43-9	Cadmium	0.12	U		P
7440-70-2	Calcium	14500			P
7440-47-3	Chromium	2.9			P
7440-48-4	Cobalt	2.2	B		P
7440-50-8	Copper	8.4			P
7439-89-6	Iron	5680			P
7439-92-1	Lead	4.4			P
7439-95-4	Magnesium	5230			P
7439-96-5	Manganese	177			P
7439-97-6	Mercury	0.06	U		CV
7440-02-0	Nickel	5.9	B		P
7440-09-7	Potassium	173	B		P
7782-49-2	Selenium	0.96	U		P
7440-22-4	Silver	0.44	U		P
7440-23-5	Sodium	205	B		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	5.3	B		P
7440-66-6	Zinc	32.9			P
	Cyanide				NR

D

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments: