SUPERFUND STANDBY PROGRAM
New York State
Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

FINAL
FOCUSED REMEDIAL INVESTIGATION
SPECTRUM FINISHING CORPORATION SITE
Site No. 1-52-029
VOLUME I

Work Assignment Number
D003060-26

Prepared by:

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December 2001

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FINAL
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SPECTRUM FINISHING CORPORATION SITE
Site No. 1-52-029
VOLUME II

Work Assignment Number
D003060-26

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FINAL
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Site No. 1-52-029
VOLUME III

Work Assignment Number
D003060-26

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FOCUSED REMEDIAL INVESTIGATION
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1.0 INTRODUCTION

This report presents the results of the Focused Remedial Investigation (FRI) completed by GZA GeoEnvironmental of New York (GZA) during the period from June 1, 1999 through May 3, 2001 at the Spectrum Finishing Corporation (Spectrum) Site. The field work was done in three phases. Phase I was completed in June and July 1999; the second phase (Phase II) of field work was done in July 2000; and the third phase (Phase III) was completed in April and May 2001. Additionally, an Interim Remedial Measure (IRM) was conducted at the Site in April 2000. The Site is a New York State Department of Environmental Conservation (NYSDEC) Class 2 Inactive Hazardous Waste Disposal Site, Site Code 1-52-029. The Site was added to the NYSDEC registry in December 1983. The FRI was completed on behalf of the NYSDEC under Superfund Standby Contract Work Assignment No. D003060-26 to TAMS Consultants, Inc. (TAMS). The FRI was completed by GZA as a subconsultant to TAMS.

Interpretations presented within this report are based primarily on the investigations described herein. Previous investigations completed by others at the Spectrum Site and adjacent properties have been reviewed. Applicable data from these reports have been included in sections of this report.

1.1 REPORT ORGANIZATION

The text of this report is divided into seven sections. Immediately following the text are the references, tables, figures and appendices. Appendix A includes limitations to this report. A brief summary of each report section is provided below.

Section 1.0 Introduction: The purpose of the FRI report, the Site background including Site description, Site history and previous relevant studies, scope of work and report organization are discussed.

Section 2.0 Field Explorations: This section summarizes the field work completed including geoprobe soil borings, test borings, monitoring well construction, sample collection, and field information. Field activity procedures and data collection methods for these activities are outlined in Appendix C.

Section 3.0 Physical Characteristics of the Study Area: This section presents and interprets the various data collected and evaluates Site conditions (e.g., hydrogeology, geology, hydrology, etc.).

Section 4.0 Nature and Extent of Contamination: The types of chemicals detected in the various environmental media are discussed. The section is divided into source areas, groundwater and subsurface soils.

Section 5.0 Contaminant Fate and Transport: An evaluation of potential migration pathways and contaminant persistence is presented.

Section 6.0 Qualitative Risk Assessment: This section presents the results of a general human health and environmental impact assessment completed at the Site. The assessment includes an estimation of exposure point concentrations and a comparison of this data with published New York State standards, criteria and guidance values (SCGs).

Section 7.0 Summary and Conclusions: This section summarizes the results of the FRI.

1.2 BACKGROUND

1.2.1 Site Description

The Spectrum Site property consists of approximately 0.9 acres of land, located at 50 Dale Street in West Babylon, New York (see Figures 1 & 2). For the purpose of this investigation, the Site or study area was extended to the north to include the parking lot up to the south edge of the buildings located at 60 Dale Street (approximately 1.3 acres). Spectrum Finishing Corporation (SFC) has owned the Site since 1968. SFC specialized in electroplating high strength alloys, and descaling titanium alloys for the aerospace industry. Metal finishing operations at the Site ceased in about 1994.

The Site includes the original building, approximately 60 feet by 320 feet (19,400 square feet). Areas not occupied by the building consist of paved parking to the north of the building, an unpaved alleyway to the south of the building, and grassy areas to the east and west of the building. Current tenants in the building include a machine shop, door manufacturer, and an automobile storage operation.

Eleven cesspools (CP-1 though CP-11), 12 drainage structures (DS-1 through DS-12) and two former well structures (WS-1 and WS-2) exist at the Site. In general, the cesspools and drainage structures are similar and are approximately eight-foot diameter, round concrete vaults with perforated sides, and apparently no bottom [Note: CP-10 apparently has a concrete bottom.] The type of manhole cover defined the difference between a cesspool and drainage structure. The cesspools have solid steel or solid concrete covers. The drainage structures have open grate steel covers for stormwater runoff.

Figure 4 shows the apparent location of piping based on field observations made by GZA. Some of the piping locations were determined from dye testing or test pit excavation. GZA also utilized sketches obtained from Suffolk County Department of Health Services (SCDHS) to locate piping. Other piping locations are assumed based on the apparent directions of pipes entering/exiting the structures. In general, it was determined that the drainage structures received flow from the roof drains and stormwater runoff. The cesspools receive overflow from the drainage structures or directly from the on-Site buildings (toilets, floor drains, etc.). Some of the cesspools and drainage structures were found to be interconnected (e.g., CP-3 flows into CP-4). DS-6, DS-9, and DS-10 have piping exiting the structure, but apparent termini of the piping were not identified. Based on information contained in an August 8, 1975 State Pollutant Discharge Elimination System (SPDES) discharge permit (NY-008-5561) for the Site; CP-3, CP-4, CP-7, CP-10 were used for sanitary waste disposal. It is not known if the other structures were used for waste disposal.

The well structures consisted of approximate six-foot diameter concrete vaults with solid covers. The sidewalls of the structure appeared to be perforated. According to Bob Seyfarth from the SCDHS, these structures may have housed piping and water supply wells. Additional information regarding these possible wells was not available from SCDHS. Observations made by GZA in the field did not indicate the presence of open wells in the base of the structure. However, some of the pipes appeared to lead below the soil at the base of the structure.

Table 1-1 summarizes information collected by GZA regarding the structures. The summary table includes a description of the structures (elevation, cover type, diameter, etc.), description of the liquids and sediments present in the structures, and a discussion of the observed pipes that enter and exit the structures.

1.2.2 Site History

The Site history was developed from information contained in the previous reports prepared by United States Environmental Protection Agency (USEPA), NYSDEC, New York State Department of Health (NYSDOH), Suffolk County, and West Babylon and files provided to TAMS/GZA (References 1-6). Previous reports for the NTU Circuits Site were included in our review due to its close proximity to the SFC Site (adjacent to the north).

SFC Site

Spectrum Finishing Corporation (SFC) began operations at the Site around 1968. Building department records indicate that the SFC building (50 Dale Street) was constructed in the late 1960s. Metal finishing operations at the Site included electroplating (in particular copper, cadmium, chromium and nickel) of high strength alloys (for the aerospace industry); chromium conversion coating (aluminum parts); and chemical cleaning. The facility was known to have specialized in descaling and chemical cleaning of titanium alloys. Painting was also reportedly conducted at the facility.

Chemicals that were reportedly stored on Site include the following:

caustic soda
acid (sulfuric, hydrochloric, nitric, boric, chromic)
sodium dichromate
sodium chromate, potassium chromate
sodium fluoride, potassium fluoride
sodium nitrate, potassium nitrate
sodium cyanide, copper cyanide, cyanide, calcium cyanide
cadmium oxide
sodium carbonate
nickel sultanate
potassium hydroxide
chlorine
sodium metabisulfide
copper
cadmium, chromium
nickel
manganese
phosphate
iron
beryllium
magnesium
tin
zinc
toluene
methyl ethyl ketone (2-butanone)
trichloroethene

From 1970 to 1975, the SCDHS revealed discharges of industrial waste into storm drains. High concentrations of heavy metals were noted from samples collected from the leaching tank, storm drain, and Site runoff.

During the 1970s, SCDHS inspections revealed discharges of liquid plating wastes to the soil. In 1983, an accidental spillage of wastewater drained into on-Site storm drains. Since about 1983, SFC discontinued discharge of wastewater into the on-Site drainage structures, and disposed the wastewater off-Site. In June 1994, SFC filed Chapter 7 bankruptcy and ceased operations. Some documents indicated the facility stopped operations in April 1993.

A Phase II Investigation was completed for NYSDEC by Gibbs & Hill Inc. in March 1988. The Phase II was completed to determine the nature and extent of waste, identify past and/or current episodes of chemical spills, and evaluate on-Site and off-Site impacts from any chemical spillage. Eight groundwater monitoring wells were installed at four locations. A groundwater sample was collected and analyzed from each well. Additionally, ten soil samples were collected for analysis. The samples were analyzed for cadmium, chromium, copper, iron, lead, nickel, zinc, chloride, cyanide, 1,1-dichloroethane, 1,2-dichloroethane, 2-butanone, 1,1,1-trichloroethane, trichloroethylene and toluene. These compounds were selected based on Site chemical use.

Several metals were found in the background samples including copper (30 mg/kg), iron (6951 mg/kg), lead (27.4 mg/kg) and zinc (36.1 mg/kg). Additionally, chromium was found at a concentration of 29.8 mg/kg, which was identified as being three times greater than the background sample. Cadmium was found in four of the ten samples ranging from 0.9 to 2.0 mg/kg and nickel was found in three of the ten samples ranging in concentration from 3.9 to 5.2 mg/kg. No volatile organic compounds were detected in the soil samples. However, the analyses were completed after the holding time had expired.

One round of groundwater samples was collected and analyzed. The following compounds and related maximum concentrations were identified in the groundwater samples.

Cadmium (99 ug/L)	Chromium (36 ug/L)
Copper (926 ug/L)	Iron (95 ug/L)
Lead (40 ug/L)	Nickel (28 ug/L)
Zinc (339 ug/L)	1,1,1-trichloroethane (28 ug/L)
Trichloroethene (73 ug/L)	Toluene (5 ug/L)

In May 1997, Mr. Joseph Vazzana, Jr., a potentially responsible party (PRP) for the Site, reportedly pumped liquid waste from several on-Site vats into approximately three hundred (300) 55-gallon drums. The United States Environmental Protection Agency (USEPA) witnessed this process being performed "haphazardly" with many spills. The drums were unlabeled and mislabeled, and wastes were mixed. Mr. Vazzana, Jr. demolished a large vat containing cyanide salts. The NYSDEC and NYSDOH conducted a visit to the Site on October 7, 1997. Mr. Vazzana, Jr. was observed pumping wastes from one vat to another, and hosing down several drums.

The USEPA completed a removal action to address the on-Site wastes located in the building in August 1997 through March 1998. The removal action included the removal and disposal of a total of 25,767 gallons and 77 cubic feet of various hazardous wastes. Two concrete-lined sumps, various exterior sumps/drywells, various USTs, paint booths and several vats were observed inside the building during the USEPA removal action. The removal action included scraping and sweeping to remove waste from the interior floors and pressure washing of the boiler room, wastewater treatment room, garage area, storage room, process rooms and paint booths. Wipe samples were collected in the areas that were cleaned.

Following the USEPA removal action, Roy F. Weston, Inc. (Weston) collected environmental samples in April 1998 on behalf of USEPA. Weston collected 22 on-Site surficial soil samples, sediment samples from the bottoms of on-Site storm drains, soil samples from beneath the concrete floor, stormwater/runoff samples collected from the water pooled in storm drains, and nine groundwater samples from the on-Site monitoring wells. The samples were analyzed for TCL volatile organic compounds (VOCs) and TAL inorganics (metals). Analytical results identified that several media were impacted with elevated levels of metals (including cadmium, chromium, copper, nickel, silver and cyanide) and VOCs (including 1,2-dichloroethene, trichloroethene and tetrachloroethene). The Weston results are summarized below.

- On-Site surficial soil samples: cadmium (26 to 281 mg/kg); chromium (30.5 to 129 mg/kg); copper (17.1 to 190 mg/kg); nickel (15.1 to 85.6 mg/kg); silver (2.5 mg/kg); cyanide (0.9 to 5.2 mg/kg).

- Sediment samples: cadmium (291 to 6470 mg/kg); chromium (81.9 to 4340 mg/kg); copper (83.7 to764 mg/kg); nickel (44.5 mg/kg to 1400 mg/kg); silver (0.33 to 2.1 mg/kg); cyanide (2.9 to 122 mg/kg).

- Soil Samples: tetrachloroethene (3 to 180 ug/kg); cadmium (0.86 to 797 mg/kg); chromium (3.0 to 357 mg/kg); copper (5.8 to 118 mg/kg)); nickel (2.9 to 1630 mg/kg); silver (0.47 to 1.5 mg/kg); cyanide (0.07 to 168 mg/kg).

- Stormwater/runoff samples: cadmium (21.2 to 71.8 ug/L); chromium (7.4 to 61.9 ug/L); copper (20.7 to 81.4 ug/L); nickel (26.5 to 193 ug/L); silver (1.0 to 1.2 ug/L); cyanide (1.4 to 18.4 ug/L).

- Groundwater samples: 1,2-dichloroethene (26 to 1300 ug/L); trichloroethene (6 to 250 ug/L); tetrachloroethene (8 to 3500 ug/L); cadmium (1.4 to 21.5 ug/L); chromium (1.2 ug/L to 408 ug/L); copper (2.7 to 241 ug/L); nickel; (1.1 to 141 ug/L); silver (1.0 to 8.7 ug/L); cyanide (1.1 t 26.2 ug/L).

NTU Site

The NTU Site was vacant until 1968 when the current site building was constructed. Gray Electric occupied and owned the site from 1968 until 1981, when SFC purchased it. NTU Circuits leased the eastern portion of the building from 1978 until 1983. A candy distributor leased this area of the building from April 1984 until September 1984. Midmer-Losh (pipe organ manufacturer) occupied the eastern portion of the site from 1985 and Welding Metallurgy occupied the western portion of the building from 1981 until the present automotive collision shop began operation.

The former NTU Site at 60 Dale Street is a delisted NYSDEC Class 2a inactive hazardous waste disposal site (registry number 1-52-086). This facility adjoins the SFC Site to the north. The NTU Site was added to the NYSDEC registry in December 1984 and removed March 1993. NTU produced high-resolution printed circuit boards and its operations included drilling, cleaning and electroplating. Chemicals used at the NTU facility include ammonium persulfate, sulfuric acid, hydrochloric acid, copper plating solution, and etching solution (containing copper, lead and nickel).

No volatile organic chemicals were reportedly used at the NTU facility. Additionally, according to information contained in the Phase II Investigation Report, there was no documentation to verify that the organic compounds detected were ever used at the NTU Site. The highest levels of volatile organic compounds detected during historic groundwater sampling at the site included 1,1 dichloroethene (6 parts per billion (ppb)), 1,1,1 trichloroethane (74 ppb), trichloroethene (35 ppb), tetrachloroethene (370 ppb), and 1,2 dichloroethene (26 ppb). The Phase II report indicated that it is possible that contamination from an outside source reached the leach pools via nearby facilities that use volatile organic compounds (including the SFC Site). The parking lot on the south side of the NTU building is now part of the SFC Site.

NTU occupied the site from about 1978 to 1983. Remediation (soil removal) of metal contaminated soil was completed in drain pools around the site. Following the removal of contaminated soil, the drain pools were filled with lime slurry, sealed and covered with asphalt. Based on information provided by the SCDHS (Reference 1), these closed drain pools may have been tampered with following closure and illegal discharging of liquids to the parking lot surface near drain pools from the SFC Site. It should be noted that the SFC purchased the NTU Site in 1981 and reportedly leased the building for various purposes.

There is no information indicating that SFC's metal finishing operation was located in the NTU building.

1.2.3 Agency Involvement

The SFC Site is a NYSDEC Class 2 Inactive Hazardous Waste Site, Site Code 1-52-029. The Site was added to the NYSDEC registry in December 1983.

1.2.4 Database Search

GZA used Vista Information Solutions, Inc. (Vista) to review available State and Federal Lists for environmental concerns at and near the Site. The Vista report (Appendix B) identified SFC as a CERCLIS facility, Resource Conservation and Recovery Act (RCRA) large quantity generator and a RCRA violator. The Vista report also identified Spectrum as being included on the State Priority List (Registry of Inactive Hazardous Waste Disposal Sites) and the State aboveground storage tank (AST) list.

The CERCLIS database indicated that industrial effluent, which contained excessive amounts of heavy metals, was discharged to underground cesspools. Potential groundwater contamination was identified at Spectrum because of this incident.

The RCRA large quantity generator status was included in the RCRA violations database. Three written informal violations were noted and three compliance orders were issued. The database indicated that all of the violations were satisfied.

The State equivalent priority list (SPL) identified heavy metals and methyl ethyl ketone (MEK) as pollutants at Spectrum.

Fifty-nine ASTs were reported with an unknown status and one tank was identified with a removed status.

Numerous upgradient facilities were included on the State and Federal databases. The following is a summary of nearby and/or upgradient facilities.

- NTU Circuits Inc., the adjoining northerly property was identified on the RCRA violations database. One written informal violation, three generation violations and one compliance order was issued. The database indicated that all of the violations

were satisfied. This facility was also identified as a CERCLIS facility. Industrial effluent containing excessive amounts of heavy metals was discharged to underground cesspools. Potential groundwater contamination was identified. Based upon this limited information, activities and historical releases from NTU Circuits Inc. may have impacted the SFC Site.

- Carolina Freight Carriers, located approximately 150 feet north of the SFC Site, was identified on the emergency response notification system (ERNS). The response occurred in July 1988. Unknown poison liquid was identified as being spilled in a truck trailer. The immediate area of the spill was evacuated and three people were treated at a hospital. This release was listed on the State spills database with a closed status (included below). Since this release was to the surface, and is identified to have a closed status, this facility is not expected to have impacted the SFC Site.

- One RCRA treatment, storage, and disposal (TSD) facility; six RCRA small quantity generators; and seven RCRA large quantity generators were identified. Additionally, two written informal RCRA violations were noted. These listings are registrations, and the violations have been satisfied, these incidents are not expected to have impacted the SFC Site.

- Two active solid waste landfills (SWLF) were identified at nearby facilities. One SWLF located approximately 150 feet north was listed as accepting commercial waste; and one SWLF located approximately 150 feet south was listed as an incinerator. No additional information was provided. Based upon the proximity of these SWLFs, these facilities may have impacted the SFC Site.

- The underground storage tank (UST) database identified thirty-six removed USTs, seven permitted USTs, four heating oil USTs and eighteen USTs with an unknown status. Six leaking underground storage tanks (LUST) were identified with a closed status and one LUST was listed with an open status. Since the UST listings are registrations and not identified releases, it is not known whether the USTs have impacted the SFC Site. The closed LUST listings have been remediated to a level acceptable to NYSDEC. The one LUST with an open status, identified as number 951572, is located at Furniture Store at 95A Bell Street, approximately 0.12 miles west to northwest of the SFC Site. Number two fuel oil was released to the ground from an aboveground tank, spilling hundreds of gallons onto the ground. Based upon this limited information, this historical release may have impacted the SFC Site.

- The AST database included nine ASTs with a removed status, five permitted ASTs and eleven ASTs with an unknown status. Since these AST listings are registrations and not identified releases, it is not known if these ASTs have impacted the SFC Site.

- The State spills database included sixteen closed spills and three spills with an open status. The closed spills have been remediated to a level acceptable to NYSDEC, and therefore are not expected to have impacted the Site. The three open spills are listed below.

- I.T.C. at 299 Edison Avenue was identified as spill number 9411489 for spreading contaminated soil from various spills in their parking lots. Additionally, trucks were listed as constantly leaking at the pumps with many unreported spills. This facility is located approximately 0.3 miles south of the Site in an estimated cross- to downgradient direction, and therefore is not expected to have impacted the SFC Site.

- Preston Trucking Company at 125 Dale Street was identified as spill number 9711855 for a release of diesel fuel due to a tank overfill. Approximately 40 gallons was released. This facility is located approximately 0.03 miles north of the SFC Site, in an estimated crossgradient direction, and therefore is not expected to have impacted the SFC Site.

- Medigan Co. at 91 Eads Court was identified as spill number 9306875 for a fire at the building, that resulted in contaminated water runoff. This facility is located approximately 0.06 miles northeast of the SFC Site, in an estimated crossgradient direction, and therefore is not expected to have impacted the SFC Site.

1.2.5 Class 2 Inactive Hazardous Waste Disposal Sites

Eight Class 2 Inactive Hazardous Waste Disposal Sites are located in the vicinity of the SFC Site. Class 2 Sites located within about one mile upgradient and two miles downgradient of the SFC Site are shown on Figure 3.

1.3 PURPOSE

The purpose of this FRI is to confirm the presence of, and to assess the lateral and vertical extent of contamination in order to establish a baseline for the selection and design of an appropriate Site remedial response. The basic elements that have been used to gain an understanding of the environmental condition of various Site media during this FRI investigation included the following.

- Geophysical survey
- Completion of test pits
- Surface soil sampling
- Cesspool and drainage structure water and sediment sampling
- Geoprobe soil borings
- Test borings
- Installation of groundwater monitoring wells
- Water level elevation observations
- Sampling and analytical testing of collected soil and groundwater samples.

1.4 FRI SCOPE OF WORK

This scope of work for this FRI was modified for on-Site conditions. The following tasks, as described in later sections of this FRI report and the Site Field Activities Plan (FAP), were conducted.

- Coordinated work and discussed project and details with TAMS and NYSDEC;
- Research of historical information;
- Previously-installed monitoring well assessment;
- Test pits;
- Geoprobe soil borings;
- UST identification and sampling;
- Surface soil sampling (hand augers);
- Test borings;
- Installation of groundwater monitoring wells in the test borings;
- Monitoring well development;
- Hydraulic conductivity testing;
- Groundwater sampling;
- Mapping the Site;
- Groundwater well user survey;
- Groundwater level measurements;
- Baseline qualitative health risk assessment;
- QA/QC review and data evaluation;
- Identification of NYS standards, criteria and guidelines; and
- Preparation of this report.

This FRI study and report was completed in general accordance with:

- The scope of work described in the "Project Management Plan, Spectrum Finishing Corporation Site RI/FS, Site No. 1-52-029", dated January 1999;

- USEPA Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, dated October 1988;

- Procedures recommended in the NYSDEC Division of Environmental Remediation, TAGM 4025 Guidance, "Guidelines for Remedial Investigation/Feasibility Studies", dated March 1989; and

- NYSDEC Division of Environmental Remediation TAGM 4030 Guidance, "Selection of Remedial Actions at Inactive Hazardous Waste Sites", as revised May 1990.

The scope of work for the Spectrum Site was prepared by TAMS and GZA and submitted to NYSDEC for review and approval. The scope of work was subsequently finalized and issued as part of the Project Management Plan (dated January 1999); Amendment 1 (dated May 2000); Project Management Plan Amendment 2 (dated May 2000); and Work Plan Amendment Approval dated April 2001. The Project Management Plan incorporates the following additional work plan documents:

- "Field Activity Plan, Spectrum Finishing Corporation Site RI/FS, Site No. 1-52-029" dated April 1999;

- "Quality Assurance Project Plan, Spectrum Finishing Corporation Site RI/FS, Site No. 1-52-29" dated April 1999; and

- "Health and Safety Plan, Spectrum Finishing Corporation Site RI/FS, Site No. 1-52-029" dated April 1999.

2.0 FIELD EXPLORATIONS

Field explorations were completed at the Site in general accordance with the Site FAP to evaluate surface and subsurface environmental conditions and to provide data pertaining to the extent of contamination. A description of the field explorations conducted during this FRI is presented in this section. The dates of the field activities are summarized in Table 2-16.

2.1 GEOPHYSICAL SURVEY

GZA used an EM-31 terrain conductivity meter to assess for the presence or absence of shallow subsurface metallic materials. The terrain conductivity meter that utilizes electromagnetic (EM) induction is generally sensitive to the presence of highly conductive materials. The geophysical survey was generally conducted as outlined in the field procedures presented in Appendix C.

The FAP indicated that six areas of the Site would be evaluated during the geophysical survey (Figure 4 of the FAP, Reference 7). The six areas included potential areas of USTs, previously installed monitoring wells, and buried cesspool structures. GZA's geophysical survey assisted in determining the location of CP-3 and CP-4 (one of the six areas). The geophysical survey was not conducted in the other five areas because visual observations (i.e., fill ports, vents) and historic information obtained during the field investigation identified the presence of USTs, cesspools, and monitoring wells not observed during the initial Site visit. Field observations were limited during the initial Site visit by the presence of cars, metal scrap piles, and other debris.

2.2 GEOPROBE SOIL BORINGS

During the Phase I FRI work, TAMS contracted with Zebra Environmental, Inc. (Zebra) to conduct Geoprobe soil borings at the Site. TAMS contracted with Aquifer Drilling and Testing (ADT) during the Phase III FRI work to complete five additional Geoprobe soil borings at the Site. The soil borings were completed in order to evaluate the nature and extent of unsaturated and saturated subsurface soil contamination at locations around the Site and at locations off-Site to the south. The Geoprobes were generally completed as outlined in the Geoprobe field procedures presented in Appendix C. Geoprobe soil boring locations are shown on Figure 2, and the Geoprobe boring logs are contained in Appendix D.

A total of 46 Geoprobe borings were completed at the Site. The Geoprobe borings are identified as GP-1 through GP-49 (Note: borings GP-37, GP-41, and GP-43 are field duplicates, resulting in a total of 46 Geoprobe borings). Soil samples were collected at varying depths from these Geoprobe borings for laboratory analysis. Groundwater samples were generally collected at an approximate depth of 20 feet. Also, additional groundwater samples were collected at approximate depths of 40 feet, 60 feet, or 80 feet from select Geoprobe borings.

In general, the Geoprobe borings were advanced to a depth of 20 feet, except for GP-8, GP-9, and GP-11, at which refusal was encountered between 12 and 17 feet. Five of the Geoprobe borings were further advanced to an approximate depth ranging from 60 to 80 feet to allow for collection of deeper groundwater samples, including GP-5, GP-7, GP-10, GP-17 and GP-27. Soil samples were not collected from Geoprobe borings at a depth greater than 20 feet below ground surface (bgs). Four geoprobe borings (GP-1, GP-12, GP-22, and GP-26) were advanced to a depth of 30 feet to allow for temporary piezometer installation. The temporary piezometer installations were used to obtain groundwater elevations.

2.2.1 Headspace Screening

A GZA field representative did not note visual or olfactory evidence of possible contamination in soil samples collected from Geoprobe borings. The headspace of each soil sample jar was screened using a Photoionization Detector (PID) as outlined in Appendix C. The results of the soil sample headspace screening are presented on the Geoprobe soil boring logs contained in Appendix D.

2.2.2 Analytical Samples

Based on visual observation and field screening, soil samples (including matrix spike/matrix spike duplicate (MS/MSD) samples) were selected from various locations for laboratory analyses including TCL VOCs, semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, TAL metals including hexavalent chromium, cyanide, and total organic carbon. Groundwater samples collected from Geoprobe borings were submitted for TCL VOCs, TAL metals (total and dissolved), and cyanide analysis. See Table 2-1 for a summary of samples collected for analytical testing.

2.3 TEST BORING/MONITORING WELL INSTALLATION

TAMS contracted with both Applied Earth Technologies (AET) and ADT to complete test borings and install additional groundwater monitoring wells at the Site. A total of twenty-two monitoring wells were completed at the Site in order to further evaluate the geologic and groundwater flow conditions within the overburden at the Site (see Figure 2). Additionally, monitoring wells were installed to collect representative groundwater samples for subsequent analytical testing. The test borings and monitoring well installations were conducted from June 26, 1999 to July 15, 1999; July 17 to July 19, 2000; and April 23 to May 2, 2001, with field techniques outlined in Appendix C and in general accordance with the Field Activities Plan. Monitoring well installation logs are presented in Appendix D.

Monitoring wells were constructed of 2-inch I.D. flush coupled polyvinyl chloride (PVC) riser and screen. Shallow wells (identified by a "S", e.g., MW-7S) were installed such that the screened interval intercepted the water table. Intermediate wells (identified by a "D" or "D1" (e.g., MW-1D or MW-5D1)) were installed such that the bottom of the well was approximately 50 feet bgs. Deep wells (identified by a "D2" (e.g., MW-5D2)) were installed such that the bottom of the well was approximately installed from about 90 feet bgs so that the bottom of the screened well is located on top of the Gardiners Clay layer. The bottoms of the wells vary by location throughout the Site. The well screens consist of an approximate 10-foot long section of machine slotted (20-slot) screen. See Table 2-2 for a monitoring well installation summary.

The installed monitoring wells were developed to remove fines and develop a filter pack by means of pumping out groundwater at a constant rate. Hydraulic conductivity testing was also conducted to provide information that would aid in evaluating subsurface conditions. Several rounds of water level measurements were used to interpret groundwater flow direction within the overburden. Monitoring well development, hydraulic conductivity testing and water level survey procedures are outlined in Appendix C. Table 2-3 presents a summary of hydraulic conductivity results for each monitoring well, and a water level summary is presented in Table 2-4.

2.4 TEST PIT EXPLORATIONS

Test pits were excavated in ten Site areas to evaluate the location and size of buried cesspools, USTs and sump structures. Refer to Appendix F for a UST summary report and additional information. Figure 5 shows the locations of the test pits. The following is a summary of findings during test pit activities and the areas that were investigated.

- CP-3, CP-4, and UST-1 location and orientation were documented to the east of the SFC building.
- UST-4 and UST-5 orientation was documented to the north of the central portion of the SFC building.
- UST-8 orientation was documented to the south of the eastern former NTU building.
- UST-1 and UST-8 orientation was documented to the north of the western portion of the SFC building.

- UST-7 orientation was documented to the south of the western former NTU building.
- CP-5 location and orientation were documented to the west of the SFC building.
- UST-6 location and orientation were documented to the west of the SFC building.
- CP-1 location and orientation were documented to the north of the west end of the SFC building.
- CP-2 location and orientation were documented to the north of the west end of the SFC building.
- An interior test pit (TP) was dug within the former SFC building to assess an apparent former sump structure.

GZA was present during the excavation of test pits to observe the subsurface conditions encountered; to check air monitoring measurements according to the Health and Safety Plan (HASP); and to document findings.

Analytical soil and water samples were collected from the interior test pit (TP). Analytical test results for these samples are contained in Table 2-7 for the soil samples and Table 2-5 for the water sample.

2.5 WATER LEVEL MEASUREMENTS

Water levels were measured within the newly installed wells, existing wells, and temporary piezometers at several different times throughout the FRI. The depth of water was measured from a reference elevation that was surveyed as part of the study. An electronic water level indicator was used to measure water levels from the established reference elevation. Water level survey information is summarized on Table 2-4.

2.6 HEALTH AND SAFETY MONITORING

A Site-specific HASP was prepared by GZA for the field activities at SFC. The Site safety officer or field representative provided the health and safety oversight during field activities. The health and safety monitoring equipment was maintained daily according to the HASP and as outlined in Appendix C. Field work was performed in Level D protection (e.g., hard hats, steel-toed boots, work clothing, latex gloves, etc.).

GZA did not detect elevated levels (greater that 1 (parts per million (ppm)) of VOCs in the work area during intrusive activities, that would have warranted additional protective measures.

2.7 ENVIRONMENTAL SAMPLING

The collected samples were submitted for analytical testing to CompuChem, of Cary, North Carolina, the analytical laboratory. The analytical results were submitted to URS Greiner Woodward Clyde of Buffalo, New York, and EDV, Inc. of Pittsburgh, Pennsylvania for data validation as part of the FRI.

A general description of the various media sampled and analyzed is provided below with the sample series designations. A summary of the samples collected is presented in Table 2-1.

- Cesspool, drainage structure and well structure soil samples (CP-1 to CP-11; DS-1 to DS-12; and WS-1 and WS-2) were collected from the cesspools and storm drainage structures.

- Cesspool and drainage structure water samples were collected when water was present.

- Soil samples from former potential well structures (WS-1 and WS-2) were collected.

- UST liquid samples (UST-1 to UST-8) were collected from USTs. Liquid samples were not obtainable from UST-5 due to physical constraints.

- Surface soils (AP-1 to AP-10) were collected from auger probe borings.

- Soil and groundwater samples were collected from Geoprobe soil borings (GP-1 to GP-49).

- Soil and water samples were collected from the former interior sump in the SFC building.

- Groundwater samples were collected from monitoring well clusters MW-1 to MW-15.

Sampling procedures (e.g. equipment cleaning, container labeling, and cooler sealing and chain-of-custody) are presented in Appendix C and discussed herein.

2.7.1 Surface Soil Samples

Eight surface soil samples (excluding duplicate and MS/MSD samples) were collected from ten locations from a depth of 0 to 1 foot bgs. In paved areas, surface soil samples were collected approximately 0 to 0.5 feet below the pavement subbase material, or about 0.5 to 1 foot below the top of the pavement. Select surface soil samples were tested for TCL parameters including VOCs, SVOCs, pesticides, and PCBs. Additionally, select samples were tested for TAL metals and cyanide, and total organic carbon. The analytical results are presented in Table 2-6.

It should be noted that for risk-based analysis, NYSDOH considers surface soils to include those soils located from 0 to 2 inches bgs. However, samples were collected to a depth of about 1 foot during the investigation to evaluate the nature and extent of contamination in near surface soils that may require remediation, in accordance with the FAP.

2.7.2 Subsurface Soil Sampling

One hundred twenty-two subsurface soil samples (excluding duplicate and MS/MSD samples) were collected from forty-five Geoprobe borings. Additionally, five subsurface soil samples (excluding duplicate and MS/MSD samples) were collected from four test borings, including MW-5D1, MW-6S, MW-10S and MW-11S. Also, two subsurface soil samples (excluding duplicate and MS/MSD samples) were collected from the test pit A summary of samples and parameters is presented in Table 2-1. The analytical results are presented in Table 2-7.

2.7.3 Cesspool/Drainage/Well Structure Sampling

Thirty-seven soil samples and fifteen water samples (excluding duplicate and MS/MSD samples) were collected from cesspool/drainage/well structures at the Site during the FRI. A summary of samples and parameters is presented in Table 2-1.

The analytical results are presented in Tables 2-8 (cesspool soils) and 2-9 (cesspool water samples). The analytical results of the drainage structures soils are contained in Table 2-10, and Table 2-11 for the water samples. The summary of the well structure sediment sample results is contained in Table 2-12. Samples taken before and after (noted as IRM Confirmatory samples) the IRM are included within the tables.

2.7.4 Groundwater Sampling

Groundwater sampling was completed during FRI Phase I (July 1999), FRI Phase II (July 2000) and FRI Phase III (April 2001), as summarized on the following table (excluding duplicate and MS/MSD samples).

FRI Phase	Geoprobe Boring Samples	Monitoring Well Samples
I	54 samples from 40 locations	16 wells
II	None	20 wells
III	1 sample from 1 location	30 wells

Groundwater was collected from monitoring wells and Geoprobe boring locations. Refer to Table 2-13 for the organic results, and Table 2-14 for the inorganics.

Monitoring well sampling procedures were conducted as outlined in Appendix C and in general accordance with the FAP. Filtered and unfiltered samples were collected from the groundwater sample locations during FRI Phase I. Low-flow sampling techniques were implemented in FRI Phases II and III for groundwater sampling. The low-flow sampling method was conducted to reduce the turbidity in the groundwater samples, which may cause interference with metal analysis.

2.7.5 UST Product Sampling

As described in Appendix F, six UST product samples were collected from the UST numbers 1 through 8 (not UST-5 and UST-7). The samples were submitted for laboratory analysis including TCL PCBs and gas chromatograph fingerprint.

2.8 EXISTING MONITORING WELL ASSESSMENT

The overburden monitoring wells (Section 2.3.2) were initially located based on the assumption that existing (previously installed) on-Site wells were functional and useable for this project. In order to confirm this, a monitoring well assessment was conducted for the existing wells, which included inspection, development, field permeability testing, and repair, if appropriate. The existing wells are designated as MW-1S, MW-1D, MW-2S, MW-2D, MW-3S, MW-3D, MW-4S, and MW-4D.

The assessment of the existing monitoring wells included opening the protective casing, and monitoring and assessing the construction materials and surface seals. The wells were observed for evidence of tampering or the presence of foreign materials. The depths of the existing wells were measured and compared to the depths indicated on their respective boring logs. The monitoring wells were then redeveloped to remove accumulated sediment by bailing and pumping.

The hydraulic conductivity at existing wells was calculated after conducting field permeability tests. These calculations were compared to the hydraulic conductivities calculated for the newly installed wells, to assess whether the existing wells appear to be functioning properly.

Based on the results of the existing well assessment, it was GZA's opinion that the previously installed monitoring wells are generally suitable for water level monitoring, groundwater sampling and hydrogeologic testing. GZA also concluded that surface water might have been introduced into MW-3, based on the condition of the flush-mounted protective casing, which was not capped or locked. However, due to the location of this well and in consultation with NYSDEC, it was decided that the well would be sampled and that the results considered in this study.

2.9 WATER WELL INVENTORY

Mr. Jeff Altorfer of the Suffolk County Water Authority (SCWA) indicated there are no public drinking water wells within a one-mile radius of the Site. The nearest public water supply well is located about 1.2 miles to the southeast, based on Figure 5.4.1 in Reference 8. The locations of water wells located within approximately one mile upgradient and two miles downgradient of the Site are shown on Figure 3.

There are several private water supply wells in the area of the Site. The nearest well to the SFC Site appears to be an irrigation well (Well Number 13988; see Figure 3), located about 1000 feet southwest of the Site. This well is reportedly used for watering lawns in the New Montefiore Cemetery (Reference 6).

Water well number S-101207 is located upgradient of the SFC Site and proximate to Cabot Street and Patton Avenue. According to the Delisting Petition Report prepared for NTU dated November 1992, this well was sampled in April 1992 at various depths bgs. Numerous VOCs were detected in the groundwater from this well, including tetrachloroethene (PCE) at a concentration of 210 ug/L at 90 feet bgs. An excerpt of this report (Table 5.3.1 and Figure 5.3.1) is provided in Appendix G.

Various monitoring wells associated with the Babylon Landfill (located about 1,500 feet east of the Site) are located east and south of the Site. Based on information contained in Reference 6, a leachate-enriched groundwater plume extends about 11,000 feet downgradient (south) of the landfill. The plume is reportedly about 1,900 wide. Additional information concerning the Babylon Landfill and its associated groundwater plume is presented in the "Town of Babylon Ash Disposal Site Final Environmental Impact Statement", provided in Appendix G.

2.10 INTERIM REMEDIAL MEASURES SUMMARY

GZA identified 11 cesspools (CP-1 though CP-11), 12 drainage structures (DS-1 through DS-12), and two former well structures (WS-1 and WS-2), as shown on Figure 2.

During GZA's field investigation, sediment and water samples were collected (if present) and analyzed from the structures. In general, the structures' sediment and water samples were analyzed for VOCs, PCBs, and metals. Some of the samples were also analyzed for SVOCs and pesticides. Analytical data are presented on the summary tables (Tables 2-8 through 2-12).

GZA issued a letter to NYSDEC dated November 22, 1999 that summarizes the findings related to the cesspools and drainage structures. GZA developed a ranking system for the structures to be selected for IRM. The cesspools and drainage structures were divided into groups based on the type and concentration of contaminants.

Eleven underground structures, cesspools and storm drains were selected by NYSDEC for remediation. Seven structures contained water. As detailed in Table 2-15, these structures were divided into the following four groups.

- Group 1 consisted of DS-4, CP-6, CP-5 and CP-10. The soils in these structures were contaminated with VOCs, SVOCs, and metals.
- Group 2 consisted of DS-8, DS-10, and CP-8. The soils in these structures were contaminated with metals.
- Group 3 consisted of CP-3, CP-4, and CP-7. The soils in these structures were contaminated with high levels of metals.
- Group 4 consisted on DS-5. The soil in this structure was contaminated with PCBs and metals.

It should be noted that CP-11 was not found or sampled until July 2000, and therefore was not included in the IRM evaluation. The selected remediation for contaminated media from the structures consisted of pumping and off-Site disposal of the water, and excavation and off-Site

disposal of the soils.

Solicitation of bids to perform the remediation were prepared and submitted to several subcontractors. Able Environmental Group (AB Oil) of Bohemia, New York was selected to perform the remediation. The remediation commenced on April 10, 2000 and was completed on April 11, 2000. GZA was on Site to observe the remediation, document quantities and perform community air monitoring.

The remediation generally consisted of initially using a vacuum truck to remove the liquids from the structures. An approximate total of 12,200 gallons of water was removed from DS-4, CP-6, CP-5, CP-10, DS-8, DS-10, CP-8, and DS-5. Mr. Kevin Oldham from the Suffolk County Department of Public Works was on Site during the removal of the water from the structures to determine which water would be acceptable for disposal at the Bergen Point wastewater treatment facility (WWTF). Water from CP-10 was identified by Mr. Oldham as having an oil content above the acceptable limit for disposal at the Bergen Point WWTF. The removed water (with the exception of the water from CP-10 (approximately 700 gallons)) was transported to and disposed of at the Bergen Point WWTF. Water from CP-10 was containerized and later disposed of by AB Oil.

A vacuum truck and small clamshell bucket were used to remove the soils from the structures. Initially, a clamshell bucket was used to remove the sediments from CP-3 and CP-4. However, a vacuum truck was used for the remaining remediation, as it was more efficient and faster. The soils were placed into four approximate 15 cubic yard roll-off boxes. The soils were segregated based on the group (Groups 1 through 4 discussed above). AB Oil collected a composite soil sample from each roll-off box for disposal analytical testing. The soils were disposed of at S&W Waste in Kearny, New Jersey.

In addition to the quantities presented above, approximately 3,250 gallons of water was decanted off the roll-off boxes prior to removal from the Site. This water was disposed of by AB Oil.

After the soil removal was completed, GZA collected confirmatory analytical soil samples from the eleven structures using a hand auger. Table 2-15 summarizes the water and soil removed from each structure and the analytical testing completed. Analytical results of the confirmatory soil samples are included on Tables 2-8 and 2-10.

- In general, VOCs, SVOCs, PCBs and pesticides were not detected in the confirmatory soil samples above their respective Recommended Soil Cleanup Criteria from NYSDEC Technical and Administrative Guidance Memorandum No. HWR-94-4046 (RSCOs) for the sediment samples, with the exception of one parameter: heptachlor epoxide. Heptachlor epoxide, a pesticide, was detected in the confirmatory sample from DS-10 at a concentration of 56 ug/kg, which is above the RSCO of 20 ug/kg.

- Several metal compounds were detected at concentrations above the RSCOs. However, the concentrations within the CPs and DSs were shown to have been

greatly reduced from the IRM activities.

During the IRM field work, the surface soils surrounding the open fill port of UST-3 (see Figure 2 and Appendix F for UST identification and locations) were observed to be stained with fuel oil. AB Oil removed approximately 1,000 gallons of liquid from the UST with a vacuum truck for disposal at the request of the NYSDEC. The impacted soil surrounding the fill port was also removed and placed in the roll-off box with soils designated as Group 1.

3.0 PHYSICAL CHARACTERISTICS OF THE STUDY AREA

The following sections discuss surface features, meteorology, surface water hydrology, regional and Site geology, regional and Site hydrogeology, and land use.

3.1 SURFACE FEATURES

The SFC Site is approximately 0.67 acre at 50 Dale Street, West Babylon, Suffolk County, New York. Surrounding property is mixed industrial/commercial. The elevation at the Site is approximately 63 feet, based on the National Geodetic Vertical Datum (NGVD). The overall Site topography is generally flat.

The Site includes the original building, approximately 53 feet by 220 feet, set on property that is about 100 feet by 300 feet in areal extent. Areas not occupied by the building consist of paved parking areas to the north of the building and an unpaved alleyway to the south. Grassy areas are located on the west and east sides of the building. Dale Street borders the Site to the east and Cabot Street borders the Site to the west. The northern boundary of the Site is defined as the south wall of the former NTU building. The southern boundary of the Site is the alleyway south of the SFC building.

The facility is currently occupied by three businesses: a door company (Unique Door Gallery) in the west side of the building; a machine shop in the central part of the building; and auto parts storage in the east part of the building. Walls divide the three occupied sections.

3.2 METEOROLOGY

Moderately warm summers and cool damp winters with little snowfall typify the climate in the vicinity of the Site and Suffolk County. Precipitation is distributed throughout the year with an annual average of 43 to 44 inches. The average annual temperature is about 53 degrees Fahrenheit (Reference 9).

3.3 SURFACE WATER HYDROLOGY

3.3.1 Regional Surface Water Hydrology

Regional surface water generally flows either towards tributaries, stormwater detention basins and/or through the numerous stormwater drainage systems located throughout Suffolk County, which eventually drain to the Great South Bay south of the Site. The nearest surface water feature (Santapogue Creek) to the Site, in an apparent hydraulic downgradient direction, is approximately 2 miles southeast. The Santapogue Creek flows southerly toward the Great South Bay that is part of the Atlantic Ocean (References 10 & 11).

3.3.2 Site Surface Water Hydrology

Natural surface water bodies (e.g., streams or ponds) do not exist near the Site (References 10 & 11). However, manmade drainage basins are located in the area. Asphalt and gravel areas surrounding the Site buildings direct surface water runoff at the Site. The stormwater from the parking areas, which also includes some run-off from the building roof, generally collects in several stormwater drainage structures located south of the former NTU building and north of the former SFC building. The drainage structures have perforated walls and, in most cases, no bottoms [Note: CP-10 has a bottom]. Thus, drainage into subsurface soils can occur. Stormwater along Dale and Cabot Streets drains to catch basins that convey water toward Edison Avenue.

The elevations on Site are relatively flat. Slight elevation changes suggest runoff from the Site could migrate to the north, east, south and west. It is expected that limited surface water runoff occurs from the Site.

3.4 REGIONAL GEOLOGY

The subsurface geology for the western portion of Suffolk County generally consists of unconsolidated sediments underlain by crystalline Precambrian metamorphic and igneous bedrock (Reference 12). The bedrock consists of schist, gneiss and, in some areas, granite. The bedrock, which is as deep as 800 feet bgs, is reported as having an upper layer that has been substantially weathered into clay.

Above the bedrock are sediments from the Raritan and Magothy-Matawan Group from the late Cretaceous age. The Raritan Formation consists of two units: the Lloyd sand member group below and the Raritan clay member above. The Lloyd member is of continental origin having been deposited in a large freshwater lake. The material consists of fine to coarse-grained sands, gravel and inter-bedded clay and silty sand. The Raritan clay is also of continental origin and consists of clay, silty clay and clayey silt and fine silty sand. This member acts as a confining layer over the Lloyd member. The Magothy Formation - Matawan Group sedimentary deposits are similar to the underlying sediments, with a sand and gravel deposit in the lower portion of the formation and a clay unit in the upper portion of the formation.

Above the Magothy - Matawan Group is the Jameco Gravel that was deposited during the Pleistocene age. Streams from glacial melting may have deposited this material. These sediments are mainly coarse sand and gravel with some cobbles and boulders (Reference 12).

The Gardiners Clay overlays the Jameco Gravel and is identified as an interglacial deposit of marine origin. This gray to bluish-gray clay layer acts as an effective confining layer over the Jameco

Gravel and Magothy Formation - Matawan Group. This layer is expected to be on the order of 50+ feet thick near the Site.

Sediments consisting of fine to coarse sand with traces of silt, clay and/or fine gravel are located above the Gardiners Clay, herein referred to as the Upper Glacial Aquifer (Reference 12). These sediments are considered glacial outwash from Wisconsian aged glacial activity. These soils are the main focus of this FRI (i.e., the Upper Glacial Aquifer was evaluated in this study).

3.5 SITE GEOLOGY

The geologic focus of this study is the glacial outwash sands belonging to the Upper Glacial Aquifer extending to the uppermost region of the Gardiners Clay layer. The Site geology is based on data collected from Geoprobe soil borings, monitoring well installations and test pits. Geoprobe and monitoring well installation logs identifying subsurface soils as observed during this study are presented in Appendix D.

3.5.1 Overburden

The overburden deposits encountered at the Site generally consist of fill materials, glacial outwash, and clay soil. The following sections describe the physical characteristics of the overburden deposits encountered during this study.

3.5.1.1 Fill Deposit

The fill deposit was generally encountered from the ground surface (at each of the subsurface explorations around the Site building) and ranged in thickness from approximately 0.2 to 1.6 feet bgs. The composition of the fill material varies depending on location at the Site and is also found at greater depths adjacent to underground structures (i.e., cesspools and USTs).

3.5.1.2 Glacial Outwash

Glacial outwash deposits consisting primarily of gravelly sand underlie the fill at the Site. This material is the prevalent overburden at the Site study area. This glacial sediment was observed up to depths of approximately 90 feet bgs.

The Upper Glacial soils consist of fine to coarse sands and gravel. Occasional layers or seams of finer grained soils (fine sands and silts) were observed in the soil samples. The Upper Glacial sand is continuous across the study area and is the predominant water-bearing unit studied at this Site. During this study, the groundwater table was observed at approximately 18 feet bgs.

3.5.1.3 Gardiners Clay

The Gardiners Clay was observed underneath the Upper Glacial sands at the Site during monitoring well installation. The clay was encountered at a depth of approximately 90

feet bgs and was encountered in the deep monitoring well borings. This clay layer was penetrated approximately one foot during this study. This clay layer is reported to be approximately 30 feet thick (References 12), and acts as a lower confining layer for the Upper Glacial Aquifer.

3.6 REGIONAL HYDROGEOLOGY

The general flow of groundwater in the Upper Glacial Aquifer is southeasterly (References 12 and 17). As discussed in Section 2.9, several production wells were historically used to draw water from the Upper Glacial Aquifer. Drinking water is no longer pumped from this zone due to groundwater contamination. However, some wells are still active for irrigation and cooling purposes. These wells could influence local groundwater flow patterns and potentially draw existing contamination plumes in directions other than the main southerly groundwater flow direction.

3.7 SITE HYDROGEOLOGY

As discussed above, only the Upper Glacial Aquifer at the Site was studied. The primary hydraulic properties used to describe the groundwater conditions at the Site include hydraulic conductivity, porosity and hydraulic gradient. These properties are used to estimate groundwater flow directions and velocities. Hydraulic conductivity is a measure of the ability of a soil to transmit water throughout the deposit.

3.7.1 Hydraulic Conductivity and Soil Porosity

Estimated horizontal hydraulic conductivity values were calculated from short-term pumping tests and rising head tests conducted by TAMS/GZA as part of this investigation. As shown in Table 2-3, the hydraulic conductivity ranges between approximately 10 and 900 feet per day (fpd), with an average of 300 fpd.

NYSDEC provided TAMS/GZA with aquifer pump test results calculated by IT Corporation at the National Heatset Printing Site in Babylon, New York, located approximately 1.5 miles southwest of the SFC Site. The pump tests were conducted on four monitoring wells reportedly installed in the Upper Glacial Aquifer, using an estimated aquifer thickness of 70 feet. These estimated hydraulic conductivity results ranged from 11 to 147 fpd, with an average of 137 fpd.

The wide range of hydraulic conductivity values indicates that the Upper Glacial Aquifer is heterogeneous. It is probable that areas or zones of higher (or lower) hydraulic conductivity exist throughout the Site. The Upper Glacial Aquifer reportedly has an average hydraulic conductivity across Long Island of approximately 270 feet per day (References 17 and 19).

The Upper Glacial Aquifer is reported to be anisotropic with a horizontal hydraulic conductivity between 10 to 24 times greater than the vertical hydraulic conductivity (Reference 12).

The aquifer thickness is anticipated to vary at different locations of the study area, however, was observed over the Site with an average thickness of approximately 70 feet. The transmissivity

of the Upper Glacial Aquifer to this depth ranges from 770 to 35,000 ft^2/day with an estimated average of 17,000 ft^2/day.

The effective porosity for the Upper Glacial Aquifer is reported to be about 0.20 to 0.30 (References 12 and 18).

3.7.2 Groundwater Flow Patterns and Velocities

Shallow[1] groundwater contour maps representing groundwater elevations (see Figures 6, 7 and 8) were prepared based on the water elevations measured in the groundwater monitoring wells on June 6, 1999; July 25, 2000; and May 3, 2001. The groundwater flow direction in the study area is southeasterly based on the groundwater contour map. The southeasterly flow direction is generally consistent with the apparent regional groundwater flow and previous studies.

The horizontal gradient across the study area is generally low with an estimated average of 0.002, but there are areas where the gradient is higher. The gradient is relatively low in the center of the study area.

Groundwater flow velocities were calculated using Darcy's Law (Reference 13), utilizing the average horizontal hydraulic gradient (0.002) and porosity (0.20 to 0.30). Based on the range of calculated hydraulic conductivity values (presented in Section 3.7.1 above), the groundwater velocity at the Site study area was calculated to range from about 0.05 to 6 feet per day (fpd), with an average of approximately 2 fpd or 700 feet per year. Average groundwater flow velocities reportedly range from approximately 1 fpd to 2 fpd in the Upper Glacial Aquifer.

Vertical groundwater flow appears to be negligible between the shallow and deep Upper Glacial Aquifer zones. The anisotropy of the hydraulic conductivity (i.e., the horizontal conductivity is 10 to 24 times greater than the vertical conductivity), suggests that very little vertical flow will occur from the top to the bottom of the aquifer.

Intermediate groundwater elevation contours are presented on Figure 9 for the May 3, 2001 data. The deep well groundwater elevations are also presented on Figure 9. These deeper wells indicate southerly flow.

3.8 LAND USE AND DEMOGRAPHY

The SFC Site is located in the western portion of Suffolk County, in a commercial and industrial area between three cemeteries (see Figure 1). Since the 1950s, the Site area and surrounding properties have not undergone significant physical changes, based on historical photographs.

3.9 HABITAT ASSESSMENT

The SFC Site and the areas surrounding the Site have a limited fish and wildlife population due primarily to the commercial and industrial use of the area. Based on the concentrations of chemical

[1] Shallow groundwater is defined by the wells installed to a depth of approximately 25 feet bgs.

compounds and metals detected in the various media, it appears that the impact on the fish and wildlife population in the Site area is low. Therefore, the evaluation of fish and wildlife concerns at the Site was not completed as part of this Focused RI.

4.0 NATURE AND EXTENT OF CONTAMINATION

This section discusses the nature and extent of contamination at the Site. As discussed in Section 2.10, the IRM was undertaken to remove heavily contaminated sediments located in selected cesspools and drainage structures. Soil/sediment samples were collected before (pre) and after (post) the IRM. Results of both sets of data are presented in Tables 2-8 to 2-12. The pre-IRM results are presented to portray the source area contaminant conditions at the Site (see Section 4.2). However, in evaluating the existing source area and soil quality conditions, the post-IRM results were used.

Detected chemical compounds in the various media sampled at the Site and the analytical results are presented in Table 2-5 to 2-14. CompuChem of Cary, North Carolina provided the analytical laboratory services for this project. EDV, Inc. and URS Greiner Woodward Clyde provided independent data validation services for this project.

Data qualifiers and their definitions, and a summary of information regarding data that were qualified by the validator as rejected, are included in Appendix E. Presentation of results within the text does not include data qualifiers.

The criteria used to assess whether the soil sample results represent a potential threat to human health or the environment is provided in NYSDEC TAGM 4046 dated January 1994 (Reference 14). The New York State Class GA groundwater quality standards (Reference 15) were used for comparison to the groundwater sample results.

Based on a review of the data collected (including the trends over time) for the three sample rounds conducted in July 1999 (1999 Round), July 2000 (2000 Round) and April 2001 (2001 Round); and considering the IRM (highly contaminated soil removal from the cesspools and drainage structures) was completed in April 2000; TAMS/GZA has generally considered the 1999 and 2000 rounds as representative as pre-IRM conditions and the 2001 round as post-IRM conditions. Although the 2000 round was conducted after the IRM (about three months after), it is not expected that this was sufficient time for a significant change to have occurred. Therefore, some of the figures and discussions of analytical data are grouped/presented as 1999/2000 round and 2001 round.

4.1 CONTAMINANT TYPES

Discussions of laboratory analytical results for various environmental media are presented by the chemical classes. Site specific chemical classes of concern include VOCs and inorganic compounds (metals). Other chemical classes, including SVOCs, PCBs and pesticides, were analyzed for and detected at the Site, but they appear to be relatively insignificant.

Several inorganic elements and VOCs have been identified as the contaminants of concern for this study. Based on a review of the compounds detected, toxicity characteristics, frequency of exceedance of Recommended Soil Cleanup Criteria from NYSDEC Technical and Administrative Guidance Memorandum No. HWR-94-4046 (RSCO) and groundwater standards, the metals of concern include; cadmium, chromium, copper and nickel. PCE and other VOCs have been identified as the primary VOCs of concern. VOCs and metals of concern were selected primarily for presentation and discussion purposes. It should be noted that GZA's evaluation included a detailed review of the chemical data collected for this FRI.

4.2 SOURCE AREAS

Based on historical information and previous studies conducted at and near to the Site, several potential source areas were identified. Source areas include cesspools, drainage structures, interior sumps, surficial spills, and upgradient groundwater. These potential source areas are identified (shown as bold) on Figure 4.

Underground storage tanks (USTs) are considered as possible source areas for the VOCs, inorganics, SVOCs, PCBs or pesticides. However, traceable patterns of contamination relating to the observed hazardous materials were not apparent. Petroleum related compounds were generally not detected at significant levels. As requested by NYSDEC, GZA prepared a separate report regarding the USTs. A copy of the report is included in Appendix F. At the request of the NYSDEC, the SCDHS was provided with a copy of this information.

It should be noted that soil collected from the bottom of cesspools and drainage structures are described as sediment in this report. Based on discussions with NYSDEC, the appropriate evaluation criteria for the sediment (soil) from the structures are the subsurface soil RSCOs.

4.2.1 Volatile Organic Compounds

Sediment

The VOC levels in the sediment samples (Table 2-8) from cesspools are generally higher than the drainage structures (Table 2-10). The highest levels of VOCs from the selected sediment samples were detected at CP-6. Five compounds were noted to be detected at pre-IRM levels exceeding 10,000 ug/kg in CP-6. These five compounds are identified below.

Compound	Detected Concentration	RSCO
PCE	12,000 ug/kg	1,400 ug/kg
1,1,1-trichloroethane	23,000 ug/kg	800 ug/kg
toluene	34,000 ug/kg	1,500 ug/kg
chloroethane	34,000 ug/kg	1,900 ug/kg
1,1-dichloroethane	52,000 ug/kg	200 ug/kg

Several additional VOCs were identified in CP-6 above the RSCO. Refer to Table 2-8 for these compounds and their concentrations.

VOCs were also detected in CP-5, CP-10 and DS-4 at concentrations above RSCO. These compounds include chlorobenzene at a concentration of 46,000 ug/kg (RSCO of 1,700 ug/kg); acetone at 2,300 ug/kg (RSCO of 200 ug/kg); 2-butanone at 440 ug/kg (RSCO of 300 ug/kg); xylenes (total) at 3,800 ug/kg (RSCO at 1,200 ug/kg); and toluene at 2,300 ug/kg (RSCO of 1,500 ug/kg).

The post-IRM results presented in Tables 2-8 and 2-10 identify a significant decrease in VOC concentrations in the sediment samples. Additionally, no VOCs were identified in the post IRM confirmatory samples exceeding the RSCOs for the CP and DS sediment samples.

Water

Several VOCs at various concentrations were identified in the pre-IRM water samples from the cesspools (Table 2-9) and drainage structures (Table 2-11). There are no readily applicable criteria for comparison purposes for the water in the drainage structures. However, the CP and DS waters discharge to the groundwater. Therefore, we have compared the CP and DS groundwater analytical results to the groundwater standards. The highest level was detected in the CP-10 water sample for chloroethane (91 to 1,000 ug/L). Additional compounds detected above the groundwater standards included acetone (54 to 410 ug/L) which may be associated with laboratory contamination; 1,1-dichlorethane (19 to 54 ug/L); benzene (2 ug/L); toluene (12 to 150 ug/L); ethylbenzene (50 ug/L); xylenes (total) (16 to 60 ug/L); and 1,2-dichloroethene (total) (14 ug/L).

Post-IRM water samples were not collected from the CPs or DSs.

4.2.2 Inorganics

Sediment

Various inorganics were detected in the sediment samples above the RSCO or expected background. The detected metals include:

Arsenic	Barium	Beryllium
Cadmium	Calcium	Chromium
Cobalt	Copper	Iron
Lead	Magnesium	Mercury
Nickel	Selenium	Sodium
Zinc		

Refer to Tables 2-8 and 2-10 for concentrations of detected inorganics. Based on distribution, number of exceedances and toxicity, and for discussion purposes, we will focus on the compounds considered to be "indicator compounds" which include cadmium, chromium, copper and nickel.

The higher levels of inorganics were generally detected in CP-3, CP-4, CP-5, CP-7, CP-8, DS-4, DS-5, DS-8, and DS-10. Metal detections in cesspool samples were generally higher than drainage structure samples. The highest levels of metals were detected in CP-3 sediments: cadmium (19,500 ppm); chromium (120,000 ppm); copper (26,900 ppm); and nickel (54,500 ppm). Additionally, these four compounds were detected at levels in exceedance of RSCOs in the above-mentioned CPs and DSs.

The post-IRM results show the metal concentrations were greatly reduced in the sediment of the IRM CPs and DSs. However, residual metal concentrations exceed the RSCOs.

Six cesspools (CP-3, CP-4, CP-6, CP-7, CP-8 and CP-10) and eleven drainage structures (all but DS-4) contain one or more of the four inorganics at levels 10 times the RSCO.

Water

The pre-IRM water samples analyzed from the CPs and DSs identified elevated levels of various inorganics. The detected inorganics include:

Antimony	Arsenic	Cadmium
Chromium	Copper	Iron
Lead	Manganese	Mercury
Nickel	Selenium	Silver
Sodium	Thallium	Zinc

Refer to Tables 2-9 and 2-11 for concentrations of detected inorganics. CP-10 contained the highest levels of metals: cadmium (318 ug/L); copper (6,700 ug/L); and nickel (1050 ug/L).

Post-IRM water samples were not collected from the CPs or DSs.

4.2.3 PCBs/Pesticides

Sediment
PCBs and pesticides were detected in the samples from CP-3, CP- 4, CP-6, CP-7, CP-9, CP-10, DS-1, DS-2, DS-3, DS-4, DS-5, DS-6, DS-7, DS-8, DS-9, DS-10, and DS-12. Refer to tables 2-8 and 2-10 for specific compounds and concentrations. The only PCB detected above the RSCO was in DS-5 at a concentration of 20,000 ug/kg, which exceeded the RSCO of 10,000 ug/kg. The pesticide heptachlor epoxide was identified above the RSCO of 20 ug/kg in samples DS-10 (IRM Conf.) and CP-10 at concentrations of 56 ug/kg and 32 ug/kg, respectively.

The post-IRM data for sediment samples identified a general decrease in the PCB concentrations in the samples collected. The IRM included removing approximately 6.5 cubic yards of soil from DS-5 where the high PCB level was encountered. Post-IRM confirmatory samples did not identify PCBs at concentrations above the RSCOs.

Water
The water samples did not identify significant levels of PCBs or pesticides above groundwater standards. Refer to Tables 2-9 and 2-11 for a presentation of the results.

4.2.4 SVOCs

Sediment
The SVOCs in sediments detected were generally below the RSCOs with the exception of CP-10. Four compounds at CP-10 exceeded the RSCO including naphthalene at 27,000 ug/kg (RSCO of 13,000 ug/kg), 2-methylnapthalene at 200,000 ug/kg (RSCO of 36,400 ug/kg), phenanthrene at 56,000 ug/kg (RSCO at 50,000 ug/kg), and bis (2-ethylhexyl) phthalate at 73,000 ug/kg (RSCO of 50,000 ug/kg). These results are presented in Tables 2-8 and 2-10. Sediments from CP-10 were removed to the concrete bottom of the structure during the IRM.

Water
SVOCs in water samples from the CPs and DSs indicate low level detections. The highest concentration reported was 59 ug/L Phenol was detected in the water from CP-5 and CP-6 at a concentration of 4 ug/L and 8 ug/L, respectively. The groundwater standard for phenol is 1 ug/L. Refer to Tables 2-9 and 2-11 for a presentation of the results.

4.3 SURFACE SOIL ANALYTICAL RESULTS

Eight surface soil samples were collected during the Site study from depths approximately 0 to 1 foot bgs. In paved areas, surface soil samples were collected approximately 0 to 0.5 feet below the pavement subbase material, or about 0.5 to 1 foot below the top of the pavement. Results of this testing are summarized in Table 2-6.

4.3.1 Volatile Organic Compounds

VOC compounds were detected in three of the eight surface soil samples analyzed; however, only 1,1-dichloroethane (DCA) and 1,1,1-trichloroethane (TCA) exceeded the RSCOs. DCA was detected at a concentration of 2,200 ug/kg, exceeding the RSCO of 200 ug/kg at AP-1. Additionally, TCA concentrations ranged from 840 to 2,400 ug/kg, exceeding the RSCO of 800 ug/kg at AP-2 and AP-1, respectively. These results are presented in Table 2-6.

4.3.2 Inorganics

Inorganics are naturally occurring elements in native soils. To assess whether the soil is contaminated, it is necessary to determine background concentrations for the Site. This was done by selecting soil samples that: appeared to be not impacted by organic contamination, were not immediately downgradient of a potential source; and were above the water table. The sample collected and analyzed from AP-5 was selected for determination of surface soil background concentrations.

Various inorganics were detected in the surface soil samples above the RSCO or expected background. The detected inorganics include:

Arsenic	Beryllium	Cadmium
Chromium	Copper	Iron
Mercury	Nickel	Zinc

Refer to Table 2-6 for concentrations of detected inorganics. As indicated above, based on distribution, number of exceedances and toxicity, for discussion purposes, we will focus on the compounds considered to be “indicator compounds” which include cadmium, chromium, copper and nickel.

The highest concentrations of cadmium, chromium, copper, and nickel were detected from the surface soil sample collected from AP-8. Elevated levels of metals were detected in the alleyway south of the SFC building as represented by sample locations AP-2, AP-3, AP-4, AP-6, AP-7, AP-8, and AP-9.

Concentrations of the indicator compounds detected ranged as follows:

Metal	Detected Concentration Range (mg/kg)
Cadmium	134 to 1670
Chromium	194 to 3130
Copper	42 to 1970
Nickel	64.6 to 21,100

These values suggest surficial deposition of wastes. In general the results from AP-10 suggest some impact by waste material; however, the levels are lower than the results from the alleyway (except for copper). Results from AP-1 are significantly lower than the other results.

Relatively high concentrations of cyanide were detected at AP-8 and AP-9, at 65.7 and 66.5 mg/kg, respectively.

4.3.3 PCBs/Pesticides

PCBs were detected at three locations at a concentration at or exceeding the RSCO. The locations are AP-1, AP-6 and AP-8, at which PCB-1254 was identified at concentrations ranging from 1,000 ug/kg to 6,100 ug/kg (exceeding the RSCO of 1,000 ug/kg). Refer to Table 2-6 for a presentation of these results.

4.3.4 SVOCs

SVOCs were detected at the eight sample locations. However, the concentrations were below their respective RSCOs. Table 2-6 presents these results.

4.4 SUBSURFACE SOIL EXPLORATION ANALYTICAL RESULTS

One hundred twenty-nine subsurface soil samples from geoprobes, monitoring well borings and one test pit were analyzed. Samples were generally selected from the unsaturated zone at two depth intervals based on visual observations and engineering judgement. The results are presented on Table 2-7.

4.4.1 Volatile Organic Compounds

Seventeen VOCs were detected in the subsurface soil samples. The concentrations of the detected VOCs were below the RSCOs. Thus, the samples tested did not appear to be impacted significantly by VOCs. However, it appears likely that unsaturated soils below some of the cesspools and drainage structures are or were contaminated with VOCs, and likely contribute or contributed to groundwater contamination.

4.4.2 Inorganics

Various inorganics were detected in the subsurface soil samples above the RSCO or expected background (if no RSCO value is available). Background metals in subsurface soils are presented in Table 4-1. The detected inorganics include:

Beryllium	Cadmium	Chromium
Copper	Iron	Magnesium
Mercury	Nickel	Selenium
Zinc	Cyanide	

Refer to Table 2-7 for concentrations of detected inorganics. Based on distribution, number of exceedances and toxicity, for discussion purposes, we will focus on the compounds considered to be "indicator compounds" which include cadmium, chromium, copper and nickel.

In general, the highest levels of metals were detected at GP-2, GP-4, GP-5, GP-11, GP-40, GP-47, GP-49 and TP-1. These sample locations are generally in the southeastern portion of the Site, both outside and inside the Building. TP-1 is located near the sump in the northeastern portion of the SFC Building.

The highest levels of cadmium, chromium, copper, and nickel in subsurface soil samples were detected at TP-1 at a depth of 1 foot bgs as follows: cadmium (5500 mg/kg), chromium (19,600 mg/kg), copper (3610 mg/kg) and nickel (4,900 mg/kg). The metal concentrations in the unsaturated subsurface soils typically decrease with depth. For example, at this same location from a depth of 6 feet, the metal concentrations were reported at lower concentrations as follows: cadmium (111 mg/kg), chromium (220 mg/kg), copper (54.3 mg/kg), and nickel (115 mg/kg).

The levels of the four metals in soils are shown on Figure 10. This figure includes both surface soil and subsurface soil results. The highest levels of these metals are in the alleyway south of the SFC Building and from samples inside the SFC Building (TP-1, GP-40, GP-47, and GP-49).

For comparative purposes, Figures 11 and 12 depict sample locations and Site areas containing one of more of the four metals at levels 100 times and 10 times, respectively, greater than the respective RSCOs.

Selected Total Metals in Soils at Levels 100 Times Greater Than RSCOs:

Figure 11 shows the sample locations containing one or more of the four metals at levels 100 times greater than the respective RSCOs. This figure includes cesspool and drainage structure results (post-IRM). In general, cadmium is the primary metal with concentration levels 100 times the RSCOs. The area of soil impacted at 100 times above the RSCO is estimated at 4,500 sf.

The estimated depth of soil contamination containing at or above 100 times the RSCOs is not well defined and is likely associated with surface spills and spills to structures. Most

samples 100 times the RSCOs are from surficial samples and the bottom of the cesspools and drainage structures. It is suspected that the soil concentrations at or above 100 times the RSCOs is limited to the upper two feet of the surface and near surface soils. Similarly, it is expected that the average depth of contaminated soils near TP-1, GP-40 and GP-49 is approximately 4 ft. Additionally, an area of deeper (below 4 feet) soils with metals concentrations greater than 100 times the RSCO is located in the alleyway at GP-47 (possibly associated with spills in the alleyway), which extends to the water table at about 18 feet. It is estimated that the deeper 100 times the RSCO soil at GP-47 is about 200 cubic yards (cy). As such, the estimated volume of contaminated soils 100 times the RSCO totals approximately 700 cubic yards (i.e., about 440 cubic yards (cy) from the surface and near surface soils, about 50 cy from the cesspools and drainage structures and about 200 cy at GP-47).

Selected Total Metals in Soils at Levels 10 Times Greater Than RSCOs:

The surface and subsurface soil samples containing the four metals greater than 10 times the RSCO are shown on Figure 12. The area of soil containing one or more of the four metals detected at 10 times the RSCO is estimated at approximately 8500 sf. As described above, the estimated depth of soils contaminated at 10 times the RSCOs is not well defined, but is expected to be limited. It is expected that the average depth of contaminated to a level 10 times the RSCOs is:

- Interior soils: approximately 8 feet;
- Alleyway: approximately 2 to 4 feet, with the exception of the area at GP-47 that extends to the water table at about 18 feet.
- West of 40 Dale Street: 14 feet; and
- GP-11 and GP-19: 8 and 16 feet, respectively.

The estimated volume of contaminated soil (10 times the RSCO) is about 2,700 cy from the soils.

The post-IRM analytical results for six cesspools (CP-3, CP-4, CP-6, CP-7, CP-8 and CP-10) and eleven drainage structures (not DS-4) indicated one or more of the four metals at levels 10 times the RSCO. Again assuming a depth of contamination of 5 feet, this equates to an estimated volume of 160 cubic yards.

As such, the estimated volume of contaminated soils 10 times the RSCO totals approximately 2900 cubic yards (i.e., about 2700 cy from the subsurface soils and about 160 cy from the cesspools and drainage structures).

4.4.3 PCBs/Pesticides

Ten pesticides and one PCB were identified in the soil samples analyzed. The concentrations reported were below their RSCOs.

4.4.4 SVOCs

There were three SVOCs reported in subsurface soils. Phenol was detected in one sample (GP-32, S-5) at a concentration of 75 ug/kg, which is above the RSCO of 30 ug/kg. The concentrations of the remaining two SVOCs (di-n-butl phthalate and bis(2-ethylhexl)phthalate) reported were below their RSCOs.

4.5 GROUNDWATER ANALYTICAL RESULTS

Groundwater samples were collected in July 1999 (Phase I) from geoprobe and monitoring wells. A second round of samples (Phase II) was collected in July 2000 from the wells existing in 1999, plus five wells installed in July 2000. A third round of sampling (Phase III) was completed in May 2001 on the existing monitoring wells, one geoprobe (GP-46) and nine new wells (installed in the downgradient area). The Phase III round included analysis of groundwater samples for hexavalent chromium.

4.5.1 Volatile Organic Compounds

Twelve VOCs were detected in excess of groundwater standards. The detected compounds include:

Compound	Detected Concentration	Groundwater Standard
1,1-Dichloroethane	22 ug/L	5 ug/L
1,1-Dichloroethene	7 to 90 ug/L	5 ug/L
1,1,1-Trichloroethane	6 to 15 ug/L	5 ug/L
Trichloroethene	6 to 64 ug/L	5 ug/L
Tetrachloroethene	6 to 610 ug/L	5 ug/L
1,2-Dichloroethene (total)	7 to 51 ug/L	5 ug/L
Methylene Chloride	29 ug/L	5 ug/L
Benzene	13 to 16 ug/L	1 ug/L
Toluene	6 to 31 ug/L	5 ug/L
Chlorobenzene	15 to 17 ug/L	5 ug/L
Methyl tert-butyl ether	14 ug/L	10 ug/L
1,2-Dibromo-3-chloropropane	1 to 2 ug/L	0.04 ug/L

PCE was detected the most frequently in the groundwater and at the highest concentration (610 ug/L at GP-12). Refer to Table 2-13 for analytical results.

Plan views of the PCE distribution in the shallow, intermediate and deep groundwater are included as Figures 13-A, 13-B and 13-C, respectively. These maps display the PCE concentration contours for the 2001 round (the most recent data), and list the results for the three rounds (i.e., 1999/2000/2001) adjacent to the respective wells. The higher levels of PCE for the 1999/2000 rounds were located on the east portion of the Site near GP-33, GP-17, GP-9, and GP-12; and for the 2001 round are located in the vicinity of the MW-6 and MW-12 clusters (downgradient of the higher levels from 1999/2000). In general, PCE was not detected on the west side of the Site with the exception of GP-29 (3 ug/L) and MW-1D2 (13 to 21 ug/L).

A cross-sectional view of the PCE results in groundwater collected in 2001 is presented on Figure 13-D.

The PCE plume indicates that upgradient groundwater is contaminated (e.g., MW-9S). Thus, a potential source area exists north and/or east of the Site (see Section 2.90) and possibly from the NTU Site. Upgradient groundwater results are presented in Table 4-2. Other additional sources of PCE appear on Site. For example, the sediment sample from CP-6 contained 12,000 ug/kg of PCE. The analytical test results indicate a trend of decreasing PCE concentrations in the central-west part of the Site, and an increasing PCE concentration downgradient of the Site between the 1999/2000 and 2001 sample rounds.

Plan views of the total VOC distribution in the shallow, intermediate and deep groundwater collected from monitoring wells are included as Figures 13-E, 13-F and 13-G. These maps display the total VOC concentration contours for the 2001 round. The distribution of total VOC concentrations in groundwater are similar to those for PCE, in that VOCs were generally detected in groundwater collected from the eastern portion of the Site and downgradient (i.e., proximate to well clusters MW-6 and MW-12).

4.5.2 Inorganics

Inorganics are naturally occurring in soils and groundwater. Groundwater samples collected with high soils content (e.g., turbid water) usually contain higher metal concentrations than low turbidity groundwater. GZA obtained groundwater samples from geoprobe borings and monitoring wells. The July 1999 groundwater sampling consisted of collected samples using traditional groundwater sampling methodology (i.e., with a bailer). Due to the high turbidity identified in the groundwater samples, the samples were also filtered to assess representative groundwater and to reduce interference from the sediment within the unfiltered samples. Subsequent rounds of groundwater sampling were completed in July 2000 and May 2001. During these sampling rounds, low-flow sampling techniques were utilized to reduce sediment interference with the groundwater analytical results.

The following discussion focuses on the filtered and low-flow groundwater sample results. This discussion is followed by a summary of the unfiltered results. The results of the inorganic groundwater sampling are presented in Table 2-14.

Filtered and Low-Flow Results

The inorganics from the filtered and low-flow sampling show that eleven inorganics exceed groundwater standards. They are antimony, cadmium, chromium, copper, iron, lead, manganese, nickel, sodium, thallium and cyanide.

- Antimony slightly exceeded the groundwater standard at two of the low-flow sampling locations and at 68 of the filtered samples. However the highest groundwater concentration reported was 6.5 ug/L compared to the standard of 3 ug/L. The significance of the exceedance is not apparent. As such, antimony is not discussed further.

- Cadmium and nickel significantly exceeded the groundwater standards at 14 and 16 locations, respectively in the low-flow samples. Additionally, cadmium and nickel were detected above the groundwater standards at 27 and 8 filtered samples, respectively. These metals are discussed in more detail below.

- Chromium and copper significantly exceeded the groundwater standards at 9 and 3 low-flow sample locations, respectively. Additionally copper was detected above the groundwater standards at four filtered sample locations. Chromium was not detected above the groundwater standards in the filtered locations. These metals are discussed in more detail below.

- Iron, manganese, and sodium exceeded the groundwater standards. However, these metals are not considered significant human health concern, and are not discussed further.

- Lead exceeded the groundwater standard at one well MW-6S (2960 ug/L) downgradient of the Site. This compound cannot be related directly to the Site. Thus, this metal is not discussed further.

- Thallium was detected at well MW-11S at a concentration of 4.8 ug/L which slightly exceeds the groundwater standard of 1 ug/L. Since thallium was only detected at one location, it is not discussed further.

- Cyanide was detected at one location above the groundwater standard, MW-4S (652 ug/L). Since cyanide was only detected above the standard at one location, it is not discussed further.

- Hexavalent chromium was detected at two locations above the groundwater standard (MW-3S at 80 ug/L and MW-6S at 914 ug/L).

The following discussion focuses on the four metals (cadmium, chromium, copper, and nickel) from the low-flow sampling. Figure 14 presents the spatial distribution for these metals in groundwater.

Cadmium

Cadmium was detected above the groundwater standard at 31 locations. It appears that cadmium becomes prevalent in the groundwater just south of the cesspools and drainage structures in the parking area between the NTU Site and the SFC Site. The cadmium exceedances appear to originate from east to west across the Site paralleling the line of cesspools and drainage structures. The highest levels of cadmium were detected at MW-4S (672 ug/L) and GP-2 (593 ug/L).

Chromium

Chromium was detected above the groundwater standard at seven locations: MW-1S, MW-1D2, MW-2S, MW-3S, MW-3D, MW-4S, and MW-6S. The highest level of chromium was detected at MW-6S (3,180 ug/L). The other chromium levels were less than 100 ug/L. It appears that chromium could be from the Site as high levels of chromium were detected in the source areas (e.g., cesspools). However, upgradient groundwater at the MW-1 well cluster contained elevated chromium levels (62.9 to 71.7 ug/L).

Copper

Copper was detected in excess of the groundwater standard primarily in the eastern portion of the Site. Three groundwater sample locations contained elevated levels: GP-16 (205 ug/L), GP-4 (960 ug/L), and MW-4S (1910 ug/L). These data suggest that a source of copper exists or existed on Site. Upgradient copper concentrations ranged from 16.2 to 33.5 ug/L.

Nickel

Nickel was detected at concentrations exceeding the groundwater standard at 20 locations. Upgradient groundwater contained nickel concentrations in excess of the groundwater standard (100 ug/L). Specifically at well cluster MW-1 and well MW-9S, the nickel concentrations ranged between 189 to 313 ug/L. However, the nickel concentrations are significantly higher at several downgradient locations such as: GP-9 (1,770 ug/L); GP-4 (528 ug/L); MW-4S (916 ug/L); MW-6S (547 ug/L); MW-12S (501 ug/L); and GP-2 (999 ug/L). This suggests a source of nickel exists on Site.

Unfiltered Inorganic Results

Unfiltered metals data also indicate traceable patterns to the Site source areas. Total cadmium and total nickel concentrations were plotted (see Figures 15 & 16 showing the 1999/2000 data and Figures 17 and 18 showing the 2001 data). These figures show cadmium and nickel plumes apparently emanating from several of the cesspools and drainage structures, from the surficial soils, and/or from inside the SFC Building (e.g., TP-1).

The highest cadmium concentration was reported at GP-2, 17,200 ug/L. The total distribution shows similarities to the filtered and low-flow results. Specifically, the cadmium plume becomes prevalent in the parking area between the NTU and SFC Buildings. The unfiltered concentrations are higher than the filtered and low-flow results. The cadmium plume extends southerly beyond well (Edison Ave) MW-12S (339 ug/L).

The unfiltered nickel plume was also similar to the filtered and low-flow results. The highest concentrations were reported from GP-9 (3,360 ug/L) and GP-2 (7,310 ug/L). The plume extends southerly beyond (Edison Ave) well MW-12S (543 ug/L). The upgradient unfiltered nickel concentrations range up to 313 ug/L (MW-1D2).

4.5.3 PCBs/Pesticides

Four pesticides were detected in the groundwater. Two pesticides, aldrin and heptachlor epoxide, exceed the groundwater standards. The pesticides exceedances occurred at wells MW-1D1, MW-1D2, MW-3S, MW-4S, and MW-5D2. There does not appear to be a traceable pattern to the SFC Site.

4.5.4 SVOCs

In general, SVOCs were not detected. The SVOC detected was bis (2-ethylhexyl) phthalate. However, the concentrations did not exceed the groundwater standard.

5.0 CONTAMINANT FATE AND TRANSPORT

This section discusses the mechanisms that may affect migration of contaminants at the Site and the chemical behavioral characteristics of the compounds detected, including persistence of these chemical substances. This information is compared with the Site specific data and observations to assist in assessing the extent of migration that has occurred.

The apparent sources of contamination at the Site include:

1. Cesspools and drainage structures - The specific cesspools and drainage structures that received wastes are not known. However, given the levels of contamination, it appears that CP-3, CP-4, CP-5, CP-6, CP-7, CP-8, DS-4, DS-5, DS-8, and DS-10 are source areas. These source areas were addressed under the IRM. Additional cesspools/drainage structures could also have been discharge locations.

2. Surficial staining in an alleyway south of the SFC Site building including deeper subsurface contamination at GP- 47.

3. Interior sump near former rinsewater treatment holding area.

In addition, interior floor drains or pipes connecting to the cesspools or drainage structures could be secondary sources, if they leaked.

Off-Site sources of contamination are likely. Specifically, the NTU Site and upgradient facilities appear to be contributing to the VOCs (PCE) contamination and possibly the inorganics such as chromium and nickel. Furthermore, downgradient facilities such as 40 Dale Street could also be contributing to the contamination. For example, the cadmium and copper filtered/low-flow groundwater concentrations are highest at wells MW-4S and MW-6S, downgradient of 40 Dale Street.

5.1 POTENTIAL ROUTES OF MIGRATION

Primary routes of migration from the Site are via groundwater and volatilization to soil gas/air. The groundwater at the Site in the glacial outwash deposits generally flows southeasterly based on current Site conditions.

Surface water and sediment are not significant migration pathways from this Site. During rainfall events, water was observed to enter drainage structures, accumulate in the parking lot or infiltrate the ground. Even though runoff was not observed exiting the Site, it is possible for some surficial contamination to migrate in runoff. Historic surface spills at the Site may have exited the Site by sheet flow.

Volatilized contamination from soil and groundwater is expected to migrate in soil gas above the groundwater table. Migration of soil gas contaminated with VOCs is expected and is less predictable than groundwater migration due to subsurface heterogeneities and subsurface structures (e.g., utilities, building foundations). The source of the VOC contamination is expected to primarily be associated with contaminated groundwater.

5.2 CONTAMINANT PERSISTENCE AND BEHAVIORAL CHARACTERISTICS

Several classes of chemical compounds were detected in the identified environmental media at the Site. However VOCs and inorganics are the contaminants that occurred with the most significance based on exceedance of RSCOs and groundwater standards. The other detected contaminants were at relatively low concentrations and at sporadic locations throughout the Site; and are, therefore, generally not pertinent to this study. Thus, the analysis and discussion of these chemical classes are not included below.

In general, chemical compounds within a given chemical class will behave similarly in the environment. However, significant differences in behavior of chemical compounds may be observed within a chemical class. Their behavior is dependent on their physical and chemical properties as well as environmental conditions, such as the presence of bacteria, pH variations, and Eh conditions.

5.2.1 Volatile Organic Compounds

Groundwater migration, under current conditions, is expected to spread the contamination in the direction of groundwater flow (southeasterly). Vertical spreading is also expected. As the contamination migrates southeasterly, the natural organic carbon in the soil will adsorb the organics, thus slowing the advance of the VOC plume. Additionally, VOCs will be attenuated in the direction of groundwater flow in response to dispersion, volatilization, and degradation, among other factors.

5.2.2 Inorganics

The fate and transport of a metal in soil and groundwater depends upon the chemical form and speciation of the metal. Typically, metals are relatively immobile in subsurface systems as a result of precipitation and/or absorption reactions (Reference 16). Surficial spills of metal plating baths, discharge of metal plating wastes, or other similar waste products can promote the rate of metal migration.

The pH of the groundwater from field data suggests that the groundwater is acidic (pH < 7). Table 5-1 shows the pH of the groundwater from the 1999, 2000 and 2001 sampling events. The metals are likely to be more mobile in an acidic environment than under neutral or higher pH conditions (pH of 7). It is expected that the metal plumes would migrate southeasterly in a similar, but at a slower rate, than the groundwater.

5.3 OBSERVED MIGRATION

5.3.1 Groundwater

The groundwater at the Site indicates upgradient groundwater contamination is present at well cluster MW-1 and well MW-9S. PCE, nickel and chromium were detected in the upgradient groundwater at concentrations exceeding groundwater quality standards. Higher concentrations of PCE, nickel and chromium were detected in the on-Site groundwater samples suggesting that the Site is contributing to these plumes.

The VOCs and metals are expected to flow at rates less than groundwater. The VOC migration rates can be calculated using the retardation factor, which calculates the organic carbon content of the soil with the groundwater seepage velocity. The average groundwater velocity is estimated at 700 feet per year. VOC velocities in groundwater are summarized below.

VOC	Retardation Factor	Estimated Average Contaminant Velocity (Feet per year)
PCE	1.4	500
TCE	1.1	630
TCA	1.3	540
cis 1,2-DCE	1.07	650
1,1-DCE	1.09	640
1,1-DCA	1.07	650
Toluene	1.2	580

As can be seen, the primary Site VOC (PCE) will travel at a rate about 500 feet per year.

The metals migration rate in groundwater is not well understood. The pH of the groundwater is less than 7.0. When the metals are in acidic groundwater conditions, the metals will be more mobile than when the pH is higher than 7.0.

The rate of metals transport flow through the groundwater can be inferred from the distance the plume has traveled. Assume that the plume has migrated from the Site to well MW-12S (a distance of about 500 feet), and that the metals were discharged to the groundwater sometime between 1968 and 1983. This indicates that certain metals (e.g., cadmium) traveled 400 feet or more over a period of 17 to 32 years. The inferred metal transport velocity would therefore range between approximately 15 to 30 feet per year or more. Based on monitoring well analytical data from wells installed in 2001, the width of the plume at Edison Ave is narrow (less than 200 feet wide).

5.3.2 Volatilization and Soil Vapor Migration

PCE within the Site overburden groundwater and soils may volatilize into the unsaturated soil zone (i.e., the zone above the water table). As noted, the thickness of the unsaturated soil zone, based on the explorations, is approximately 18 feet thick. Migration of soil vapors (gases) occurs through the void spaces between the soil grains in the overburden. Soil vapors may discharge into the atmosphere, and into on-Site or off-Site subsurface structures such as basements, manholes, or sumps. In addition, volatilization of VOCs may occur at groundwater discharge locations, such as sumps and/or surface water features.

6.0 QUALITATIVE RISK ASSESSMENT

A qualitative human health baseline risk assessment was completed based on the information presented in Sections 1.0 through 5.0. Generally, the human health evaluation involved an exposure assessment, an evaluation of Site occurrence, hazard identification and comparison to New York State Standards, Criteria and Guidelines (SCGs).

6.1 HUMAN HEALTH EVALUATION

This Section discusses the exposure assessment, an evaluation of Site occurrence and a comparison to SCGs related to potential impacts to human health. It should be noted that several conservative assumptions were used in conducting this assessment, and thus, the risks identified may not necessarily be realized.

6.1.1 Exposure Assessment

This exposure assessment discusses potential migration routes by which chemicals in the environment may be able to reach human receptors. This discussion is based on current and hypothetical future Site conditions and extrapolated Site conditions to off-Site conditions.

Currently, the Site and the surrounding area is mixed commercial and industrial. There are no residences proximate to the Site. It is assumed for the purposes of this evaluation that the general area use will remain unchanged.

In developing hypothetical future Site conditions, the possibility for the Site and immediate surrounding area to be redeveloped for residential purposes was not evaluated, since this is considered unlikely. However, development and/or intrusive Site work in areas near the Site were evaluated. In addition, the possibility for the SFC to be abandoned and left unattended was considered. A future Site worker scenario, unaware of potential contamination, was also considered.

A complete exposure pathway must exist for a population to be impacted by the chemicals at the Site. A complete exposure pathway consists of four components:

1. Source and mechanism of chemical release;
2. Transport medium;
3. Point of potential human contact with the contaminated medium; and
4. Exposure route at the contact point.

Section 4.0 discusses potential source areas and other contaminated media at and associated with the SFC Site. Section 5.0 discusses potential routes of migration of chemical substances from source areas and observed contaminant migration at the Site. This section focuses primarily on identifying potential points of human contact with contaminated media.

The subsections below discuss exposure pathways identified for the Site. The exposure pathways are also summarized on Table 6-1.

6.1.1.1 Surface Soils

Exposure to chemical substances within surface soils may occur via dermal contact or ingestion. The Site is accessible from the surrounding commercial areas during business hours. The Site is restricted by a gated chain link fence during evening hours. In addition, the Site is approximately 90% paved or covered with slab-on-grade concrete. Thus, exposure to surface soils via dermal contact or ingestion is considered low. However, surface soil in the alleyway is accessible to the public. The alleyway is not expected to be

frequented by the public considering it is blocked by vegetation at each end, very narrow and located on private property. The possibility does exist for the Site to be abandoned and unrestricted access to the Site to occur.

6.1.1.2 Subsurface Soils

Exposure to chemical substances within on-Site subsurface soils (including those within cesspools and drainage structures) may occur via dermal contact, inhalation or ingestion under the hypothetical future scenario where on-Site intrusive work is performed and workers are unaware or not properly trained to work with potentially hazardous materials. If these materials are brought to the surface and not adequately secured, it is unlikely that exposure to local residents may occur since the Site is gated and fenced. However, vapor emissions could occur.

It should be noted that the Site is currently recognized by the NYSDEC as an inactive hazardous waste disposal site. As such, intrusive work on the Site, including construction or maintenance work on cesspools and drainage structures, should be conducted in accordance with requirements that include health and safety monitoring. Therefore, the likelihood of this potential exposure is relatively low, if proper health and safety procedures are followed.

Contaminated subsurface soils also act as a source of continuing groundwater contamination.

6.1.1.3 Overburden Groundwater

Exposure to overburden groundwater, if used as a water supply, includes ingestion, dermal contact and inhalation of vapors. There is sufficient overburden groundwater to serve as a water supply source as evidenced by the groundwater supply wells located 1.2 miles southeast of the Site. However, these water supply wells reportedly extract groundwater from greater than 300 feet bgs. Therefore, threat to these wells from contamination at the Site is not expected. Public supply wells are discussed in Section 2.9.

In addition, future development or utility repairs proximate to or downgradient of the Site may expose workers to groundwater during excavation and dewatering. The likelihood for this exposure scenario is considered moderate.

6.1.1.4 Potential Volatile Vapors

Potential inhalation exposure from PCE volatilization from this groundwater near the Site may occur under current conditions (e.g., migration of vapors into buildings). Excavation work on utilities (including drainage or cesspool structures) within the Site or along Dale and Cabot Street, or Edison Avenue may also result in exposure to VOCs. The likelihood of these exposures is considered low due to the depth to groundwater (approximately 18 feet bgs) and lack of basements in the vicinity of the Site. Additionally, work inside drainage structures or cesspools is expected to be monitored (e.g., air monitoring prior to entering) due to the confined-space nature of the work.

6.1.1.5 Dust Migration

Potential dust migration from unpaved areas could also occur resulting in off-Site migration of contaminants. This could occur from the alleyway south of the existing SFC Building. However, this area is partially vegetated. Limited dust migration is possible; although, the likelihood of significant exposure is considered low.

6.1.2 Evaluation of Site Occurrence

Tables 6-2, 6-3 and 6-4 present the range of concentrations for the chemicals detected in the various media for the exposure scenarios discussed above. The summary includes the number of times a chemical was detected; the number of samples analyzed; the maximum value reported and the location where the maximum value was reported. For purposes of this qualitative assessment, the exposure point concentration was set as the maximum reported value, and this value was then compared to SCGs.

In evaluating Site occurrence, reported analytical results qualified with an "R", indicating the data were rejected by the data validator, were omitted. In addition, data from matrix spike and matrix spike duplicate samples were not included. Data from diluted, duplicate and re-analyzed samples were included for purposes of determining a maximum or minimum value. Both unfiltered and filtered results for groundwater were included in the evaluation. However, these were combined as one sample in evaluating the frequency of occurrence.

Groundwater monitoring wells were sampled during three events. As previously described, the number of samples and analytical testing during the third round were reduced based on a review of the Round 1 and 2 data. The number of times detected is represented by the number of individual locations in which a particular substance was detected. As such, a compound was only counted once per location (e.g., MW-6S), regardless of whether it was detected in Round 1, Round 2 or Round 3 samples. The data from the three sampling rounds were combined for this evaluation (i.e., the higher or highest concentration of the three rounds were selected).

6.1.3 Hazard Identification and Comparison to SCGs

The Site's potential hazard of human exposure was reviewed based on chemical-specific health exposure based SCGs. SCGs included State values believed potentially applicable to the media or pathway being examined. The SCGs varied depending on the environmental medium under consideration; and, it should be noted that the applicability of a given SCG to a specific media or pathway was considered during the review and subsequent comparisons. The SCGs, maximum concentration and detection frequency are presented in Tables 6-2, 6-3 and 6-4.

The sections below discuss the SCGs used for each medium and the comparison of anticipated exposure point concentrations to SCGs. It should be noted that additional SCGs (i.e., non-chemical specific) might subsequently be identified during the Focused Feasibility Study.

6.1.3.1 Surface Soils

The SCGs used for Site surface soils include the following:

- "Determination of Soil Cleanup Objectives and Cleanup Levels", NYSDEC TAGM 4046 Guidance dated January 24, 1994 (Reference 14).

A comparison of soil SCGs and Site occurrence information compiled from analytical testing results of surface soil samples collected from the Site is included in Table 6-2. The data set used to compile this information included the surface soil samples (samples designated “AP” from the upper 0 to 1 foot of soil.)

As shown in Table 6-2, there are several exceedances of the SCGs. Most of the exceedances and the highest frequency of detections were noted for the metals. Two VOCs and two PCBs were also reported in exceedance of the SCGs.

6.1.3.2 Subsurface Soils

The SCGs used for Site surface soils include the following:

- "Determination of Soil Cleanup Objectives and Cleanup Levels", NYSDEC TAGM 4046 Guidance dated January 24, 1994 (Reference 14).

A comparison of soil SCGs and Site occurrence information compiled from analytical testing results for subsurface soil samples (samples designated "GP", “MW”, “CP”, “DS”, “AG” and "TP") collected from the Site is included in Table 6-3.

As shown in Table 6-3, there are many exceedances of the SCGs, primarily for the inorganics.

6.1.3.3 Overburden Groundwater

Human health risks associated with exposure to overburden groundwater were examined by considering both use of the overburden groundwater as a drinking water source, and potential exposure to overburden groundwater at a point of contact, downgradient of the Site to the south by construction or utility workers.

The SCGs used for human health risks associated with use of overburden groundwater at the Site as a drinking water source, include the following.

- NYSDEC Class GA Groundwater Quality Criteria 6NYCRR Part 701-703 dated June 1998 (Reference 15).

As shown in Table 6-4, there are eleven VOCs that exceed the SCGs. PCE was detected the most frequently and at the highest concentration. There were no SVOCs that exceed the SCGs. Two pesticides exceed their respective SCGs.

The inorganic results are separated into two sets of data, unfiltered (total) and filtered. The unfiltered data includes the low-flow results. These results indicate that 20 inorganics exceed the SCGs. The filtered results indicate that seven inorganics exceed the SCGs.

6.1.3.4 Volatile Vapors in Downgradient Excavation or Basement

A potential exposure scenario is temporary exposure to VOC vapors within a downgradient excavation made near the Site. However, quantification of these risks without VOC vapor data is speculative and unreliable. Given the depth to groundwater, concentrations of PCE in groundwater; monitoring requirements for cesspool and drainage structure confined space entry; and lack of basements in the local Site vicinity (where structures are primarily slab-on-grade construction); it is suspected that exposure to VOCs in basements and excavations would be low.

7.0 SUMMARY AND CONCLUSIONS

7.1 SITE HISTORY SUMMARY

SFC Site

The SFC began operations at the Site around 1968. Building department records indicate that the SFC building (50 Dale Street) was constructed in the late 1960s. Metal finishing operations at the Site included electroplating (in particular copper, cadmium, chromium and nickel) of high strength alloys (for the aerospace industry), chromium conversion coating (aluminum parts), and chemical cleaning. The facility was known to have specialized in descaling and chemical cleaning of titanium alloys. Painting was also reportedly conducted at the facility.

During the 1970s, SCDHS inspections revealed discharges of liquid plating wastes to the soil and drainage structures. Since about 1983, SFC discontinued discharge of wastewater into the on-Site drainage structures, and disposed the wastewater off Site. In June 1994, SFC filed Chapter 7 bankruptcy and ceased operations.

The USEPA completed a removal action to address the on-Site wastes in August 1997 – March 1998. The removal action included the removal and disposal of a total of 25,767 gallons and 77 cubic feet of various hazardous wastes. Two concrete-lined sumps, various exterior sumps/drywells, various USTs, paint booths and several vats were observed inside the building during the EPA removal action. The removal action included the scraping and sweeping to remove waste from the interior floors and pressure washing of the boiler room, wastewater treatment room, garage area, storage room, process rooms and paint booths.

NTU Site

The NTU Site is a delisted NYSDEC Class 2a inactive hazardous waste disposal Site (registry number 1-52-086). This facility adjoins the Site to the north. NTU produced high-resolution

printed circuit boards and its operations included drilling, cleaning and electroplating. Chemicals used at the NTU facility include ammonium persulfate, sulfuric acid, hydrochloric acid, copper plating solution, and etching solution (containing copper, lead and nickel).

No volatile organic chemicals were reportedly used at the NTU facility. Additionally, according to information contained in the Phase II Investigation Report, there was no documentation to verify that the organic compounds detected were ever used at the NTU Site. The Phase II report (Reference 3) indicated that it is possible that contamination from an outside source reached the leach pools via nearby facilities that use VOCs (including the SFC Site). The parking lot on the south side of the NTU building, is now part of the SFC Site.

Remediation (soil removal) of metal contaminated soil was completed in drain pools around the Site. According to SCDHS, following the removal of contaminated soil the drain pools were filled with lime slurry, sealed and covered with asphalt.

7.2 FIELD EXPLORATIONS SUMMARY

The FRI study was conducted in three Phases between June 1999 and July 2001. During this time, various field explorations were completed at the Site in general accordance with the Site Field Activities Plan. The FRI study was completed to evaluate surface and subsurface environmental conditions and to provide data pertaining to the extent of nature and extent of on-Site contamination. The field explorations included: a geophysical survey; Geoprobe soil borings, test boring and monitoring well installations; test pit explorations; water level survey; hydraulic conductivity testing; water supply well inventory; existing monitoring well assessment; health and safety monitoring; and environmental sampling.

7.3 PHYSICAL SITE CHARACTERISTICS SUMMARY

7.3.1 Summary of Surface Features and Surface Water Hydrology

The Site property consists of approximately 0.9 acres of land, located at 50 Dale Street in West Babylon, New York. For the purpose of this investigation, the Site study area was extended to the north to include the parking lot up to the south edge of the buildings located at 60 Dale Street (approximately 1.3 acres). SFC owned the Site since 1968. SFC specialized in electroplating high strength alloys, and descaling titanium alloys for the aerospace industry. Metal finishing operations at the Site ceased in about 1994.

The Site includes the original on-Site building, approximately 60 feet by 320 feet (19,400 square feet). Areas not occupied by the building consist of paved parking to the north, an unpaved alleyway to the south, and grassy areas to the east and west of the building. Current tenants in the building include a machine shop, door manufacturer, and an automobile storage operation.

Eleven cesspools, 12 drainage structures and two former well structures exist at the Site. In general, the cesspools and drainage structures are similar and are approximately eight-foot diameter, round concrete vaults with perforated sides, and apparently no bottom. For the

purposes of this report, cesspools include those structures with solid steel or concrete covers, whereas drainage structures generally have open grate steel covers.

Natural surface water bodies (e.g., streams or ponds) do not exist near the Site. However, manmade drainage basins are located in the area. Asphalt and gravel areas surrounding the Site buildings direct surface water runoff at the Site. The stormwater from the parking areas, which also includes some run-off from the building roof, generally collects in several stormwater drainage structures located south of the former NTU building and north of the SFC building. Stormwater along Dale and Cabot Streets drains to catch basins that convey water toward Edison Avenue.

7.3.2 Geologic and Hydrogeologic Summary

The fill material encountered on-Site is relatively insignificant. Glacial outwash deposits, (the Upper Glacial Aquifer) consisting primarily of gravelly sand, are under the fill at the Site. The Upper Glacial Aquifer is the prevalent overburden at the Site study area. This deposit was observed up to depths of approximately 90 feet bgs. The Upper Glacial outwash was encountered in each subsurface exploration across study area and is the predominant water-bearing unit studied at this Site. The Gardiners Clay was observed underneath the Upper Glacial sands at a depth of about 90 feet.

The groundwater flow direction in the study area is southeasterly based on the groundwater measurements made. The southeasterly flow direction is generally consistent with the apparent regional groundwater flow and previous studies.

The groundwater flow velocities were calculated for the Upper Glacial Aquifer and ranged from about 0.05 to 6 feet per day (fpd), with an average of 2 fpd or 700 feet per year.

7.4 NATURE AND EXTENT OF CONTAMINATION SUMMARY

Based on historical information and previous studies conducted at and near to the Site, several potential source areas were identified. Source areas include cesspools, drainage structures, interior sumps, surficial spills, and upgradient groundwater.

Site specific chemical classes of concern include VOCs and inorganic compounds (metals). Other chemical classes, including SVOCs, PCBs, and pesticides were analyzed for and detected at the Site, but appear to be less significant.

7.4.1 IRM Summary

The IRM was undertaken to remove heavily contaminated sediments located in selected cesspools and drainage structures. Eleven underground structures, cesspools and storm drains were selected by NYSDEC for remediation: DS-4, DS-5, DS-8, DS-10, CP-3, CP-4, CP-5, CP-6, CP-7, CP-8, and CP-10. The IRM included the removal of 11,500 gallons of non-hazardous water; 3,950 gallons of impacted water; and 43 tons of soil/sediment identified as hazardous waste (Waste Code D006 Cadmium contaminated).

7.4.2 Source Areas

The source areas include cesspools and drainage structures, surficial soils in the alleyway and the sump near the former rinsewater and treat hold area. Other potential sources include the pipelines within the SFC Building and those interconnecting the cesspools and drainage structures. Upgradient groundwater also appears to be adding contamination (VOCs and certain metals) to the Site groundwater. The most significant contamination was found in the cesspools and drainage structures. For example, the results from CP-3 (pre-IRM) contained cadmium at 19,500 mg/kg (~2 %), and chromium at 120,000 mg/kg (~12%).

In general, the pre-IRM results from the cesspools and drainage structures indicated that VOCs, metals, SVOCs and PCBs exceeded subsurface soil RSCOs in one or more of the structures. Post-IRM results indicate that the VOCs, PCBs, and SVOCs have been removed to levels below the RSCOs. Metal concentrations were greatly reduced, but residual concentrations are above the RSCOs in many of the cesspools and drainage structures.

7.4.3 Soil Contamination

7.4.3.1 VOCs

There were VOC detections and exceedances of RSCOs in surface soils at three locations in the alleyway. However, the VOC results from subsurface soils did not show exceedances of RSCOs.

7.4.3.2 Inorganics

The levels of the four "indicator" metals (i.e., cadmium, chromium, copper, nickel) in soils are shown on Figure 10. This figure includes both surface soil and subsurface soil results. The highest levels of these metals are in the alleyway south of the SFC Building and from samples inside the SFC Building (TP-1, GP-40 and GP-47). It should be noted that the cesspools and drainage structures also contain high levels of metals in the soil, although these results are not shown on this figure.

Figure 11 shows the sample locations containing one or more of the four metals at levels 100 times greater than the respective RSCOs. This figure includes cesspool and drainage structure results (post-IRM). In general, cadmium is the primary metal with concentration levels 100 times the RSCOs. The volume of soil impacted at 100 times above the RSCO is estimated at 440 cubic yards (cy) from the surface and near surface soils, about 50 cy from the cesspools and drainage structures and about 200 cubic yards (cy) at GP-47.

The surface and subsurface soil samples containing the four metals greater than 10 times the RSCO are shown on Figure 12. The volume of soil containing one or more of the four metals detected at 10 times the RSCO is estimated at approximately 2,900 cy.

7.4.3.3 PCBs/Pesticides

There were three PCB exceedances of RSCOs in the surface soils and one exceedance of PCBs were detected in the subsurface soils. There were no exceedances of the pesticide RSCOs in surface soils, and ten exceedances of pesticide RSCOs in subsurface soils.

7.4.3.4 SVOCs

There were SVOCs reported in surface and subsurface soils. The concentrations reported were generally below their respective RSCOs.

7.4.4 GROUNDWATER ANALYTICAL RESULTS

7.4.4.1 VOCs

Twenty-four VOCs were detected in the groundwater samples. Twelve of the VOCs were detected in excess of groundwater standards. PCE was detected the most frequently in the groundwater and at the highest concentration (610 ug/L at GP-12). A plan view of the PCE distribution in the groundwater is included as Figure 13. This map displays the shallow PCE concentration contours. The higher levels of PCE are situated on the east portion of the Site near GP-33, GP-17, GP-9, and GP-12. In general, PCE was not detected on the west side of the Site with the exception of GP-29 (3ug/L) and MW-1D2 (21 ug/L).

The PCE plume indicates that upgradient groundwater is contaminated (e.g., MW-9S, 140 ug/L). Thus, a potential source area exists north and/or west of both the SFC and NTU Site. Other additional sources of PCE appear on-Site. For example, CP-6 contained 12,000 ug/kg of PCE in the sediment sample. While a plume is not apparently emanating from CP-6, it does suggest that PCE was discharged on Site.

The analytical test results indicate a trend of decreasing PCE concentrations in the central west part of and increasing PCE concentration downgradient of the Site between the 1999/2000 and 2001 sample rounds.

7.4.4.2 Inorganics

Filtered and Low-Flow Results

The inorganics from the filtered and low-flow sampling show that eleven inorganics exceed groundwater standards. They are antimony, cadmium, chromium, copper, iron, lead, manganese, nickel, sodium, thallium and cyanide.

- Antimony slightly exceeded the groundwater standard at two of the low-flow sampling locations and at 68 of the filtered samples. However the highest groundwater concentration reported was 6.5 ug/L compared to the standard of 3 ug/L. The significance of the exceedance is not apparent. As such, antimony is not discussed further.

- Cadmium and nickel significantly exceeded the groundwater standards at 14 and 16 locations, respectively in the low-flow samples. Additionally, cadmium and nickel were detected above the groundwater standards at 27 and eight filtered samples respectively. These metals are discussed in more detail below.

- Chromium and copper significantly exceeded the groundwater standards at nine and three low-flow sample locations, respectively. Additionally copper was detected above the groundwater standards at four filtered sample locations. Chromium was not detected above the groundwater standards in the filtered locations. These metals are discussed in more detail below.

- Iron, manganese, and sodium exceeded the groundwater standards. However, these metals are not considered significant human health concern, and are not discussed further.

- Lead exceeded the groundwater standard at one well MW-6S (2960 ug/L) downgradient of the Site. This compound cannot be related directly to the Site. Thus, this metal is not discussed further.

- Thallium was detected at well MW-11S at a concentration of 4.8 ug/L which slightly exceeds the groundwater standard of 1 ug/L. Since thallium was only detected at one location, it is not discussed further.

- Cyanide was detected at one location above the groundwater standard, MW-4S (652 ug/L). Since cyanide was only detected above the standard at one location, it is not discussed further.

- Hexavalent chromium was detected at two locations above the groundwater standard (MW-3S at 80 ug/L and MW-6S at 914 ug/L).

The following discussion focuses on the four metals cadmium, chromium, copper, and nickel from the low-flow sampling. Figure 14 presents the spatial distribution for these metals in groundwater.

Cadmium

Cadmium was detected above the groundwater standard at 31 locations. It appears that cadmium becomes prevalent in the groundwater just south of the cesspools and drainage structures in the parking area between the NTU Site and the SFC Site. The cadmium exceedances appear to originate from east to west across the Site paralleling the line of cesspools and drainage structures. The highest levels of cadmium were detected at MW-4S (672 ug/L) and GP-2 (593 ug/L.)

Chromium

Chromium was detected above the groundwater standard at seven locations: MW-1S, MW-1D2, MW-2S, MW-3S, MW-3D, MW-4S, and MW-6S. The highest level of chromium was detected at MW-6S (3,180 ug/L). The other chromium levels were less than 100ug/L. It appears that chromium could be from the Site as high levels of chromium were detected in the source areas (e.g., cesspools). However, upgradient groundwater at well MW-1 cluster contained elevated chromium levels (62.9 to 71.7 ug/L).

Copper

Copper was detected in excess of the groundwater standard primarily in the eastern portion of the Site. Three groundwater sample locations contained elevated levels: GP-16 (205 ug/L), GP-4 (960 ug/L), and MW-4S (1910 ug/L). These data suggest that a source of copper exists or existed on-Site. Upgradient copper concentrations ranged from 16.2 to 33.5 ug/L.

Nickel

Nickel was detected at concentrations exceeding the groundwater standard at 20 locations. Upgradient groundwater contained nickel concentrations in excess of the groundwater standard (100 ug/L). Specifically at well cluster MW-1 and well MW-9S the nickel concentration ranged between 189 to 313 ug/L. However, the nickel concentrations are significantly higher at several downgradient locations such as: GP-9 (1,770 ug/L); GP-4 (528 ug/L); MW-4S (916 ug/L); MW-6S (547 ug/L); MW-12S (501 ug/L); and GP-2 (999 ug/L). This suggests a source of nickel exists on-Site.

7.4.4.3 PCBs/Pesticides

Four pesticides were detected in the groundwater. Two pesticides, aldrin and heptachlor epoxide, exceed the groundwater standards. The pesticides exceedances occurred at well MW-10S, MW-3S, MW-4S, and MW-5D2. There does not appear to be a traceable pattern to the SFC Site. Samples were not tested for PCBs.

7.4.4.4 SVOCs

In general, SVOCs were not detected. The only SVOC detected was bis (2-ethylhexyl) phthalate. However, the concentrations did not exceed the groundwater standard.

7.5 CONTAMINANT FATE AND TRANSPORT SUMMARY

7.5.1 Observed Migration Summary

Primary routes of migration from the Site are via groundwater and volatilization to soil gas/air. The groundwater at the Site in the glacial outwash deposits generally flows southeasterly. It

is generally understood that the contamination will flow with the groundwater in a southeasterly direction.

Volatilized contamination from soil and groundwater is expected to migrate in soil gas above the groundwater table. Migration of soil gas contaminated with VOCs is expected and is less predictable than groundwater migration due to subsurface heterogeneities and subsurface structures (e.g., utilities, building foundations). The source of the VOC contamination is expected to primarily be associated with contaminated groundwater.

Groundwater migration, under current conditions, is expected to spread the contamination to the south, with possible easterly components based on the direction of groundwater flow. Vertical spreading is also expected.

The groundwater at the Site indicates upgradient groundwater contamination is present at well cluster MW-1 and well MW-9S. PCE, nickel and chromium were detected in the upgradient groundwater at concentrations exceeding groundwater quality standards. Higher concentrations of PCE, nickel and chromium were detected in the on-Site groundwater samples, suggesting that the Site is contributing to these plumes.

The VOCs and metals are expected to flow at rates less than groundwater. As the contamination migrates southerly, the natural organic carbon in the soil will adsorb the organics, thus slowing the advance of the VOC plume. Additionally, VOCs will be attenuated in the direction of groundwater flow in response to dispersion, volatilization, and degradation, among other factors.

VOC migration rates were calculated using a retardation factor of about 1.1 to 1.4 times slower than groundwater. The average groundwater velocity is estimated at 700 feet per year, and thus, the retarded VOC velocities are expected to range between 500 and 650 feet per year.

Metals migration is attenuated by adsorption to the soils, dispersion and precipitation among other factors. Based on the distance traveled and the assumed time the metals have been in groundwater, the inferred metal transport velocity would range between approximately 15 to 30 feet per year or more.

7.6 QUALITATIVE RISK ASSESSMENT SUMMARY

A qualitative baseline risk assessment was completed based on the information and data obtained during the FRI study. Human health and ecological assessments were completed.

7.6.1 Summary of Human Health Risk Assessment

A qualitative baseline human health risk assessment was completed based on the information and data obtained during the FRI study. The qualitative human health evaluation included an exposure assessment, an evaluation of Site occurrence, hazard identification and comparison to New York State SCGs.

- A majority of the Site is paved and access is restricted, therefore, there is low exposure potential in these areas. However, the surface soil is exposed in the alleyway south of the SFC Building, and a greater exposure potential exists in that area.

- There is a moderate exposure potential to subsurface soils due to leaching to groundwater. Access to subsurface Site soils is considered low, as it would likely be limited to future construction or maintenance of existing subsurface utilities including the cesspools and drainage structures.

- The potential of exposure to overburden groundwater is moderate based on the current and anticipated future use of the Site and the presence of a public water supply in the area.

- There is a low exposure potential for soil gas vapors due to the relatively low groundwater concentrations; monitoring requirements for cesspool and drainage structure confined space entry; and lack of basements in the local Site vicinity (where structures are primarily slab-on-grade construction);.

- There is a low exposure potential for dust particulate from the Site as the majority of the Site is paved, and the exposed soils in the alleyway are situated between two buildings limiting exposure to wind.

7.7 CONCLUSIONS

Based on the FRI summarized above, the following conclusions regarding current Site conditions are presented.

The following Site environmental media need to be addressed during the feasibility study.

- Surface soils;

- Subsurface soils, including cesspools and drainage structures and associated piping;

- Overburden groundwater; and

In addition, off-Site concerns include the following.

- Groundwater contamination located off-Site to the south and east resulting from on-Site sources. Upgradient groundwater contamination sources and possible downgradient sources may also exist (i.e., cesspools or drainage structures possibly impacted by runoff from the site.)

- Subsurface soil in the drainage structures in the parking area of the Building at 40 Dale Street.

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Table 1-1
Summary of Cesspools, Drainage Structures, and Well Structures

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Structure Number	Reference Elevation (feet)	Type of Cover	Approximate Diameter (feet)	Type of Construction	Liquids in the Structures		Soils in the Structures		Remarks
					Depth to Liquid (feet)	Comments	Depth to Soils (feet)	Comments	
DS-1	62.22	Open Grate	8	Round with perforated concrete walls, no bottom.	Dry	no sample collected	10 to 12	Dark brown/black organics and sand	4-inch diameter plastic pipe enters structure from northwest side, apparently connected to roof drain. 4-inch diameter plastic pipe exits west side of structure, possibly connected to CP-2.
DS-2	62.09	Open Grate	8	Round with perforated concrete walls, no bottom.	7 to 8		10 to 12	Dark brown/black organics and sand	4-inch diameter plastic pipe enters structure from northwest side, apparently from building.
DS-3	62.22	Open Grate	8	Round with perforated concrete walls, no bottom.	7 to 8		10 to 12	Dark brown/black organics and sand	4-inch diameter plastic pipe enters structure from the south, apparently connected to building. 4 inch diameter plastic pipe exits structure from the northwest, apparently connected to CP-1.
DS-4	62.19	Open Grate	8	Round with perforated concrete walls, no bottom.	9		9.5	Dark brown/black organics and sand	4-inch diameter plastic pipe enters structure from northeast side, apparently connected to roof drain.
DS-5	62.18	Open Grate	8	Round with perforated concrete walls, no bottom.	15		15 to 16	Dark brown/black organics and sand	4-inch diameter plastic enters structure from southeast side, apparently connected to roof drain.
DS-6	61.92	Open Grate	8	Round with perforated concrete walls, no bottom.	5 to 6		10 to 12	Dark brown/black organics and sand	4-inch diameter plastic pipes enter structure from southeast and southwest sides, apparently connected to roof drains. 6 inch diameter pipe exits structure from west side, possibly connected to a buried cesspool.
DS-7	63.08	Open Grate	8	Round with perforated concrete walls, no bottom.	Dry	no sample collected	1 to 2	Dark brown/black organics and sand	4-inch diameter plastic pipe enters structure from northeast side, apparently connected to building. Structure is full of sediments.
DS-8	63.14	Open Grate	8	Round with perforated concrete walls, no bottom.	6 to 8		10 to 12	Dark brown/black organics and sand	4-inch diameter plastic pipe enters structure from southeast side, apparently connected to roof drain.
DS-9	63.09	Open Grate	8	Round with perforated concrete walls, no bottom.	4		10 to 12	Dark brown/black organics and sand	4-inch diameter plastic pipe exits structure from east side, possibly connected to DS-12. 4-inch diameter plastic pipe enters structure from north side, possibly connected to building.
DS-10	62.87	Open Grate	8	Round with perforated concrete walls, no bottom.	6 to 8		10 to 12	Dark brown/black organics and sand	4-inch diameter plastic pipe enters structure from southwest side, apparently connected to roof drain. 6-inch diameter plastic pipe exists structure from east side, possibly connected to a buried cesspool near Dale Street.
DS-11	62.96	Open Grate	8	Round with perforated concrete walls, no bottom.	8 to 10		12 to 15	Dark brown/black organics and sand	4-inch diameter plastic pipe enters/exits structure from west side, possibly connected to DS-12.
DS-12	63.36	Open Grate	8	Round with perforated concrete walls, no bottom.	8 to 10		12 to 14	Dark brown/black organics and sand	4-inch diameter plastic pipe enters/exits structure from east side, apparently connected to DS-11. No pipe observed on west side of structure (leading towards DS-9).
CP-1	62.37	Solid Cover (Buried)	8	Round with perforated concrete walls, no bottom.	8 to 10		14 to 15	Brown sandy sediments	4-inch diameter plastic pipe enters structure from the southeast, apparently connected to DS-3.
CP-2	62.53	Solid Cover (Buried)	8	Round with perforated concrete walls, no bottom.	Dry	no sample collected	13 to 14	Brown sandy sediments	4-inch diameter plastic pipe enters structure from the east, apparently connected to DS-1.
CP-3	62.52	Solid Cover (Buried)	8	Round with perforated concrete walls, no bottom.	Dry	no sample collected	12 to 14	Soft red/green sediments	4-inch diameter plastic pipe enters structure from the northwest, apparently connected to building. 4-inch diameter plastic pipe exists structure from the west, apparently connected to CP-4.
CP-4	63.38	Solid Cover (Buried)	8	Round with perforated concrete walls, no bottom.	Dry	no sample collected	12 to 14	Soft red/green sediments	4-inch diameter plastic pipe enters structure from the east, apparently connected to CP-3.
CP-5	62.84	Solid Cover (Buried)	8	Round with perforated concrete walls, no bottom.	10 to 12		12 to 14	Dark brown/black sandy and gravelly sediments	4-inch diameter plastic pipe enters structure from the west, apparently connected to building.
CP-6	no survey data, approximately 62.7	Solid Cover	8	Round with perforated concrete walls, no bottom.	8 to 10		11	Brown sand and organics	4- to 6-inch diameter plastic pipe enters structure from the southwest, apparently connected to the bathrooms and floor drains inside of building. 4-inch diameter pipe enters/exits structure on the northwest side (possibly connected to a buried cesspool).
CP-7	63.25	Solid Cover	8	Round with perforated concrete walls, no bottom.	Dry	no sample collected	13	Soft green/red sediments	6-inch diameter plastic pipe enters structure from south side, apparently from building.
CP-8	63.65	Solid Cover	8	Round with perforated concrete walls, no bottom.	Dry	no sample collected	6 to 8	Brown sandy sediments	6-inch diameter plastic pipe enters structure from southwest side, apparently connected to building and or roof drain.
CP-9	63.50	Solid Cover	8	Round with perforated concrete walls, no bottom.	3 to 4		12 to 14	Brown sand and organics	4-inch diameter plastic pipe enters structure from northeast side, apparently from CP-10.
CP-10	63.72	Solid Cover	8	Round with perforated concrete walls, no bottom.	5 to 6		12 to 14	Brown sand and organics	4-inch diameter plastic pipe exits structure from southwest side, apparently to CP-9. 4-inch diameter plastic pipe enters structure from northeast side, apparently from building.
CP-11	62.50	Solid Cover	8	Round with perforated concrete walls, no bottom.	Dry	no sample collected	12	Dark brown/black organics and sand	4-inch diameter plastic pipe enters structure from northwest side, apparently from building.
WS-1	62.74	Solid Cover	6	Round concrete vault.	Dry	no sample collected	6	Brown sandy sediments	No apparent pipe inlets or outlets. Piping exist within the structure.
WS-2	63.47	Solid Cover	6	Round concrete vault, possibly perforated.	Dry	no sample collected	5	Brown sandy sediments	1- to 1.5-inch diameter pipe and other piping fixtures exits/enters the north side of structure.

NOTES:
1) See Figure No. 4 for cesspool and drainage structure locations.
2) Survey information provided by YEC, P.E., L.S., P.C.
3) Depth measurements referenced to the ground surface.
4) N/A = not applicable.
5) Drainage structures have open grated covers and were generally located in areas to collect stormwater runoff.
6) Cesspools CP-1 through CP-5 have solid concrete covers. Cesspools CP-6 through CP-11 and WS-1 and WS-2 have solid steel covers.
7) Drainage structures with pipes leading to the buildings are generally connected to roof drains.

Table 2-1
Summary of Samples Collected for Analytical Testing
Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Location	Lab Identifier	Date Sampled	Matrix	TCL VOCs	TCL SVOCs	TAL Metals + Cn	TAL Metals (Dissolved)	Cr^{+6}	TCL PCBs	TCL Pesticides	TOC	Wet Chemistry Parameters	GC Fingerprint
Surface Soil													
AP-1	AP-1,S-1	6/9/1999	soil	1		1			1				
AP-1	AP-1	6/28/1999	soil		1								
AP-2	AP-2, S-1	6/9/1999	soil	1		1			1				
AP-2	AP-2	6/28/1999	soil		1								
AP-5	AP-5	6/27/1999	soil	1	1	1			1		1		
AP-5 (Duplicate)	AP-11	6/27/1999	soil	1	1	1			1	1	1		
AP-6	AP-6	6/27/1999	soil	1	1	1			1				
AP-7	AP-7	6/27/1999	soil	1	1	1			1				
AP-8 (MS/MSD)	AP-8	6/27/1999	soil	3	3	3			3				
AP-9	AP-9	6/27/1999	soil	1	1	1			1				
AP-10	AP-10	6/27/1999	soil	1	1	1			1	1	1		
Equipment Blank (Bowl and Spoon)	EB-7-AP	6/27/1999	water	1	1	1			1				
TOTAL (Surface Soil Samples):				12	12	12	0	0	12	2	3	0	0
Geoprobe and Soil Boring Subsurface Soil													
GP-1, S-3	GP-1, S-3	6/1/1999	soil	1		1			1				
GP-1, S-8	GP-1, S-8	6/1/1999	soil	1		1			1				
GP-2, S-5	GP-2, S-5	6/10/1999	soil	1		1			1				
GP-2, S-10	GP-2, S-10	6/10/1999	soil	1		1			1				
GP-3, S-5 (MS/MSD)	GP-3, S-5	6/10/1999	soil	3		3			3				
GP-3, S-9	GP-3, S-9	6/10/1999	soil	1		1			1				
GP-4, S-2	GP-4, S-2	6/4/1999	soil	1		1			1				
GP-4, S-9	GP-4, S-9	6/4/1999	soil	1		1			1				
GP-5, S-1	GP-5, S-1	6/7/1999	soil	1		1			1				
GP-5, S-8	GP-5, S-8	6/7/1999	soil	1		1			1				
GP-6, S-4 (MS/MSD)	GP-6, S-4	6/28/1999	soil	3		3			3				
GP-6, S-7	GP-6, S-7	6/28/1999	soil	1		1			1				
GP-7, S-5	GP-7, S-5	6/4/1999	soil	1		1			1				
GP-7, S-10	GP-7, S-10	6/28/1999	soil	1		1			1				
GP-7, S-10 (Duplicate)	GP-41, S-1	6/28/1999	soil	1		1			1				
GP-8, S-4	GP-8, S-4	6/16/1999	soil	1		1			1				
GP-9, S-4	GP-9, S-4	6/7/1999	soil	1		1			1				
GP-9, S-6	GP-9, S-6	6/7/1999	soil	1	1	1			1	1	1		
GP-9, S-6 (Duplicate)	GP-41, S-5	6/7/1999	soil	1	1	1			1	1	1		
GP-10, S-1	GP-10, S-1	6/15/1999	soil	1		1			1				
GP-10, S-4	GP-10, S-4	6/15/1999	soil	1		1			1				
GP-11, S-4	GP-11, S-4	6/3/1999	soil	1		1			1				
GP-11, S-4 (Duplicate)	GP-37, S-4	6/3/1999	soil	1		1			1				
GP-12, S-4	GP-12, S-4	6/1/1999	soil	1		1			1				
GP-12, S-10	GP-12, S-10	6/1/1999	soil	1		1			1				
GP-13, S-6	GP-13, S-6	6/2/1999	soil	1	1	1			1	1			
GP-14, S-6	GP-14, S-6	6/2/1999	soil	1		1			1				
GP-14, S-10	GP-14, S-10	6/2/1999	soil	1		1			1				
GP-15, S-1	GP-15, S-1	6/2/1999	soil	1		1			1				
GP-15, S-3	GP-15, S-3	6/2/1999	soil	1		1			1				
GP-16, S-1	GP-16, S-1	6/2/1999	soil	1		1			1				
GP-16, S-8	GP-16, S-8	6/2/1999	soil	1		1			1				
GP-17, S-2	GP-17, S-2	6/2/1999	soil	1		1			1				
GP-17, S-6	GP-17, S-6	6/2/1999	soil	1		1			1				
GP-18, S-4	GP-18, S-4	6/16/1999	soil	1	1	1			1	1	1		
GP-19, S-4	GP-19, S-4	6/2/1999	soil	1	1	1			1	1			
GP-19, S-8	GP-19, S-8	6/2/1999	soil	1		1			1				
GP-20, S-3	GP-20, S-3	6/4/1999	soil	1		1			1				
GP-20, S-8	GP-20, S-8	6/4/1999	soil	1		1			1				
GP-21, S-2	GP-21, S-2	6/4/1999	soil	1		1			1				
GP-21, S-8	GP-21, S-8	6/4/1999	soil	1		1			1				
GP-22, S-2	GP-22, S-2	6/2/1999	soil	1		1			1				
GP-22, S-9	GP-22, S-9	6/2/1999	soil	1		1			1				
GP-23, S-4	GP-23, S-4	6/15/1999	soil	1	1	1			1	1			
GP-24, S-3	GP-24, S-3	6/3/1999	soil	1		1			1				
GP-24, S-7	GP-24, S-7	6/3/1999	soil	1		1			1				
GP-25, S-5	GP-25, S-5	6/3/1999	soil	1		1			1				
GP-25, S-10	GP-25, S-10	6/3/1999	soil	1		1			1				
GP-26, S-5	GP-26, S-5	6/1/1999	soil	1		1			1				
GP-26, S-10	GP-26, S-10	6/1/1999	soil	1		1			1				
GP-27, S-5	GP-27, S-5	6/15/1999	soil	1		1			1				
GP-27, S-9	GP-27, S-9	6/15/1999	soil	1		1			1				
GP-28, S-3 (MS/MSD)	GP-28, S-3	6/15/1999	soil	3	3	3			3	3			
GP-28, S-8	GP-28, S-8	6/15/1999	soil	1		1			1				
GP-29, S-4	GP-29, S-4	6/3/1999	soil	1		1			1				
GP-29, S-9	GP-29, S-9	6/3/1999	soil	1		1			1				
GP-30, S-1	GP-30, S-1	6/3/1999	soil	1		1			1				
GP-30, S-6	GP-30, S-6	6/3/1999	soil	1		1			1				
GP-32, S-5	GP-32, S-5	6/1/1999	soil	1	1	1			1	1			
GP-32, S-9	GP-32, S-9	6/1/1999	soil	1		1			1		1		
GP-33, S-4	GP-33, S-4	6/2/1999	soil	1		1			1				
GP-33, S-10	GP-33, S-10	6/2/1999	soil	1		1			1				
GP-34, S-6	GP-34, S-6	6/2/1999	soil	1		1			1				
GP-34, S-10	GP-34, S-10	6/2/1999	soil	1		1			1				
GP-35, S-8	GP-35, S-8	6/3/1999	soil	1		1			1				
GP-36, S-2	GP-36, S-2	6/3/1999	soil	1		1			1				
GP-36, S-8	GP-36, S-8	6/3/1999	soil	1		1			1				
GP-38, S-4	GP-38, S-4	6/3/1999	soil	1		1			1				
GP-38, S-9	GP-38, S-9	6/3/1999	soil	1		1			1				
GP-39, S-2	GP-39, S-2	6/3/1999	soil	1		1			1				
GP-39, S-8	GP-39, S-8	6/3/1999	soil	1		1			1				
GP-40, S-1	GP-40, S-1	6/17/1999	soil	1	1	1			1				

Table 2-1
Summary of Samples Collected for Analytical Testing
Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Location	Lab Identifier	Date Sampled	Matrix	TCL VOCs	TCL SVOCs	TAL Metals + Cn	TAL Metals (Dissolved)	Cr^{+6}	TCL PCBs	TCL Pesticides	TOC	Wet Chemistry Parameters	GC Fingerprint
GP-40, S-4	GP-40, S-4	6/17/1999	soil	1		1			1				
GP-42,S-2	GP-42,S-2	6/10/1999	soil	1		1			1				
GP-42,S-6	GP-42,S-6	6/10/1999	soil	1		1			1				
GP-44,S-4	GP-44,S-4	6/15/1999	soil	1	1	1			1	1			
GP-44,S-8	GP-44,S-8	6/15/1999	soil	1		1			1				
GP-44,S-8 (Duplicate)	GP-43,S-5	6/15/1999	soil	1		1			1				
GP-45,S-1	GP-45,S-1	4/24/2001	soil	1		1							
GP-45,S-2	GP-45,S-2	4/24/2001	soil	1		1							
GP-45,S-3	GP-45,S-3	4/24/2001	soil	1		1							
GP-45,S-4	GP-45,S-4	4/24/2001	soil	1		1							
GP-45,S-5	GP-45,S-5	4/24/2001	soil	1		1							
GP-45,S-6	GP-45,S-6	4/24/2001	soil	1		1							
GP-45,S-7	GP-45,S-7	4/24/2001	soil	1		1							
GP-45,S-8	GP-45,S-8	4/24/2001	soil	1		1							
GP-46,S-1	GP-46,S-1	4/24/2001	soil	1		1							
GP-46,S-2	GP-46,S-2	4/24/2001	soil	1		1							
GP-46,S-2 (Duplicate)	GP-52,S-2	4/24/2001	soil	1		1							
GP-46,S-3 (MS/MSD)	GP-46,S-3	4/24/2001	soil	3		3							
GP-46,S-4	GP-46,S-4	4/24/2001	soil	1		1							
GP-46,S-5	GP-46,S-5	4/24/2001	soil	1		1							
GP-46,S-6	GP-46,S-6	4/24/2001	soil	1		1							
GP-46,S-7	GP-46,S-7	4/24/2001	soil	1		1							
GP-46,S-8	GP-46,S-8	4/24/2001	soil	1		1							
GP-46,S-9	GP-46,S-9	4/24/2001	soil	1		1							
GP-46,S-10	GP-46,S-10	4/24/2001	soil	1		1							
GP-47,S-1 (MS/MSD)	GP-47,S-1	4/24/2001	soil	3		3							
GP-47,S-2	GP-47,S-2	4/24/2001	soil	1		1							
GP-47,S-2 (Duplicate)	GP-50,S-2	4/24/2001	soil	1		1							
GP-47,S-3	GP-47,S-3	4/24/2001	soil	1		1							
GP-47,S-4	GP-47,S-4	4/24/2001	soil	1		1							
GP-47,S-5	GP-47,S-5	4/24/2001	soil	1		1							
GP-47,S-6	GP-47,S-6	4/24/2001	soil	1		1							
GP-47,S-7	GP-47,S-7	4/24/2001	soil	1		1							
GP-47,S-8	GP-47,S-8	4/24/2001	soil	1		1							
GP-47,S-9	GP-47,S-9	4/24/2001	soil	1		1							
GP-47,S-10	GP-47,S-10	4/24/2001	soil	1		1							
GP-48,S-1	GP-48,S-1	4/24/2001	soil	1		1							
GP-48,S-2	GP-48,S-2	4/24/2001	soil	1		1							
GP-48,S-3	GP-48,S-3	4/24/2001	soil	1		1							
GP-48,S-4	GP-48,S-4	4/24/2001	soil	1		1							
GP-48,S-5	GP-48,S-5	4/24/2001	soil	1		1							
GP-48,S-6	GP-48,S-6	4/24/2001	soil	1		1							
GP-48,S-7	GP-48,S-7	4/24/2001	soil	1		1							
GP-48,S-8	GP-48,S-8	4/24/2001	soil	1		1							
GP-48,S-9	GP-48,S-9	4/24/2001	soil	1		1							
GP-48,S-10	GP-48,S-10	4/24/2001	soil	1		1							
GP-49,S-1 (MS/MSD)	GP-49,S-1	4/24/2001	soil	3		3							
GP-49,S-2	GP-49,S-2	4/24/2001	soil	1		1							
GP-49,S-2 (Duplicate)	GP-51,S-2	4/24/2001	soil	1		1							
GP-49,S-3	GP-49,S-3	4/24/2001	soil	1		1							
GP-49,S-4	GP-49,S-4	4/24/2001	soil	1		1							
GP-49,S-5	GP-49,S-5	4/24/2001	soil	1		1							
GP-49,S-6	GP-49,S-6	4/24/2001	soil	1		1							
GP-49,S-7	GP-49,S-7	4/24/2001	soil	1		1							
GP-49,S-8	GP-49,S-8	4/24/2001	soil	1		1							
GP-49,S-9	GP-49,S-9	4/24/2001	soil	1		1							
GP-49,S-10	GP-49,S-10	4/24/2001	soil	1		1							
MW-5D1	MW-5D1	7/12/1999	soil	1	1	1			1				
MW-6S, S-1 (MS/MSD)	MW-6S, S-1	7/18/2000	soil	3		3							
MW-6S, S-2	MW-6S, S-2	7/18/2000	soil	1		1							
MW-6S, S-2 (Duplicate)	MW-13, S-1	7/18/2000	soil	1		1							
MW-10S, S-11	MW-10S-11	7/18/2000	soil	1		1							
MW-11S, S-11	MW-11S-11	7/17/2000	soil	1		1							
Equip. Blank (Sampler)	EB-2	6/10/1999	water	1	1	1			1	1			
Equip. Blank (Sampler)	EB-6-GP	6/16/1999	water	1	1	1			1	1			
Equip. Blank (Sampler)	EB-9-GPS	6/28/1999	water	1		1			1				
Equip. Blank (Sampler)	Rinsate-1	7/18/2000	water	1		1							
Equip. Blank (Sampler)	EB-GPS-1	4/24/2001	water	1		1							
Equip. Blank (Sampler)	EB-GPS-2	4/24/2001	water	1		1							
Equip. Blank (Sampler)	EB-GPS-3	4/24/2001	water	1		1							
TOTAL (Subsurface Soil Samples):				156	15	156	0	0	88	13	4	0	0
Geoprobe Groundwater													
GP-1 (MS/MSD)	GP-1	6/3/1999	groundwater	3		3	3						
GP-2	GP-2	6/10/1999	groundwater	1		1	1						
GP-3	GP-3	6/10/1999	groundwater	1		1	1						
GP-4	GP-4	6/4/1999	groundwater	1		1	1						
GP-5	GP-5	6/7/1999	groundwater	1		1	1						
GP-5	GP-5,40	6/8/1999	groundwater	1		1	1						
GP-5	GP-5,60	6/8/1999	groundwater	1		1	1						
GP-5	GP-5,80	6/28/1999	groundwater	1		1	1						
GP-6	GP-6	6/28/1999	groundwater	1		1	1						
GP-7	GP-7	6/7/1999	groundwater	1		1	1						
GP-7	GP-7,40	6/8/1999	groundwater	1		1	1						
GP-7	GP-7,60	6/8/1999	groundwater	1		1	1						
GP-7	GP-7,80	6/28/1999	groundwater	1		1	1						
GP-8 (MS/MSD)	GP-8	6/15/1999	groundwater	3		3	3						
GP-9	GP-9	6/7/1999	groundwater	1		1	1						
GP-9 (Duplicate)	GP-41	6/7/1999	groundwater	1		1	1						
GP-10	GP-10	6/15/1999	groundwater	1		1	1						

Table 2-1
Summary of Samples Collected for Analytical Testing
Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Location	Lab Identifier	Date Sampled	Matrix	TCL VOCs	TCL SVOCs	TAL Metals + Cn	TAL Metals (Dissolved)	Cr^{+6}	TCL PCBs	TCL Pesticides	TOC	Wet Chemistry Parameters	GC Fingerprint
GP-10	GP-10, 40	6/8/1999	groundwater	1		1	1						
GP-10 (MS/MSD)	GP-10,60	6/8/1999	groundwater	3		3	3						
GP-11	GP-11	6/17/1999	groundwater	1		1	1						
GP-12	GP-12	6/2/1999	groundwater	1		1	1						
GP-13	GP-13	6/2/1999	groundwater	1		1	1						
GP-14	GP-14	6/2/1999	groundwater	1		1	1						
GP-15	GP-15	6/2/1999	groundwater	1		1							
GP-16	GP-16	6/2/1999	groundwater	1		1	1						
GP-17	GP-17	6/2/1999	groundwater	1		1	1						
GP-17	GP-17,40	6/17/1999	groundwater	1		1	1						
GP-17	GP-17,60	6/17/1999	groundwater	1		1	1						
GP-17	GP-17,80	6/17/1999	groundwater	1		1	1						
GP-18	GP-18	6/16/1999	groundwater	1		1	1						
GP-19	GP-19	6/2/1999	groundwater	1		1	1						
GP-20	GP-20	6/4/1999	groundwater	1		1	1						
GP-21	GP-21	6/4/1999	groundwater	1		1	1						
GP-22	GP-22	6/2/1999	groundwater	1		1	1						
GP-23	GP-23	6/15/1999	groundwater	1		1	1						
GP-24	GP-24	6/3/1999	groundwater	1		1	1						
GP-24 (Duplicate)	GP-37	6/3/1999	groundwater	1		1	1						
GP-25	GP-25	6/3/1999	groundwater	1		1	1						
GP-26	GP-26	6/3/1999	groundwater	1		1	1						
GP-26 (Duplicate)	GP-43	6/3/1999	groundwater	1		1	1						
GP-27	GP-27	6/15/1999	groundwater	1		1	1						
GP-27	GP-27,40	6/15/1999	groundwater	1		1	1						
GP-27	GP-27,60	6/17/1999	groundwater	1		1	1						
GP-27	GP-27,80	6/17/1999	groundwater	1		1	1						
GP-28	GP-28	6/15/1999	groundwater	1		1	1						
GP-29	GP-29	6/3/1999	groundwater	1		1	1						
GP-30 (MS/MSD)	GP-30	6/3/1999	groundwater	3		3	3						
GP-32	GP-32	6/2/1999	groundwater	1		1	1						
GP-33	GP-33	6/2/1999	groundwater	1		1	1						
GP-34	GP-34	6/2/1999	groundwater	1		1	1						
GP-35	GP-35	6/3/1999	groundwater	1		1	1						
GP-36	GP-36	6/3/1999	groundwater	1		1	1						
GP-38	GP-38	6/3/1999	groundwater	1		1	1						
GP-39	GP-39	6/4/1999	groundwater	1		1	1						
GP-40	GP-40	6/4/1999	groundwater	1		1	1						
GP-42	GP-42	6/10/1999	groundwater	1		1	1						
GP-44	GP-44	6/15/1999	groundwater	1		1	1						
GP-46	GP-46	4/24/2001	groundwater	1			1						
Equip. Blank (HDPE Tubing)	EB-GP-1	6/4/1999	water	1		1	1						
Equip. Blank (HDPE Tubing)	EB-3	6/10/1999	water	1		1	1						
Equip. Blank (HDPE Tubing)	EB-8GPW	6/28/1999	water	1		1	1						
TOTAL (Geoprobe Groundwater Samples):				69	0	68	68	0	0	0	0	0	0
Drainage Structure Sediment													
DS-1	DS-1-SED	6/15/1999	soil	1		1			1				
DS-2	DS-2-SED	6/15/1999	soil	1	1	1			1	1			
DS-3	DS-3-SED	6/15/1999	soil	1		1			1				
DS-4	DS-4-SED	6/16/1999	soil	1		1			1				
DS-4 (Duplicate)	DS-13-SED	6/16/1999	soil	1		1			1				
DS-4 (IRM Conf. Sample)	DS-4	4/11/2000	soil	1	1	1			1	1			
DS-5	DS-5-SED	6/16/1999	soil	1		1			1				
DS-5 (IRM Conf. Sample)	DS-5	4/11/2000	soil	1	1	1			1	1			
DS-6	DS-6-SED	6/17/1999	soil	1		1			1				
DS-7	DS-7-SED	6/17/1999	soil	1		1			1				
DS-8	DS-8-SED	6/18/1999	soil	1	1	1			1	1	1		
DS-8 (IRM Conf. Sample)	DS-8	4/11/2000	soil	1	1	1			1	1			
DS-9	DS-9-SED	6/18/1999	soil	1		1			1				
DS-10	DS-10-SED	6/18/1999	soil	1		1			1				
DS-10 (IRM Conf. Sample)	DS-10	4/11/2000	soil	1	1	1			1	1			
DS-11	DS-11-SED	6/18/1999	soil	1		1			1				
DS-12	DS-12-SED	6/28/1999	soil	1		1			1				
Equipment Blank (Auger)	EB-5	6/10/1999	water	1	1	1			1	1			
Equipment Blank (Auger)	EB-10-SED	6/28/1999	water	1		1			1				
TOTAL (Drainage Structure Soil Samples):				19	7	19	0	0	19	7	1	0	0
Drainage Structure Water													
DS-2	DS-2-WATER	6/15/1999	water	1		1			1				
DS-3	DS-3-WATER	6/15/1999	water	1		1			1				
DS-4	DS-4-WATER	6/16/1999	water	1	1	1			1				
DS-5	DS-5-WATER	6/16/1999	water	1	1	1			1				
DS-5 (Duplicate)	DS-13-WATER	6/16/1999	water	1	1	1			1				
DS-6	DS-6-WATER	6/17/1999	water	1		1			1				
DS-8	DS-8-WATER	6/18/1999	water	1		1			1				
DS-9	DS-9-WATER	6/18/1999	water	1		1			1				
DS-10	DS-10-WATER	6/18/1999	water	1		1			1				
DS-11	DS-11-WATER	6/18/1999	water	1		1			1				
DS-12	DS-12-WATER	6/28/1999	water	1		1			1				
Equipment Blank (Glass Sampler)	EB-4	6/10/1999	water	1	1	1			1				
TOTAL (Drainage Structure Water Samples):				12	4	12	0	0	12	0	0	0	0
Cesspool Structure Sediment													
CP-1	AG-1	6/8/1999	soil	1		1			1				
CP-2	CP-2	6/9/1999	soil	1		1			1				
CP-3	CP-3	6/9/1999	soil	1		1			1				
CP-3 (IRM Conf. Sample)	CP-3	4/11/2000	soil	1	1	1			1	1			
CP-3, S-1	CP-3, S-1	7/21/2000	soil	1		1							
CP-3, S-2	CP-3, S-2	7/21/2000	soil	1		1							
CP-4	CP-4-SED	6/9/1999	soil	1		1			1				
CP-4 (IRM Conf. Sample)	CP-4	4/10/2000	soil	1	1	1			1	1			

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Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Location	Lab Identifier	Date Sampled	Matrix	TCL VOCs	TCL SVOCs	TAL Metals + Cn	TAL Metals (Dissolved)	Cr^{+6}	TCL PCBs	TCL Pesticides	TOC	Wet Chemistry Parameters	GC Fingerprint
CP-5	CP-5 SED	6/9/1999	soil	1		1			1				
CP-5 (IRM Conf. Sample)	CP-5	4/10/2000	soil	1	1	1			1	1			
CP-6	CP-6-SED	6/17/1999	soil	1		1			1				
CP-6 (IRM Conf. Sample)	CP-6	4/10/2000	soil	1	1	1			1	1			
CP-7	CP-7-SED	6/17/1999	soil	1		1			1				
CP-7 (IRM Conf. Sample)	CP-7	4/11/2000	soil	1	1	1			1	1			
CP-8 (MS/MSD)	CP-8-SED	6/18/1999	soil	3	3	3			3	3			
CP-8 (IRM Conf. Sample)	CP-8	4/11/2000	soil	1	1	1			1	1			
CP-9	CP-9-SED	6/27/1999	soil	1		1			1				
CP-10	CP-10-SED	6/27/1999	soil	1	1	1			1	1	1		
CP-10 (Duplicate)	CP-11-SED	6/27/1999	soil	1	1	1			1	1	1		
CP-11, S-1	CP 11, S-1	7/25/2000	soil	1		1							
TOTAL (Cesspool Structure Sediment Samples):				22	11	22	0	0	19	11	2	0	0
Cesspool Structure Water													
CP-1	AG-1	6/8/1999	water	1	1	1			1	1			
CP-5	CP-5	6/9/1999	water	1	1	1			1				
CP-6 (MS/MSD)	CP-6-WATER	6/17/1999	water	3	3	3			3				
CP-9	CP-9-WATER	6/27/1999	water	1		1			1				
CP-10	CP-10-WATER	6/27/1999	water	1		1			1				
TOTAL (Cesspool Structure Water Samples):				7	5	7	0	0	7	1	0	0	0
Former Well Structure Sediment													
WS-1	WS-1-SED	6/17/1999	soil	1		1			1				
WS-2 (MS/MSD)	WS-2-SED	6/18/1999	soil	3		3			3				
TOTAL (Well Structure Sediment Samples):				4	0	4	0	0	4	0	0	0	0
Former Interior Sump Adjacent Soil													
TP-1, S-1	TP-2	7/21/2000	soil	1		1							
TP-1, S-2	TP-1	7/21/2000	soil	1		1							
TOTAL (Interior Sump Soil Samples):				2	0	2	0	0	0	0	0	0	0
Former Interior Sump Water													
TP-3	TP-3	7/21/2000	water	1		1	1						
TOTAL (Interior Sump Water Samples):				1	0	1	1	0	0	0	0	0	0
Groundwater													
MW-1S	MW-1S	7/27/1999	groundwater	1		1	1		1	1			
MW-1S	MW1S	7/20/2000	groundwater	1		1	1						
MW-1S	MW1S	4/30/2001	groundwater	1		1	1	1					
MW-1D1	MW-1D1	7/27/1999	groundwater	1		1	1		1	1			
MW-1D1	MW1D1	7/20/2000	groundwater	1		1	1						
MW-1D1	MW1D1	4/30/2001	groundwater	1		1	1	1					
MW-1D2	MW-1D2	7/27/1999	groundwater	1		1	1		1	1			
MW-1D2	MW1D2	7/20/2000	groundwater	1		1	1						
MW-1D2	MW1D2	4/30/2001	groundwater	1		1	1	1					
MW-2S	MW-2S	7/29/1999	groundwater	1		1	1		1	1			
MW-2S	MW2S	7/21/2000	groundwater	1		1	1						
MW-2S (Duplicate)	MW13S	7/21/2000	groundwater	1		1	1						
MW-2S	MW2S	4/27/2001	groundwater	1		1	1	1					
MW-2D1	MW-2D1	7/29/1999	groundwater	1		1	1		1	1			
MW-2D1	MW2D	7/24/2000	groundwater	1		1	1						
MW-2D1	MW2D	4/27/2001	groundwater	1		1	1	1					
MW-3S	MW-3S	7/29/1999	groundwater	1		1	1		1	1			
MW-3S	MW3S	7/20/2000	groundwater	1		1	1						
MW-3S	MW-3S	4/24/2001	groundwater	1		1	1	1					
MW-3D1	MW-3D1	7/29/1999	groundwater	1		1	1		1	1			
MW-3D1	MW3D	7/20/2000	groundwater	1		1	1						
MW-3D1	MW-3D	4/24/2001	groundwater	1		1	1	1					
MW-3D1 (Duplicate)	MW-16D	4/24/2001	groundwater	1		1	1	1					
MW-4S	MW-4S	7/29/1999	groundwater	1		1	1		1	1			
MW-4S	MW4S	7/19/2000	groundwater	1		1	1						
MW-4S	MW4S	4/24/2001	groundwater	1		1	1	1					
MW-4D1	MW-4D1	7/29/1999	groundwater	1		1	1		1	1			
MW-4D1	MW4D1	7/19/2000	groundwater	1		1	1						
MW-4D1	MW4D	4/27/2001	groundwater	1		1	1	1					
MW-5D1	MW-5D1	7/28/1999	groundwater	1	1	1	1		1	1			
MW-5D1(Duplicate)	MW-9D1	7/28/1999	groundwater	1	1	1	1		1	1			
MW-5D1	MW5D1	7/23/2000	groundwater	1		1	1						
MW-5D1	MW5D1	4/25/2001	groundwater	1		1	1	1					
MW-5D2	MW-5D2	7/28/1999	groundwater	1		1	1		1	1			
MW-5D2 (MS/MSD)	MW5D2	7/23/2000	groundwater	3		3	3						
MW-5D2	MW5D2	4/25/2001	groundwater	1		1	1	1					
MW-6S	MW6S	7/19/2000	groundwater	1		1	1						
MW-6S (See Note 3)	MW6S	4/26/2001	groundwater	1		1	1	1				1	
MW-6D1 (MS/MSD)	MW-6D1	7/28/1999	groundwater	3	3	3	3		3	3			
MW-6D1	MW6D1	7/24/2000	groundwater	1		1	1						
MW-6D1	MW6D1	4/26/2001	groundwater	1		1	1	1					
MW-6D2	MW-6D2	7/28/1999	groundwater	1		1	1		1	1			
MW-6D2	MW6D2	7/24/2000	groundwater	1		1	1						
MW-6D2	MW6D2	4/27/2001	groundwater	1		1	1	1					
MW-7S	MW-7S	7/29/1999	groundwater	1		1	1		1	1			
MW-7S	MW7S	4/25/2001	groundwater	1		1	1	1					
MW-7D1	MW-7D1	7/29/1999	groundwater	1		1	1		1	1			
MW-7D1	MW7D	7/24/2000	groundwater	1		1	1						
MW-7D1	MW7D1	4/25/2001	groundwater	1		1	1	1					
MW-8D1	MW-8D1	7/29/1999	groundwater	1		1	1		1	1			
MW-8D1	MW8D1	7/25/2000	groundwater	1		1	1						
MW-8D1(Duplicate)	MW14D1	7/25/2000	groundwater	1		1	1						
MW-8D1	MW8D1	4/25/2001	groundwater	1		1	1	1					
MW-9S	MW9S	7/19/2000	groundwater	1		1	1						
MW-9S	MW9S	5/1/2001	groundwater	1		1	1	1					
MW-10S	MW10S	7/19/2000	groundwater	1		1	1						
MW-10S	MW10S	4/23/2001	groundwater	1		1	1	1					

Table 2-1
Summary of Samples Collected for Analytical Testing
Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Location	Lab Identifier	Date Sampled	Matrix	TCL VOCs	TCL SVOCs	TAL Metals + Cn	TAL Metals (Dissolved)	Cr^{+6}	TCL PCBs	TCL Pesticides	TOC	Wet Chemistry Parameters	GC Fingerprint
MW-10S (Duplicate)	MW17S	4/23/2001	groundwater	1		1	1	1					
MW-11S (MS/MSD)	MW11S	7/19/2000	groundwater	3		3	3						
MW-11S (Duplicate - See Note 1)	MW-7S2	7/25/2000	groundwater	1		1	1						
MW-11S (MS/MSD)	MW11S	4/24/2001	groundwater	3		3	3	3					
MW-12S	MW12S	7/19/2000	groundwater	1		1	1						
MW-12S	MW12S	4/23/2001	groundwater	1		1	1	1					
MW-12D1	MW12D1	4/30/2001	groundwater	1		1	1	1					
MW-12D2	MW12D2	5/1/2001	groundwater	1		1	1	1					
MW-13S	MW13S	5/3/2001	groundwater	1		1	1	1				1	
MW-13D1	MW13D1	5/3/2001	groundwater	1		1	1	1					
MW-13D2	MW13D2	5/2/2001	groundwater	1		1	1	1					
MW-14S (MS/MSD)	MW-14S	5/1/2001	groundwater	3		3	3	3					
MW-14D1	MW-14D1	5/1/2001	groundwater	1		1	1	1					
MW-15S	MW15S	5/2/2001	groundwater	1		1	1	1					
MW-15D1	MW-15D1	5/1/2001	groundwater	1		1	1	1					
Equipment Blank (Bailer)	RinsateGW	7/29/1999	water	1	1	1	1		1	1			
Equipment Blank (Tubing)	GW Rinsate 1	7/20/2000	water	1		1	1						
Equipment Blank (Tubing)	RinsatesGW2	7/25/2000	water	1		1	1						
Equipment Blank (Bailer/Tubing)	EB-GW-1	4/23/2001	water	1		1	1	1					
Equipment Blank (Bailer/Tubing)	EB-GW-2	5/3/2001	water	1		1	1	1					
TOTAL (Groundwater Samples):				87	6	87	87	38	20	20	0	2	0
UST Product													
UST-1	UST-1	6/7/1999	product										1
UST-1	UST-1	6/30/1999	product						1				
UST-2	UST-2	6/7/1999	product										1
UST-2	UST-2	6/30/1999	product						1				
UST-3	UST-3	6/7/1999	product										1
UST-3	UST-3	6/30/1999	product						1				
UST-4	UST-4	6/9/1999	product										1
UST-4	UST-4	6/30/1999	product						1				
UST-6	UST-6	6/8/1999	product										1
UST-6	UST-6	6/30/1999	product						1				
UST-8	UST-8	6/9/1999	product										1
UST-8	UST-8	6/30/1999	product						1				
TOTAL (UST Product Samples):				0	0	0	0	0	6	0	0	0	6
			TOTAL:	391	60	390	156	38	187	54	10	2	6

Notes:

TCL VOCs - Target Compound List Volatile Organic Compounds
TCL SVOCs - Target Compound List Semi-volatile Organic Compounds
TAL Metals - Target Analyte List Inorganics
Cr^{+6} - Hexavalent Chromium
TCL PCBs - Target Compound List Polychlorinated Biphenyls
TCL Pesticides - Target Compound List Pesticides
TOC - Total Organic Carbon
Wet Chemistry Parameters - Biological Oxygen Demand, Fecal/Total Coliform, Hardness, Nitrate, Nitrite, Sulfate, Alkalinity, Chloride and Total Suspended Solids.
MS/MSD - Matrix Spike/Matrix Spike Duplicate

1. MW-11S2 (collected 7/25/00) was a duplicated groundwater sample, with a lower turbidity measurement than original sample.
2. Groundwater and soil samples collected in 2001 were not tested for cyanide.
3. Samples collected in 2001 from wells MW-6S and MW-13S, and analyzed for wet chemistry parameters, have lab identifiers of MW-6S-RS and MW-13S-RS, respectively

Table 2-2
Summary of Monitoring Well Installations

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Well/ Boring Identification	Start Date of Installation	Ground Surface Elevation (ft.)	Reference Elevation (ft.)	Top of Fill (ft. BGS)	Top of Sand (ft. BGS)	Top of Clayey Layer (ft. BGS)	Depth of Boring (ft. BGS)	Diameter of Well Screen and Riser (in)	Length of Well Screen (ft.)	Well Intake Depth/Elevations			
										Top of Sandpack		Bottom of Sandpack	
										Depth (ft. BGS)	Elev. (ft)	Depth (ft. BGS)	Elev. (ft)
MW-1S	1/21/1987	63.5	63.13	---	0.0	---	50	2	10	12.0	51.5	25.0	38.5
MW-1D1	1/21/1987	63.5	63.05	---	0.0	---	50	2	10	38.0	25.5	49.6	13.9
MW-1D2	6/26/1999	63.3	63.06	0.0	0.5	94.5	95	2	10	81.0	-17.7	95.0	-31.7
MW-2S	1/23/1997	63.6	63.11	---	0.0	---	50	2	10	12.0	51.6	24.1	39.5
MW-2D	1/23/1987	63.6	63.10	---	0.0	---	50	2	10	38.0	25.6	48.6	15.0
MW-3S	1/26/1987	63.4	62.82	---	0.0	---	50	2	10	12.0	51.4	23.6	39.8
MW-3D	1/26/1987	63.4	62.87	---	0.0	---	50	2	10	38.0	25.4	48.8	14.6
MW-4S	1/28/1987	62.3	61.99	---	0.0	---	50	2	10	12.0	50.3	23.7	38.6
MW-4D	1/28/1987	62.3	62.02	---	0.0	---	50	2	10	38.0	24.3	48.8	13.5
MW-5D1	7/12/1999	62.6	62.41	0.0	0.2	---	50	2	10	37.0	25.6	50.0	12.6
MW-5D2	7/8/1999	62.6	62.32	0.0	0.2	92.5	93	2	10	80.0	-17.4	93.0	-30.4
MW-6S	7/17/2000	61.8	61.35	0.0	0.2	---	27	2	10	15.0	46.8	27.0	34.8
MW-6D1	7/15/1999	61.7	61.33	0.0	0.3	---	50	2	10	35.0	26.7	50.0	11.7
MW-6D2	7/1/1999	61.8	61.33	0.0	0.3	93.0	92	2	10	78.0	-16.2	90.0	-28.2
MW-7S	7/7/1999	63.3	62.92	0.0	0.2	---	28	2	10	15.5	47.8	28.0	35.3
MW-7D1	7/6/1999	63.3	63.10	0.0	0.2	---	50	2	10	35.9	27.4	50.0	13.3
MW-8D1	7/8/1999	63.3	62.99	0.0	0.2	---	50	2	10	38.5	24.8	50.0	13.3
MW-9S	7/18/2000	64.8	63.78	0.0	0.2	---	27	2	10	15.0	49.8	27.0	37.8
MW-10S	7/18/2000	62.7	61.90	0.0	0.2	---	27	2	10	15.0	47.7	27.0	35.7
MW-11S	7/18/2000	63.2	62.58	0.0	0.2	---	26	2	10	13.7	49.5	25.7	37.5
MW-12S	7/18/2000	62.4	62.00	0.0	0.2	---	27	2	10	15.0	47.4	27.0	35.4
MW-12D1	4/26/2001	62.4	61.89	0.0	---	---	50	2	10	34.0	28.4	49.5	12.9
MW-12D2	4/25/2001	62.5	62.07	0.0	0.4	91.8	92	2	10	77.0	-14.5	91.2	-28.7
MW-13S	5/2/2001	62.4	61.78	0.0	---	---	24	2	10	11.5	50.9	23.7	38.7
MW-13D1	5/1/2001	62.2	61.45	0.0	---	---	51	2	10	35.0	27.2	49.6	12.6
MW-13D2	4/30/2001	62.1	61.56	0.0	0.2	90.5	92	2	10	75.0	-12.9	89.9	-27.8
MW-14S	4/24/2001	61.8	61.48	0.0	---	---	24	2	10	11.5	50.3	23.8	38.0
MW-14D1	4/23/2001	61.8	61.64	0.0	0.2	---	50	2	10	36.5	25.3	49.5	12.3
MW-15S	4/27/2001	62.5	62.28	0.0	---	---	24	2	10	10.0	52.5	23.5	39.0
MW-15D1	4/27/2001	62.5	61.86	0.0	0.4	---	50	2	10	36.0	26.5	49.6	12.9

NOTES:

1) The dashed symbol "---" indicates that the geologic unit was not encountered.

2) NA = not applicable.

3) ft. BGS = feet below ground surface.

4) Data for MW-1S, MW-1D, MW-2S, MW-2D, MW-3S, MW-3D, MW-4S, and MW-4D were obtained from monitoring well installation logs from previous Site studies. Depths of borings determined from field measurements.

5) Survey information provided by YEC, Inc.

Table 2-3
Summary of Hydraulic Conductivity Testing Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Monitoring Well	Screened Zone	Hydraulic Conductivity Test Method	Test Results	
			(ft/day)	(cm/sec)
MW-1S	Overburden	pump test	15	5.4×10^{-3}
MW-1D1	Overburden	pump test	11	3.8×10^{-3}
MW-1D2	Overburden	pump test	65	2.3×10^{-2}
MW-2S	Overburden	pump test	195	6.9×10^{-2}
MW-2D	Overburden	pump test	457	1.6×10^{-1}
MW-3S	Overburden	pump test	288	1.0×10^{-1}
MW-3D	Overburden	pump test	501	1.8×10^{-1}
MW-4S	Overburden	pump test	106	3.7×10^{-2}
MW-4D	Overburden	pump test	177	6.3×10^{-2}
MW-5D1	Overburden	pump test	244	8.6×10^{-2}
MW-5D2	Overburden	pump test	144	5.1×10^{-2}
MW-6S	Overburden	pump test	270	9.5×10^{-2}
MW-6D1	Overburden	pump test	288	1.0×10^{-1}
MW-6D2	Overburden	pump test	290	1.0×10^{-1}
MW-7S	Overburden	pump test	260	9.2×10^{-2}
MW-7D1	Overburden	pump test	168	5.9×10^{-2}
MW-8D1	Overburden	pump test	383	1.3×10^{-1}
MW-9S	Overburden	pump test	233	8.2×10^{-2}
MW-10S	Overburden	pump test	323	1.1×10^{-1}
MW-11S	Overburden	pump test	235	8.3×10^{-2}
MW-12S	Overburden	pump test	361	1.3×10^{-1}
MW-12D1	Overburden	rising head	850	3.0×10^{-1}
MW-12D2	Overburden	rising head	672	2.4×10^{-1}
MW-13S	Overburden	rising head	816	2.9×10^{-1}
MW-13D1	Overburden	rising head	672	2.4×10^{-1}
MW-13D2	Overburden	rising head	537	1.9×10^{-1}
MW-14S	Overburden	rising head	768	2.7×10^{-1}
MW-14D1	Overburden	rising head	912	3.2×10^{-1}
MW-15S	Overburden	rising head	936	3.3×10^{-1}
MW-15D1	Overburden	rising head	36	1.3×10^{-2}

Notes:
1. Data calculated using the H. Bouer; 1989 Method (rising head), or the Hvorslev's equations for constant head in monitoring wells as documented in Lambe & Whitman (1969), "Soil Mechanics", p. 284-286 (pump test).
2. ft/day = feet per day; cm/sec = centimeters per second.

Table 2-4
Summary of Groundwater Elevations

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Well /Piezometer	Reference	June 6, 1999		July 16, 1999		July 26, 1999		July 17 & 19, 2000		July 25, 2000		May 3, 2001	
Number	Elevation (ft.)	Depth (ft.)	Elevation (ft.)	Depth (ft.)	Elevation (ft.)	Depth (ft.)	Elevation (ft.)	Depth (ft.)	Elevation (ft.)	Depth (ft.)	Elevation (ft.)	Depth (ft.)	Elevation (ft.)
MW-1S	63.13	18.39	44.7	19.76	43.4	20.11	43.0	18.66	44.5	18.95	44.2	17.61	45.5
MW-1D1	63.05	18.49	44.6	19.84	43.2	20.23	42.8	18.74	44.3	18.90	44.2	17.51	45.5
MW-1D2	63.06	not installed	NA	19.75	43.3	20.09	43.0	18.67	44.4	18.95	44.1	17.44	45.6
MW-2S	63.11	18.53	44.6	19.90	43.2	20.26	42.9	19.00	44.1	19.29	43.8	17.77	45.3
MW-2D	63.10	18.53	44.6	19.91	43.2	20.24	42.9	18.93	44.2	19.22	43.9	17.71	45.4
MW-3S	62.82	18.38	44.4	19.73	43.1	20.12	42.7	18.82	44.0	18.97	43.9	17.41	45.4
MW-3D	62.87	18.45	44.4	19.84	43.0	20.17	42.7	18.86	44.0	19.02	43.9	17.50	45.4
MW-4S	61.99	17.75	44.2	19.12	42.9	19.44	42.6	18.03	44.0	18.30	43.7	16.80	45.2
MW-4D	62.02	17.77	44.3	19.14	42.9	19.51	42.5	18.05	44.0	18.31	43.7	16.83	45.2
MW-5D1	62.41	not installed	NA	19.36	43.1	19.73	42.7	18.40	44.0	18.67	43.7	17.16	45.3
MW-5D2	62.32	not installed	NA	19.49	42.8	19.83	42.5	18.30	44.0	18.58	43.7	17.07	45.3
MW-6D1	61.33	not installed	NA	18.63	42.7	18.99	42.3	17.56	43.8	17.76	43.6	16.30	45.0
MW-6D2	61.33	not installed	NA	18.92	42.4	19.23	42.1	17.76	43.6	18.06	43.3	16.51	44.8
MW-6S	61.35	not installed	NA	not installed	NA	not installed	NA	17.57	43.8	17.81	43.5	16.27	45.1
MW-7S	62.92	not installed	NA	19.67	43.3	20.06	42.9	18.65	44.3	18.88	44.0	17.39	45.5
MW-7D1	63.10	not installed	NA	19.84	43.3	20.24	42.9	18.81	44.3	19.10	44.0	17.58	45.5
MW-8D1	62.99	not installed	NA	19.65	43.3	20.03	43.0	18.62	44.4	18.91	44.1	17.38	45.6
MW-9S	63.78	not installed	NA	not installed	NA	not installed	NA	19.31	44.5	19.53	44.3	18.00	45.8
MW-10S	61.90	not installed	NA	not installed	NA	not installed	NA	18.04	43.9	18.76	43.1	16.78	45.1
MW-11S	62.58	not installed	NA	not installed	NA	not installed	NA	18.54	44.0	18.76	43.8	17.26	45.3
MW-12S	62.00	not installed	NA	not installed	NA	not installed	NA	18.50	43.5	18.74	43.3	17.23	44.8
MW-12D1	61.89	not installed	NA	not installed	NA	not installed	NA	not installed	NA	not installed	NA	17.17	44.7
MW-12D2	62.07	not installed	NA	not installed	NA	not installed	NA	not installed	NA	not installed	NA	17.32	44.8
MW-13S	61.78	not installed	NA	not installed	NA	not installed	NA	not installed	NA	not installed	NA	16.78	45.0
MW-13D1	61.45	not installed	NA	not installed	NA	not installed	NA	not installed	NA	not installed	NA	16.47	45.0
MW-13D2	61.56	not installed	NA	not installed	NA	not installed	NA	not installed	NA	not installed	NA	16.58	45.0
MW-14S	61.48	not installed	NA	not installed	NA	not installed	NA	not installed	NA	not installed	NA	16.83	44.7
MW-14D1	61.64	not installed	NA	not installed	NA	not installed	NA	not installed	NA	not installed	NA	16.69	45.0
MW-15S	62.28	not installed	NA	not installed	NA	not installed	NA	not installed	NA	not installed	NA	17.61	44.7
MW-15D1	61.86	not installed	NA	not installed	NA	not installed	NA	not installed	NA	not installed	NA	17.13	44.7
GP-1	62.49	18.20	44.3	19.55	42.9	19.94	42.6	NA	NA	NA	NA	NA	NA
GP-12	63.21	18.71	44.5	20.05	43.2	removed	NA	NA	NA	NA	NA	NA	NA
GP-22	62.60	18.07	44.5	19.40	43.2	removed	NA	NA	NA	NA	NA	NA	NA
GP-26	62.61	18.09	44.5	19.45	43.2	removed	NA	NA	NA	NA	NA	NA	NA
NTU Well MW-2	62.74	18.14	44.6	no reading	NA	no reading	NA	NA	NA	NA	NA	NA	NA

NOTES:
1. See Figure 2 for monitoring well locations.
2. Survey information provided by YEC, Inc.
3. Depth measurements referenced to the top of the PVC riser for monitoring wells.
4. N/A = not applicable.

Table 2-5
Summary of Interior Test Pit Sump Water Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date	TP-3-Water 7/21/2000	
		Q
Volatile Organics (ug/L)		
Methylene chloride	130	
Acetone	30	J
1,1-Dichloroethene	74	
1,1-Dichloroethane	170	
2-Butanone	21	J
1,1,1-Trichloroethane	11070	D
Trichloroethene	1557	D
4-Methyl-2-pentanone	54	J
Tetrachloroethene	160	
Toluene	200	
Ethylbenzene	2	J
Styrene	2	J
Xylenes (Total)	15	
Inorganics (ug/L)		
Aluminum	13800	
Antimony	2.1	U
Arsenic	6	B
Barium	58.7	B
Beryllium	0.38	B
Cadmium	2750	
Calcium	478000	
Chromium	5430	
Cobalt	30.7	B
Copper	1460	
Iron	16000	
Lead	58.8	
Magnesium	4230	B
Manganese	577	
Mercury	1.2	
Nickel	3590	
Potassium	176000	
Selenium	4.6	B
Silver	1.6	B
Sodium	324000	
Thallium	4.3	U
Vanadium	17.7	B
Zinc	1060	
Cyanide	2330	

NOTES:
1. Only compounds detected are presented on this table.
2. Blank indicates compound was not detected.
3. Analytical testing completed by CompuChem Corporation.
4. Q = laboratory qualifier. Refer to Appendix E for qualifier definitions.
5. ug/L = micrograms per liter or parts per billion.

Table 2-6
Summary of Surface Soil Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date	Site Background[7]	TAGM # 4046 RSCO[8]	Published Background[9]	AP-1, S-1 6/9/1999	Q	AP-2,S-1 6/9/1999	Q	AP-5 [(4)] 6/27/1999	Q	AP-6 6/27/1999	Q	AP-7 6/27/1999	Q	AP-8 6/27/1999	Q	AP-9 6/27/1999	Q	AP-10 6/27/1999	Q
Volatile Organics (ug/kg)																			
Chloroethane		1900		6	J														
1,1-Dichloroethene		400		5	J														
1,1-Dichloroethane		200		**2200**	DEJ	100	J												
1,1,1-Trichloroethane		800		**2400**	DEJ	**840**	DJ												
Trichloroethene		700		7	J	22	J												
1,1,2-Trichloroethane		NV				5	J												
Tetrachloroethene		1400		150	J	10	J			1	J								
Toluene		1500		15	J	10	J												
Semi-Volatile Organics (ug/kg)																			
Dimethyl phthalate		2000												420	J			86	J
Di-n-butyl phthalate		8100												110	J				
Fluoranthene		50000																35	J
Pyrene		50000												86	J			47	J
Butyl benzyl phthalate		50000						46	J	220	J	5800		4400		1200		37	J
bis(2-Ethylhexyl)phthalate		50000		1200	J	730	J	180	J	200	J	5000		2600		880		140	J
Di-n-octyl phthalate		50000												82	J				
Benzo(b)fluoranthene		1100												100	J			42	J
Indeno(1,2,3-cd)pyrene		3200												140	J				
Benzo(g,h,i)perylene		50000												350	J	45	J		
PCBs and Pesticides (ug/kg)																			
Beta-BHC		200		NT		NT				NT		NT		NT		NT		1.5	J
Gamma-BHC (Lindane)		60		NT		NT				NT		NT		NT		NT		0.36	J
4,4'-DDD		2900		NT		NT		4.6		NT		NT		NT		NT		8.6	
4,4'-DDE		2100		NT		NT		18		NT		NT		NT		NT		7	J
4,4'-DDT		2100		NT		NT		16		NT		NT		NT		NT		29	J
Dieldrin		44		NT		NT		1.2	J	NT		NT		NT		NT		4.7	
Endosulfan sulfate		1000		NT		NT				NT		NT		NT		NT		2	J
Heptachlor		100		NT		NT				NT		NT		NT		NT		1.4	
PCB-1254		1000 (total)		**6100**		720		27	J	1000		380		**3600**		420		87	P
PCB-1260		1000 (total)						37				230		**1600**		160	J		
Gamma chlordane		540		NT		NT		NT		NT				NT		NT		2.3	D
Alpha chlordane		NV		NT		NT		NT		NT				NT		NT		23	J
Inorganics (mg/kg)																			
Aluminum	7610	SB	33,000	2810	*	6260	*	7610		5140		2260		4100		3870		3850	
Antimony		SB	NV		B	0.83	B			0.67	J	10.2	J	1.4	J	0.77	J		
Arsenic	4.4	7.5 or SB	3-12	1.2	B	4		4.4		3.8		2.2		5.3		2.4		10.9	
Barium	19.2	300 or SB	15-600	36.8	B	161		19.2	B	22.3	B	91.6		40.9		157		220	
Beryllium	0.24	0.16 or SB	0-1.75	0.11	B	0.8	B	0.24	B	0.27	B	0.45	B	0.29	B	0.23	B	0.19	B
Cadmium	1.8	1 or SB	0.1-1	154		265		1.8	J	174	J	134	J	1670	J	153	J	10.3	J
Calcium	1400	SB	130-35,000	429	B	1350		1400		2200		2490		2270		307	B	22600	
Chromium	10.1	10 or SB	1.5-40	447		194		10.1		220		488		3130		292		54.8	
Cobalt	2	30 or SB	2.5-60	2.1	B	18.3		2	B	2.4	B	3.9	B	27.8		2.5	B	3.4	B
Copper	12	25 or SB	1-50	42	J	302	J	12	J	53.2	J	61.2	J	1970	J	96.5	J	49	J
Iron	8790	2,000 or SB	2,000-550,000	4550	*	10200	*	8790	*	6850	*	4010	*	13100	*	6930	*	6090	*
Lead	31.2	200-500	20-500 [10]	72.5		94.8		31.2	*	60.1	*	188	*	135	*	38	*	88	*
Magnesium	669	SB	100-5,000	421	B	1270		669	B	1210		713	B	778	B	781	B	3790	
Manganese	63.1	SB	50-5,000	37.4	J	70.1	J	63.1	*	46.8	*	306	*	613	*	67.3	*	196	*
Mercury	0.03	0.1	0.001-0.2	0.05	J	0.17	J	0.03	B	0.03	B	0.04	B	0.7				0.02	B
Nickel	6.4	13 or SB	0.5-25	64.6	J	368	J	6.4	B	109		97.2		21100	J	86.2		38.5	
Potassium	169	SB	8,500-43,000	143	B	240	B	169	B	172	B	153	B	315	B	201	B	365	B
Selenium	1.2	2 or SB	0.1-3.9					1.2	J	1.1	J	1.9	J						
Silver		SB	NV	0.51	B	18.1								7.7					
Sodium		SB	6,000-8,000	83	B									242	B			141	B
Thallium	2.2	SB	NV	2	B	2.2	B	2.2		1.5	B	1.2	B	3.3		1.9	B	1.5	B
Vanadium	14	150 or SB	1-300	5.8	B	15.7		14		9.2	B	5.4	B	7	B	8.2	B	8.2	B
Zinc	51.8	20 or SB	9-50	89.6		343		51.8	*	188	*	401	*	1190	*	1030	*	102	*
Cyanide		NV	NV	21.2		7.9				30.3	*	5.8	*	65.7	*	66.5	*	0.37	B*
Total Organic Carbon (mg/kg)																			
Total Organic Carbon		NV		NT		NT		19100		NT		NT		NT		NT		2150	

NOTES:
1. Only compounds detected in one or more soil samples are presented in this table.
2. Blank indicates compound was not detected. NT indicates compound was not tested.
3. Analytical testing completed by CompuChem Corporation.
4. Results presented for AP-5 are the higher of this sample and its duplicate.
5. Q = laboratory qualifier. Refer to Appendix E for qualifier definitions.
6. ug/kg = parts per billion, mg/kg = parts per million.
7. AP-5 utilized for surface soil site background inorganics.
8. TAGM # 4046 RSCO are Recommended Soil Cleanup Criteria from Technical and Administrative Guidance Memorandum No. HWR-94-4046
9. Published background as noted in NYSDEC Technical and Administrative Guidance Memorandum No. HWR-94-4046.
10. NV = no value, SB = Site background.
11. Concentrations that are bold exceed RSCO.
12. Surface soil samples were collected approximately 0 to 1.0 feet below ground surface or 0.5 feet below subbase material if paved.

Table 2-7
Summary of Subsurface Soil Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date Sample Depth	Site Background[8]	TAGM #4046 RSCO[9]	Published Background[10]	GP-1,S-3 6/1/1999 4-6 ft	Q	GP-1,S-8 6/1/1999 14-16 ft	Q	GP-2,S-5 6/10/1999 8-10 ft	Q	GP-2,S-10 6/10/1999 18-20 ft	Q	GP-3,S-5 6/10/1999 8-10 ft	Q	GP-3,S-9 6/10/1999 16-18 ft	Q	GP-4,S-2 6/4/1999 2-4 ft	Q	GP-4,S-9 6/4/1999 16-18 ft	Q	GP-5,S-1 6/7/1999 0-2 ft	Q	GP-5,S-8 6/7/1999 14-16 ft	Q	GP-6,S-4 6/28/1999 6-8 ft	Q	GP-6,S-7 6/28/1999 12-14 ft	Q	GP-7,S-5 6/4/1999 8-10 ft	Q	GP-7,S-10 6/28/1999 18-20 ft	Q	GP-8,S-4 6/16/1999 6-8 ft	Q	GP-9,S-4 6/7/1999 6-8 ft	Q	GP-9,S-6 6/7/1999 10-12 ft	Q	GP-10,S-1 6/15/1999 0-2 ft	Q	GP-10,S-4 6/15/1999 6-8 ft	Q	GP-11,S-4 6/3/1999 6-8 ft	Q
Volatile Organics (ug/kg)																																													
Chloromethane		NV																																											
Bromomethane		NV																																											
Methylene chloride		100																																											
1,1,2-Trichloro-1,2,2-trifluoroethane		6000																																											
Acetone		200		5	J			2	J																																				
Carbon disulfide		2700																																											
1,1-Dichloroethane		200																																											
2-Butanone		300																																											
1,1,1-Trichloroethane		800																																											
Trichloroethene		700																		17																									
Tetrachloroethene		1400		1	J											20		2	J	30																			6	J					
2-Hexanone		NV																																											
4-Methyl-2-pentanone		1000																																											
Toluene		1500		2	J															2	J																							
1,2-Dibromo-3-chloropropane (DBCP)		NV																																											
1,2,4-Trichlorobenzene		3400																																											
Semi-Volatile Organics (ug/kg)																																													
Phenol		30 or MDL		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT	
Di-n-butyl phthalate		8100		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT	
bis(2-Ethylhexyl)phthalate		50000		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		86	J	NT		NT		NT	
PCB and Pesticides (ug/kg)																																												
Alpha-BHC		110		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT	
Gamma-BHC (Lindane)		60		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT	
4,4'-DDE		2100		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT	
Endosulfan I		900		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT	
Endosulfan II		900		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT	
Endosulfan sulfate		1000		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT	
Endrin aldehyde		NV		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT	
Heptachlor epoxide		20		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT	
p,p'-Methoxychlor		NV		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT	
PCB-1254		10000														1200	D	1400	D																	290					
Gamma chlordane		540		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT	
Inorganics (mg/kg)																																												
Aluminum	723	SB	33,000	1320		986		842		1120		710		580		6100		2200		9370		923		4100		727		869		708		2440	*	5630		1070		5860		3600		4210	J
Antimony		SB	NV							1.1	BJ							0.27	B	1.3	BJ													0.32	BJ							3.4	B
Arsenic	1.0	7.5 or SB	3-12			0.86	B									1.3	BJ	1.6	BJ	1.4	B			2.7		1.5	B			1.6	B	1.2	B	1.3	B	3.3		2.2				3.7	J
Barium	2.8	300 or SB	15-600	7.5	B	4.8	B	1.6	B	4.5	B	1.6	B	1.9	B	8.3	B	15.3	B	12.1	B	4.7	B	13.9	B	4.3	B	3.3	B	4.2	B	11.6	B	14.5	B	5.5	B	9.9	B	9.4	B	453	
Beryllium	0.08	0.16 or SB	0-1.75			0.17	B	0.12	B	0.12	B					0.18	B	0.13	B	0.26	B	0.14	B	0.29	B	0.12	B	0.11	B	0.17	B	0.21	B	0.28	B	0.13	B	0.17	B	0.16	B	0.33	B
Cadmium		1 or SB	0.1-1							87.2				1.4		53.1		550		19.4		0.63	B	48.6	J	18.6	J	0.35	B	1.6	J					0.29	B	38.4				0.35	B
Calcium	553.0	SB	130-35,000	393	B	33.5	B	16.1	B	82	BJ	13.1	B	12.9	B	345	B	434	B	810	BJ	26.3	BJ	184	B	25.2	B	290	B	29.9	B	35.4	B	171	BJ	74.9	BJ	294	B*	199	B*	22000	
Chromium	4.3	10 or SB	1.5-40	1.3	B	4.2		1.3	B	289		1.9	B	62.1		39.5		76.2		327		27.4		5.4		2.7		5.5		11.9		4.1		46.5		16.8		150		11.6		26.4	
Cobalt	0.91	30 or SB	2.5-60	2.4	B	1.6	B	0.71	B	1.4	B	0.76	B	0.32	B	2.4	B	2.4	B	2.3	B	0.74	B	3.1	B	1.1	B	0.98	B	0.7	B	2.5	B	2.7	B	3.2	B	1.8	B	2	B	5.4	B
Copper	1.6	25 or SB	1-50	2.1	B	3.2	B	1.6	B	71.5	J	2	B	5.8	J	17.7		94.4		214	J	22.9	J	3.6	J	2	J	2.2	B	15.8	J	3.6	B	5.1	B	2.5	B	69.6	*	8.2	*	448	
Iron	1910	2,000 or SB	2,000-550,000	1870		3260		1750		2370		2150		1680		6010		6330		8550		2250		6660	*	1710	*	2130		2060	*	5410	*	6560		2930		6560	*	6190	*	16100	
Lead	0.54	200-500	20-500 [10]	0.86		1.7		0.76		2.3		0.46	BJ	0.68		4.2		9.7		7.4		1.5		1.7	J	0.49	J	1.2		0.29	J	1.8		4.6		1.3		6.7		1.8		331	
Magnesium	454	SB	100-5,000	390	B	260	B	119	BJ	249	BJ	205	B	117	B	632	B	402	B	656	BJ	153	BJ	723	B	211	B	182	B	157	B	490	B	990	BJ	223	BJ	459	B	931	B	6290	
Manganese	50	SB	50-5,000	339		59		28.3	*	22.3		11.2		13.1	J	88		67		45.6		37.4		151	*	39.9	*	13.5		28.3	*	225	J	68.5		35.3		54.3		65.8		350	
Mercury		0.1	0.001-0.2		R	0.02	BJ	0.004	BJ	0.01	BJ		R		R	0.01	BJ	0.01	BJ		R		R				R				R	0.01	BJ		R		R		R		R
Nickel	1.0	13 or SB	0.5-25	1.9	B	2	B	0.77	B	41.7		0.78	B	2.7	B	249		379		87		9.8		3.7	B	1.3	B	1.2	B	3.6	B	2.7	B	142		47.5		116		20.8		32.4	
Potassium	71.9	SB	8,500-43,000	77.1	B	105	B	40.9	B	131	B	64	B	58.9	B	189	B	164	B	263	B	83	B	191	B	135	B	66.4	B	92.4	B	153	B	325	B	145	B	245	B	513	B	462	B
Selenium		2 or SB	0.1-3.9																																			1.7	J			1.4	
Silver		SB	NV							0.15	B							0.91	B																								
Sodium		SB	6,000-8,000							64.1	B			68.5	B					164	B	75.6	B											720	B	324	B	1020	B	511	B		
Thallium		SB	NV															0.81	B					2.2		1.3	B			1.2	B	2	B					1.8	B	1.8	B	1.5	B
Vanadium	1.7	150 or SB	1-300	2	B	2.8	B	1.9	B	2.6	B	2.5	B	1.6	B	8.7	B	4.5	B	11.5		2.3	B	8.2	B	1.6	B	1.9	B	3	B	5.5	B	9.8	B	2.6	B	9.4	B	6.5	B	13.8	
Zinc	2.3	20 or SB	9-50	3.1	BJ	10.4	J	2.7	BJ	35.4		2.6	B	2.9	J	18.8		318		46.7		5.3	J	16	J	3.4	J	6.2	J	4.2	J	7.5	J	147		3.8	BJ	19.4		13.5		1230	
Cyanide	0.35	NV	NV							29.3						12.3		9.4		26.3		1.7			R		R					0.4	B					31.8		13.9			
Total Organic Carbon (mg/kg)																																												
Total Organic Carbon				NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		227		NT		NT		NT	

Notes:
1. Only compounds detected in one or more soil samples are presented in this table.
2. Blank indicates compound was not detected.
3. NT indicates compound was not tested.
4. Analytical testing completed by CompuChem Corporation.
5. Results presented for GP-7, S-10; GP-9, S-6; GP-11, S-4; GP-44, S-8; GP-46, S-2; GP-47, S-2; GP-49, S-2; and MW-6S, S-2 are the higher of these samples and their respective duplicate.
6. Q = laboratory qualifier. See Appendix E for qualifier definitions.
7. ug/kg = parts per billion, mg/kg = parts per million.
8. Refer to Table 4-1 for additional information on background Site conditions.
9. TAGM # 4046 RSCO are Recommended Soil Cleanup Criteria from NYSDEC Technical and Administrative Guidance Memorandum No. HWR-94-4046, based on background Site soil samples (see Table 4-1). NV = no value; ND = no detections.
10. Published background as noted in NYSDEC Technical and Administrative Guidance Memorandum No HWR-94-4046.
11. NV = no value; SB = site background; MDL = method detection limit.
12. Concentrations that are bold exceed RSCO.

Table 2-7
Summary of Subsurface Soil Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date Sample Depth	Site Background[8]	TAGM #4046 RSCO[9]	Published Background[10]	GP-12,S-4 6/1/1999 6-8 ft	Q	GP-12,S-10 6/1/1999 18-20 ft	Q	GP-13,S-6 6/2/1999 10-12 ft	Q	GP-14,S-6 6/2/1999 10-12 ft	Q	GP-14,S-10 6/2/1999 18-20 ft	Q	GP-15,S-1 6/2/1999 0-2 ft	Q	GP-15,S-3 6/2/1999 4-6 ft	Q	GP-16,S-1 6/2/1999 0-2 ft	Q	GP-16,S-8 6/2/1999 14-16 ft	Q	GP-17,S-2 6/2/1999 2-4 ft	Q	GP-17,S-6 6/2/1999 10-12 ft	Q	GP-18,S-4 6/16/1999 6-8 ft	Q	GP-19,S-4 6/2/1999 6-8 ft	Q	GP-19,S-8 6/2/1999 14-16 ft	Q	GP-20,S-3 6/4/1999 4-6 ft	Q	GP-20,S-8 6/4/1999 14-16 ft	Q	GP-21,S-2 6/4/1999 2-4 ft	Q	GP-21,S-8 6/4/1999 14-16 ft	Q	GP-22,S-2 6/2/1999 2-4 ft	Q	GP-22,S-9 6/2/1999 16-18 ft	Q	GP-23,S-4 6/15/1999 6-8 ft	Q
Volatile Organics (ug/kg)																																														
Chloromethane		NV																																												
Bromomethane		NV																																												
Methylene chloride		100																																											12	
1,1,2-Trichloro-1,2,2-trifluoroethane		6000																																											
Acetone		200										8	J											5	J																		23	
Carbon disulfide		2700		2	J																																								
1,1-Dichloroethane		200																																											
2-Butanone		300																																											
1,1,1-Trichloroethane		800																																											
Trichloroethene		700																																											
Tetrachloroethene		1400																																											
2-Hexanone		NV																																											
4-Methyl-2-pentanone		1000																																											
Toluene		1500																2	J																								3	J
1,2-Dibromo-3-chloropropane (DBCP)		NV																																											
1,2,4-Trichlorobenzene		3400																																											
Semi-Volatile Organics (ug/kg)																																														
Phenol		30 or MDL		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT						NT		NT		NT		NT		NT		NT				
Di-n-butyl phthalate		8100		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT						NT		NT		NT		NT		NT		NT				
bis(2-Ethylhexyl)phthalate		50000		NT		NT		39	J	NT		NT		NT		NT		NT		NT		NT		NT		39	J			NT		NT		NT		NT		NT		NT		56	J
PCB and Pesticides (ug/kg)																																													
Alpha-BHC		110		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT						NT		NT		NT		NT		NT		NT				
Gamma-BHC (Lindane)		60		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT						NT		NT		NT		NT		NT		NT				
4,4'-DDE		2100		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT						NT		NT		NT		NT		NT		NT				
Endosulfan I		900		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT						NT		NT		NT		NT		NT		NT				
Endosulfan II		900		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT						NT		NT		NT		NT		NT		NT				
Endosulfan sulfate		1000		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT						NT		NT		NT		NT		NT		NT				
Endrin aldehyde		NV		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT						NT		NT		NT		NT		NT		NT				
Heptachlor epoxide		20		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT						NT		NT		NT		NT		NT		NT				
p,p'-Methoxychlor		NV		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT						NT		NT		NT		NT		NT		NT				
PCB-1254		10000												70				100																											
Gamma chlordane		540		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT						NT		NT		NT		NT		NT		NT				
Inorganics (mg/kg)																																													
Aluminum	723	SB	33,000	1020		1010		693		605		378		5760		9910		3730		951		5310	*	1330		1290	*	1060		781		923		697		6020		890		1110		837		720	*
Antimony		SB	NV																																										
Arsenic	1.0	7.5 or SB	3-12			1.5	B							2	B	2.3		2.1	B			1.3	B	1.6	B											1.7	BJ			0.87	B	1.2	B		
Barium	2.8	300 or SB	15-600	3.2	B	3.2	B	3.1	B	2.1	B	2.5	B	8.6	B	40.5	B	10.6	B	3.5	B	7	BE	4.7	B	4.8	B	4.3	B	3.3	B	3.3	B	2.9	B	15.3	B	3.7	B	5.4	B	3.6	B	1.9	B
Beryllium	0.08	0.16 or SB	0-1.75			0.18	B	0.12	B					0.2	B	0.32	B	0.2	B			0.2	B			0.11	B	0.13	B			0.13	B	0.09	B	0.25	B	0.1	B			0.1	B		
Cadmium		1 or SB	0.1-1															2		17.9				7.9						20.3				3				0.29	B			8.1			
Calcium	553.0	SB	130-35,000	20.9	B	52.9	B	12.4	B	20.9	B	24	B	2680		154	B	33700		67	B	220	B	73.7	B	36	B	15.6	B	37.9	B	197	B	161	B	72.4	B	30	B	42.5	B	345	B	10.2	B
Chromium	4.3	10 or SB	1.5-40	1.7	B	1.8	B	10.6		1	B	2.5		4.9		10.3		6		39.5		62.8	*	17.6		10.7		3.4		37.5		2.5		4.9		6.2		2.6		1.4	B	52.3		1	B
Cobalt	0.91	30 or SB	2.5-60	0.95	B	0.73	B	0.97	B	0.51	B	0.36	B	1.4	B	5.1	B	2.2	B	0.9	B	1.9	B	1.3	B	1.1	B	1.6	B	0.75	B	0.81	B	0.66	B	3.2	B	0.89	B	1.1	B	0.79	B	0.37	B
Copper	1.6	25 or SB	1-50	2.1	B	3.6	B	1.9	B	6.4		11.5		2.6	B	6.4		6.2		8.3		1.7	B	46.1		3.2	B	2.2	B	19.3		2.1	B	3.9	B	3.7	B	2.4	B	17.9		12.2		1.3	B
Iron	1910	2,000 or SB	2,000-550,000	2990		3390		2470		1280		1260		6580		8380		5080		2510		5050		2930		2920	*	3410		1920		3230		2160		7910		2390		1760		2350		1790	*
Lead	0.54	200-500	20-500 [10]	0.66		1.2		1		0.63		13		5.7		4.8		7.4		1.9		2.4		1.2		0.9	J	1.1		0.56	B	1.2		2.2		2.7		0.76	B	2.2		3		0.34	J
Magnesium	454	SB	100-5,000	163	B	193	B	163	B	101	B	117	B	1650		1520		18100		330	B	400	B	298	B	225	B	238	B	202	B	276	B	227	B	743	B	265	B	147	B	353	B	147	B
Manganese	50	SB	50-5,000	35.2		53		49.7		19.6		7		46.7		133		107		19.3		52.4		55		92.3	J	80.8		51.3		27.4		17.7		115		37.7		79.9		28.1		13	J
Mercury		0.1	0.001-0.2		R		R		R	0.02	BJ		R	0.03	BJ	0.04	BJ		R		R	0.03	B		R		R		R	0.03	BJ		R	0.04	BJ		R		R				
Nickel	1.0	13 or SB	0.5-25	0.72	B	1.1	B	1.3	B	0.65	B	0.29	B	2.7	B	6.2	B	4.8	B	17.9		8.6		26.8		8.9		1.6	B	8.5		0.81	B	2.4	B	3.8	B	1.3	B	1.1	B	9.8		0.73	B
Potassium	71.9	SB	8,500-43,000	74.7	B	74.5	B	62	B	50.6	B	67.7	B	126	B	265	B	181	B	244	B	115	B	135	B	98.8	B	118	B	66.6	B	68.8	B	51.1	B	155	B	110	B	59.9	B	67.5	B	65.4	B
Selenium		2 or SB	0.1-3.9																																										
Silver		SB	NV																																									
Sodium		SB	6,000-8,000																					99.9	B													58.2	B						
Thallium		SB	NV													0.87	B					0.89	B			1.1	B									1.3	B								
Vanadium	1.7	150 or SB	1-300	2.3	B	2.6	B	2.4	B	1.3	B	1.5	B	9.2	B	16.7		7.3	B	2.4	B	7.4	B	3	B	3.2	B	2.8	B	2.1	B	2.6	B	2.1	B	9.9	B	2.5	B	1.7	B	2.5	B	1.4	B
Zinc	2.3	20 or SB	9-50	3.1	B	3.8	BJ	2.5	BJ	1.9	BJ	1.8	BJ	9.6	J	17.6	J	12.3	J	19.3		5.2		14.4	J	4.7	J	4.2	J	8.5	J	5.9	J	8.9	J	9.6	J	4.2	J	7.5	J	15.9	J	3.2	J
Cyanide	0.35	NV	NV							0.35	B							0.49	B	25.7		0.52	B	1.1		4				31.7												11.6			
Total Organic Carbon (mg/kg)																																													
Total Organic Carbon				NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT		NT	

Notes: (See Page 1.)

Table 2-7
Summary of Subsurface Soil Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date Sample Depth	Site Background[8]	TAGM #4046 RSCO[9]	Published Background[10]	GP-24,S-3 6/3/1999 4-6 ft	Q	GP-24,S-7 6/3/1999 12-14 ft	Q	GP-25,S-5 6/3/1999 8-10 ft	Q	GP-25,S-10 6/3/1999 18-20 ft	Q	GP-26,S-5 6/1/1999 8-10 ft	Q	GP-26,S-10 6/1/1999 18-20 ft	Q	GP-27,S-5 6/15/1999 8-10 ft	Q	GP-27,S-9 6/15/1999 16-18 ft	Q	GP-28,S-3 6/15/1999 4-6 ft	Q	GP-28,S-8 6/15/1999 14-16 ft	Q	GP-29,S-4 6/3/1999 6-8 ft	Q	GP-29,S-9 6/3/1999 16-18 ft	Q	GP-30,S-1 6/3/1999 0-2 ft	Q	GP-30,S-6 6/3/1999 10-12 ft	Q	GP-32,S-5 6/1/1999 8-10 ft	Q	GP-32,S-9 6/1/1999 16-18 ft	Q	GP-33,S-4 6/2/1999 6-8 ft	Q	GP-33,S-10 6/2/1999 18-20	Q
Volatile Organics (ug/kg)																																									
Chloromethane		NV																																							
Bromomethane		NV																																							
Methylene chloride		100																																							
1,1,2-Trichloro-1,2,2-trifluoroethane		6000																																							
Acetone		200						12																3	J	3	J										3	J	3	J
Carbon disulfide		2700																																							
1,1-Dichloroethane		200																																							
2-Butanone		300																																							
1,1,1-Trichloroethane		800																																							
Trichloroethene		700																																							
Tetrachloroethene		1400																																							
2-Hexanone		NV																																							
4-Methyl-2-pentanone		1000																																							
Toluene		1500																																							
1,2-Dibromo-3-chloropropane (DBCP)		NV																																							
1,2,4-Trichlorobenzene		3400																																							
Semi-Volatile Organics (ug/kg)																																									
Phenol		30 or MDL		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		NT		NT		**75**	J	NT		NT		NT	
Di-n-butyl phthalate		8100		NT		NT		NT		NT		NT		NT		NT		NT		87	J	NT		NT		NT		NT		52	J	NT		NT		NT	
bis(2-Ethylhexyl)phthalate		50000		NT		NT		NT		NT		NT		NT		NT		NT		39	J	NT		NT		NT		NT		530	J	NT		NT		NT	
PCB and Pesticides (ug/kg)																																									
Alpha-BHC		110		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		NT				NT		NT		NT	
Gamma-BHC (Lindane)		60		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		NT		1	J	NT		NT		NT	
4,4'-DDE		2100		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		NT		19	JN	NT		NT		NT	
Endosulfan I		900		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		NT		16	JN	NT		NT		NT	
Endosulfan II		900		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		NT		29	JN	NT		NT		NT	
Endosulfan sulfate		1000		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		NT		35	J	NT		NT		NT	
Endrin aldehyde		NV		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		NT		30	J	NT		NT		NT	
Heptachlor epoxide		20		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		NT		9.9	J	NT		NT		NT	
p,p'-Methoxychlor		NV		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		NT		78	JN	NT		NT		NT	
PCB-1254		10000																																		1500	J					
Gamma chlordane		540		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		NT		9.8	J	NT		NT		NT	
Inorganics (mg/kg)																																									
Aluminum	723	SB	33,000	1210		1180		1380		821		723		749		1090		644		2120	*	799	*	958		1360		1660		1870		1110		466		810		306	
Antimony		SB	NV																																						
Arsenic	1.0	7.5 or SB	3-12							1.4	BJ			0.96	B					1.1	B	0.9	B							0.91	BJ								
Barium	2.8	300 or SB	15-600	6.9	B	5.7	B	3	B	3	B	2.5	B	3.9	B	13.1	B	2.7	B	6.2	B	3.1	B	2.9	B	11.5	B	8.3	B	6.9	B	4.4	B	3.4	B	2.5	B	2.5	B
Beryllium	0.08	0.16 or SB	0-1.75	0.14	B	0.09	B	0.15	B	0.09	B			0.1	B	0.09	B			0.13	B	0.1	B	0.11	B	0.13	B	0.15	B	0.15	B	0.09	B			0.12	B		
Cadmium		1 or SB	0.1-1			1.7				0.42	B							0.71	B							0.16	B	1	B	0.41	B					1.3	
Calcium	553.0	SB	130-35,000	21.1	B	85	B	2370	J	512	B	13.2	B	10.3	B	16.8	B*	14	B*	38.5	B	34.2	B	6.3	BJ	246	BJ	536	BJ	4200		10200		15.8	B	16.5	B	73	B
Chromium	4.3	10 or SB	1.5-40	1.8	B	5.1		13		10.8		4.3		2.5		2.5		1.8	B	4.2		1.7	B	1.3	B	3.7		5.9		4.6		16		1	B	1.1	B	7.9	
Cobalt	0.91	30 or SB	2.5-60	0.99	B	1.2	B	1.2	B	0.68	B	0.91	B	0.5	B	0.79	B	0.6	B	1.6	B	0.85	B	0.98	B	1.1	B	1.7	B	1.9	B	1.2	B	0.81	B	0.63	B	0.3	B
Copper	1.6	25 or SB	1-50	2.4	B	6.7		3.4	B	2.8	B	1.6	B	1.3	B	2.8	B*	2.8	B*	3	B	2.2	B	2.5	B	2.6	B	4.7	B	3.9	B	3.7	B	2.5	B	7.5		20.6	
Iron	1910	2,000 or SB	2,000-550,000	2990		3130		3710		2560		1790		1210		2460	*	1600	*	4770	*	2830	*	2920		2820		3330		3820		3280		1360		1710		1190	
Lead	0.54	200-500	20-500 [10]	1.4		1.6		1.6		0.95	B	0.54	B	0.45	B	4.9		1.3		0.81		0.96		1.1		1		3		5.7		1.2		1.1		0.6		14.5	
Magnesium	454	SB	100-5,000	212	B	405	B	1520	J	419	B	124	B	151	B	172	B	104	B	748	B	176	B	144	BJ	522	BJ	561	BJ	2680		5980		85	B	150	B	122	B
Manganese	50	SB	50-5,000	60.7		24.8		71.1		29.8		28.5		26.5		25		21.8		72.9	J	53.4	J	26		38.5		98.3		86		49.3		30.6		17.8		9.6	
Mercury		0.1	0.001-0.2		R		R		R		R		R	0.02	BJ		R		R		R		R		R	0.03	BJ	0.02	BJ		R		R		R		R		R
Nickel	1.0	13 or SB	0.5-25	1.1	B	2.8	B	2.1	B	1.5	B	1	B	0.79	B	1.1	B	1.4	B	2.2	B	1.1	B	0.82	B	1.7	B	2.4	B	2.6	B	2	B	1	B	0.76	B	0.7	B
Potassium	71.9	SB	8,500-43,000	94.1	B	295	B	109	B	82	B	50.9	B	83.7	B	55.8	B	44.8	B	166	B	76.6	B	63	B	365	B	119	B	137	B	96.8	B	54	B	64.5	B	76.7	B
Selenium		2 or SB	0.1-3.9																																				
Silver		SB	NV																																				
Sodium		SB	6,000-8,000																	78.7	B					67.3	B	69.7	B										
Thallium		SB	NV																	1.4	B	1.3	B																
Vanadium	1.7	150 or SB	1-300	2.6	B	4	B	3.7	B	2.3	B	1.5	B	1.7	B	2.4	B	1.8	B	8.3	B	2.1	B	2.4	B	4.3	B	3.9	B	4.1	B	3.1	B	1.5	B	1.4	B	1.2	B
Zinc	2.3	20 or SB	9-50	4.8	J	11.5	J	4.3	J	4.9	J	2.3	BJ	2.4	BJ	5.4	J	24.2		5.9	J	3.4	J	4.1	J	8.9	J	9.4	J	9.8	J	3.8	BJP	3.8	BJ	2.1	BJ	3.7	BJ
Cyanide	0.35	NV	NV																																			5.8	
Total Organic Carbon (mg/kg)																																									
Total Organic Carbon				NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		223		NT		NT	

Notes: (See Page 1.)

Table 2-7
Summary of Subsurface Soil Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date Sample Depth	Site Background[8]	TAGM #4046 RSCO[9]	Published Background[10]	GP-34,S-6 6/2/1999 10-12 ft	Q	GP-34,S-10 6/2/1999 18-20	Q	GP-35,S-8 6/3/1999 14-16 ft	Q	GP-36,S-2 6/3/1999 2-4 ft	Q	GP-36,S-8 6/3/1999 14-16 ft	Q	GP-38,S-4 6/3/1999 6-8 ft	Q	GP-38,S-9 6/3/1999 16-18 ft	Q	GP-39,S-2 6/3/1999 2-4 ft	Q	GP-39,S-8 6/3/1999 14-16 ft	Q	GP-40,S-1 6/17/1999 0-2 ft	Q	GP-40,S-4 6/17/1999 6-8 ft	Q	GP-42,S-2 6/10/1999 2-4 ft	Q	GP-42,S-6 6/10/1999 10-12 ft	Q	GP-44,S-4 6/15/1999 6-8 ft	Q	GP-44,S-8 6/15/1999 14-16 ft	Q	GP-45,S-1 4/24/2001 0-2 ft.	Q	GP-45,S-2 4/24/2001 2-4 ft.	Q	GP-45,S-3 4/24/2001 4-6 ft.	Q	GP-45,S-4 4/24/2001 6-8 ft.	Q	GP-45,S-5 4/24/2001 8-10 ft.	Q
Volatile Organics (ug/kg)																																										
Chloromethane		NV																																								
Bromomethane		NV																																								
Methylene chloride		100																								26															
1,1,2-Trichloro-1,2,2-trifluoroethane		6000																																							
Acetone		200								5	J	2	J	4	J	2	J			5	J	22	J	9	J																
Carbon disulfide		2700																																								
1,1-Dichloroethane		200																																							
2-Butanone		300																																							
1,1,1-Trichloroethane		800																								3	J									2	J				
Trichloroethene		700																				1	J			4	J									8	J				
Tetrachloroethene		1400																				9	J			9	J									12					
2-Hexanone		NV																																								
4-Methyl-2-pentanone		1000																																								
Toluene		1500																				2	J			4	J														
1,2-Dibromo-3-chloropropane (DBCP)		NV																																								
1,2,4-Trichlorobenzene		3400																																								
Semi-Volatile Organics (ug/kg)																																										
Phenol		30 or MDL		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT		NT	
Di-n-butyl phthalate		8100		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		NT		NT		NT		NT		NT		NT	
bis(2-Ethylhexyl)phthalate		50000		NT		NT		NT		NT		NT		NT		NT		NT		NT		50	J	NT		NT		NT		NT		NT		NT		NT		NT		NT	
PCB and Pesticides (ug/kg)																																										
Alpha-BHC		110		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT		1.2	J	NT		NT		NT		NT		NT	
Gamma-BHC (Lindane)		60		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT				NT		NT		NT		NT		NT	
4,4'-DDE		2100		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT				NT		NT		NT		NT		NT	
Endosulfan I		900		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT				NT		NT		NT		NT		NT	
Endosulfan II		900		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT				NT		NT		NT		NT		NT	
Endosulfan sulfate		1000		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT				NT		NT		NT		NT		NT	
Endrin aldehyde		NV		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT				NT		NT		NT		NT		NT	
Heptachlor epoxide		20		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT				NT		NT		NT		NT		NT	
p,p'-Methoxychlor		NV		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT				NT		NT		NT		NT		NT	
PCB-1254		10000								870	DJ																							NT		NT		NT		NT	
Gamma chlordane		540		NT		NT		NT		NT		NT		NT		NT		NT		NT				NT		NT		NT				NT		NT		NT		NT		NT	
Inorganics (mg/kg)																																										
Aluminum	723	SB	33,000	715		706		948		7970		760		1480		1950		7240		661		5910		1220		6660	*	731	*	1420		735	*	8610	J	6600	J	1160	J	1100	J	1140	J
Antimony		SB	NV																															0.41	BN								
Arsenic	1.0	7.5 or SB	3-12	1	B					2	B			1.4	B			1.9	B			1.5	B			2.8						0.96	B	6.1		1.4	B			0.39	B		
Barium	2.8	300 or SB	15-600	2.8	B	2.9	B	4.2	B	17.2	B	3.2	B	4.6	B	8.3	B	12.8	B	3.6	B	12.1	B	10.9	B	12.5	B	2.9	B	7.7	B	6.3	B	34.1	BN	11.9	B	5.1	B	5.2	B	4.2	B
Beryllium	0.08	0.16 or SB	0-1.75	0.08	B			0.14	B	0.3	B	0.1	B	0.24	B	0.21	B	0.26	B			0.17	B	0.16	B	0.2	B			0.12	B			0.33	B	0.22	B	0.16	B	0.2	B	0.16	B
Cadmium		1 or SB	0.1-1									5.5						1.8		4.9		1360		21.8								0.54	B								
Calcium	553.0	SB	130-35,000	553	B	32.6	B	46.7	B	542	BJ	99.7	BJ	8.5	BJ	135	BJ	12700	J	14.6	BJ	1680	*	45.1	B*	255	B	16.2	B	22.8	B*	26.1	B	2270	E	301	BE	76.9	BE	51.1	BE	767	BE
Chromium	4.3	10 or SB	1.5-40	2.3		2.3		30.4		8.1		14		2.3	B	8		8.2		18.4		142		91.5		6.7		1.9	B	1.4	B	1.9	B	12.2		7.4		2.4	B	2.9		3.2	
Cobalt	0.91	30 or SB	2.5-60	0.77	B	0.53	B	1.3	B	5.2	B	0.66	B	1.2	B	1.5	B	4.3	B	0.41	B	2.5	B	1.3	B	2.1	B	0.57	B	2.2	B	0.67	B	2	B	1.9	B	1.3	B	1	B	0.64	B
Copper	1.6	25 or SB	1-50	1.2	B	13.9		21.7		4.9	B	21.5	J	3.1	B	4.6	B	4.5	B	8.4	J	98.9	*	3.6	B*	5.6	J	1.9	B	2.9	B*	1.9	B	17.1		4	B	1.8	B	2	B	1.7	B
Iron	1910	2,000 or SB	2,000-550,000	1910		1050		4730		8850		1870		5240		4900		8530		3630		6010	*	6030	*	7700	*	2650	*	2840	*	1990	*	11200		7850		3270		3830		3020	
Lead	0.54	200-500	20-500 [10]	0.52	B	0.97		13.8		4.8		1.1		1		2.1		4.2		2.2		10.9		1.1		12.5		0.77		1		0.79		67	NJ	5.7	NJ	1.2	NJ	1.1	NJ	1.4	NJ
Magnesium	454	SB	100-5,000	454	B	260	B	270	B	1050	BJ	153	BJ	235	BJ	435	BJ	8010	J	165	BJ	619	B	202	B	500	B	149	B	258	B	181	B	834	B	824	B	301	B	213	B	323	B
Manganese	50	SB	50-5,000	49.7		13.2		51		162		32		50		53.1		170		8.5		72.6		252		57.1	J	43.1	J	210		22.7	J	124		59.4		126		162		49.7	
Mercury		0.1	0.001-0.2		R	0.02	BJ		R	0.01	BJ	0.01	BJ		R		R	0.01	BJ	0.01	BJ	0.02	J		R	0.01	J		R		R										
Nickel	1.0	13 or SB	0.5-25	0.87	B	1.1	B	3	B	4.9	B	9.4		1.5	B	1.9	B	5.4	B	2.6	B	895		62.4		3.5	B	0.95	B	1.6	B	0.95	B	6.6	B	4.9	B	2	B	1.8	B	1.3	B
Potassium	71.9	SB	8,500-43,000	71.9	B	80.7	B	99.9	B	265	B	60	B	150	B	440	B	268	B	65.2	B	212	B	55	B	172	B	80.2	B	113	B	86	B	324	B	208	B	75.1	B	88	B	105	B
Selenium		2 or SB	0.1-3.9																			1.3	J			1.6								1.4	NJ	0.84	BNJ						
Silver		SB	NV																			0.36	B											0.2	B								
Sodium		SB	6,000-8,000							68.6	B					130	B	72.7	B	69.7	B	1210		131	B	71.3	B	64.6	B			147	B	267	B	229	B	191	B	231	B	234	B
Thallium		SB	NV															1.1	B			1.3	B	1.6	B	1.9	B	1.2	B	1.1	B	1.1	B										
Vanadium	1.7	150 or SB	1-300	1.7	B	1.8	B	2.6	B	11.9		1.8	B	3.4	B	4	B	11.8		1.9	B	9.6	B	2.7	B	11.6		2.2	B	2.4	B	1.8	B	18.3		11.3		3	B	2.8	B	2.7	B
Zinc	2.3	20 or SB	9-50	1.9	BJ	2.6	BJ	7.4	J	11.7	J	4	BJ	6.8	J	13.9	J	11.6	J	5.2	J	54.8		10.2		17.3		2.2	J	6.5		2.2	J	79.1	EJ	15.2	E	3.5	BE	3.7	BE	3.2	BE
Cyanide	0.35	NV	NV			0.62		1.1				1.3								1.8		107		6.5										NT		NT		NT		NT	
Total Organic Carbon (mg/kg)																																										
Total Organic Carbon				NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	

Notes: (See Page 1.)

Table 2-7
Summary of Subsurface Soil Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date Sample Depth	Site Background[8]	TAGM #4046 RSCO[9]	Published Background[10]	GP-45,S-6 4/24/2001 10-12 ft.	Q	GP-45,S-7 4/24/2001 12-14 ft.	Q	GP-45,S-8 4/24/2001 14-16 ft.	Q	GP-46,S-1 4/24/2001 0-2 ft.	Q	GP-46,S-2 4/24/2001 2-4 ft.	Q	GP-46,S-3 4/24/2001 4-6 ft.	Q	GP-46,S-4 4/24/2001 6-8 ft.	Q	GP-46,S-5 4/24/2001 8-10 ft.	Q	GP-46,S-6 4/24/2001 10-12 ft.	Q	GP-46,S-7 4/24/2001 12-14 ft.	Q	GP-46,S-8 4/24/2001 14-16 ft.	Q	GP-46,S-9 4/24/2001 16-18 ft.	Q	GP-46,S-10 4/24/2001 18-20 ft.	Q	GP-47, S-1 4/24/2001 0-2 ft.	Q	GP-47, S-2 4/24/2001 2-4 ft.	Q	GP-47,S-3 4/24/2001 4-6 ft.	Q	GP-47,S-4 4/24/2001 6-8 ft.	Q	GP-47,S-5 4/24/2001 8-10 ft.	Q	GP-47,S-6 4/24/2001 10-12 ft.	Q	GP-47,S-7 4/24/2001 12-14 ft.	Q
Volatile Organics (ug/kg)																																										
Chloromethane		NV																																							
Bromomethane		NV																																							
Methylene chloride		100		2	J	2	J	2	J																					33	DJ										
1,1,2-Trichloro-1,2,2-trifluoroethane		6000								2	J	2	J			2	J			2	J	2	J	1	J	1	J	2	J							2	J				
Acetone		200																												26	DJB									
Carbon disulfide		2700																																						
1,1-Dichloroethane		200																																						
2-Butanone		300																																					4	J
1,1,1-Trichloroethane		800								4	J	1	J																												
Trichloroethene		700								8	J	2	J																	12	DJ										
Tetrachloroethene		1400								47		14																		480	D	160		13		2	J			7	J
2-Hexanone		NV		1	J																											1	J								
4-Methyl-2-pentanone		1000																																						
Toluene		1500																																						
1,2-Dibromo-3-chloropropane (DBCP)		NV																														1	JB								
1,2,4-Trichlorobenzene		3400																										1	J			1	J								
Semi-Volatile Organics (ug/kg)																																									
Phenol		30 or MDL		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Di-n-butyl phthalate		8100		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
bis(2-Ethylhexyl)phthalate		50000		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
PCB and Pesticides (ug/kg)																																									
Alpha-BHC		110		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Gamma-BHC (Lindane)		60		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
4,4'-DDE		2100		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Endosulfan I		900		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Endosulfan II		900		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Endosulfan sulfate		1000		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Endrin aldehyde		NV		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Heptachlor epoxide		20		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
p,p'-Methoxychlor		NV		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
PCB-1254		10000		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Gamma chlordane		540		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Inorganics (mg/kg)																																									
Aluminum	723	SB	33,000	1030	J	1880	J	881	J	3310	J	2700	J	1160	J	951	J	1100	J	1060	J	1160	J	900	J	1280	J	1270	J	6520	J	2110	J	1780	J	1070	J	724	J	1510	J	1120	J
Antimony		SB	NV							0.68	B			0.37	B															1.5	BN	0.33	BN									0.42	BN
Arsenic	1.0	7.5 or SB	3-12			0.64	B	0.53	B	1.2	B	0.53	B			0.45	B	0.36	B	6.1				0.67	B	1.3	B	1	B	2.1	B	0.5	B	0.53	B					1.7	B		
Barium	2.8	300 or SB	15-600	3.6	B	6.7	B	4.2	B	27.2	B	7.4	B	6	B	6.5	B	3.5	B	3.4	B	6.6	B	2.9	B	6.3	B	5.9	B	18	B	8.2	B	8.2	B	3.3	B	3.1	B	10.4	B	7.1	B
Beryllium	0.08	0.16 or SB	0-1.75	0.18	B	0.15	B	0.15	B	0.15	B	0.13	B					0.16	B			0.11	B			0.11	B			0.27	B	0.16	B	0.16	B	0.15	B	0.16	B	0.18	B	0.16	B
Cadmium		1 or SB	0.1-1							20.9				0.17	B					0.11	B	0.32	B			0.16	B	0.34	B	590		42.1		200		25.6		103		173		273	
Calcium	553.0	SB	130-35,000	40.6	BE	3020	E	624	BE	3210		372	B	152	B	29.7	B	2170		38.3	B	349	B	34.8	B	386	B	974	B	497	BE	250	BE	2650	E	135	BE	127	BE	242	BE	276	BE
Chromium	4.3	10 or SB	1.5-40	2.1		7.1		4.6		47.9	J	3.4		2.8		3.9		3.7		5		7.7		3.4		10	J	6.9		370		18.2		48.4		10.5		10.3		16.3		44.9	
Cobalt	0.91	30 or SB	2.5-60	0.83	B	1.1	B	0.53	B	2.1	B	2.2	B	1.2	B	0.93	B	0.79	B	1.3	B	1	B	0.67	B	0.83	B	0.95	B	6	B	2	B	1.2	B	0.65	B	0.68	B	1.5	B	1.1	B
Copper	1.6	25 or SB	1-50	1.7	B	2.7		1.5	B	31.9		2.9	B	1.7	B	2.7	B	3.6	B	2.1	B	2.6	B	2.5	B	3.2	B	4.2	B	15.5		8.2		28		3.8	B	4.8	B	8.3		32.5	
Iron	1910	2,000 or SB	2,000-550,000	4200		3820	B	2210		7030	*J	5000	*J	2120	*J	2670	*J	4740	*J	5890	*J	3320	*J	3760	*J	4330	*J	5350	*J	7820		4420		3690		3320		2270		3810		3570	
Lead	0.54	200-500	20-500 [10]	1.1	NJ	3.2	NJ	1.9	NJ	24.5		6.3		1.5		1.4		1.6		1.1		1.7		1		1.4		2.1		14	NJ	1.8	NJ	2.7	NJ	1.3	NJ	1.2	NJ	1.8	NJ	2.7	NJ
Magnesium	454	SB	100-5,000	185	B	432	B	204	B	2000		513	B	296	B	183	B	264	B	218	B	282	B	305	B	316	B	335	B	615	B	379	B	1790		208	B	182	B	390	B	275	B
Manganese	50	SB	50-5,000	51.2		83		37.6		117	*J	142	*J	142	*J	235	*J	50.2	*J	59.9	*J	118	*J	42.1	*J	67.8	*J	85.3	*J	99.9		204		92.1		39.1		26.5		72.3		66.9	
Mercury		0.1	0.001-0.2																																								
Nickel	1.0	13 or SB	0.5-25	1.3	B	2.2	B	1.1	B	56.3		3.2	B	2.8	B	2.5	B	2.1	B	2.3	B	3	B	1.7	B	2.9	B	2.9	B	1960		112		104		97.5		72.1		112		179	
Potassium	71.9	SB	8,500-43,000	81.1	B	181	B	92.4	B	385	BJ	212	BJ	114	BJ	92.9	BJ	81.9	BJ	73	BJ	105	BJ	86.2	BJ	226	BJ	234	BJ	235	B	166	B	129	B	97.2	B	75.1	B	207	B	123	B
Selenium		2 or SB	0.1-3.9																			0.47	B							0.71	BNJ			0.64	BNJ								
Silver		SB	NV																											0.2	B												
Sodium		SB	6,000-8,000	217	B	264	B	191	B	176	B	155	B	166	B	176	B	166	B	158	B	137	B	133	B	148	B	151	B	280	B	279	B	218	B	216	B	214	B	254	B	240	B
Thallium		SB	NV	0.82	B					0.86	B	0.91	B							1.2	B					0.7	B			1.2	B												
Vanadium	1.7	150 or SB	1-300	2.2	B	4.3	B	2.2	B	8.9	B	5.4	B	2.4	B	2.6	B	2.5	B	3.2	B	3.2	B	3	B	3.7	B	4.2	B	12.4		3.5	B	3.9	B	2.4	B	2	B	5.2	B	3.1	B
Zinc	2.3	20 or SB	9-50	3.3	BE	5.8	E	2.6	BE	42.6		8.6		3.6	B	3	B	8.1		4.4		4.4		3.7	B	5.9		9.8		31.9	EJ	6.6	E	24.5	EJ	3.6	BE	5.6	E	12	E	22.6	EJ
Cyanide	0.35	NV	NV	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Total Organic Carbon (mg/kg)																																									
Total Organic Carbon				NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	

Notes: (See Page 1.)

Table 2-7
Summary of Subsurface Soil Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date Sample Depth	Site Background[8]	TAGM #4046 RSCO[9]	Published Background[10]	GP-47,S-8 4/24/2001 14-16 ft.	Q	GP-47,S-9 4/24/2001 16-18 ft.	Q	GP-47,S-10 4/24/2001 18-20 ft.	Q	GP-48,S-1 4/24/2001 0-2 ft.	Q	GP-48,S-2 4/24/2001 2-4 ft.	Q	GP-48,S-3 4/24/2001 4-6 ft.	Q	GP-48,S-4 4/24/2001 6-8 ft.	Q	GP-48,S-5 4/24/2001 8-10 ft.	Q	GP-48,S-6 4/24/2001 10-12 ft.	Q	GP-48,S-7 4/24/2001 12-14 ft.	Q	GP-48,S-8 4/24/2001 14-16 ft.	Q	GP-48,S-9 4/24/2001 16-18 ft.	Q	GP-48,S-10 4/24/2001 18-20 ft.	Q	GP-49,S-1 4/24/2001 0-2 ft.	Q	GP-49,S-2 4/24/2001 2-4 ft.	Q	GP-49,S-3 4/24/2001 4-6 ft.	Q	GP-49,S-4 4/24/2001 6-8 ft.	Q	GP-49,S-5 4/24/2001 8-10 ft.	Q	GP-49,S-6 4/24/2001 10-12 ft.	Q	GP-49,S-7 4/24/01 12-14 ft.	Q	GP-49,S-8 4/24/2001 14-16 ft.	Q
Volatile Organics (ug/kg)																																												
Chloromethane		NV																				1	J																			
Bromomethane		NV																				3	JB																			
Methylene chloride		100										4	J																													
1,1,2-Trichloro-1,2,2-trifluoroethane		6000								2	J	4	J																			2	J									
Acetone		200																																								
Carbon disulfide		2700																																								
1,1-Dichloroethane		200																																								
2-Butanone		300																				3	J																			
1,1,1-Trichloroethane		800										1	J									1	J																			
Trichloroethene		700										5	J																			2	J									
Tetrachloroethene		1400				10	J					24										2	J									19						2	J			
2-Hexanone		NV																																								
4-Methyl-2-pentanone		1000																												2	J						3	J			
Toluene		1500																																								
1,2-Dibromo-3-chloropropane (DBCP)		NV																																								
1,2,4-Trichlorobenzene		3400																																								
Semi-Volatile Organics (ug/kg)																																										
Phenol		30 or MDL		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Di-n-butyl phthalate		8100		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
bis(2-Ethylhexyl)phthalate		50000		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
PCB and Pesticides (ug/kg)																																										
Alpha-BHC		110		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Gamma-BHC (Lindane)		60		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
4,4'-DDE		2100		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Endosulfan I		900		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Endosulfan II		900		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Endosulfan sulfate		1000		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Endrin aldehyde		NV		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Heptachlor epoxide		20		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
p,p'-Methoxychlor		NV		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
PCB-1254		10000		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Gamma chlordane		540		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Inorganics (mg/kg)																																										
Aluminum	723	SB	33,000	1620	J	2000	J	1220	J	4520	J	4980	J	1660		3870		735		553		2340		711		2890		707		5360		2950		557		1600		1130		592		1800		1110	
Antimony		SB	NV	6.8	BN	0.69	BN	0.57	BN																	0.47	B			2.3	BN														
Arsenic	1.0	7.5 or SB	3-12	1.4	B	0.63	B	1.8	B	1.5	B	0.94	B	0.63	B	1	B													2.2													
Barium	2.8	300 or SB	15-600	67.8		14.6	B	20.6	B	10.2	B	8.9	B	5.8	B	12.4	B	2.6	B	2.6	B	8	B	5.5	B	8.4	B	4.2	B	13	B	4.8	B	1.2	B	3.2	B	4.1	B	2.2	B	5.6	B	8.9	B
Beryllium	0.08	0.16 or SB	0-1.75	0.19	B	0.19	B	0.27	B	0.21	B	0.36	B	0.13	BJ	0.22	BJ							0.11	BJ	0.13	BJ	0.12	BJ	0.19	BJ	0.14	BJ										
Cadmium		1 or SB	0.1-1	299		599		26						4.2								0.18	B			0.33	B	0.43	B	94.3		21.2		2.6		3.7		4.3	J	2		12.8		0.89	B
Calcium	553.0	SB	130-35,000	1530	E	1090	E	96	BE	1290	E	105	BE	4160		62.6	B	57.8	B	13.6	B	369	B	33.1	B	533	B	37.9	B	502	B	93.4	B	18.8	B	35	B	1590		42.3	B	3800		82.1	B
Chromium	4.3	10 or SB	1.5-40	435		89.8		90.3		6.7		5.7		34.7	*	4.1	*	1.9	B*	1.8	B*	6.5	*	4.7	*	9.4	*J	5	*	766	*	54.2	*	5.1	*	13.6	*	49.1	*	21.3	*	70.7	*	25.9	*
Cobalt	0.91	30 or SB	2.5-60	2.1	B	1.9	B	0.63	B	2.4	B	1.2	B	2.9	B	6.2	B	0.46	B	0.34	B	1.6	B	0.46	B	1.6	B	0.63	B	1.1	B	1.5	B	0.41	B	0.75	B	1.7	B	0.27	B	1.5	B	0.96	B
Copper	1.6	25 or SB	1-50	127		67.5		100		3.5	B	2.6	B	9.9		3.5	B	2.2	B	1.5	B	3	B	1.9	B	8.7		13.6		97.5		2.9	B	1.2	B	1.9	B	7.2		3.6	B	12.7		5.2	
Iron	1910	2,000 or SB	2,000-550,000	4870		4960		4580		6710		7450		4090		7460		2510		2110		3330		2580		4630		2360		7720		3850		1630		3710		2610		1260		3800		3150	
Lead	0.54	200-500	20-500 [10]	49.2	NJ	5.9	NJ	1.3	NJ	5.4	NJ	3.8	NJ	1.9	N*J	2.4	N*J	0.8	N*J	0.99	N*J	1.8	N*J	0.92	N*J	2.9	N*J	0.88	N*J	16.8	N*	2.1	N*J	0.53	BN*	1.3	N*J	1.5	N*J	0.65	N*J	2.3	N*J	1.2	N*J
Magnesium	454	SB	100-5,000	1100		1020		323	B	655	B	384	B	385	B	630	B	143	B	123	B	465	B	263	B	1620		177	B	382	B	243	B	144	B	270	B	235	B	119	B	328	B	327	B
Manganese	50	SB	50-5,000	81.9		114		33.7		121		59.5		151		214		44.6		41.1		64.1		46.3		99.7		41.7		56.1		90.6		31.9		42.9		62.9		11.6		89.7		73.8	
Mercury		0.1	0.001-0.2	0.12																																							
Nickel	1.0	13 or SB	0.5-25	419		357		15		3.5	B	2.8	B	12.6	N*J	4.1	BN*	0.92	BN*	0.79	BN*J	2.6	BN*	0.98	BN*J	6.8	BN*	1.8	BN*	86.1	N*J	15.4	N*J	1.5	BN*	4.1	BN*	9.4	N*J	3.5	BN*J	17.6	N*J	3.1	BN*
Potassium	71.9	SB	8,500-43,000	200	B	256	B	207	B	233	B	118	B	134	B	198	B	72	B	54.8	B	125	B	135	B	154	B	87.2	B	173	B	101	B	54.8	B	116	B	83.2	B	54.1	B	103	B	182	B
Selenium		2 or SB	0.1-3.9							0.8	BNJ	0.75	BNJ																															
Silver		SB	NV	1.2	B																																					
Sodium		SB	6,000-8,000	182	B	245	B	215	B	450	B	341	B	379	B	446	B	419	B	390	B	503	B	380	B	406	B	378	B	392	B	368	B	182	B	361	B	401	B	396	B	343	B	366	B
Thallium		SB	NV	0.59	B							0.8	B	0.63	BJ	1.3	BJ													2	B	0.8	B			0.69	B					0.94	B		
Vanadium	1.7	150 or SB	1-300	4.3	B	6.1	B	5.5	B	8.3	B	9.1	B	3.8	BJ	6.7	BJ	2.5	BJ	2	BJ							2.4	BJ	13.2		4.9	B	1.6	B	3.1	B	3.6	B	1.7	B	3.9	B	3.5	B
Zinc	2.3	20 or SB	9-50	158	EJ	59.8	EJ	11.5	E	9.3	E	11.6	E		R		R		R		R		R		R		R		R		R		R		R		R		R		R	
Cyanide	0.35	NV	NV	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Total Organic Carbon (mg/kg)																																										
Total Organic Carbon				NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	

Notes: (See Page 1.)

Table 2-7
Summary of Subsurface Soil Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date Sample Depth	Site Background[8]	TAGM #4046 RSCO[9]	Published Background[10]	GP-49,S-9 4/24/2001 16-18 ft.	Q	GP-49,S-10 4/24/2001 18-20 ft.	Q	MW-5D1 7/12/1999 15-17 ft	Q	MW-6S,S-1 7/18/2000 16 - 18 ft	Q	MW-6S, S-2 7/18/2000 26 - 28 ft	Q	MW-10S, S-11 7/18/2000 20 - 22 ft	Q	MW-11S-11 7/17/2000 20 - 22 ft	Q	TP-1, S-1 7/21/2000 0.5 - 1 ft.	Q	TP-1, S-2 7/21/2000 1 - 6 ft.	Q
Volatile Organics (ug/kg)																					
Chloromethane		NV																			
Bromomethane		NV																			
Methylene chloride		100		1	JB																
1,1,2-Trichloro-1,2,2-trifluoroethane		6000																			
Acetone		200		13	B													4	J	8	J
Carbon disulfide		2700																			
1,1-Dichloroethane		200																1	J		
2-Butanone		300																			
1,1,1-Trichloroethane		800																78		18	
Trichloroethene		700																28		6	J
Tetrachloroethene		1400																47		7	J
2-Hexanone		NV																			
4-Methyl-2-pentanone		1000		2	J																
Toluene		1500								4	J			2	J			4	J	2	J
1,2-Dibromo-3-chloropropane (DBCP)		NV																			
1,2,4-Trichlorobenzene		3400																			
Semi-Volatile Organics (ug/kg)																					
Phenol		30 or MDL		NT		NT				NT		NT		NT		NT		NT		NT	
Di-n-butyl phthalate		8100		NT		NT				NT		NT		NT		NT		NT		NT	
bis(2-Ethylhexyl)phthalate		50000		NT		NT		45	J	NT		NT		NT		NT		NT		NT	
PCB and Pesticides (ug/kg)																					
Alpha-BHC		110		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Gamma-BHC (Lindane)		60		NT		NT		NT		NT		NT		NT		NT		NT		NT	
4,4'-DDE		2100		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Endosulfan I		900		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Endosulfan II		900		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Endosulfan sulfate		1000		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Endrin aldehyde		NV		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Heptachlor epoxide		20		NT		NT		NT		NT		NT		NT		NT		NT		NT	
p,p'-Methoxychlor		NV		NT		NT		NT		NT		NT		NT		NT		NT		NT	
PCB-1254		10000		NT		NT		99		NT		NT		NT		NT		NT		NT	
Gamma chlordane		540		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Inorganics (mg/kg)																					
Aluminum	723	SB	33,000	1990		1080		609	*	405		590		518		843		15400	J	3940	J
Antimony		SB	NV																		
Arsenic	1.0	7.5 or SB	3-12	0.62	B													13.7			
Barium	2.8	300 or SB	15-600	8	B	11.5	B	3.1	B	2.5	B	3.8	B	2.8	B	4.6	B	108		7.1	B
Beryllium	0.08	0.16 or SB	0-1.75									0.064	B			0.05	B	1	B	0.21	B
Cadmium		1 or SB	0.1-1	13.6		2.3		3.4		0.5	B	6.3						5500	J	111	J
Calcium	553.0	SB	130-35,000	3590		75.9	B	410	BE	4480*		85.6	B*	21.1	B*	74.9	B*	8370	E	358	BE
Chromium	4.3	10 or SB	1.5-40	95.2	*	26.7	*	24.2		3.1		5.8		1.4	B	3.3		19600		220	
Cobalt	0.91	30 or SB	2.5-60	1.3	B	0.86	B	0.66	B	0.18	B	0.33	B	0.28	B	0.44	B	4.4	B	1.9	B
Copper	1.6	25 or SB	1-50	31.6	J	9.3		8.8		1.4	B	3.9	B	1.2	B	2.2	B	3610		54.3	
Iron	1910	2,000 or SB	2,000-550,000	4200		2220		2720		880		1230		1080		1910		7590		4640	
Lead	0.54	200-500	20-500 [10]	3	N*J	1.2	N*J	0.53	B	0.46	B	0.95		1.1		1.3			R		R
Magnesium	454	SB	100-5,000	430	B	337	B	137	B	2670		137	B	106	B	176	B	399		387	
Manganese	50	SB	50-5,000	63.6		58.8		33	*	20		7.6		20		35.3			R		R
Mercury		0.1	0.001-0.2															0.3			
Nickel	1.0	13 or SB	0.5-25	54.2	N*	5.8	BN*J	5	B	2.4	B	5.6	B	0.66	B	1.1	B	4900		125	
Potassium	71.9	SB	8,500-43,000	154	B	147	B	68.2	B	66.4	B	67.2	B	58.3	B	103	B	1520		204	B
Selenium		2 or SB	0.1-3.9															2.4			
Silver		SB	NV															0.42	B		
Sodium		SB	6,000-8,000	290	B	389	B			139	B	115	B	121	B	111	B	1300		526	B
Thallium		SB	NV	1.1	B											1.2	B	4.3	J	1.8	J
Vanadium	1.7	150 or SB	1-300	4.6	B	3.2	B	2.2	B	1.1	B	1.5	B	1.1	B	1.6	B	9.2	B	6.2	B
Zinc	2.3	20 or SB	9-50		R		R	4.6		2	B	2.7	B	1.9	B	3.5	B	2980	J	47	J
Cyanide	0.35	NV	NV	NT		NT		0.3	B									56.8		19.2	
Total Organic Carbon (mg/kg)																					
Total Organic Carbon				NT		NT		NT													

Notes: (See Page 1.)

Table 2-7
Summary of Subsurface Soil Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date Sample Depth	Site Background[8]	TAGM #4046 RSCO[9]	Published Background[10]
Volatile Organics (ug/kg)			
Chloromethane		NV	
Bromomethane		NV	
Methylene chloride		100	
1,1,2-Trichloro-1,2,2-trifluoroethane		6000	
Acetone		200	
Carbon disulfide		2700	
1,1-Dichloroethane		200	
2-Butanone		300	
1,1,1-Trichloroethane		800	
Trichloroethene		700	
Tetrachloroethene		1400	
2-Hexanone		NV	
4-Methyl-2-pentanone		1000	
Toluene		1500	
1,2-Dibromo-3-chloropropane (DBCP)		NV	
1,2,4-Trichlorobenzene		3400	
Semi-Volatile Organics (ug/kg)			
Phenol		30 or MDL	
Di-n-butyl phthalate		8100	
bis(2-Ethylhexyl)phthalate		50000	
PCB and Pesticides (ug/kg)			
Alpha-BHC		110	
Gamma-BHC (Lindane)		60	
4,4'-DDE		2100	
Endosulfan I		900	
Endosulfan II		900	
Endosulfan sulfate		1000	
Endrin aldehyde		NV	
Heptachlor epoxide		20	
p,p'-Methoxychlor		NV	
PCB-1254		10000	
Gamma chlordane		540	
Inorganics (mg/kg)			
Aluminum	723	SB	33,000
Antimony		SB	NV
Arsenic	1.0	7.5 or SB	3-12
Barium	2.8	300 or SB	15-600
Beryllium	0.08	0.16 or SB	0-1.75
Cadmium		1 or SB	0.1-1
Calcium	553.0	SB	130-35,000
Chromium	4.3	10 or SB	1.5-40
Cobalt	0.91	30 or SB	2.5-60
Copper	1.6	25 or SB	1-50
Iron	1910	2,000 or SB	2,000-550,000
Lead	0.54	200-500	20-500 [10]
Magnesium	454	SB	100-5,000
Manganese	50	SB	50-5,000
Mercury		0.1	0.001-0.2
Nickel	1.0	13 or SB	0.5-25
Potassium	71.9	SB	8,500-43,000
Selenium		2 or SB	0.1-3.9
Silver		SB	NV
Sodium		SB	6,000-8,000
Thallium		SB	NV
Vanadium	1.7	150 or SB	1-300
Zinc	2.3	20 or SB	9-50
Cyanide	0.35	NV	NV
Total Organic Carbon (mg/kg)			
Total Organic Carbon			

Notes:

Table 2-8
Summary of Cesspool Sediment Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location				AG-1-SED [12]		CP-2-SED		CP-3-SED		CP-3 (IRM Conf.)		CP-3S-1		CP-3S-2		CP-4-SED		CP-4 (IRM Conf.)		CP-5-SED		CP-5 (IRM Conf.)		CP-6-SED		CP-6 (IRM Conf.)	
Sample Date	Site	TAGM # 4046	Published	6/8/1999		6/9/1999		6/9/1999		4/11/2000		7/21/2000		7/21/2000		6/9/1999		4/10/2000		6/9/1999		4/10/2000		6/17/1999		4/10/2000	
Sample Depth	Background[8]	RSCO[9]	Background[10]	14.5-15.5 ft.	Q	13.5-14.5 ft	Q	12.0-13.0 ft.	Q	13.0 - 13.5 ft	Q	13.5-14.5 ft.	Q	14.5-15.5 ft.	Q	12.0-13.0 ft.	Q	13.0-13.5 ft.	Q	13.0-14.0 ft.	Q	14.5 - 15.0 ft	Q	11.0 - 12.0 ft	Q	12.0 - 12.5 ft	Q
Volatile Organics (ug/kg)																											
Chloroethane		1900																						**34000**	J		
Methylene chloride		100																		36	J						
Acetone		200								3	JB	3	J	10	J			1	JB			6	JB	**970**	J	31	B
Carbon disulfide		2700																						49	J		
1,1-Dichloroethene		400																						**680**	J		
1,1-Dichloroethane		200																						**52000**	DJ		
Chloroform		300																						120	J		
1,2-Dichloroethane		100																						**140**	J		
2-Butanone		300																						**560**	J		
1,1,1-Trichloroethane		800						7	J											100	J			**23000**	DJ		
Carbon tetrachloride		600																									
Trichloroethene		700																						**2400**	J		
Dibromochloromethane		NV																									
4-Methyl-2-pentanone		1000						10	J																		
2-Hexanone		NV																						2400	J		
Tetrachloroethene		1400						17	J															**12000**	DJ		
1,1,2,2-Tetrachloroethane		600						6	J																		
Toluene		1500										5	J	19										**34000**	DJ		
Chlorobenzene		1700																		**46000**	J						
Ethylbenzene		5500																						24	J		
Styrene		NV																		54	J						
Xylenes (Total)		1200														4	J										
1,2-Dichloroethene(Total)		400																		57	J			**1900**	J		
Semi-Volatile Organics (ug/kg)																											
Naphthalene		13000		NT		NT		NT				NT		NT		NT				NT				NT			
2-Methylnaphthalene		36400		NT		NT		NT				NT		NT		NT				NT				NT			
Acenaphthene		50000		NT		NT		NT				NT		NT		NT				NT				NT			
Fluorene		50000		NT		NT		NT				NT		NT		NT				NT				NT			
Phenanthrene		50000		NT		NT		NT				NT		NT		NT				NT				NT			
Di-n-butyl phthalate		8100		NT		NT		NT				NT		NT		NT				NT				NT			
Pyrene		50000		NT		NT		NT				NT		NT		NT				NT				NT			
Butyl benzyl phthalate		50000		NT		NT		NT				NT		NT		NT				NT				NT		14740	D
bis(2-Ethylhexyl)phthalate		50000		NT		NT		NT				NT		NT		NT				NT				NT			
PCBs and Pesticides (ug/kg)																											
Aldrin		41		NT		NT		NT		0.29	JBP	NT		NT		NT		0.12	JBP	NT		0.55	JB	NT		0.79	JBP
Alpha-BHC		110		NT		NT		NT		1.4	JBP	NT		NT		NT		0.62	JB	NT		3.4	BP	NT		0.42	JBP
Beta-BHC		200		NT		NT		NT		0.53	JB	NT		NT		NT		0.52	JBP	NT		5	BP	NT		0.18	JB
Delta-BHC		300		NT		NT		NT		0.46	JBP	NT		NT		NT		0.55	JBP	NT		1.5	JBP	NT		0.21	JBP
Gamma-BHC (Lindane)		60		NT		NT		NT		0.49	JBP	NT		NT		NT		0.16	JBP	NT		3.8	BP	NT		0.17	JB
4,4'-DDD		2900		NT		NT		NT		1	JB	NT		NT		NT		0.54	JBP	NT		0.56	JB	NT			
4,4'-DDE		2100		NT		NT		NT		4.2	BP	NT		NT		NT		0.092	JBP	NT		6.1	BP	NT		7.5	BP
4,4'-DDT		2100		NT		NT		NT		1.6	JBP	NT		NT		NT		0.1	JBP	NT		2.8	JBP	NT			
Dieldrin		44		NT		NT		NT		0.62	J	NT		NT		NT		0.15	JP	NT		0.31	JP	NT		2.8	JB
Endosulfan I		900		NT		NT		NT		0.28	JB	NT		NT		NT		0.061	JB	NT		0.64	JBP	NT		5.7	BP
Endosulfan II		900		NT		NT		NT		1	JBP	NT		NT		NT		0.028	JBP	NT		0.68	JBP	NT		8.4	BP
Endosulfan sulfate		1000		NT		NT		NT		0.88	JBP	NT		NT		NT		0.26	JBP	NT		0.42	JBP	NT		5.1	JBP
Endrin		100		NT		NT		NT		0.16	JBP	NT		NT		NT		0.16	JBP	NT		0.7	JBP	NT		1.5	JBP
Endrin aldehyde		NV		NT		NT		NT		4.3	JB	NT		NT		NT		0.03	JB	NT		3.9	JBP	NT		3.2	JBP
Heptachlor		100		NT		NT		NT		1.5	JBP	NT		NT		NT		0.068	JBP	NT		1.3	JBP	NT		0.44	JBP
Heptachlor epoxide		20		NT		NT		NT		0.15	JBP	NT		NT		NT		0.04	JBP	NT		1	JBP	NT		4.7	B
p,p'-Methoxychlor		NV		NT		NT		NT		0.26	JBP	NT		NT		NT		0.15	JBP	NT		0.19	JBP	NT		2.8	JBP
PCB-1254		10000						430	J			NT		NT		130	J							250	J		
Endrin ketone		NV		NT		NT		NT		3.3	JP	NT		NT		NT		0.6	JP	NT		2.8	JBP	NT		2.6	JP
Gamma chlordane		540		NT		NT		NT		0.99	JBP	NT		NT		NT		0.12	JB	NT		5.2	BP	NT			
Alpha chlordane		NV		NT		NT		NT		0.44	JBP	NT		NT		NT		0.16	JBP	NT		5.2	B	NT		6.7	BP

Notes: (See Page 2.)

Table 2-8
Summary of Cesspool Sediment Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location				AG-1-SED [12]		CP-2-SED		CP-3-SED		CP-3 (IRM Conf.)		CP-3S-1		CP-3S-2		CP-4-SED		CP-4 (IRM Conf.)		CP-5-SED		CP-5 (IRM Conf.)		CP-6-SED		CP-6 (IRM Conf.)	
Sample Date	Site	TAGM # 4046	Published	6/8/1999		6/9/1999		6/9/1999		4/11/2000		7/21/2000		7/21/2000		6/9/1999		4/10/2000		6/9/1999		4/10/2000		6/17/1999		4/10/2000	
Sample Depth	Background[8]	RSCO[9]	Background[10]	14.5-15.5 ft.	Q	13.5-14.5 ft	Q	12.0-13.0 ft.	Q	13.0 - 13.5 ft	Q	13.5-14.5 ft.	Q	14.5-15.5 ft.	Q	12.0-13.0 ft.	Q	13.0-13.5 ft.	Q	13.0-14.0 ft.	Q	14.5 - 15.0 ft	Q	11.0 - 12.0 ft	Q	12.0 - 12.5 ft	Q
Inorganics (mg/kg)																											
Aluminum	723	SB	33,000	862		9170		29300	J	939		1490	J	1970	J	23700	J	658		4290	J	877		2450	J	921	
Antimony		SB	NV					441	J							268	J			4.2	J			11.8	J		
Arsenic	1.0	7.5 or SB	3-12			2.6		30.8	J							27.7	J			5.2	J			10.5	J		
Barium	2.8	300 or SB	15-600	3.5	B	32.2	B	656	J	15.9	B	7.7	B	9.8	B	182	J	3	B	86.3	J	3.5	B	89.9	J	13.3	B
Beryllium	0.08	0.16 or SB	0-1.75	0.09	B	0.27	B	2.6	J			0.14	B	0.16	B	2	J			0.41	J			0.33	J	0.06	B
Cadmium		1 or SB	0.1-1	4				19500	J	589		492	J	530	J	10700	J	66.9		328	J	0.65	B	1640	J	188	
Calcium	553.0	SB	130-35,000	37.8	BJ	4040	J	6960	J	234	B	237	BE	387	BE	8010	J	44.5	B	3400	J	193	B	127000	J	166	B
Chromium	4.3	10 or SB	1.5-40	5.6		8.8		120000	J	1140		1340		1180		84100	J	278		84.9	J	2.9		924	J	11.1	
Cobalt	0.91	30 or SB	2.5-60	1.5	B	2.7	B	61.2	J	2.6	B	1.9	B	1.3	B	82.8	J	0.69	B	9	J	0.3	B	6.7	J	0.51	B
Copper	1.6	25 or SB	1-50	5.7	J	6.2	J	26900	J	884		1150		941		19000	J	157		6190	J	84.7		923	J	5.7	
Iron	1910	2,000 or SB	2,000-550,000	1950		10100		33700	J	2000		3030		2950		26400	J	2370		11700	J	5060		9420	J	1360	
Lead	0.54	200-500	20-500 [10]	4.2		51.3		8950	J	8.5			R		R	983	J	3.1		196	J	2.8		170	J	2.1	
Magnesium	454	SB	100-5,000	143	BJ	3000	J	1800	J	212	B	287		389		977	J	187	B	668	J	184	B	73900	J	161	B
Manganese	50	SB	50-5,000	70		70		1060	J	52			R		R	1800	J	20.4		52.3	J	10.7		126	J	10	
Mercury		0.1	0.001-0.2	0.004	R	0.01	BJ	6.2	J	0.06	B	0.077	U	0.097		0.57	J	0.52		3	J			1.3	J		
Nickel	1.0	13 or SB	0.5-25	4.3	B	4.8	B	54500	J	1790		1030		766		32200	J	119		215	J	2.2	B	401	J	17.8	
Potassium	71.9	SB	8,500-43,000	45.4	B	288	B	831	J	113	B	113	B	231	B	1480	J	78.8	B	260	J	120	B	673	J	88.5	B
Selenium		2 or SB	0.1-3.9					9.8	J							11.2	J			4.3	J			6.9	J		
Silver		SB	NV					6.1	J	0.58	B					0.82	J			4.4	J			17.5	J	0.39	B
Sodium		SB	6,000-8,000			77.9	B			1350		628	B	633	B	12400	J	433	B	3300	J	140	B	796	J	195	B
Thallium		SB	NV					3.1	J			0.87	BJ							3.8	J						
Vanadium	1.7	150 or SB	1-300	2	B	14.7		24.2	J	2.2	B	3.5	B	3.5	B	16.6	J	2.8	B	8.4	J	3	B	10.2	J	1.9	B
Zinc	2.3	20 or SB	9-50	11.5	J	33.5		5470	J	136		101	J	106	J	2600	J	17.9		2260	J	7.1		704	J	43.3	
Cyanide	0.35	NV	NV	0.36	B			866	J	728		950		514		5390	J	45.1		42.6	J	1.7		112	J	1.3	
Total Organic Carbon (mg/kg)																											
Total Organic Carbon		NV		NT		NT		NT								NT				NT				NT			

NOTES:
1. Only compounds detected in one or more "CP" sediment samples are presented in this table.
2. Blank indicates compound was not detected.
3. NT indicates compound was not tested.
4. Results presented for CP-10-SED are the higher of this sample and its duplicate.
5. Analytical testing completed by CompuChem Corporation.
6. Q = laboratory qualifier. Refer to Appendix E for qualifier definitions.
7. ug/kg = parts per billion; mg/kg = parts per million.

8. Refer to Table 4-1 for additional information on background Site conditions.
9. TAGM # 4046 RSCO are Recommended Soil Cleanup Criteria from Technical and Administrative Guidance Memorandum No. HWR-94-4046.
10. Published background as noted in NYSDEC Technical and Administrative Guidance Memorandum No HWR-94-4046.
11. NV = no value; ND = no detections; SB = Site Background
12. Sample AG-1 was collected from CP-1.
13. IRM Conf. = Confirmatory samples collected following IRM sediment removal.
14. No confirmatory sample was collected from CP-10 following IRM sediment removal; concrete bottom encountered.
15. Concentrations that are bold exceed RSCO.

Table 2-8
Summary of Cesspool Sediment Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location				CP-7-SED		CP-7 (IRM Conf.)		CP-8-SED		CP-8 (IRM Conf.)		CP-9-SED		CP-10-SED[14]		CP-11, S-1	
Sample Date	Site	TAGM # 4046	Published	6/17/1999		4/11/2000		6/18/1999		4/11/2000		6/18/1999		6/18/1999		7/25/2000	
Sample Depth	Background[8]	RSCO[9]	Background[10]	12.5-13.5 ft.	Q	13.5 - 14.0 ft	Q	6.0-8.0 ft.	Q	8.0 - 8.5 ft	Q	13.0-14.0 ft.	Q	13.0-14.0 ft.	Q	12.0 - 13.0 ft	Q
Volatile Organics (ug/kg)																	
Chloroethane		1900												650	J		
Methylene chloride		100												33	JB		
Acetone		200				7	JB			7	JB			**2300**	B	7	J
Carbon disulfide		2700															
1,1-Dichloroethene		400															
1,1-Dichloroethane		200		3	J									93	J		
Chloroform		300															
1,2-Dichloroethane		100															
2-Butanone		300												**440**	B		
1,1,1-Trichloroethane		800														4	J
Carbon tetrachloride		600		13	J												
Trichloroethene		700															
Dibromochloromethane		NV		3	J												
4-Methyl-2-pentanone		1000															
2-Hexanone		NV															
Tetrachloroethene		1400														1	J
1,1,2,2-Tetrachloroethane		600		24	J												
Toluene		1500										3	J	1300	J		
Chlorobenzene		1700		6	J												
Ethylbenzene		5500												580	J		
Styrene		NV															
Xylenes (Total)		1200												**3800**	J		
1,2-Dichloroethene(Total)		400		3	J												
Semi-Volatile Organics (ug/kg)																	
Naphthalene		13000		NT								NT		**27000**	J	NT	
2-Methylnaphthalene		36400		NT								NT		**200000**	J	NT	
Acenaphthene		50000		NT								NT		23000	J	NT	
Fluorene		50000		NT								NT		35000	J	NT	
Phenanthrene		50000		NT								NT		**56000**	J	NT	
Di-n-butyl phthalate		8100		NT								NT				NT	
Pyrene		50000		NT								NT		15000	J	NT	
Butyl benzyl phthalate		50000		NT								NT		1100	J	NT	
bis(2-Ethylhexyl)phthalate		50000		NT				690				NT		**73000**	J	NT	
PCBs and Pesticides (ug/kg)																	
Aldrin		41		NT		0.35	JBP			0.33	JBP	NT				NT	
Alpha-BHC		110		NT		0.038	JBP			0.11	JBP	NT		7.7	J	NT	
Beta-BHC		200		NT		0.19	JBP			0.25	JBP	NT				NT	
Delta-BHC		300		NT		0.2	JBP			0.67	JBP	NT				NT	
Gamma-BHC (Lindane)		60		NT		0.5	JBP			0.13	JBP	NT		15	J	NT	
4,4'-DDD		2900		NT		1.1	JB			0.15	JB	NT				NT	
4,4'-DDE		2100		NT		1.4	JB					NT		5.1	J	NT	
4,4'-DDT		2100		NT		3.8	JB			0.29	JBP	NT		120	J	NT	
Dieldrin		44		NT		1.2	JP			0.051	JB	NT				NT	
Endosulfan I		900		NT		2.4	JBP			0.096	JBP	NT				NT	
Endosulfan II		900		NT		1.2	JBP					NT		10	J	NT	
Endosulfan sulfate		1000		NT		0.28	JBP			0.024	JB	NT				NT	
Endrin		100		NT		0.76	JBP			0.12	JBP	NT				NT	
Endrin aldehyde		NV		NT		2.4	JB			0.065	JBP	NT				NT	
Heptachlor		100		NT		0.96	JBP			0.17	JBP	NT		6.1	JN	NT	
Heptachlor epoxide		20		NT		1.1	JBP			0.057	JBP	NT		**32**	JN	NT	
p,p'-Methoxychlor		NV		NT		0.95	JBP			0.071	JBP	NT				NT	
PCB-1254		10000		2800	EJ							58				NT	
Endrin ketone		NV		NT		2	JP			0.018	JP	NT		73	JN	NT	
Gamma chlordane		540		NT		1.5	JBP			0.018	JBP	NT				NT	
Alpha chlordane		NV		NT		2.6	JBP			0.26	JBP	NT		37	JN	NT	

Notes: (See Page 2.)

Table 2-8
Summary of Cesspool Sediment Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location				CP-7-SED		CP-7 (IRM Conf.)		CP-8-SED		CP-8 (IRM Conf.)		CP-9-SED		CP-10-SED[14]		CP-11, S-1	
Sample Date	Site	TAGM # 4046	Published	6/17/1999		4/11/2000		6/18/1999		4/11/2000		6/18/1999		6/18/1999		7/25/2000	
Sample Depth	Background[8]	RSCO[9]	Background[10]	12.5-13.5 ft.	Q	13.5 - 14.0 ft	Q	6.0-8.0 ft.	Q	8.0 - 8.5 ft	Q	13.0-14.0 ft.	Q	13.0-14.0 ft.	Q	12.0 - 13.0 ft	Q
Inorganics (mg/kg)																	
Aluminum	723	SB	33,000	2420	J	579		4210		657		2180		6080	J	1220	J
Antimony		SB	NV	112	J			24.7	J	0.62	B			3.2	J		
Arsenic	1.0	7.5 or SB	3-12	10.1	J			5.2				1.2	B	13.9	J		
Barium	2.8	300 or SB	15-600	119	J	5	B	17.9	B	2.3	B	12.3	B	880	J	12.5	B
Beryllium	0.08	0.16 or SB	0-1.75	0.5	J			0.22	B			0.2	B			0.14	B
Cadmium		1 or SB	0.1-1	10300	J	167		719		15.5		9.6	J	56.3	J	7.6	J
Calcium	553.0	SB	130-35,000	5540	J	95.5	B	7090	*	49.7	B	7440		14900	J	274	BE
Chromium	4.3	10 or SB	1.5-40	4980	J	189		4080		261		9.1		301	J	5.8	
Cobalt	0.91	30 or SB	2.5-60	13.8	J	0.41	B	10.4	B	0.91	B	0.94	B	14.8	J	0.76	B
Copper	1.6	25 or SB	1-50	3650	J	55.2		8230	*	284		41.8	J	972	J	49.9	
Iron	1910	2,000 or SB	2,000-550,000	12800	J	1880		12500	*	2490		3230	*	32400	J	10100	
Lead	0.54	200-500	20-500 [10]	1160	J	6		1230		28.5		26.8	*	1010	J		R
Magnesium	454	SB	100-5,000	373	J	117	B	838	B	151	B	4390		1860	J	197	
Manganese	50	SB	50-5,000	170	J	18.5		151		16.2		21.3	*	226	J		R
Mercury		0.1	0.001-0.2	6.3	J				R	0.18		0.14		16.1	J	0.14	
Nickel	1.0	13 or SB	0.5-25	5810	J	135		3890		309		5.4	B	170	J	3.7	B
Potassium	71.9	SB	8,500-43,000	789	J	95.8	B	114	B	55.1	B	129	B	345	J	138	B
Selenium		2 or SB	0.1-3.9	7.5	J			1.6	J					10.5	J		
Silver		SB	NV	8	J									6.3	J		
Sodium		SB	6,000-8,000	16800	J	839	B	528	B	158	B			3300	J	173	B
Thallium		SB	NV	2.4	J			2.2	B			0.85	B			2.8	J
Vanadium	1.7	150 or SB	1-300	12.7	J	1.2	B	4.9	B	1.7	B	3.6	B	13.1	J	3.6	B
Zinc	2.3	20 or SB	9-50	1740	J	42.5		723		31.5		36.7	*	2010	J	59.9	J
Cyanide	0.35	NV	NV	319	J	4.9		4.2		0.31	B			2.6	J	0.47	B
Total Organic Carbon (mg/kg)																	
Total Organic Carbon		NV		NT				2980				NT		306000			

Notes: (See Page 2.)

Table 2-9
Summary of Cesspool Water Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location	AG-1-Water[7]		CP- 5-Water		CP-6-Water		CP-9-Water		CP-10-Water	
Sample Date	6/8/1999		6/9/1999		6/17/1999		6/27/1999		6/27/1999	
		Q		Q		Q		Q		Q
Volatile Organics (ug/L)										
Chloroethane				R	91	J	240		1000	
Acetone				R	240					
1,1-Dichloroethane				R	54	J	19	J	29	J
Toluene	1	J		R			18	J	150	J
Ethylbenzene				R					50	J
Xylenes (Total)				R	16	J			60	J
1,2-Dichloroethene(Total)				R	14	J				
Semi-Volatile Organics (ug/L)										
Phenol			4	J	8	J	NT		NT	
4-Methylphenol			59	J	3	J	NT		NT	
2,4-Dimethylphenol			2	J			NT		NT	
Di-n-butyl phthalate			5	J			NT		NT	
bis(2-Ethylhexyl)phthalate			1	J	13		NT		NT	
PCBs and Pesticides (ug/L)										
Alpha-BHC			NT		NT		NT		NT	
Beta-BHC			NT		NT		NT		NT	
Gamma-BHC (Lindane)			NT		NT		NT		NT	
4,4'-DDT	0.05	JP	NT		NT		NT		NT	
Inorganics (ug/L)										
Aluminum	6840		761		82.4		316		35000	
Antimony					3				27.9	
Arsenic									36.7	
Barium	103	B	222		49.9	R	33.2		1690	R
Beryllium	0.57	B					0.49		0.51	
Cadmium	271	J	1.4		285		3.1		318	
Calcium	15300	J	14000		22100		40700		143000	
Chromium	80.3	J	4.3		13.9	R	4.7		1790	R
Cobalt	27.4	B	1.5		5.7		1.7		75.1	
Copper	66.3		141		299		106		6700	
Iron	13100	J	1920	J	4540		2610		89100	
Lead	68.2	J	6.1		25	J	11.8		6260	J
Magnesium	5260	J	1230		3490		3030		12300	
Manganese	269	J	30	J	103	J	83.3		1170	J
Mercury	0.06	BJ		R	1.4	J	0.2		8.4	J
Nickel	156	J	4.9		77.6	J	6.4		1050	J
Potassium	1170	B	11500	J	24700	J	19000	J	23600	J
Selenium									20.9	J
Silver									56.1	
Sodium	1420	B	19800	J	40200		28500	J	25400	
Thallium									7.4	
Vanadium	13.9	B	1.7		2.2		1.3		53	
Zinc	156		77.3	J	251	R	67.3		10700	R
Cyanide	19.3				10.9		5.1			

NOTES:
1.Only compounds detected in one or more "CP" water samples are presented in this table.
2. Blank indicates compound not detected.
3. Analytical testing completed by CompuChem Corporation.
4. Q = laboratory qualifier. Refer to Appendix E for qualifier definitions.
5. ug/L = micrograms per liter.
6. NT indicates compound was not tested.
7. AG-1 was collected from CP-1.

Table 2-10
Summary of Drainage Structure Sediment Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date Sample Depth	Site Background[8]	TAGM # 4046 RSCO[9]	Published Background[10]	DS-1-SED 6/15/1999 11.0-12.0 ft.	Q	DS-2-SED 6/15/1999 11.0-12.0 ft.	Q	DS-3-SED 6/15/1999 11.5 - 12.5 ft.	Q	DS-4-SED[3] 6/16/1999 ~ 9.5 ft.	Q	DS-4 (IRM Conf.) 4/11/2000 10.0 - 10.5 ft.	Q	DS-5-SED 6/16/1999 15.5 - 16.5 ft.	Q	DS-5 (IRM Conf.) 4/11/2000 18.5 - 19.0 ft.	Q	DS-6-SED 6/17/1999 10.0 - 12.0 ft.	Q	DS-7-SED 6/17/1999 2.0 - 3.0 ft.	Q	DS-8-SED 6/18/1999 10.0 - 11.0 ft.	Q	DS-8 (IRM Conf.) 4/11/2000 11.5 - 12.0 ft.	Q	DS-9-SED 6/18/1999 11.0 - 12.0 ft.	Q	DS-10-SED 6/18/1999 11.0 - 12.0 ft.	Q	DS-10 (IRM Conf.) 4/11/2000 14.0 - 14.5 ft.	Q	DS-11-SED 6/18/1999 14.0 - 15.0 ft.	Q	DS-12-SED 6/28/1999 13.0 - 14.0 ft.	Q
Volatile Organics (ug/kg)																																			
Methylene chloride		100																				77	DB								37	B		
Acetone		200										21	B			20	B					73	D	14	B	90		110	J	4	JB	88			
Carbon disulfide		2700																2	J			2	J									4	J		
2-Butanone		300				7	J			57	J			4	J							10	J												
Tetrachloroethene		1400																				12	DJ			25	J					10	J		
Toluene		1500				28	J	3	J	**2300**				4	J			2	J			6	J	2	J	280		13	J			17		6	J
Ethylbenzene		5500								22	J											2	J			170						43		44	
Styrene		NV								29	J																					14	JB		
Xylenes (Total)		1200								37	J			2	J							16	J			360						24	B	75	
Semi-Volatile Organics (ug/kg)																																			
Naphthalene		13000		NT				NT		NT				NT				NT		NT		940	J			NT		NT				NT		NT	
2-Methylnaphthalene		36400		NT		1000	J	NT		NT				NT				NT		NT		14000	J			NT		NT				NT		NT	
Acenaphthene		50000		NT				NT		NT				NT				NT		NT		2900	J			NT		NT				NT		NT	
Dibenzofuran		6200		NT				NT		NT				NT				NT		NT		1100	J			NT		NT				NT		NT	
Fluorene		50000		NT				NT		NT				NT				NT		NT		4900				NT		NT				NT		NT	
Phenanthrene		50000		NT		1400		NT		NT				NT				NT		NT		13000				NT		NT				NT		NT	
Di-n-butyl phthalate		8100		NT		550	J	NT		NT				NT				NT		NT						NT		NT				NT		NT	
Fluoranthene		50000		NT		480	J	NT		NT				NT				NT		NT						NT		NT				NT		NT	
Pyrene		50000		NT		1100	J	NT		NT				NT				NT		NT		1800	J			NT		NT				NT		NT	
Butyl benzyl phthalate		50000		NT		1600		NT		NT				NT				NT		NT		10000				NT		NT				NT		NT	
Benzo(a)anthracene		224 or MDL		NT		190	J	NT		NT				NT				NT		NT						NT		NT				NT		NT	
Chrysene		400		NT		340	J	NT		NT				NT				NT		NT						NT		NT				NT		NT	
bis(2-Ethylhexyl)phthalate		50000		NT		4100		NT		NT				NT		350.2	J	NT		NT		20000		317.6	J	NT		NT		3467	D	NT		NT	
Di-n-octyl phthalate		50000		NT		320	J	NT		NT				NT				NT		NT		780	J			NT		NT				NT		NT	
Benzo(b)fluoranthene		1100		NT		260	XJ	NT		NT				NT				NT		NT						NT		NT				NT		NT	
Benzo(k)fluoranthene		1100		NT		330	XJ	NT		NT				NT				NT		NT						NT		NT				NT		NT	
PCB and Pesticides (ug/kg)																																			
Aldrin		41		NT				NT		NT		1.4	JBP	NT		0.15	JBP	NT		NT		14	J	0.24	JBP	NT		NT		13	BP	NT		NT	
Alpha-BHC		110		NT				NT		NT		0.71	JBP	NT		0.21	JBP	NT		NT				0.31	JBP	NT		NT		4.2	BP	NT		NT	
Beta-BHC		200		NT		3.6	R	NT		NT		1.5	JBP	NT		0.53	JB	NT		NT		5.2	R	0.76	JBP	NT		NT		6.1	BP	NT		NT	
Delta-BHC		300		NT				NT		NT		0.61	JBP	NT		0.78	JBP	NT		NT				0.55	JBP	NT		NT		5.7	BP	NT		NT	
Gamma-BHC (Lindane)		60		NT				NT		NT		1.1	JBP	NT		0.17	JBP	NT		NT				0.32	JBP	NT		NT		0.62	JBP	NT		NT	
4,4'-DDD		2900		NT				NT		NT		0.3	JBP	NT				NT		NT				0.79	JB	NT		NT				NT		NT	
4,4'-DDE		2100		NT		2.3	J	NT		NT				NT		0.24	JBP	NT		NT		8.9	J	0.56	JBP	NT		NT		170	DPB	NT		NT	
4,4'-DDT		2100		NT				NT		NT				NT				NT		NT				1.3	JB	NT		NT				NT		NT	
Dieldrin		44		NT		5.2		NT		NT		1.1	JBP	NT		0.2	JBP	NT		NT		17	JN	1.5	JP	NT		NT				NT		NT	
Endosulfan I		900		NT		4.3	JN	NT		NT		2.2	JBP	NT		0.21	JBP	NT		NT		31	JN	23	BP	NT		NT		110	DBP	NT		NT	
Endosulfan II		900		NT				NT		NT		0.28	JBP	NT		0.37	JBP	NT		NT				6.6	JBP	NT		NT		130	DJBP	NT		NT	
Endosulfan sulfate		1000		NT		6.4	J	NT		NT		0.58	JBP	NT		0.98	JBP	NT		NT		14	J	4.8	JBP	NT		NT		140	DJBP	NT		NT	
Endrin		100		NT		5.9	JN	NT		NT		0.07	JBP	NT		0.032	JBP	NT		NT				0.51	JBP	NT		NT		15	DJB	NT		NT	
Endrin Aldehyde		NV		NT				NT		NT		4.4	JBP	NT		0.032	JBP	NT		NT				0.53	JBP	NT		NT		230	DBP	NT		NT	
Heptachlor		100		NT				NT		NT		0.53	JBP	NT		0.13	JBP	NT		NT		2	JN	0.26	JB	NT		NT		13	BP	NT		NT	
Heptachlor epoxide		20		NT		11	R	NT		NT		0.61	JBP	NT		0.087	JBP	NT		NT				1.7	JB	NT		NT		**56**	DBP	NT		NT	
p,p'-Methoxychlor		NV		NT				NT		NT		0.47	JBP	NT		2.2	JBP	NT		NT		23	JN	3.7	JBP	NT		NT		60	BP	NT		NT	
PCB-1254		10000		200	J	160		710	D	210		4.1	J	**20000**	D	29	J	650	J	200	P	620				160	J	430						140	J
Endrin ketone		NV		NT				NT		NT		0.26	JP	NT				NT		NT		8.3	JN	1.9	JBP	NT		NT		40	P	NT		NT	
Gamma chlordane		540		NT		9.4	JN	NT		NT				NT				NT		NT				23	DB	NT		NT				NT		NT	
Alpha chlordane		NV		NT		7.2		NT		NT		2.2	JBP	NT		0.23	JBP	NT		NT		7.3	J	38	DBP	NT		NT		5.3	BP	NT		NT	

Notes: (See Page 2.)

Table 2-10
Summary of Drainage Structure Sediment Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date Sample Depth	Site Background[8]	TAGM # 4046 RSCO[9]	Published Background[10]	DS-1-SED 6/15/1999 11.0-12.0 ft.		DS-2-SED 6/15/1999 11.0-12.0 ft.		DS-3-SED 6/15/1999 11.5 - 12.5 ft.		DS-4-SED[3] 6/16/1999 ~ 9.5 ft.		DS-4 (IRM Conf.) 4/11/2000 10.0 - 10.5 ft.		DS-5-SED 6/16/1999 15.5 - 16.5 ft.		DS-5 (IRM Conf.) 4/11/2000 18.5 - 19.0 ft.		DS-6-SED 6/17/1999 10.0 - 12.0 ft.		DS-7-SED 6/17/1999 2.0 - 3.0 ft.		DS-8-SED 6/18/1999 10.0 - 11.0 ft.		DS-8 (IRM Conf.) 4/11/2000 11.5 - 12.0 ft.		DS-9-SED 6/18/1999 11.0 - 12.0 ft.		DS-10-SED 6/18/1999 11.0 - 12.0 ft.		DS-10 (IRM Conf.) 4/11/2000 14.0 - 14.5 ft.		DS-11-SED 6/18/1999 14.0 - 15.0 ft.		DS-12-SED 6/28/1999 13.0 - 14.0 ft.	
					Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q
Inorganics (mg/kg)																																			
Aluminum	723	SB	33,000	1670	*	3010	*	3230	*	29000	J	868		4890	J	738		4380		5640		5650		1480		8910		2860		549		2200		3600	
Antimony		SB	NV	2.5	B	1.2	B	3.4	B	3.6	B			33.7				4.7	BE	4.8	BE	52.3	J			8.6	BE	21.4	J			2.4	BE	14.6	J
Arsenic	1.0	7.5 or SB	3-12	1.6	B	3.2		3.5		4.4				7.5				3.8		3.6		3.2				4.3		2.5	B			3.4		5.8	
Barium	2.8	300 or SB	15-600	12.8	B	32.6	B	26.4	B	39.2	B	7.6	B	74.7		5	B	37.2	B	59.9		92.6		47.4		138		101		8	B	54.6	B	469	
Beryllium	0.08	0.16 or SB	0-1.75			0.12	B	0.12	B	1.1	B			0.25	B			0.22	B	0.15	B	0.28	B			0.3	B	0.27	B			0.18	B	0.34	B
Cadmium		1 or SB	0.1-1	50.1		56		369		67.4		0.42	B	4350		13.3		103		18.7		496		2.6		48.1		246		62.8		42.6		80.3	J
Calcium	553.0	SB	130-35,000	33200		74000		11100		23700		71.1	B	39400		56.8	B	37000	*	6240	*	11700	*	109	B	12600	*	11300	*	197	B	10600	*	6270	
Chromium	4.3	10 or SB	1.5-40	25.7		59		155		253		2.4		1220		144		254		290		1630		119		175		5280		254		147		217	
Cobalt	0.91	30 or SB	2.5-60	2.1	B	2.7	B	3.1	B	7.2	B	0.43	B	7.4	B	0.54	B	6.7	B	4.8	B	7	B	0.6	B	3.8	B	4	B	0.61	B	2.4	B	4.8	B
Copper	1.6	25 or SB	1-50	165	J	281	J	142	J	1970	J	2.8	B	1010	J	40		301	*	188	*	362	*	9.4		370	*	665	*	26.5		207	*	240	J
Iron	1910	2,000 or SB	2,000-550,000	4350	*	5810	*	7440	*	13100	*	1650		12300	*	3190		15800	*	9180	*	11100	*	3030		12300	*	9360	*	6140		5970	*	16200	*
Lead	0.54	200-500	20-500	198		74.6		221		139		5		319		21.3		1170		192		313		9.7		300		211		43.2		132		292	*
Magnesium	454	SB	100-5,000	19100		42400		6510		13900		261	B	22600		247	B	21600		3760		6890		351	B	8050		4810		142	B	6260		3490	
Manganese	50	SB	50-5,000	46.8	J	74.8	J	42.8	J	175	J	13.1		106	J	23.5		121		116		83.9		18.2		82.4		73.4		37.1	B	42.6		64	*
Mercury		0.1	0.001-0.2	0.1	J	0.18	J	0.25	J	0.18	J			0.41	J	0.07	B		R	0.24	J	0.06	J				R	0.11	J	0.06	B	0.14	J	0.19	
Nickel	1.0	13 or SB	0.5-25	23	J	38	J	73.7	J	150	J	1.6	B	369	J	40.8		201		83.1		956		11.5		98.1		476		31.2		64.7		102	
Potassium	71.9	SB	8,500-43,000	115	B	244	B	145	B	190	B	73	B	492	B	92.5	B	264	B	109	B	130	B	82.9	B	164	B	139	B	66.9	B	106		172	B
Selenium		2 or SB	0.1-3.9							1.8				2.6				1.9	J	1.7	J	2.2	J					1.8	J			1.7	J	2.3	J
Silver		SB	NV	0.33	B			0.35	B	0.51	B			0.67	B			0.26	B	0.72	B	0.37	B			0.38	B	0.44	B			0.4	B	3.3	
Sodium		SB	6,000-8,000	223	B	248	B	210	B	480	B	150	B	378	B	159	B	226	B	191	B	292	B	157	B	360	B	428	B	151	B	164	B		
Thallium		SB	NV	1.4	B	1.5	B	1.8	B	2.7	B			2.2	B			2.6	B	1.4	B	1.8	B			2.9		2	B			1.2	B	3.1	
Vanadium	1.7	150 or SB	1-300	14.3		15.4		20.1		22.7		2.7	B	21.3		2.8	B	19.1		24.8		14.1	B	4.5	B	15.4		13.9	B	3.3	B	14.8	B	16.9	
Zinc	2.3	20 or SB	9-50	105		369		273		1270		6.2		840		22.6		354		224		788		45.2		754		1020		113		289		808	*
Cyanide	0.35	NV	NV	0.65		0.81		1.8		2.2				32.4		1.3		3.6		1		8.5		7.2		2.3		25.8		15.9		1.7		2.5	*
Total Organic Carbon (mg/kg)																																			
Total Organic Carbon				NT		NT		NT		NT				NT				NT		NT		35800				NT		NT				NT		NT	

NOTES:
1. Only compounds detected in one or more "DS" samples are presented in this table.
2. Blank indicates compound was not detected.
3. Results presented for DS-4-SED are the higher of this sample and its duplicate.
4. Analytical testing completed by CompuChem Corporation.
5. Q = laboratory qualifier. Refer to Appendix E for qualifier definitions.
6. ug/kg = parts per billion, mg/kg = parts per million.
7. IRM Conf. = Confirmatory samples collected following IRM sediment removal.
8. Refer to Table 4-1 for additional information on background Site conditions.
9. TAGM # 4046 RSCO are Recommended Soil Cleanup Criteria from Technical and Administrative Guidance Memorandum No. HWR-94-4046.
10. Published background as noted in NYSDEC Technical and Administrative Guidance Memorandum No HWR-94-4046.
11. Concentrations that are bold exceed the RSCO.
12. NT = not tested, SB = Site Background.

Table 2-11
Summary of Drainage Structure Water Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date	DS-2-Water 6/15/1999	Q	DS-3-Water 6/15/1999	Q	DS-4-Water 6/16/1999	Q	DS-5-Water[3] 6/16/1999	Q	DS-6-Water 6/17/1999	Q	DS-8-Water 6/18/1999	Q	DS-9-Water 6/18/1999	Q	DS-10-Water 6/18/1999	Q	DS-11-Water 6/18/1999	Q	DS-12-Water 6/28/1999	Q
Volatile Organics (ug/L)																				
Acetone									410	J			54	DJ						
2-Butanone					4	J														
Benzene															2	J				
4-Methyl-2-pentanone													4	J						
Toluene													12							
1,2-Dichloroethene(Total)															2	J				
Semi-Volatile Organics (ug/L)																				
4-Methylphenol	NT		NT		3	J			NT		NT		NT		NT		NT		NT	
Di-n-butyl phthalate	NT		NT		7	J			NT		NT		NT		NT		NT		NT	
Pyrene	NT		NT		1	J			NT		NT		NT		NT		NT		NT	
Butyl benzyl phthalate	NT		NT		9	J			NT		NT		NT		NT		NT		NT	
bis(2-Ethylhexyl)phthalate	NT		NT		30		2	J	NT		NT		NT		NT		NT		NT	
PCB (ug/L)																				
Inorganics (ug/L)																				
Aluminum	619		2380		1810		529		999		643		7180		165	B	96.3	B	881	
Antimony	1.9	B			1.4	B			5.5	B	6.8	B	18.5	B	3.3	B				
Arsenic													14.4							
Barium	44	B	69.2	B	96.3	B	32.8	B	72.7	R	32	R	962	R	42.4	R	42.5	R	100	B
Beryllium													0.42	B					0.58	B
Cadmium	39	J	100	J	70.4	J	48.8	J	46		37.7		183		59.1		8.2		22.4	
Calcium	17000		28100		26700		12100		9990		5690		71900		35900		10600		8110	
Chromium	10.2	E	28.9	J	73.4	J	23.4	J	79.9	R	122	R	633	R	262	R	8.3	B	20.8	
Cobalt	1.5	B	2.2	B	5.8	B	1.5	B	6.3	B	1.9	B	21.2	B	2.9	B	1.1	B	2.8	B
Copper	52.4		83.7		246		56.1		260		96.5		814		171		36.1		99.6	
Iron	2360	J	6480	J	7910	J	1570	J	3940		1960		57400		2900		583		2150	
Lead	18	J	113	J	129	J	44.4	J	98.2	J	49.3	J	545	J	7.5		8		35.1	
Magnesium	3790	BE	12400	J	9700	J	3780	BE	3070	B	1790	B	28800	J	2450	B	2040	B	2930	B
Manganese	72.5	J	106	J	190	J	61.7	J	90.8	J	40.5	J	588	J	152	J	41.7	J	74.7	
Mercury	0.03	J		R		R		R	0.09	J		R	0.12	J		R		R	0.4	
Nickel	17.7	BE	52.7	J	105	J	33.4	BE	89	J	68.6	J	540	J	299	J	23.6	BE	42.4	
Potassium	1930	BE	1220	BE	3160	BE	1100	BE	1170	BE	305	BE	9090	J	2560	BE	967	BE	802	BE
Selenium													8.6	J						
Silver							0.86	B					1.6	B						
Sodium	5840	J	2790	B	2960	B	2990	B	6490		1120	B	38800		14700		3540	B	4160	B
Thallium													9.1	B						
Vanadium	5.3	B	12.1	B	11.8	B	4.6	B	8.5	B	7.1	B	40.2	B	2.6	B	3.7	B	9	B
Zinc	199		602		627		385		419	R	369	R	3170	R	275	R	101	R	304	
Cyanide			6.2	B	16.3		34.3		29.6		9.9	B	20.6		15.2				19.2	

NOTES:
1. Only compounds detected in one or more "DS" water samples are presented in this table.
2. Blank indicates compound was not detected.
3. Results presented for DS-5-Water are the higher of this sample and its duplicate.
4. Analytical testing completed by CompuChem Corporation.
5. Q = laboratory qualifier. Refer to Appendix E for qualifier definitions.
6. ug/L = parts per billion.
7. NT indicates the sample was not tested.

Table 2-12
Summary of Well Structure Sediment Sample Analytical Results

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date Sample Depth	Site Background[7]	TAGM # 4046 RSCO[8]	Published Background[9]	WS-1-SED 6/17/1999 ~5.5 ft BGS	Q	WS-2-SED 6/18/1999 ~5.5 ft BGS	Q
Volatile Organics (ug/kg)							
1,1-Dichloroethane		200		6	J		
Tetrachloroethene		1400				16	
Toluene		1500		5	J		
PCB (ug/kg)							
PCB-1254		10000		34	J	2400	
PCB-1260		10000		12	J		
Inorganics (mg/kg)							
Aluminum	723	SB	33,000	2670		5720	
Arsenic	1.0	7.5 or SB	3-12	1.1	B	3.3	
Barium	2.8	300 or SB	15-600	6.6	B	15.2	B
Beryllium	0.08	0.16 or SB	0-1.75	0.13	B	0.21	B
Cadmium		1 or SB	0.1-1	3.4		19.4	J
Calcium	553.0	SB	130-35,000	637	B*	735	B
Chromium	4.3	10 or SB	1.5-40	4.3		31.5	
Cobalt	0.91	30 or SB	2.5-60	1.5	B	2.9	B
Copper	1.6	25 or SB	1-50	6.1	*	23.4	J
Iron	1910	2,000 or SB	2,000-550,000	4740	*	7280	*
Lead	0.54	200-500	20-500	18.9		25.1	*
Magnesium	454	SB	100-5,000	500	B	922	B
Manganese	50	SB	50-5,000	56.5		73.5	*
Mercury		0.1	0.001-0.2		R		R
Nickel	1.0	13 or SB	0.5-25	2.8	B	34.6	
Potassium	71.9	SB	8,500-43,000	106	B	161	B
Thallium		SB	NV	1.3	B	2.1	B
Vanadium	1.7	150 or SB	1-300	5.4	B	10.3	B
Zinc	2.3	20 or SB	9-50	18.5		34.8	*
Cyanide	0.35	NV	NV			4.6	*

NOTES:
1. Only detected compounds in the "WS" samples presented in this table.
2. Blank indicates compound was not detected.
3. Analytical testing completed by CompuChem Corporation.
4. Q = laboratory qualifier. Refer to Appendix E for qualifier definitions.
5. ug/kg = parts per billion, mg/kg = parts per million.
6. ~ft BGS = approximate feet below ground surface.
7. Refer to Table 4-1 for additional information on background Site conditions.
8. TAGM # 4046 RSCO are Recommended Soil Cleanup Criteria from Technical and Administrative Guidance Memorandum No. HWR-94-4046.
9. Published background as noted in NYSDEC Technical and Administrative Guidance Memorandum No HWR-94-4046.

Table 2-13
Summary of Groundwater Sample Analytical Results for
Volatile and Semi-Volatile Organic Compounds, PCBs and Pesticides

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location	NYSDEC Class GA	MW-1S	MW-1S	MW-1S	MW-1D1	MW-1D1	MW-1D1	MW-1D2	MW-1D2	MW-1D2	MW-2S	MW-2S	MW-2S	MW-2D	MW-2D	MW-2D1	MW-3S	MW-3S	MW-3S	MW-3D	MW-3D	MW-3D	MW-4S
Sample Date	Criteria	7/27/1999	7/20/2000	4/30/2001	7/27/1999	7/20/2000	4/30/2001	7/27/1999	7/20/2000	4/30/2001	7/29/1999	7/21/2000	4/27/2001	7/29/1999	7/24/2000	4/27/2001	7/29/1999	7/20/2000	4/24/2001	7/29/1999	7/20/2000	4/24/2001	7/29/1999
		Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
Volatile Organics (ug/L)																							
Chloroethane	5																						
Methylene chloride	5																						
Acetone	50																						
Chloroform	7																						
Carbon disulfide	60																			1 J			
Methyl-tert-butyl ether	10						5 J											14					
1,1-Dichloroethane	5																						
1,1-Dichloroethene	5							1 J	2 J	2 J													
1,1,2-Trichloro-1,2,2-trifluoroethane	5									1 J													
1,1,1-Trichloroethane	5							**15**	**12**	**11**	1 J									2 J			2 J
Trichloroethene	5						2 J	**12**	**16**	**14**	4 J			**9** J	1 J	1 J	**11** J			**64**	2 J	1 J	
Benzene	1																						
4-Methyl-2-pentanone	NV																						
Tetrachloroethene	5							**21**	**16**	13 B	**140**	**33**	**20**	**13**	4 J	13	**210**	**17**	7 J	**140**	**6** J	**10** J	**77**
Toluene	5													**6** J						**8** J			
Chlorobenzene	5																						
Ethylbenzene	5																						
Xylenes (Total)	5																						
1,2-Dichloroethene (Total)	5								2 J	2 J	2 J						3 J			**18**			
1,3-Dichlorobenzene	3																						
1,4-Dichlorobenzene	3																						
1,2-Dichlorobenzene	3																						
1,2-Dibromo-3-chloropropane	0.04																						
1,2,4-Trichlorobenzene	5																						
Semi-Volatile Organics (ug/L)																							
bis(2-Ethylhexyl)phthalate	5	NT		NT	NT		NT	NT		NT	NT		NT	NT		NT	NT		NT	NT		NT	NT	
PCB and Pesticides (ug/L)																							
Aldrin	0.002			NT	**0.03** J		NT			NT			NT			NT	**0.034** J		NT			NT	
Alpha-BHC	NV	0.038 J		NT			NT			NT			NT			NT	0.081 J		NT			NT	0.079 JN
Heptachlor	0.04			NT	0.015 J		NT			NT			NT			NT			NT	0.015 J		NT	
Heptachlor epoxide	0.03			NT			NT	**0.05** JN		NT			NT			NT			NT	0.026 J		NT	**0.18** J

NOTES: 1. Only compounds detected in one or more groundwater samples are presented in this table.
2. Blank indicates compound was not detected.
3. NT indicates compound was not tested.
4. Analytical testing completed by CompuChem Corporation.
5. Q = laboratory qualifier. Refer to Appendix E for qualifier definitions.
6. ug/L = micrograms per liter.
7. NYSDEC Class GA Standards (Std)/Guidance Values (GV), dated June 1998; Errata Sheet dated January 1999; and Addendum dated April 2000.
8. NV = no value; SB = site background.
9. Results presented for GP-9, GP-24, GP-26, MW-2S (2000), MW-5D1 (1999), MW-8D1 (2000), MW-3D1 (2001) and MW-10S (2001) are the higher for these samples and their respective duplicate.
10. Concentrations that are bold exceed the Class GA groundwater quality limit.

Table 2-13
Summary of Groundwater Sample Analytical Results for
Volatile and Semi-Volatile Organic Compounds, PCBs and Pesticides

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date	NYSDEC Class GA Criteria	MW-4S 7/19/2000	Q	MW-4S 4/24/2001	Q	MW-4D 7/29/1999	Q	MW-4D 7/19/2000	Q	MW-4D 4/27/2001	Q	MW-5D1 7/28/1999	Q	MW-5D1 7/23/2000	Q	MW-5D1 4/25/2001	Q	MW-5D2 7/28/1999	Q	MW-5D2 7/23/2000	Q	MW-5D2 4/25/2001	Q	MW-6S 7/19/2000	Q	MW-6S 4/25/2001	Q	MW-6D1 7/28/1999	Q	MW-6D1 7/24/2000	Q	MW-6D1 4/25/2001	Q	MW-6D2 7/28/1999	Q	MW-6D2 7/24/2000	Q	MW-6D2 4/27/2001	Q	MW-7S 7/29/1999	Q	MW-7S 4/25/2001	Q	MW-7D1 7/29/1999	Q
Volatile Organics (ug/L)																																											
Chloroethane	5																																										
Methylene chloride	5																																										
Acetone	50																																										
Chloroform	7																																										
Carbon disulfide	60																																										
Methyl-tert-butyl ether	10																									2	J																
1,1-Dichloroethane	5																																										
1,1-Dichloroethene	5													2	J			2	J															1	J	1	J	1	J					
1,1,2-Trichloro-1,2,2-trifluoroethane	5																																										
1,1,1-Trichloroethane	5	2	J											**8**	J			**11**				5	J											**8**	J	**6**	J							
Trichloroethene	5	**6**	J					**45**	J	**18**		**12**		**26**	J	1	J	**30**		3	J	**20**		4	J	4	J	**7**	J	5	J	4	J	**23**	J	**23**	J	**26**						
Benzene	1																																										
4-Methyl-2-pentanone	NV																																										
Tetrachloroethene	5	**160**		**13**		5	J	**400**		**390**		**88**		**19**		**10**		**25**		**22**		**10**		**75**		**160**		**20**		**74**		**87**		**23**		**10**	J			**8**	J	1	J		
Toluene	5																																									3	J
Chlorobenzene	5																																										
Ethylbenzene	5																																							2	J			
Xylenes (Total)	5																																										
1,2-Dichloroethene (Total)	5	**6**	J					**19**	J	**31**		2	J											3	J	**9**	J			3	J	4	J										
1,3-Dichlorobenzene	3																																					1	JB					
1,4-Dichlorobenzene	3																																					2	JB					
1,2-Dichlorobenzene	3																																					2	JB					
1,2-Dibromo-3-chloropropane	0.04																																					**2**	**JB**					
1,2,4-Trichlorobenzene	5									1	JB																											3	JB					
Semi-Volatile Organics (ug/L)																																											
bis(2-Ethylhexyl)phthalate	5			NT		NT				NT		4	J			NT		NT				NT				NT		2	J			NT		NT				NT		NT		NT	
PCB and Pesticides (ug/L)																																											
Aldrin	0.002			NT						NT						NT						NT				NT						NT						NT				NT	
Alpha-BHC	NV			NT						NT						NT		0.03	J			NT				NT		0.01	J			NT		0.029	J			NT				NT	
Heptachlor	0.04			NT						NT						NT						NT				NT						NT		0.011	JN			NT				NT	
Heptachlor epoxide	0.03			NT						NT						NT		**0.13**	J			NT				NT						NT		0.017	JN			NT		0.016	J	NT	

NOTES: (See Page 1.)

Table 2-13
Summary of Groundwater Sample Analytical Results for
Volatile and Semi-Volatile Organic Compounds, PCBs and Pesticides

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date	NYSDEC Class GA Criteria	MW-7D1 7/24/2000		MW-7D1 4/25/2001		MW-8D1 7/29/1999		MW-8D1 7/25/2000		MW-8D1 4/25/2001		MW-9S 7/19/2000		MW-9S 5/1/2001		MW-10S 7/19/2000		MW-10S 4/23/2001		MW11S 7/19/2000		MW11S 4/24/2001		MW-11S repeat (MW-7S2) 7/25/2000		MW-12S 7/18/2000		MW-12S 4/23/2001		MW-12D1 4/30/2001		MW-12D2 5/1/2001		MW-13S 5/3/2001		MW-13D1 5/3/2001		MW-13D2 5/2/2001		MW-14S 5/1/2001		MW-14D1 5/1/2001		MW-15S 5/2/2001	
			Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q
Volatile Organics (ug/L)																																														
Chloroethane	5																																													
Methylene chloride	5																																													
Acetone	50											8	J																					4	JB	3	JB									
Chloroform	7																													2	JB	1	JB			1	J								
Carbon disulfide	60																																												
Methyl-tert-butyl ether	10													1	J																														
1,1-Dichloroethane	5																															1	J												
1,1-Dichloroethene	5							**35**	J															**24**	J							3	J												
1,1,2-Trichloro-1,2,2-trifluoroethane	5																															3	J												
1,1,1-Trichloroethane	5																															17													
Trichloroethene	5	2	J					**21**	J			3	J	2	J									**16**	J	1	J	2	J	**24**		**32**				1	J	**6**	J					3	J
Benzene	1							**13**	J															**16**	J																				
4-Methyl-2-pentanone	NV									2	J	1	J																																
Tetrachloroethene	5			**6**	J			**10**	J	**6**	J	**140**		**130**		**16**		**12**		**8**	J	2	J	**17**	J	**28**		**80**		**560**		**25**		3	J	4	J	**18**		2	J	1	J		
Toluene	5					3	J	**18**	J															**18**	J																				
Chlorobenzene	5							**15**	J															**17**	J																				
Ethylbenzene	5																																												
Xylenes (Total)	5																																			1	JB								
1,2-Dichloroethene (Total)	5											**9**	J	4	J													2	J	**51**		1	J												
1,3-Dichlorobenzene	3																																	1	JB	2	JB								
1,4-Dichlorobenzene	3																																	1	JB	2	JB								
1,2-Dichlorobenzene	3																																	1	JB	2	JB								
1,2-Dibromo-3-chloropropane	0.04																																	**1**	**JB**	**2**	**JB**								
1,2,4-Trichlorobenzene	5																																	3	JB	5	JB								
Semi-Volatile Organics (ug/L)																																													
bis(2-Ethylhexyl)phthalate	5			NT		NT				NT				NT				NT				NT						NT		NT		NT		NT		NT		NT		NT		NT		NT	
PCB and Pesticides (ug/L)																																													
Aldrin	0.002			NT						NT				NT				NT				NT						NT		NT		NT		NT		NT		NT		NT		NT		NT	
Alpha-BHC	NV			NT						NT				NT				NT				NT						NT		NT		NT		NT		NT		NT		NT		NT	
Heptachlor	0.04			NT		0.012	J			NT				NT				NT				NT						NT		NT		NT		NT		NT		NT		NT		NT	
Heptachlor epoxide	0.03			NT						NT				NT				NT				NT						NT		NT		NT		NT		NT		NT		NT		NT	

NOTES: (See Page 1.)

Table 2-13
Summary of Groundwater Sample Analytical Results for
Volatile and Semi-Volatile Organic Compounds, PCBs and Pesticides

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date	NYSDEC Class GA Criteria	MW-15D1 5/1/2001		GP-1 6/3/1999		GP-2 6/10/1999		GP-3 6/10/1999		GP-4 6/4/1999		GP-5 6/7/1999		GP-5-40 6/8/1999		GP-5-60 6/8/1999		GP-5-80 6/28/1999		GP-6 6/8/1999		GP-7 6/7/1999		GP-7-40 6/8/1999		GP-7-60 6/8/1999		GP-7-80 6/28/1999		GP-8 6/16/1999		GP-9 6/7/1999		GP-10 6/15/1999		GP-10-40 6/8/1999		GP-10-60 6/8/1999		GP-11 6/17/1999		GP-12 6/2/1999		GP-13 6/2/1999	
			Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q
Volatile Organics (ug/L)																																												
Chloroethane	5											2	J																															
Methylene chloride	5																																											
Acetone	50											4	J			3	J							4	J	2	J					41				5	J	3	J						
Chloroform	7																																											
Carbon disulfide	60																	2	J									1	J															
Methyl-tert-butyl ether	10																																											
1,1-Dichloroethane	5									2	J									**22**		3	J											2	J	1	J						
1,1-Dichloroethene	5																																									**90**			
1,1,2-Trichloro-1,2,2-trifluoroethane	5																																											
1,1,1-Trichloroethane	5									**7**	J	**10**				1	J	**15**		3	J					1	J	**8**	J			**6**	J	1	J	2	J						
Trichloroethene	5	2	J	**9**	J	**8**	J			2	J	2	J			**9**	J	**28**								**10**		**17**				4	J	2	J	3	J	**8**	J			**33**	J		
Benzene	1																																											
4-Methyl-2-pentanone	NV																																											
Tetrachloroethene	5			**120**		**130**				**250**	D	**110**		**8**	J	2	J	**10**								2	J	**6**	J	**44**		**540**		**130**		**47**		2	J			**610**		**19**	
Toluene	5																																											
Chlorobenzene	5																																											
Ethylbenzene	5																																											
Xylenes (Total)	5																																										2	J
1,2-Dichloroethene (Total)	5			3	J	2	J													1	J											**7**	J	1	J	2	J					**14**	J		
1,3-Dichlorobenzene	3	1	J																																									
1,4-Dichlorobenzene	3	1	J																																									
1,2-Dichlorobenzene	3	1	J																																									
1,2-Dibromo-3-chloropropane	0.04	**1**	**JB**																																									
1,2,4-Trichlorobenzene	5	2	JB																																									
Semi-Volatile Organics (ug/L)																																												
bis(2-Ethylhexyl)phthalate	5	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
PCB and Pesticides (ug/L)																																												
Aldrin	0.002	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Alpha-BHC	NV	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Heptachlor	0.04	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Heptachlor epoxide	0.03	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	

NOTES: (See Page 1.)

Table 2-13
Summary of Groundwater Sample Analytical Results for
Volatile and Semi-Volatile Organic Compounds, PCBs and Pesticides

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location / Sample Date	NYSDEC Class GA Criteria	GP-14 6/2/1999		GP-15 6/2/1999		GP-16 6/2/1999		GP-17 6/2/1999		GP-17-40 6/17/1999		GP-17-60 6/17/1999		GP-17-80 6/17/1999		GP-18 6/16/1999		GP-19 6/2/1999		GP-20 6/4/1999		GP-21 6/4/1999		GP-22 6/2/1999		GP-23 6/15/1999		GP-24 6/3/1999		GP-25 6/3/1999		GP-26 6/3/1999		GP-27 6/15/1999		GP-27-40 6/15/1999		GP-27-60 6/17/1999		GP-27-80 6/17/1999		GP-28 6/15/1999		GP-29 6/3/1999	
			Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q
Volatile Organics (ug/L)																																												
Chloroethane	5																																											
Methylene chloride	5															**29**																												
Acetone	50									6	J			6	J																													
Chloroform	7																																											
Carbon disulfide	60													1	J																													
Methyl-tert-butyl ether	10																																											
1,1-Dichloroethane	5			2	J					1	J					2	J			1	J																						
1,1-Dichloroethene	5																															**7**	J											
1,1,2-Trichloro-1,2,2-trifluoroethane	5																																											
1,1,1-Trichloroethane	5			1	J					1	J	1	J	**11**		3	J			1	J	1	J																**9**	J				
Trichloroethene	5	**12**	J	4	J	2	J					**10**		**22**		2	J																					3	J	**14**						
Benzene	1																																											
4-Methyl-2-pentanone	NV																																											
Tetrachloroethene	5	**230**		**96**		**24**		**430**		**8**	J	2	J	**8**	J	**240**	J	**22**																							**7**	J			3	J
Toluene	5																					1	J																						
Chlorobenzene	5																																											
Ethylbenzene	5																																											
Xylenes (Total)	5																					1	J																						
1,2-Dichloroethene (Total)	5	4	J	2	J			4	J							4	J																												
1,3-Dichlorobenzene	3																																											
1,4-Dichlorobenzene	3																																											
1,2-Dichlorobenzene	3																																											
1,2-Dibromo-3-chloropropane	0.04																																											
1,2,4-Trichlorobenzene	5																																											
Semi-Volatile Organics (ug/L)																																												
bis(2-Ethylhexyl)phthalate	5	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
PCB and Pesticides (ug/L)																																												
Aldrin	0.002	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Alpha-BHC	NV	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Heptachlor	0.04	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Heptachlor epoxide	0.03	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	

NOTES: (See Page 1.)

Table 2-13
Summary of Groundwater Sample Analytical Results for
Volatile and Semi-Volatile Organic Compounds, PCBs and Pesticides

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location	NYSDEC Class GA	GP-30		GP-32		GP-33		GP-34		GP-35		GP-36		GP-38		GP-39		GP-40		GP-42		GP-44		GP-46	
Sample Date	Criteria	6/3/1999		6/2/1999		6/2/1999		6/2/1999		6/3/1999		6/3/1999		6/3/1999		6/4/1999		6/4/1999		6/10/1999		6/15/1999		4/24/2001	
			Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q
Volatile Organics (ug/L)																									
Chloroethane	5																								
Methylene chloride	5																								
Acetone	50																							8	J
Chloroform	7																								
Carbon disulfide	60																								
Methyl-tert-butyl ether	10																								
1,1-Dichloroethane	5					3	J	3	J																
1,1-Dichloroethene	5																								
1,1,2-Trichloro-1,2,2-trifluoroethane	5																								
1,1,1-Trichloroethane	5							3	J															1	J
Trichloroethene	5							4	J									2	J						
Benzene	1																								
4-Methyl-2-pentanone	NV																								
Tetrachloroethene	5			**360**		**410**		**220**				2	J			2	J	**31**							
Toluene	5													1	J									1	J
Chlorobenzene	5																								
Ethylbenzene	5																								
Xylenes (Total)	5																							1	J
1,2-Dichloroethene (Total)	5							3	J																
1,3-Dichlorobenzene	3																							1	J
1,4-Dichlorobenzene	3																							1	J
1,2-Dichlorobenzene	3																							1	J
1,2-Dibromo-3-chloropropane	0.04																							**1**	**J**
1,2,4-Trichlorobenzene	5																								
Semi-Volatile Organics (ug/L)																									
bis(2-Ethylhexyl)phthalate	5	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
PCB and Pesticides (ug/L)																									
Aldrin	0.002	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Alpha-BHC	NV	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Heptachlor	0.04	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Heptachlor epoxide	0.03	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	

NOTES: (See Page 1.)

Table 2-14
Summary of Groundwater Sample Analytical Results for Inorganics

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location	NYSDEC Class GA	MW-1S	low flow MW-1S	low flow MW-1S	MW-1D1	low flow MW-1D1	low flow MW-1D1	MW-1D2	low flow MW-1D2	low flow MW-1D2	MW-2S	low flow MW-2S	low flow MW-2S	MW-2D1	MW-2D1	low flow MW-2D1	MW-3S	low flow MW-3S	low flow MW-3S	MW-3D1	low flow MW-3D1	low flow MW-3D1	MW-4S	low flow MW-4S	low flow MW-4S	MW-4D1
Sample Date	Evaluation Criterion[7]	7/27/1999	7/20/2000	4/30/2001	7/27/1999	7/20/2000	4/30/2001	7/27/1999	7/20/2000	4/30/2001	7/29/1999	7/21/2000	4/27/2001	7/24/2000	7/29/1999	4/27/2001	7/29/1999	7/20/2000	4/24/2001	7/29/1999	7/20/2000	4/24/2001	7/29/1999	7/19/2000	4/24/2001	7/29/1999
Unfiltered Inorganics (ug/L)																										
Aluminum	NV	2260	1910	578	665		89.1 B	75400			201		4260		126 B	116 B	10100	260	119 B	675		138 B	2550			484
Antimony	3	26.4 B			25.2 B		1.8 B	11.5 B			27.5 B		2.8 B		28.3 B		25.7 B			25.7 B			26.5 B			26.4 B
Arsenic	25							16.5					5.7 B				8.8 B									
Barium	1000	81.6 B	65.5 B	18.9 B	34.1 B	41.2 B	46.9 B	530	20 B	21.2 B	37.4 B	47.6 B	70.2 B	47.6 B	54.6 B	50.8 B	108 B	49.8 B	42.4 B	142 B	39.4 B	39.2 B	45.6 B	24.3 B	34.7 B	36.5 B
Beryllium	3		0.41 B					3.8 B					0.62 B				0.86 B						0.41 B			
Cadmium	5	0.87 B	0.33 B	0.75 B	0.46 B						0.93 B	2.7 B	6		0.59 B		3 B	1.9 B	2.5 B	0.67 B			640	38.1	70.5	3.7 B
Calcium	NV	15200	19400	33500	9520	13600	15100	138000	12700	12800	16900	20900	19100	16100	12700	18000	20400	17900	19000	17400	11700	17000	15200	5640	11000	12600
Chromium	50	2.5 B	62.9	4 B	2 B	49.3	4.1 B	218 J	71.7	2.9 B		60.5	22.8			4.1 B	305 J	84.2	87.7	2.4 B	59.5	5.2 B	32.3 J	61.7	30.3	10.2
Hexavalent Chromium	50	NT	NT		NT	NT		NT	NT		NT	NT		NT	NT		NT	NT	79.6	NT	NT		NT	NT		NT
Cobalt	NV	3.4 B	7.4 B	2.1 B	1.4 B	4.3 B		70.3	6.6 B	0.66 B		5.8 B	1.8 B				8.7 B	5.2 B	0.56 B	0.97 B	5.1 B		6.5 B	14.2 B	12.2 B	1 B
Copper	200	11.2 B	33.5	10.9 B	6 B	17.5 B		252	24.4 B	2.7 B	42.8	125	348		4 B		209	48.2	26	3.2 B	20.9 B		1370	1100	834	60.4
Iron	300	1200	312	31.4 BJ	654	230	37.6 BJ	94800	339	48.1 BJ	104	289	7000 J		126	113 J	14300	476	30.1 B	837	296	157	264	228	57.7 B	1090
Lead	25	2.1 B			3.2			32.7			11.1	9.5	213 J		1.4 B	2 BJ	9.7			3.2			2.7 B		1.4 B	15.1
Magnesium	35000	2780 B	2720 B	3080 B	2250 B	3130 B	3390 B	41300	3900 B	3850 B	3640 B	4180 B	4400 B	3080 B	2960 B	3620 B	5110	3640 B	3830 B	3270 B	2090 B	3220 B	4150 B	2380 B	2950 B	2460 B
Manganese	300	157	175	94.3	81	21.2	9.6 B	3120	24.8	2.5 B	5.1 B	41.8	95	12 B	11.5 B	9.8 B	464	42	21.6	447	50.9	115	374	90.1	68.7	71.7
Mercury	0.7					0.18 B		0.05 B				0.19 B					0.05 B				0.19 B			0.18 B		0.08 B
Nickel	100	4.9 B	283	9.8 B	1.7 B	221	5.2 B	129 J	313	5.3 B	2.7 B	275	19.2 B		1.3 B	5.3 B	40.3 J	228	28.2 B	2.6 B	264	6.7 B	739 J	423	249	6.7 B
Potassium	NV	4120 B	3630 BE	3440 BE	1450 B	1810 BE	1520 BE	12400	1360 BE	1230 BEJ	1550 B	2080 BE	1570 BE	1900 BE	2340 B	1490 BE	3850 B	3170 BE	1920 B	3510 B	1610 B	1110 B	2090 B	3660 BE	3980 B	1590 B
Selenium	10							9.6 J																		
Silver	50												11.6		0.73 B											
Sodium	20000	14700	13600	19100	8200	9310	10200	13200	11000	10300	8050	9650	7530	18700	19900	16800	14800	9960	9660 E	52300	20200	12500 E	19900	74900	120000 E	7280
Thallium	0.5							5.4 B																		
Vanadium	NV	2 B		0.51 B	1.2 B			149		0.54 B			8.6 B				17.9 B	0.72 B		1.1 B				2.9 B	2.2 B	2.6 B
Zinc	2000	41.9	62.6	51	14.8 B			1070			23.2	18.3 B	62.3	5.2 B	11.1 B		73.5	7.2 B	6.8 B	14.6 B			183	21.5	42.6	89.8
Cyanide	200			NT			NT			NT			2.5 B	NT		1.7 B			NT			NT	5.1 B	652	NT	24.7
Filtered Inorganics (ug/L)																										
Aluminum	NV	215	NT	NT		NT	NT		NT	NT		NT	NT	NT		NT	92 B	NT	NT		NT	NT	1500	NT	NT	
Antimony	3	4 B	NT	NT	2.8 B	NT	NT	3.9 B	NT	NT	3.5 B	NT	NT	NT	3.6 B	NT	3.8 B	NT	NT	4.1 B	NT	NT	4.1 B	NT	NT	3.7 B
Arsenic	25		NT	NT		NT	NT		NT	NT		NT	NT	NT		NT		NT	NT		NT	NT		NT	NT	
Barium	1000	108 B	NT	NT	27.4 B	NT	NT	11.7 B	NT	NT	30.8 B	NT	NT	NT	53.9 B	NT	51.4 B	NT	NT	132 B	NT	NT	53.1 B	NT	NT	33.3 B
Beryllium	3		NT	NT	0.3 B	NT	NT		NT	NT		NT	NT	NT		NT		NT	NT		NT	NT	0.36 B	NT	NT	
Cadmium	5	0.99 B	NT	NT		NT	NT		NT	NT	1.1 B	NT	NT	NT		NT	2.4 B	NT	NT		NT	NT	672	NT	NT	2.8 B
Calcium	NV	17700	NT	NT	9850	NT	NT	21200	NT	NT	14800	NT	NT	NT	12200	NT	19900	NT	NT	17100	NT	NT	14900	NT	NT	12600
Chromium	50		NT	NT		NT	NT	11.6	NT	NT		NT	NT	NT		NT	7.3 B	NT	NT		NT	NT	33.7	NT	NT	2.1 B
Cobalt	NV	2.8 B	NT	NT	1.4 B	NT	NT	2.4 B	NT	NT		NT	NT	NT		NT	1.1 B	NT	NT		NT	NT	8.5 B	NT	NT	
Copper	200	7.8 B	NT	NT	1.8 B	NT	NT		NT	NT	49.2	NT	NT	NT		NT	32.8	NT	NT		NT	NT	1910	NT	NT	18.8 B
Iron	300	38.6 B	NT	NT		NT	NT		NT	NT		NT	NT	NT		NT		NT	NT		NT	NT		NT	NT	
Lead	25		NT	NT		NT	NT		NT	NT	4.6 B	NT	NT	NT		NT		NT	NT		NT	NT		NT	NT	
Magnesium	35000	2870 B	NT	NT	2110 B	NT	NT	3410 B	NT	NT	3070 B	NT	NT	NT	2700 B	NT	3450 B	NT	NT	2930 B	NT	NT	3920 B	NT	NT	2350 B
Manganese	300	138	NT	NT	5 B	NT	NT	49.5	NT	NT	7 B	NT	NT	NT	6.6 B	NT	15.2	NT	NT	80.8	NT	NT	394	NT	NT	51.1
Mercury	0.7		NT	NT		NT	NT		NT	NT		NT	NT	NT		NT		NT	NT		NT	NT		NT	NT	
Nickel	100	3 B	NT	NT		NT	NT		NT	NT	2.9 B	NT	NT	NT	3.5 B	NT	13.8 B	NT	NT		NT	NT	916	NT	NT	3.8 B
Potassium	NV	5680	NT	NT	1580 B	NT	NT	3220 B	NT	NT	1430 B	NT	NT	NT	2600 B	NT	3120 B	NT	NT	4360 B	NT	NT	3420 B	NT	NT	1820 B
Selenium	10		NT	NT		NT	NT		NT	NT		NT	NT	NT		NT		NT	NT		NT	NT		NT	NT	
Silver	50		NT	NT		NT	NT		NT	NT		NT	NT	NT		NT		NT	NT		NT	NT		NT	NT	
Sodium	20000	15300	NT	NT	7870	NT	NT	10700	NT	NT	6500	NT	NT	NT	19800	NT	13600	NT	NT	45900	NT	NT	29400	NT	NT	7050
Thallium	0.5		NT	NT		NT	NT		NT	NT		NT	NT	NT		NT		NT	NT		NT	NT		NT	NT	
Vanadium	NV	0.72 B	NT	NT	0.93 B	NT	NT	2.2 B	NT	NT		NT	NT	NT		NT		NT	NT		NT	NT		NT	NT	
Zinc	2000	54.4	NT	NT	19.9 B	NT	NT	10.3 B	NT	NT	22.4	NT	NT	NT	20.2	NT	30	NT	NT	17.1 B	NT	NT	180	NT	NT	92.6

NOTES: 1. Inorganic compounds tested for are presented.
2. Blank indicates compound was not detected.
3. NT indicates compound was not tested.
4. Analytical testing completed by CompuChem Corporation.
5. Q = laboratory qualifier. Refer to Appendix E for qualifier definitions.
6. ug/L = micrograms per liter.
7. NYSDEC Class GA Standards (Std)/Guidance Values (GV): Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, dated June 1998
8. NV = no value.
9. Results presented for MW-2S (2000), MW-5D1 (1999), MW-8D1 (2000), MW-3D1 (2001), MW-10S (2001), GP-9, GP-24, and GP-26 are the higher of these samples and their respective duplicates.
10. Low flow indicates that the groundwater samples were collected via low flow sampling techniques. The remaining groundwater samples were collected via traditional groundwater sampling methods with a bailer.

Table 2-14
Summary of Groundwater Sample Analytical Results for Inorganics

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location	NYSDEC Class GA	low flow MW-4D1		low flow MW-4D1		MW-5D1		low flow MW-5D1		low flow MW-5D1		MW-5D2		low flow MW-5D2		low flow MW-5D2		MW-6D1		low flow MW-6D1		low flow MW-6D1		MW-6D2		low flow MW-6D2		low flow MW-6D2		low flow MW-6S		low flow MW-6S		MW-7S		low flow MW-7S		MW-7D1		low flow MW-7D1		low flow MW-7D1		MW-8D1		low flow MW-8D1		low flow MW-8D1		low flow MW-9S		low flow MW-9S	
Sample Date	Evaluation Criterion[7]	7/19/2000	Q	4/27/2001	Q	7/28/1999	Q	7/23/2000	Q	4/25/2001	Q	7/28/1999	Q	7/23/2000	Q	4/25/2001	Q	7/28/1999	Q	7/24/2000	Q	4/26/2001	Q	7/28/1999	Q	7/24/2000	Q	4/27/2001	Q	7/19/2000	Q	4/26/2001	Q	7/29/1999	Q	4/25/2001	Q	7/29/1999	Q	7/24/2000	Q	4/25/2001	Q	7/29/1999	Q	7/25/2000	Q	4/25/2001	Q	7/19/2000	Q	5/1/2001	Q
Unfiltered Inorganics (ug/L)																																																			
Aluminum	NV					17300		149	B	99.6	B	5500						3490				250		118000				69.8	B			163	B	7570				97300						10800				4440		308			
Antimony	3			1.9	B	24.5	B					26.1	B											10.5	B							3.4	B	24.6	B			12.4	B					20.3	B								
Arsenic	25					17.6	B																	48.6										8	B			53.5						9.6	B			2.6	B				
Barium	1000	81.6	B	72.6	B	201	B	59.1	B	49.1		52.5	B	50.3	B	49.6	B	109	B	66.5	B	58.7	B	825		42.2	B	48.5	B	57.2	B	78.1	B	149	B	30.4	B	1800		59.9	B	57.7	B	134	B	43.1	B	79.7	B	35.9	B	58.1	B
Beryllium	3					1.1	B											0.43	B					5.8										0.4	B			5.1						0.77	B			0.68	B				
Cadmium	5	3.1	B	6.5		35.2		0.65	B	5.5		4.2	B	6.8		0.39	B	4.7	B	1.2	B	1.4	B	45.2		0.6	B	0.55	B	476		1940		16.9		16.2												0.39	B			0.43	B
Calcium	NV	18000		14000		12900		27400		18100		27200		13600		17500		16400		13500		17100		111000		20700		14700		23400		20200		18600		11400		381000		12800		11700		16700		13000		12400		18700		11700	
Chromium	50	44.8		7.2	B	270	J	5.9	B	9.6	B	15.4	J	3.7	B	12.2		13.6	J	2.8	B	6	B	574	J	7.5	B	12.4		3180		824		292	J	15.6		448	J			4.2	B	22	J			10.6		42.3		3.2	B
Hexavalent Chromium	50	NT				NT		NT		14.23		NT		NT				NT		NT		10.16		NT						NT		914		NT		19.53		NT		NT				NT		NT				NT			
Cobalt	NV	5	B			18.8	B	0.42	B			4.7	B	0.5	B			12.3	B	0.64	B			117						7.6	B	9.4	B	5.6	B			56.3						18.4	B	0.43	B	3.5	B	9.3	B	0.56	B
Copper	200	42.2		62.2		62.9		4.2	B			9.4	B			4.2	B	23.4	B					723		3.2	B	3.9	B	18.5	B	9.6	B	143		8.5	B	343						56.1				15.6	B	16.2	B	2	B
Iron	300	277		79.6	BJ	29500		156		76.1	B	4650		23	B	257		6200				520	J	153000				29.4	BJ	222		18.4	BJ	15900		77.1	B	112000		16.4	B	21.4	B	16900				5300		756		43.4	BJ
Lead	25					24.5						1.7	B					10.1						86.5						2960	B			31.3				87.1						17.1				8.2					
Magnesium	35000	3620	B	2730	B	4770	B	8570		3480	B	6690		2500	B	5500		4130	B	2800	B	3200	B	28800		6140		4310	B	110		5080		4050	B	1490	B	53400		2680	B	2470	B	4700	B	2800	B	3260	B	3380	B	2470	B
Manganese	300	565		28.5		1950		12.8	B	34.7		338		59.1		27.6		954		11.8	B	49.2		5470		11.6	B	7.9	B			214		2020		10.2	B	3790		22.1		14.5	B	1030		15.6		248		587		19.5	
Mercury	0.7	0.2				0.04	B											0.03	B					0.37										0.63				0.44						0.19	B			0.18	B		
Nickel	100	214		43		31.3	B	1.2	B	7.3	B	17.7	B			6.9	B	10.4	B			6.2	B	175	J			5.4	B	547		981		47.4	J	33.3	B	91.6	J			6.2	B	17.3	B			11.9	B	189		6	B
Potassium	NV	3660	BE	2260	BE	4680	B	2890	BE	1500	B	3420	B	2190	BE	2370	B	2430	B	2920	BE	1980	BE	10700		2450	BE	2330	BE	3360	BE	2780	BE	5410		1600	B	7880		1920	BE	1280	B	2660	B	1740	BE	1520	B	1860	BE	1740	BE
Selenium	10																							10.3	J													8.5	J														
Silver	50																	0.97	B															2.1	B																		
Sodium	20000	29900		24200		30300		37200		15900	E	19400		19800		48800	E	17200		25500		20300		23400		25500		45900		36700		27700		11700		5720	E	12000		10100		8990	E	10200		10400		8450	E	14600		7290	
Thallium	0.5																							8	B																												
Vanadium	NV					32.7	B	0.74	B			9.2	B	0.88	B			7.2	B					162						2	B	0.82	B	16.6	B			117						19.3	B			5.1	B	0.9	B	0.58	B
Zinc	2000	4	B			82.7		1.3	B			19.8	B					26.1						759						4	B	42.3		36.5				498						55.1				20.7		9.4	B		
Cyanide	200	6.2	B	NT		142		1.7	B	NT		18		6.7	B	NT		31		2.3	B	NT		6.3	B	1.8	B	NT		5.2	B	NT		132		NT				46.8		NT						3.9	B	NT				NT	
Filtered Inorganics (ug/L)																																																			
Aluminum	NV	NT		NT				NT		NT				NT		NT				NT		NT				NT		NT		NT				NT		83.7	B	NT		NT				NT		NT		NT		NT	
Antimony	3	NT		NT		4.1	B	NT		NT		3.8	B	NT		NT		4.3	B	NT		NT		3.7	B	NT		NT		NT		NT		4	B	NT		3.2	B	NT		NT		3.6	B	NT		NT		NT	
Arsenic	25	NT		NT				NT		NT				NT		NT				NT		NT				NT		NT		NT		NT				NT				NT		NT				NT		NT		NT	
Barium	1000	NT		NT		61.8	B	NT		NT		15	B	NT		NT		50.3	B	NT		NT		25.9	B	NT		NT		NT		NT		57.5	B	NT		56.4	B	NT		NT		34.8	B	NT		NT		NT	
Beryllium	3	NT		NT				NT		NT				NT		NT				NT		NT				NT		NT		NT		NT				NT				NT		NT				NT		NT		NT	
Cadmium	5	NT		NT		8.6		NT		NT		3.4	B	NT		NT		1	B	NT		NT				NT		NT		NT		NT		14.8		NT				NT		NT				NT		NT		NT	
Calcium	NV	NT		NT		12800		NT		NT		26800		NT		NT		14700		NT		NT		21100		NT		NT		NT		NT		16400		NT		25200		NT		NT		14200		NT		NT		NT	
Chromium	50	NT		NT		5.4	B	NT		NT				NT		NT				NT		NT		23.7		NT		NT		NT		NT		1.8	B	NT		1.8	B	NT		NT				NT		NT		NT	
Cobalt	NV	NT		NT				NT		NT		2.6	B	NT		NT		0.81	B	NT		NT		1.5	B	NT		NT		NT		NT		1.5	B	NT				NT		NT				NT		NT		NT	
Copper	200	NT		NT				NT		NT				NT		NT				NT		NT		2.3	B	NT		NT		NT		NT		20.8	B	NT				NT		NT				NT		NT		NT	
Iron	300	NT		NT				NT		NT		33.7	B	NT		NT				NT		NT				NT		NT		NT		NT		664		NT				NT		NT				NT		NT		NT	
Lead	25	NT		NT				NT		NT				NT		NT				NT		NT				NT		NT		NT						NT				NT		NT				NT		NT		NT	
Magnesium	35000	NT		NT		2380	B	NT		NT		5340		NT		NT		3110	B	NT		NT		2860	B	NT		NT		NT		NT		2320	B	NT		2850	B	NT		NT		2770	B	NT		NT		NT	
Manganese	300	NT		NT		42.0		NT		NT		276		NT		NT		10.2	B	NT		NT		5.9	B	NT		NT		NT		NT		1830		NT		6.1	B	NT		NT		10.5	B	NT		NT		NT	
Mercury	0.7	NT		NT				NT		NT				NT		NT				NT		NT				NT		NT		NT		NT				NT				NT		NT				NT		NT		NT	
Nickel	100	NT		NT				NT		NT		1.5	B	NT		NT				NT		NT				NT		NT		NT		NT		29.2	B	NT				NT		NT				NT		NT		NT	
Potassium	NV	NT		NT		3540	B	NT		NT		2500	B	NT		NT		2630	B	NT		NT		6390		NT		NT		NT		NT		4840	B	NT		2330	B	NT		NT		1670	B	NT		NT		NT	
Selenium	10	NT		NT				NT		NT				NT		NT				NT		NT				NT		NT		NT		NT				NT				NT		NT				NT		NT		NT	
Silver	50	NT		NT				NT		NT				NT		NT				NT		NT				NT		NT		NT		NT				NT				NT		NT				NT		NT		NT	
Sodium	20000	NT		NT		29800		NT		NT		17900		NT		NT		16000		NT		NT		20200		NT		NT		NT		NT		10500		NT		10400		NT		NT		9430		NT		NT		NT	
Thallium	0.5	NT		NT				NT		NT				NT		NT				NT		NT				NT		NT		NT		NT				NT				NT		NT				NT		NT		NT	
Vanadium	NV	NT		NT				NT		NT		0.99	B	NT		NT		0.85	B	NT		NT		2.2	B	NT		NT		NT		NT				NT		0.88	B	NT		NT				NT		NT		NT	
Zinc	2000	NT		NT		5.7	B	NT		NT		8	B	NT		NT		4.1	B	NT		NT				NT		NT		NT		5.4	B	NT				NT		NT		3.4	B	NT		NT		NT	

NOTES: (See Page 1.)

Table 2-14
Summary of Groundwater Sample Analytical Results for Inorganics

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location / Sample Date	NYSDEC Class GA Evaluation Criterion[7]	low flow MW-10S 7/19/2000	Q	low flow MW-10S 4/23/2001	Q	low flow MW11S 7/19/2000	Q	low flow MW-11S dup 7/25/2000	Q	low flow MW-11S 4/24/2001	Q	low flow MW-12S 7/19/2000	Q	low flow MW-12S 4/23/2001	Q	low flow MW-12D1 4/30/2001	Q	low flow MW-12D2 5/1/2001	Q	low flow MW-13S 5/3/2001	Q	low flow MW-13D1 5/3/2001	Q	low flow MW-13D2 5/2/2001	Q	low flow MW-14S 5/1/2001	Q	low flow MW-14D1 5/1/2001	Q	low flow MW-15S 5/2/2001	Q	low flow MW-15D1 5/1/2001	Q	GP-1 6/3/1999	Q	GP-2 6/10/1999	Q	GP-3 6/10/1999	Q	GP-4 6/4/1999	Q	GP-5 6/7/1999	Q	GP-5-40 6/8/1999	Q	GP-5-60 6/8/1999	Q	GP-5-80 6/28/1999	Q	GP-6 6/8/1999	Q	GP-7 6/7/1999	Q
Unfiltered Inorganics (ug/L)																																																		
Aluminum	NV	367		124	B	106	B	488		110	B	417		200	B	329		264				223				189	B	358				106	B	20200		201000		15600		72700		165000		42500		32800		19000		29200		305000	
Antimony	3									4.7	B			1.7	B					1.9	B					2.8	B							11	B	292		20.6	B	6.7	B	16.3	BJ	5.5	BJ	8.3	BJ	2.1	B	3.7	B	15.5	BJ
Arsenic	25																					2.1	B											16.7	J	91.1		7.1	B	18.4	J	67.8	J	24		23.7		8.9	B	21.6		58.6	J
Barium	1000	64.4	B	68.2	B	73.5	B	61.6	B	31.1	B	39	B	52.2	B	77.9	B	17.9	B	0.54	B	14.4	B	0.12	B	62.2	B	61.4	B	43.8	B	81.7	B	207		2060		249		782		827	J	434	J	384	J	179	B	264		1330	J
Beryllium	3													0.53	B																			1.9	B	15		1.5	B	6.2		11.2	J	2.9	BJ	2.6	BJ	1.6	B	3.2	B	14.8	
Cadmium	5			1.2	B	0.85	B	0.48	B	0.46	B	110		339		39		4.7	B			3.2	B			103		0.6	B	7.9		0.71	B		R	17200	J	154	J		R	128	J	6.8	J	23.9	J			310		482	J
Calcium	NV	25600		20800		21200		18900		20400		16800		16100		19700		16500				46400				26400		16400		31400		55100		14200		38200		18000		15000		34000	J	14600	J	15400	J	18600		27600		29900	J
Chromium	50	44.7		4.6	B	49.9		1.4	B	4.2	B	47.2		7	B	11.2		4.9	B			9.1	B	3.6	B	4.5	B	11.4		15.1		11.6		3010		123000	J	7540	J	1890		4820	J	389	J	750	J	93.3		336		3480	J
Hexavalent Chromium	50	NT		11.57		NT		NT				NT		10.71								46.29								15.56				NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Cobalt	NV	7.8	B	0.83	B	5.4	B			0.71	B	8.6	B	7	B	1.7	B	4.3	B			1.3	B	0.72	B	1.5	B	0.89	B	6.4	B	1.4	B	10.9	B	128	J	8.6	B	33.5	B	162	J	55	J	79.1	J	81.2		28.9	B	118	J
Copper	200	16.4	B			18.5	B					17.2	B	3.5	B	11.9	B	2.8	B			3.8	B					5.1	B	2	B	4.3	B		R	6500		1090			R	2450		115		233		32.6		223		9520	
Iron	300	922		80.2	B	387		725		126		928		143		171	J	465	J			77.1	BJ	24.1	BJ	209	J	500	J	81.3	B	119	J	43200		239000	J	25400	J	64000		195000	J	82600	J	92300	J	36000		52300		426000	J
Lead	25							1.1	B																			1.1	B						R	428	J	31.8	J		R	194	J	67.6	J	123	J	26		44.1		288	J
Magnesium	35000	3170	B	3450	B	3360	B	3100	B	2890	B	2850	B	3030	B	3510	B	5030				2050	B			4090	B	2650	B	6090		5420		5580		16900	J	5710	J	9600		23200	J	9130	J	8120	J	8660		8900		34300	J
Manganese	300	380		60.3		919		111		8.4	B	540		97.6		61.6		382		1.3	B	36		0.51	B	21.6		83.8		449		134			R	6680	J	345	J		R	7070	J	3820	J	3750	J	2000		601		5020	J
Mercury	0.7																																	0.59	J	5.2	J		R	0.3	J	0.63	J		R		R	0.05	B	0.16	B	1.6	J
Nickel	100	198		7.9	B	230				6.5	B	501		543		78.4		10.1	B			9.6	B	4.7	B	25.5	B	13.4	B	20.3	B	18.1	B	393		7310	J	368	J	834		1090	J	216	J	224	J	39	B	250		1520	J
Potassium	NV	1840	BE	2100		2510	BE	2560	BE	1470	B	2590	BE	2250	B	2460	BE	1430	BE			2210	BE			2380	BE	3320	BE	3870	BE	5140	E	4610	B	20200	J	4730	BE	11100		34400	J	7570	J	6280	J	4780	BE	6790	J	49700	J
Selenium	10																																	15.5						13		8.9		7.1		9.7		12.6		22	
Silver	50																																	12.9						0.9	B										
Sodium	20000	10100		11900	E	10800		10400		17700	E	11200		12900	E	20000		10600		1720	B	26200				11600		10900		78000		14600		10400		11000	J	13000	J	15500		93700	J	10200	J	17900	J	13900	J	12000	J	16700	J
Thallium	0.5									4.8	B																							5.3	B	24.3		4.5	B	10		34.5		13.8		16.5		4.9	B	8.5	B	38.7	
Vanadium	NV	1.2	B			0.76	B	1.2	B	1.2	B	1.3	B					0.77	B			4.2	B	0.54	B	1.4	B	1.3	B	0.96	B	1.9	B	36.1	B	175		19.9	B	59.4		171	J	66.1	J	53.2	J	35	B	58.3		248	J
Zinc	2000	8.3	B			13	B	2.5	B			10.5	B	39.6		38.4		8.3	B									7.7	B	9	B			235	J	14200		154		318	J	606		174		310		66.7		164		1010	
Cyanide	200			NT				5.5	B	NT				NT		NT		NT		NT		NT		NT		NT		NT		NT		98.3		5490		97.4		4.5		465		6.3	B	20.3				125		9.2	B
Filtered Inorganics (ug/L)																																																		
Aluminum	NV	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		238		55.8	B	209		2930		235						74.2	B	73.8	B		
Antimony	3	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		3.9	B	4.5	B	5.8	B	3.6	B	3.6	B	4.2	B	3.5	B	3.4	B	3.7	B	3.9	B
Arsenic	25	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT																					
Barium	1000	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		57.9	B	4.1	B	33.1	B	105	B	223		43.8	B	32.8	B	25.8	B	33	B	27.4	B
Beryllium	3	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT				0.34	B			1.3	B												
Cadmium	5	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		85		593		34.7		207		70		3	B	3.1	B	0.81	B	199		72.4	
Calcium	NV	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		14700		16000		15800		18300		36700		13500		13100		17900		27500		23700	
Chromium	50	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		18.9		4.1	B	47.9		11.5		48.1											
Cobalt	NV	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		3.1	B	8.7	B	2.5	B	13.1	B	23.5	B	3.1	B	5.2	B	11.5	B	8.6	B	9.2	B
Copper	200	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		85.5		11.9	B	77.4		960		15	B							3.1	B	9.3	B
Iron	300	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		1830		1560		516		6470		1310		756		2550		1230		1560		2520	
Lead	25	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT																					
Magnesium	35000	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		2600	B	3000	B	2960	B	3840	B	5470		2390	B	3240	B	5060		3940	B	3390	B
Manganese	300	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		73.4		303		53.7		684		1440		314		658		508		200		891	
Mercury	0.7	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT																					
Nickel	100	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		177		999		77.1		528		587		11.1	B	14.6	B	9.4	B	75.7		211	
Potassium	NV	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		2400	B	2610	B	2710	B	4880	B	15900		2850	B	2470	B	2720	B	4390	B	8640	
Selenium	10	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT																					
Silver	50	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT																					
Sodium	20000	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		10200		11300		11000		17500		104000		9050		15200		13400		12100		16100	
Thallium	0.5	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT																					
Vanadium	NV	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		1.4	B	1	B	1.1	B	1.4	B							1.2	B	2	B		
Zinc	2000	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		89.2		124		40.1		199		63.1		5.8	B	30.1		9.5	B	24.8		16.1	B

NOTES: (See Page 1.)

Table 2-14
Summary of Groundwater Sample Analytical Results for Inorganics

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date	NYSDEC Class GA Evaluation Criterion[7]	GP-7-40 6/8/1999		GP-7-60 6/8/1999		GP-7-80 6/28/1999		GP-8 6/16/1999		GP-9 6/7/1999		GP-10 6/15/1999		GP-10-40 6/8/1999		GP-10-60 6/8/1999		GP-11 6/17/1999		GP-12 6/2/1999		GP-13 6/2/1999		GP-14 6/2/1999		GP-15 6/2/1999		GP-16 6/2/1999		GP-17 6/2/1999		GP-17-40 6/17/1999		GP-17-60 6/17/1999		GP-17-80 6/17/1999		GP-18 6/16/1999		GP-19 6/2/1999		GP-20 6/4/1999		GP-21 6/4/1999		GP-22 6/2/1999		GP-23 6/15/1999		GP-24 6/3/1999		GP-25 6/3/1999	
			Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q
Unfiltered Inorganics (ug/L)																																																	
Aluminum	NV	27200		2480		32500		41700		103000	J	134000		33500		5530		217000		42000		93600		95400		176000		62600		25200		129000		20300		153000		10500		88000		2180		71600		41600		200000		40900		15100	
Antimony	3	12.6	BJ	4.8	BJ	4.3	B	11.1	B	18.8	BJ	4.1	B	1.6	BJ			4.1	B	2.8	B	3.7	B	6.4	B			13.1	B	3.9	B	7.1	B			2.4	B	9.8	B	20.1	B			9.3	BJ	8.4	B	3.9	B	17.2	B	1.6	BJ
Arsenic	25	15.4				28.6		24.2		37.6	J	38		19.3		5.8	B	56.7		19.8	J	20.7	J	71.7	J	139	J	29.9	J	11.5	J	61.1		21.9		54		7.6	B	28.1	J			33.4		18	J	46		25.2	J	10.8	
Barium	1000	410	J	65.2	B	339		450		732	J	657		311	J	90.8	B		R	299		1060		816		1450		519		442			R		R		R	212		782		86.5	B	1020	J	262			R	347		151	B
Beryllium	3	2.2	B			2.9	B	3.8	B	6.5	J	8.6		2.5	B	0.52	B	14		3.9	B	6.5		7.7		6.3		6.9		2.8	B	9		1.5	B	8.1		1.3	B	11.2				5.8	J	3.5	B	11.6		2.2	B	1.2	B
Cadmium	5	15.5	J	14.7	J			38.3	J	481	J	11.1	J	42.2	J	7.2	J	21					R				R		R								54.4	J			R	3.9	B			R	0.57	B
Calcium	NV	15100	J	12600	J	25200		26300		46100	J	14000		16900	J	13500	J	20400		28600		19900		26300		33100		19000		23400		16200		13400		19800		15200		23200		19900	J	11400	J	10500		27900		12900		11500	J
Chromium	50	822	J	134	J	371		2890	J	5670	J	762	J	411	J	94.1	J		R	211		434		676		1280		4030		599			R		R		R	3310	J	6410		56.1	J	1340	J	1990			R	6170		132	J
Hexavalent Chromium	50	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Cobalt	NV	39.5	B	4.8	B	60.9		29.4	B	46.7	B	71	J	65.4	J	6.1	B	92		17.9	B	56.2	J	46	B	71.5	J	27	B	14.7	B	141		72.3		140		8.2	B	53.6	J	4.1	B	42.1	B	21.2	B	191		30.1	B	14.8	B
Copper	200	218		23	B	173		727		3960	J	4010		307		21.4	B	542			R		R		R		R		R		R	556		61.3		259		732			R	13.3	B	452			R	372			R	40.1	
Iron	300	71600	J	14100	J	89500		137000	J	139000	J	152000	J	84400	J	19400	J	235000		57700		104000		150000		231000		95100		41200		232000		49700		241000		28000	J	108000		5100	J	114000	J	67500		209000		76500		27800	J
Lead	25	73.5	J	12.9		61.8		161	J	315	J	129	J	71.4	J	12.2		215	J	74.7			R		R		R		R		R	171	J	53.4	J	159	J	196	J		R	4.6		102	J		R	178	J		R	22.1	J
Magnesium	35000	6570	J	3640	B	11600		7420	J	19300	J	16900	J	8450	J	4340	B	28900			R	11600		21500		44200		13400		6180		23900		7320			R	4540	BE	14500		4520	B	12300	J	7220		31700		11600		5050	J
Manganese	300	2690	J	334	J	3530		1750	J	3010	J	2990	J	4900	J	528	J	4350	J		R		R		R		R		R		R	9690	J	9520	J	5680	J	2000	J		R	114	J	952	J		R	15500	J		R	1300	J
Mercury	0.7		R		R	0.1	B	0.02	J	0.64	J	0.04	J		R		R		R	0.09	BJ	0.18	BJ	1.1	J	4.3	J	0.54	J	0.12	J		R		R		R		R	0.89	J		R	0.11	BJ		R		R		R	
Nickel	100	162	J	50.6	J	91.4		340	J	3360	J	349	J	137	J	37.1	B	300	J	258		307		178		246		382		185		292	J	102	J	182	J	73.5	J	402		42.7	J	467		225		227	J	645		69.3	J
Potassium	NV	5470	J	2300	B	6030	J	6990	J	19400	J	14700	J	6350	J	3120	B	31600	J	7960		11500		19500		37800		9100		15000		17400	J	4740	BE	21500	E	4820	BE	11500		1670	B	8860	J	6140		34000	J	6870		4840	B
Selenium	10	6.1				6		10.5		8.5		14.2	J	5.7				11.8	J													16.4	J			12.5	N					8.9	J			11.9	J				
Silver	50									2.1	B																																									
Sodium	20000	11300	J	15200	J	11900	J	10600	J	55600	J	8990	J	13900	J	18800	J	9200		18200		8510		13700		7740		7190		19800		11000		17500		13300		10000	J	7620		5570	J	16000	J	5490		10800		3400	B	8680	J
Thallium	0.5	14.5				16		21.5		16.7		21.9		17.8				30.5		6.6	B	16.1		22.1		34.2		12.7		5.4	B	35.8		12.6		33.8		6.7	B	15				13.9		9.4	B	29.7		13.8			
Vanadium	NV	43.4	B	4.5	B	67.6		46.5	B	111	J	131		59	J	13.3	B	231		55		63.4		185		326		111		29.8	B	215		49.4	B	224		21.5	B	94.1		5.1	B	127	J	59.5		203		103		25.9	B
Zinc	2000	233		45.2	J	178		247		874	J	387		165		34.7	J		R	171	J	674	J	428	J	700	J	731	J	119			R		R		R	62.3	J	597	J	18.1	BJ	811		304	J		R	664	J	72.3	J
Cyanide	200	22.7				5.9	B	27		164	J	6.4	B	159		18.4		6.8	B			15.6						258		46.2								1100		215		22.7		4.7	B	108		9.1	B	617			
Filtered Inorganics (ug/L)																																																		
Aluminum	NV									66.0	B	62.6	B							66.9	B					NT		50.4	B	309												49.5	B	69.6	B							
Antimony	3	3.5	B	3.6	B	3.7	B	4.3	B	4.2	B	3.9	B	4.2	B	3.4	B	3.9	B	3.3	B	3.6	B	3.9	B	NT		4	B	4.2	B	3.7	B	3.7	B	3.3	B	4.1	B	3.5	B	4.3	B	6.5	B	3.6	B	3.3	B	4	B	3.2	B
Arsenic	25																									NT																		4.3	B								
Barium	1000	54.6	B	42.2	B	40.2	B	37.9	B	74.3	B	12.6	B	41.7	B	52.1	B	64.5	B	73.4	B	32.3	B	42.2	B	NT		13.8	B	256		26.4	B	44.1	B	21.9	B	37.4	B	23.9	B	52.4	B	54.7	B	10.1	B	38.4	B	15.3	B	36.3	B
Beryllium	3							0.36	B															0.38	B	NT		0.41	B	0.57	B					0.31	B	0.37	B	0.41	B			0.34	B	0.36	B	0.32	B	0.35	B		
Cadmium	5	5.7		9.7				6.3		241		2	B	5.6		3.2	B	2.3	B	1.3	B	3.1	B	0.74	B	NT		20.3		24		0.79	B	0.87	B			3.3	B	12.4		33.7		34.6		40.7		1.5	B	88.9		1.1	B
Calcium	NV	14400		12500		17100		15700		26700		11600		15900		13500		18800		23300		16100		20900		NT		14400		26400		13100		13300		15700		12900		19500		20100		8810		9590		24100		10900		10100	
Chromium	50			4.5	B					8.4	B															NT				4.3	B											5.5	B					6.4	B	3.6	B
Cobalt	NV	3.4	B			7.4	B	2.2	B	5.7	B	17.1	B	12	B	1.2	B	9.6	B	2.5	B	5.3	B	3.1	B	NT		2	B	6.5	B	2.3	B	3.5	B	4.6	B	1.6	B	8.6	B	3.8	B	4.3	B	6.4	B	22.1	B	2.8	B		
Copper	200			2.1	B			2.7	B	46.1		12.9	B	8.8	B	1.5	B			29.7				14.7	B	NT		205		107								6.6	B	7.7	B	1.6	B	2.8	B	2.7	B			12.1	B		
Iron	300	2020		422		1820		2570		4830		6760		1620		1060		10400		3340		2300		3910		NT		682		5600		681		224		958		1380		2980		1790		1390		3010		203		552		241	
Lead	25																									NT																										
Magnesium	35000	2450	B	3030	B	4180	B	2930	B	3470	B	2320	B	2810	B	3330	B	3530	B	3850	B	3600	B	3510	B	NT		2810	B	3260	B	2010	B	3260	B	4250	B	1910	B	4760	B	4140	B	1840	B	1750	B	3580	B	2670	B	2050	B
Manganese	300	366		93.3		653		152		1160		695		1330		183		900		159		543		294		NT		117		379		207		504		474		1590		522		110		98.3		376		3150		341		239	
Mercury	0.7																																																			
Nickel	100	15	B	3.9	B	5.1	B	10.8	B	1770		217		18.4	B	5.6	B	8.3	B	9.6	B	14.5	B	14.2	B	NT		30.7	B	46.2		6	B	4.6	B	3.6	B	9.2	B	18.9	B	19.3	B	30.7	B	39.2	B	8.9	B	100		6.3	B
Potassium	NV	2030	B	2050	B	2680	B	2870	B	6440		1770	B	2670	B	2640	B	3970	B	3960	B	2580	B	3820	B	NT		1330	B	14300		2210	B	2570	B	2430	B	2640	B	2610	B	1990	B	1790	B	1580	B	4000	B	1130	B	3320	B
Selenium	10																																																		
Silver	50																																																		
Sodium	20000	9900		13700		11100		9120		40200		7700		12400		17800		8570		16500		9450		14400		NT		6200		20500		9140		16600		11800		8450		6640		5570		15200		5040		9220		3320	B	7790	
Thallium	0.5																																																		
Vanadium	NV					0.78	B	1.7	B			1.3	B					1.2	B	1.1	B					NT		0.83	B	1.2	B			1.5	B	0.88	B	1.1	B			1.4	B	3.3	B	1	B	0.85	B				
Zinc	2000	23.6		8.1	B	21.6		7	B	90.6		136		11.6	B	5.2	B	13.7	B	44.7		29.3		23.5		NT		28.5		58.7		4.5	B	7.7	B			10.6	B	7.4	B	10.6	B	15.1	B	18.2	B			39.4		9.7	B

NOTES: (See Page 1.)

Table 2-14
Summary of Groundwater Sample Analytical Results for Inorganics

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date	NYSDEC Class GA Evaluation Criterion[7]	GP-26 6/3/1999		GP-27 6/15/1999		GP-27-40 6/15/1999		GP-27-60 6/17/1999		GP-27-80 6/17/1999		GP-28 6/15/1999		GP-29 6/3/1999		GP-30 6/3/1999		GP-32 6/2/1999		GP-33 6/2/1999		GP-34 6/2/1999		GP-35 6/3/1999		GP-36 6/3/1999		GP-38 6/3/1999		GP-39 6/4/1999		GP-40 6/4/1999		GP-42 6/10/1999		GP-44 6/15/1999		GP-46 4/24/2001	
			Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q		Q
Unfiltered Inorganics (ug/L)																																					
Aluminum	NV	102000		132000		52100		82000		88500		165000		105000		72100		76900		51900		39300		56300		61400		46300		39300		46700		222000		200000		NT	
Antimony	3	4.6	B	5.1		2.1		5.8	B	1.8	B	3.2	B	3	BJ	6	BJ	3.3	B			2.6	B			7.2	BJ	3	BJ	4.4	B	11.5	B	15.9		5.8		NT	
Arsenic	25	36.1	J	65.3		29.4		69		30.5		55		43.4	J	43.7	J	27.8	J	74.3	J	13.9	J	44.3	J	28.9		25.2		31.3	J	21.7	J	64		79.9		NT	
Barium	1000	990			R	609			R		R		R	737	J	611	J	465		324		319		490	J	660	J	362	J	740		279		1000			R	NT	
Beryllium	3	6.7		8.8		4		6.2		4.9	B	10.8		7.5	J	5.4	J	5.4		6.7		3	B	7.2	J	3	BJ	3.2	BJ	3.8	B	3.5	B	12.5		14.7		NT	
Cadmium	5			30.9										46.1	J	66.8	J		BR		BR			1.3	B	12	J				R		R	263	J	259		NT	
Calcium	NV	19400	J	17300		13800		14800			R		R	11100	J	18100	J	17000		15100		14200		15400	J	19500	J	13400	J	18400		13500		28500		13300		NT	
Chromium	50	449			R	228	J		R	228		348		355	J	465	J	248		2310		159		1280	J	2250	J	215	J	654		3510		4600	J		R	NT	
Hexavalent Chromium	50	NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT		NT	
Cobalt	NV	105		117		107	J	124		52.6		165		165	J	30.2	BJ	20.9	B	34.5	B	16.5	B	25.3	B	28	BJ	36.9	B	27.6	B	14.8	B	86.2	J	380		NT	
Copper	200	166		264		184		311		136		409		288		229			R		R		R	1700		1580		109			R		R	6370		484		NT	
Iron	300	136000		182000		98600	J	213000		128000		228000		137000	J	139000	J	76200		153000		50700		123000	J	116000	J	76700	J	84300		46700		275000	J	295000		NT	
Lead	25	94.8	J	136	J	136	J	173	J	64.7	J	226	J	222	J	132	J		R		R		R	4940	J	263	J	57.5	J		R		R	261	J	370	J	NT	
Magnesium	35000	15200		22100		11800	J	17300		19200		28500		14300	J	13800	J	9860		11400		10300		10200	J	15200	J	10200	J	8400		8840		28400	J	30000		NT	
Manganese	300	1550	J	8670	J	9360	J	15000	J	6870	J	11700	J	15600	J	1080	J		R		R		R	1350	J	1050	J	3180	J		R		R	3190	J	47200	J	NT	
Mercury	0.7	0.33	J		R		J	0.22	J		R		R	0.33	J	0.21	J	0.02	J	1.5	J		R	1	J	3.6	J	0.06	BJ		R	1	J	3.8	J	0.04	J	NT	
Nickel	100	106		216	J	133	J	277	J	113	J	274	J	236	J	165	J	110		90.2		83.6		113	J	225	J	123	J	89.4		366		1900	J	326	J	NT	
Potassium	NV	15300		16700	J	8050	J	11800	J	13200	J	25700	J	13500	J	9250	J	13200		13800		6930		13700	J	13100	J	9340	J	7830		5410		34700	J	28200	J	NT	
Selenium	10	9.9		10.8	J	7.4		12.8	J	8.4	J	14.4	J	11.4		9.8								6		10.2		8.6						19.4		17.1	J	NT	
Silver	50																			54.8		6.5	B	23.8		13.7						3.1	B	2.6				NT	
Sodium	20000	18100	J	11500		10600	J	14800		12400		13100		7460	J	5250	J	16300		8300		8210		7130	J	9330	J	12200	J	8750		4890	B	14700	J	11600		NT	
Thallium	0.5	22.3		22.4		19.9		39.9		23.2		35.9		20.3		11.9		12		24.1		8.7	B	22.9		11.2		13.2		13.9		7.5	B	32.7		48.2		NT	
Vanadium	NV	116		194		73.6		179		136		217		143	J	157	J	66.2		138		47.7	B	96.7	J	119	J	73.4	J	70.5		61		218		277		NT	
Zinc	2000	275	J		R	172			R		R		R	395		592		210	J	287	J	108	J	237		255		158		125	J	453	J	596			R	NT	
Cyanide	200					126		13.6				5	B			59.2				556				80.1		161						524		21.7		5.2		NT	
Filtered Inorganics (ug/L)																																					
Aluminum	NV																			67.4	B											64.4	B						
Antimony	3	3.7	B	5.1	B	3.7	B	3.8	B	3.4	B	3	B	3.7	B	4.3	B	4	B	3.7	B	4.2	B	4	B	4.4	B	3.8	B	3.4	B	5.9	B	4.7	B	6	B		
Arsenic	25																																						
Barium	1000	83.8	B	47.4	B	23.9	B	39.8	B	21.2	B	43	B	24.7	B	43.6	B	11	B	16.8	B	20.4	B	33.9	B	42.4	B	32.8	B	32.2	B	14.4	B	11.3	B	38.5	B	74.5	B
Beryllium	3									0.31	B			0.36	B			0.35	B	0.42	B	0.35	B	0.3	B			0.42	B										
Cadmium	5	0.62	B	5.2										4.4	B	5.7				0.82	B	1.1	B	0.85	B	0.77	B			0.58	B	67.9		25.3		45.1		2.3	B
Calcium	NV	16900		16300		10500		13000		14200		13800		9880		14400		15000		16100		12300		13500		16000		12000		17300		13200		19600		12000		35900	
Chromium	50	2	B													3.1	B															3.5	B					4.7	B
Cobalt	NV	11.1	B	3.6	B	3.7	B	4.5	B	2.7	B	8	B	5.8	B			2.1	B	3.1	B	1.6	B	1.9	B	1.2	B	1.7	B	1.9	B	1.9	B	5.9	B	5.9	B	4.8	B
Copper	200																	7.3	B	7	B	23.7	B	3.6	B	17	B			1.8	B	133		9.9	B				
Iron	300	10100		289		513		1790		756		547		142		4810		3070		3360		1130		1010		2450		291		694		572		2800		192		549	
Lead	25																			8.6				2.9	B														
Magnesium	35000	3300	B	2870	B	2280	B	2940	B	3700	B	2870	B	2600	B	4000	B	2970	B	2650	B	2610	B	1580	B	2130	B	2540	B	2520	B	2620	B	2800	B	2300	B	6880	
Manganese	300	508		394		578		897		447		1120		583		140		110		192		209		746		243		214		60		57.2		291		1450		724	
Mercury	0.7																																						
Nickel	100	8.2	B	4.6	B	4.1	B	9.3	B	2.6	B	10.1	B	7.1	B	6.1	B	8.7	B	9.5	B	6.5	B	6.1	B	6.3	B	4.5	B	2.4	B	42.1		278		12.6	B	14.7	B
Potassium	NV	5150		3450	B	2110	B	2660	B	2630	B	3040	B	3190	B	2090	B	7480		2530	B	1830	B	3000	B	4490	B	3700	B	3490	B	1410	B	4430	B	2910	B	5290	
Selenium	10																																						
Silver	50																																						
Sodium	20000	17200		12000		8440		13600		10700		10900		7220		5030		15600		8970		7300		7650		8000		10500		8400		5060		10900		10600		27400	E
Thallium	0.5																																						
Vanadium	NV	1.5	B	1	B	0.8	B	0.87	B	0.81	B			1.4	B			1.3	B					0.97	B	0.85	B	0.74	B	0.84	B	1.6	B	0.74	B	0.87	B		
Zinc	2000	8.1	B	15.4	B			8.2	B			8.6	B	4.7	B	10.8	B	24.3		48.4		10.1	B	26.1		13.1	B	3.9	B	6	B	69.6		8	B	5.2	B	5.6	B

NOTES: (See Page 1.)

Table 2-15
Summary of Cesspools and Drainage Structures IRM

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Structure Number	Type of Cover	Summary of Impacted Water Removal		Summary of Contaminated Soil Removal		Approximate Depth of Confirmatory Soil Sample Collection (feet)	Disposal Information
		Volume Remove (gallons)	Comments	Depth Removed (feet)	Approximate Volume (cubic yards)		
DS-4	Open Grate	4,000 Gallons (Removed from DS-4, CP-6, and CP-5).	Disposed of at the Bergen Point Waste Water Treatment Facility (non-hazardous liquid)	7.0 to 10.0 ft (3.0 ft thick)	5.6	10.0 to 10.5	Roll-off Box 1 (Group 1 Soils): Soil contaminated with volatile organic compounds, semi-volatile organic compounds and metals. See Note 8.
CP-6	Solid Cover			10.5 to 12.0 ft (1.5 thick)	2.8	12.0 to 12.5	
CP-5	Solid Cover (Buried)			13.0 to 14.5 ft (1.5 ft thick)	2.8	14.5 to 15.0	
CP-10	Solid Cover	700 Gallons	Disposed of at AB Oil (oil sheen on water)	NA	NA	No sample collected due to a concrete bottom.	
DS-8	Open Grate	4,000 Gallons (Removed from DS-8, DS-10, and CP-8).	Disposed of at the Bergen Point Waste Water Treatment Facility (non-hazardous liquid)	10.0 to 11.5 ft (1.5 ft thick)	2.8	11.5 to12.0	Roll-off Box 2 (Group 2 Soils): Soil contaminated with metals. See Note 8.
DS-10	Open Grate			12.5 to 14.0 ft (1.5 ft thick)	2.8	14.0 to 14.5	
CP-8	Solid Cover			7.0 to 8.0 ft (1.0 ft thick)	1.9	8.0 to 8.5	
CP-3	Solid Cover (Buried)	Dry	No water removed.	8.0 to 13.0 ft (5.0 ft thick)	9.3	13.0 to 13.5	Roll-off Box 3 (Group 3 Soils): Soil contaminated with metals. See Note 8.
CP-4	Solid Cover (Buried)	Dry	No water removed.	12.0 to 13.0 ft (1.0 ft thick)	1.9	13.0 to 13.5	
CP-7	Solid Cover	Dry	No water removed.	12.0 to 13.5 ft (1.5 ft thick)	2.8	13.5 to 14.1	
DS-5	Open Grate	3,500 Gallons	Disposed of at the Bergen Point Waste Water Treatment Facility (non-hazardous liquid)	14.5 to 18.5 ft (3.5 ft thick)	6.5	18.5 to 19.0	Roll-off Box 4 (Group 4 Soils): Soil contaminated with PCBs and metals. See Note 8.

NOTES:
1. See Figure No. 3 for cesspool and drainage structure locations.
2. Depth measurements referenced to the ground surface.
3. N/A = not applicable.
4. Volume of liquid based on estimates from AB Oil vacuum truck operator.
5. Volume of soil based on an 8-foot diameter structure, and depth measurements made before and after soil removal.
6. No soils were removed from CP-10 as it had a concrete bottom.
7. In addition to the quantities listed above, approximately 3,250 gallons of water was decanted off of the four roll-off boxes prior to removal from the Site. The impacted water was disposed of at AB Oil as non-hazardous metals-impacted.
8. Approximately 43 tons of D006 (Cadmium Hazardous Waste) was removed from the structures noted above and disposed of at S&W Waste in Kearney, NJ, as requested by NYSDEC.
9. 1,000-gallons of fuel oil was removed from UST-3 and disposed of by AB Oil.

Table 2-16
Summary of Field Exploration Dates

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Field Activity	FRI Phase I	Interim Remedial Measures	FRI Phase II	FRI Phase III
Geophysical Survey	6/6/1999			
Geoprobe Soil Borings	6/01/99 to 6/17/99			
	6/28/1999			
				4/24/2001
Test Boring/Monitoring Well Installation	6/26/99 to 7/15/99			
			7/17/00 to 7/19/00	4/23/01 to 5/02/01
Test Pit Explorations	6/08/99 to 6/9/99		07/21/00	
Water Level Measurements	6/6/1999			
	7/16/1999			
	7/26/1999			
			7/17/00 & 7/19/00	
			7/25/2000	
				5/3/2001
Health and Safety Monitoring	Conducted daily in field	Conducted daily in field	Conducted daily in field	Conducted daily in field
Environmental Sampling	Conducted between 6/1/99 to 6/18/99, 6/26/99 to 6/30/99, 7/12/01 and 7/27/99 to 7/29/99 **(1999 Round)**	4/10/00 to 4/11/00	Conducted between 7/19/00 and 7/25/00 **(2000 Round)**	Conducted between 4/24/01 to 5/04/01 **(2001 Round)**
Existing Monitoring Well Assessment	6/01/99 to 6/05/99			

Table 2-17
Summary of Additional Parameters Analytical Test Results for
Monitoring Wells MW-6S and MW-13S (May 2001)

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location	MW- 6S		MW-13S	
Sample Date	5/10/2001		5/10/2001	
		Q		Q
Parameters (mg/L)				
Total Coliform			present	
Biological Oxygen Demand (BOD)	<2		<4	
Chloride	30.2		54	
Hardness	101		15.9	
Sulfate	23		33.6	
Total Suspended Solids (TSS)	2340		4	
Alkalinity	71		31	
Nitrate/Nitrite	2.3		10.1	

NOTES:
1. Blank indicates parameter not detected.
2. Analytical testing completed by CompuChem Corporation.
3. Q = laboratory qualifier. Refer to Appendix E for qualifier definitions.
4. mg/L = milligrams per liter or ppm.

Table 4-1
Evaluation of Background Metals in Soil

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location Sample Date Sample Depth	GP-26,S-5 6/1/1999 8-10 ft bgs		GP-14,S-6 6/2/1999 10-12 ft bgs		Site Background (Higher Concentration of Selected Soil Samples)[8]	RSCO[6]	Published Background [9]
Inorganics (mg/kg)							
Aluminum	723		715		723	SB	33,000
Antimony						SB	NV
Arsenic			1.0	B	1.0	7.5 or SB	3-12
Barium	2.5	B	2.8	B	2.8	300 or SB	15-600
Beryllium			0.08	B	0.08	0.16 or SB	0-1.75
Cadmium						1 or SB	0.1-1
Calcium	13.2	B	553	B	553.0	SB	130-35,000
Chromium	4.3		2.3		4.3	10 or SB	1.5-40
Cobalt	0.91	B	0.77	B	0.91	30 or SB	2.5-60
Copper	1.6	B	1.2	B	1.6	25 or SB	1-50
Iron	1790		1910		1910	2000 or SB	2,000-550,000
Lead	0.54	B	0.52	B	0.54	20-500 [10]	20-500 [10]
Magnesium	124	B	454	B	454	SB	100-5,000
Manganese	28.5		49.7		50	SB	50-5,000
Mercury						0.1	0.001-0.2
Nickel	1.0	B	0.87	B	1.0	13 or SB	0.5-25
Potassium	50.9	B	71.9	B	71.9	SB	8,500-43,000
Selenium						2 or SB	0.1-3.9
Silver						SB	NV
Sodium						SB	6,000-8,000
Thallium						SB	NV
Vanadium	1.5	B	1.7	B	1.7	150 or SB	1-300
Zinc	2.3	BJ	1.9	BJ	2.3	20 or SB	9-50
Cyanide			0.35	B	0.35	NV	NV

NOTES:
1. See Section 4.3.2 for information regarding the criteria used to establish background samples.
2. Blank indicates compound was not detected.
3. Analytical testing completed by CompuChem Corporation.
4. Q = laboratory qualifier. See Appendix E for qualifier definitions.
5. mg/kg = milligrams per kilogram; bgs = below ground surface.
6. RSCO is the Recommended Soil Cleanup Criteria from NYSDEC Technical and Administrative Guidance Memorandum No. HWR-94-4046.
7. SB = site background; NV = no value.
8. The higher concentration of selected soil samples is considered representative of background Site conditions.
9. Published background as noted in NYSDEC Technical and Administrative Guidance Memorandum No HWR-94-4046.
10. Average background levels of lead for metropolitan or suburban areas or near highways typically range from 200-500 ppm.

Table 4-2
Evaluation of Upgradient Groundwater Samples

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Sample Location	Low Flow MW-1S		Low Flow MW-1D1		Low Flow MW-1D2		Low Flow MW-9S		HIGHEST[9]	NYSDEC Class GA Evaluation Criterion[7]
Sample Date	4/30/2001	Q	4/30/2001	Q	4/30/2001	Q	5/1/2001	Q		
Volatile Organics (ug/L)										
Chloroethane									ND	5
Methylene chloride									ND	5
Acetone									ND	50
Chloroform									ND	7
Carbon disulfide									ND	NV
Methyl-tert-butyl ether			5	J			1	J	5	NV
1,1-Dichloroethane									ND	5
1,1-Dichloroethene					2	J			2	5
1,1,2-Trichloro-1,2,2-trifluoroethane					1	J			1	5
1,1,1-Trichloroethane					11				11	5
Trichloroethene			2	J	14		2	J	14	5
Benzene									ND	1
4-Methyl-2-pentanone									ND	NV
Tetrachloroethene					13	B	130		130	5
Toluene									ND	5
Chlorobenzene									ND	5
Ethylbenzene									ND	5
Xylenes (Total)									ND	5
1,2-Dichloroethene (Total)					2	J	4	J	4	5
1,3-Dichlorobenzene									ND	3
1,4-Dichlorobenzene									ND	3
1,2-Dichlorobenzene									ND	3
1,2-Dibromo-3-chloropropane									ND	0.04
1,2,4-Trichlorobenzene									ND	5
Unfiltered Inorganics (ug/L										
Aluminum	578		89.1	B					89.1	1109
Antimony			1.8	B					1.8	3
Arsenic									ND	25
Barium	18.9	B	46.9	B	21.2	B	58.1	B	58.1	1000
Beryllium									ND	3
Cadmium	0.75	B					0.43	B	0.75	5
Calcium	33500		15100		12800		11700		33500	16100
Chromium	4	B	4.1	B	2.9	B	3.2	B	4.1	57
Hexavalent Chromium									ND	50
Cobalt	2.1	B			0.66	B	0.56	B	2.1	7
Copper	10.9	B			2.7	B	2	B	10.9	200
Iron	31.4	BJ	37.6	BJ	48.1	BJ	43.4	BJ	48.1	409
Lead									ND	25
Magnesium	3080	B	3390	B	3850	B	2470	B	3850	35000
Manganese	94.3		9.6	B	2.5	B	19.5		94.3	300
Mercury									ND	0.7
Nickel	9.8	B	5.2	B	5.3	B	6	B	9.8	252
Potassium	3440	BE	1520	BE	1230	BEJ	1740	BE	3440	2165
Selenium									ND	10
Silver									ND	50
Sodium	19100		10200		10300		7290		19100	20000
Thallium									ND	0.5
Vanadium	0.51	B			0.54	B	0.58	B	0.58	0.9
Zinc	51								51	2000
Cyanide	NT		NT		NT		NT		NT	200

NOTES:

1. Compounds detected in one or more groundwater samples are presented in this table.
2. Blank indicates compound was not detected.
3. NT = compound was not tested; ND = Not Detected.
4. Analytical testing completed by CompuChem Corporation.
5. Q = laboratory qualifier.
6. ug/L = micrograms per liter.
7. NYSDEC Class GA Standards (Std)/Guidance Values (GV): Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, dated June 1998.
8. NV = no value.
9. Highest of the upgradient concentration in groundwater (i.e., groundwater collected from MW-1S, MW-1D1, MW-1D2, and MW-9S in 2001).

Table 5-1
Summary of Field Test Parameters

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Monitoring Well	Date	pH (standard units)	Specific Conductance (mS/cm)	Temperature (C)	Turbidity (NTU)
MW-1S	July 1999	5.85	0.20	15.1	0
MW-1S	July 2000	4.65	0.23	16.0	0
MW-1S	April 2001	5.65	0.28	14.1	1
MW-1D1	July 1999	5.76	0.11	14.7	0
MW-1D1	July 2000	5.39	0.14	15.8	0
MW-1D1	April 2001	5.52	0.16	14.1	3
MW-1D2	July 1999	6.78	0.17	15.7	1
MW-1D2	July 2000	5.28	0.15	14.7	0
MW-1D2	April 2001	5.52	0.16	14.3	2
MW-2S	July 1999	6.77	0.15	15.5	2
MW-2S	July 2000	5.59	0.19	18.5	15
MW-2S	April 2001	5.94	0.16	13.2	6
MW-2D	July 1999	6.18	0.20	14.7	NA
MW-2D	July 2000	5.62	0.14	16.1	0
MW-2D	April 2001	5.40	0.24	14.7	2
MW-3S	July 1999	5.55	0.20	14.4	2
MW-3S	July 2000	5.67	0.18	15.6	13
MW-3S	April 2001	6.43	0.18	13.3	1
MW-3D	July 1999	5.74	0.35	14.3	0
MW-3D	July 2000	5.61	0.17	16.2	0
MW-3D	April 2001	5.17	0.18	15.2	1
MW-4S	July 1999	5.68	0.25	16.2	1
MW-4S	July 2000	6.32	0.44	16.4	2
MW-4S	April 2001	5.79	0.66	13.8	1
MW-4D	July 1999	5.55	0.16	14.6	1
MW-4D	July 2000	5.75	0.26	16.0	4
MW-4D	April 2001	5.63	0.24	13.9	1
MW-5D1	July 1999	6.00	0.26	15.2	1
MW-5D1	July 2000	5.64	0.39	14.9	7
MW-5D1	April 2001	7.04	0.20	13.5	3
MW-5D2	July 1999	7.44	0.27	17.9	3
MW-5D2	July 2000	5.44	0.19	16.9	3
MW-5D2	April 2001	6.57	0.38	13.4	3
MW-6S	July 2000	6.56	0.30	15.6	12
MW-6S	April 2001	5.61	0.31	12.1	2
MW-6D1	July 1999	6.92	0.21	15.0	1
MW-6D1	July 2000	5.67	0.21	16.1	4
MW-6D1	April 2001	5.77	0.22	13.9	3
MW-6D2	July 1999	9.22	0.29	15.5	4
MW-6D2	July 2000	5.05	0.29	17.4	1
MW-6D2	April 2001	5.37	0.39	13.5	1
MW-7S	July 1999	6.94	0.16	15.5	18
MW-7S	July 2000	6.18	0.13	16.8	4
MW-7S	April 2001	6.28	0.10	10.5	2
MW-7D	July 1999	5.83	0.15	15.0	0
MW-7D	July 2000	5.62	0.14	16.1	0
MW-7D	April 2001	5.47	0.13	12.7	0
MW-8D1	July 1999	6.12	0.16	15.9	0
MW-8D1	July 2000	5.68	0.14	16.0	0
MW-8D1	April 2001	5.65	0.13	13.3	3
MW-9S	July 2000	5.52	0.18	15.9	15
MW-9S	April 2001	5.46	0.35	16.1	11
MW-10S	July 2000	5.94	0.19	15.0	26
MW-10S	April 2001	5.18	0.20	14.1	2
MW-11S	July 2000	6.00	0.17	16.8	16
MW-11S	April 2001	5.97	0.24	12.3	2
MW-12S	July 2000	5.92	0.15	14.6	8
MW-12S	April 2001	5.27	0.19	4.7	14
MW-12D1	April 2001	5.64	0.23	15.1	1
MW-12D2	May 2001	6.09	0.19	14.7	9
MW-13S	May 2001	9.32	0.34	14.9	5
MW-13D1	May 2001	5.73	0.18	15.1	4
MW-13D2	May 2001	6.35	0.59	15.4	5
MW-14S	May 2001	6.28	0.24	14.3	7
MW-14D1	May 2001	4.82	0.13	15.2	0
MW-15S	May 2001	6.20	0.37	13.0	2
MW-15D1	May 2001	5.74	0.18	15.8	9

NOTES:

1. mS/cm = millisiemens per centimeter; C = degrees Celsius; NTU = nephelometric turbidity units
2. NA = not available
3. Field parameters were collected during monitoring well development and/or well purging prior to sampling.

Table 6-1
Summary of Exposure Assessment Pathways

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Medium	Exposure	Likelihood of Exposure	Data Set	Standards
Surface Soils	Ingestion, Inhalation and Dermal Contact by local commercial workers and migration to surface water through erosion.	Low	Surface Soil Test Results	TAGM 4046 Soil Cleanup Objectives
Subsurface Soils	Ingestion, Inhalation and Dermal Contact by construction or commercial/maintenance workers.	Low	Test Results for Geoprobe/Soil Boring Subsurface Soil; Sediment (Soil) from Drainage Structures, Cesspools, Former Well Structures; and Soil Adjacent to Former Interior Sump	TAGM 4046 Soil Cleanup Objectives
	Leaching to groundwater.	Moderate	Test Results for Geoprobe/Soil Boring Subsurface Soil; Sediment (Soil) from Drainage Structures, Cesspools, Former Well Structures; and Soil Adjacent to Former Interior Sump	TAGM 4046 Soil Cleanup Objectives
Overburden Groundwater	Ingestion, Inhalation and Dermal Contact from use as a drinking water source.	Moderate	Test Results for Overburden Groundwater (from Geoprobe Borings and Monitoring Wells)	NYSDEC Class GA Groundwater Quality Criteria
	Ingestion, Inhalation and Dermal Contact at points of groundwater discharge (e.g., sumps, basements, bodies of water)	Moderate	Test Results for Overburden Groundwater (from Geoprobe Borings and Monitoring Wells)	NYSDEC Class GA Groundwater Quality Criteria
Soil Vapor	Inhalation within excavations, manholes, sumps, buildings/basements, other structures, or otherwise outdoors.	Low	Overburden Groundwater Test Results (see above) used to estimate maximum possible vapor concentrations by applying Henry's Law	According to NYSDOH, none available.
Air (Particulate Dusts)	Inhalation by local commercial workers or construction/maintenance workers.	Low	Field Air Monitoring Results	None.

Notes:

1. See text section 6.0 for further discussion of Likelihood of Exposure.

Table 6-2
Summary of New York State Criteria for Surface Soil

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Parameter	Summary of Site Occurrence				NYSDEC TAGM 4046 [3]
	Number of Samples Detected	Number of Samples Tested	Maximum	Location of Maximum	
Volatile Organics (ug/kg)					
1,1,2-Trichloroethane	1	8	5	AP-2, S-1	NV
Chloroethane	1	8	6	AP-1, S-1	1,900
1,1-Dichloroethene	1	8	5	AP-1, S-1	400
1,1-Dichloroethane	2	8	2,200	AP-1, S-1	200
1,1,1-Trichloroethane	2	8	2,400	AP-1, S-1	800
Trichloroethene	2	8	22	AP-2, S-1	700
Tetrachloroethene	3	8	150	AP-1, S-1	1,400
Toluene	2	8	15	AP-1, S-1	1,500
Semi-Volatile Organics (ug/kg)					
Dimethyl phthalate	2	8	420	AP-8	2,000
Di-n-Butylphthalate	1	8	110	AP-8	8,100
Fluoranthene	1	8	35	AP-10	50,000
Pyrene	2	8	86	AP-8	50,000
Butylbenzylphthalate	6	8	5,800	AP-7	50,000
Bis (2-Ethylhexyl) Phthalate	8	8	5,000	AP-7	50,000
Di-n-Octyl Phthalate	1	8	82	AP-8	50,000
Benzo (b) Fluoranthene	2	8	100	AP-8	1,100
Indeno (1,2,3-cd) Pyrene	1	8	140	AP-8	3,200
Benzo(g,h,i) Perylene	2	8	350	AP-8	50,000
Pesticides and PCBs (ug/kg)					
Heptachlor	1	2	1.4	AP-10	100
Beta-BHC	1	2	1.5	AP-10	200
Gamma-BHC (Lindane)	1	2	0.36	AP-10	60
Dieldrin	2	2	4.7	AP-10	44
4,4'-DDE	2	2	18	AP-5	2,100
4,4'-DDD	2	2	8.6	AP-10	2,900
4,4'-DDT	2	2	29	AP-10	2,100
Endosulfan sulfate	1	2	2	AP-10	1,000
alpha-Chlordane	1	2	23	AP-10	NV
gamma-Chlordane	1	2	2.3	AP-10	540
PCB-1254	8	8	6,100	AP-1, S-1	1,000
PCB-1260	4	8	1,600	AP-8	1,000
Metals (mg/kg)					
Aluminum	8	8	7,610	AP-5	SB
Antimony	5	8	10.2	AP-7	SB
Arsenic	8	8	10.9	AP-10	7.5
Barium	8	8	220	AP-10	300
Beryllium	8	8	0.8	AP-2, S-1	0.16
Cadmium	8	8	1,670	AP-8	1
Calcium	8	8	22,600	AP-10	SB
Chromium	8	8	3,130	AP-8	10
Cobalt	8	8	27.8	AP-8	30
Copper	8	8	1,970	AP-8	25
Iron	8	8	13,100	AP-8	2,000
Lead	8	8	188	AP-7	200-500
Magnesium	8	8	3,790	AP-10	SB
Manganese	8	8	613	AP-8	SB
Mercury	7	8	0.7	AP-8	0.1
Nickel	8	8	21,100	AP-8	13
Potassium	8	8	365	AP-10	SB
Selenium	3	8	1.9	AP-7	2
Silver	3	8	18.1	AP-2, S-1	SB
Sodium	3	8	242	AP-8	SB
Thallium	8	8	3.3	AP-8	SB
Vanadium	8	8	15.7	AP-2, S-1	150
Zinc	8	8	1190	AP-8	20
Cyanide	7	8	66.5	AP-9	NV

NOTES:
1. Site occurrence includes maximum detected values of the respective test parameters.
2. SB = Site Background
3. TAGM 4046 = "Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives Levels", prepared by NYSDEC, are adjusted for inorganic compounds based on background Site soil samples. See Table 4-1.
4. NV = No Value
5. ug/kg = parts per billion, mg/kg = parts per million.

Table 6-3
Summary of New York State Criteria for Subsurface Soil

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Parameter	Summary of Site Occurrence				NYSDEC TAGM 4046
	Number of Samples Detected	Number of Samples Tested	Maximum	Location of Maximum	
Volatile Organics (ug/kg)					
Chloromethane	1	155	1	GP-48,S-7	NV
Bromomethane	1	155	3	GP-48, S-7	NV
Methylene Chloride	9	155	37	DS-11	100
Acetone	36	155	90	DS-9	200
Carbon Disulfide	3	155	4	DS-11	2,700
1,1-Dichloroethane	2	155	6	WS-1	200
2-Butanone	3	155	7	DS-2	300
1,1,1-Trichloroethane	9	155	78	TP-1,S-1	300
1,1,2-Tricholoro-1,2,2-trifluoroethane	12	155	4	GP-48, S-2	6,000
1,2-Dibromo-3-chloropropane	1	155	1	GP-47, S-2	NV
1,2,4-Trichlorobenzene	2	155	1	GP-46, S-10 GP-47, S-2	3,400
Trichloroethene	12	155	28	TP-1,S-1	700
4-Methyl-2-Pentanone	3	155	3	GP-49	1,000
2-Hexanone	2	155	1	GP-45,S-6, GP-47,S-2	NV
Tetrachloroethene	27	155	480	GP-47,S-1	1,400
Toluene	21	155	280	DS-9	1,500
Ethylbenzene	3	155	170	DS-9	5,500
Styrene	1	155	14	DS-11	NV
Xylene (total)	3	155	360	DS-9	1,200
Semi-volatile Organics (ug/kg)					
2-Methylnaphthalene	1	21	1,000	DS-2	36,400
Phenanthrene	1	21	1,400	DS-2	50,000
Di-n-Butyl phthalate	3	21	550	DS-2	8,100
Fluoranthene	1	21	480	DS-2	50,000
Pyrene	1	21	1,100	DS-2	50,000
Butylbenzylphthalate	2	21	14,740	CP-6 (IRM Conf.)	50,000
Benzo (a) Anthracene	1	21	190	DS-2	224
Chrysene	1	21	340	DS-2	400
Phenol	1	21	75	GP-32, S-5	30
Bis (2-ethylhexyl) phthalate	12	21	4,100	DS-2	50,000
Di-n-Octyl Phthalate	1	21	320	DS-2	50,000
Benzo (b) Fluoranthene	1	21	260	DS-2	1,100
Benzo (k) Fluoranthene	1	21	330	DS-2	1,100
PCBs and Pesticides (ug/kg)					
Aldrin	10	19	13	DS-10 (IRM Conf.)	41
Alpha-BHC	11	19	4.2	DS-10 (IRM Conf.)	110
Beta-BHC	11	19	6.1	DS-10 (IRM Conf.)	200
Delta-BHC	10	19	5.7	DS-10 (IRM Conf.)	300
Gamma-BHC (Lindane)	11	19	3.8	CP-5	60
4,4'-DDD	7	19	1.1	CP-7	2,900
4,4'-DDE	10	19	170	DS-10 (IRM Conf.)	2,100
4,4'-DDT	6	19	3.8	CP-7	2,100
Dieldrin	10	19	5.2	DS-2	44
Endosulfan I	12	19	110	DS-10 (IRM Conf.)	900
Endosulfan II	10	19	130	DS-10 (IRM Conf.)	900
Endosulfan sulfate	12	19	140	DS-10 (IRM Conf.)	1,000
Endrin	11	19	15	DS-10 (IRM Conf.)	100
Endrin aldehyde	11	19	230	DS-10 (IRM Conf.)	NV
Heptachlor	10	19	13	DS-10 (IRM Conf.)	100
Heptachlor epoxide	12	19	56	DS-10 (IRM Conf.)	20
p,p'-Methoxychlor	11	19	78	GP-32,S-5	NV
Aroclor - 1254	18	98	1500	GP-32,S-5	10,000
Aroclor - 1260	1	98	12	WS-1	10,000
Endrin ketone	10	19	40	DS-10 (IRM Conf.)	NV
alpha-Chlordane	11	19	38	DS-8 (IRM Conf.)	540
gamma-Chlordane	8	19	23	DS-8 (IRM Conf.)	540

NOTES: (See Page 2.)

Table 6-3
Summary of New York State Criteria for Subsurface Soil

Spectrum Finishing Corporation Site
West Babylon, New York
Site No. 1-52-029

Parameter	Summary of Site Occurrence				NYSDEC TAGM 4046
	Number of Samples Detected	Number of Samples Tested	Maximum	Location of Maximum	
Metals (mg/kg)					
Aluminum	155	155	15400	TP-1, S-1	SB
Antimony	24	155	14.6	DS-12	SB
Arsenic	73	155	13.7	TP-1, S-1	7.5
Barium	155	155	469	DS-12	300
Beryllium	107	155	1	TP-1, S-1	0.16
Cadmium	93	155	5500	TP-1, S-1	1
Calcium	155	155	74000	DS-2	SB
Chromium	155	155	19600	TP-1, S-1	10
Cobalt	155	155	6.7	DS-6	30
Copper	155	155	3610	TP-1, S-1	25
Iron	155	155	16200	DS-12	2,000
Lead	150	155	1170	DS-6	200-500
Magnesium	155	155	42400	DS-2	SB
Manganese	150	155	350	GP-11,S-4	SB
Mercury	43	155	0.52	CP-4 (IRM Conf.)	0.1
Nickel	155	155	4900	TP-1, S-1	13
Potassium	155	155	1520	TP-1, S-1	SB
Selenium	16	155	2.4	TP-1, S-1	2
Silver	16	155	3.3	DS-12	SB
Sodium	97	155	1350	CP-3 (IRM Conf.)	SB
Thallium	52	155	4.3	TP-1, S-1	SB
Vanadium	152	155	24.8	DS-7	150
Zinc	111	155	2980	TP-1, S-1	20
Cyanide	48	107	950	CP-3,S-1	NV

NOTES:

1. Site occurrence includes maximum detected values of the respective test parameters.
2. SB = Site Background
3. TAGM 4046 = "Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives Levels", prepared by NYSDEC, are adjusted for inorganic compounds based on background Site soil samples. See Table 4-1.
4. NV = No Value
5. ug/kg = parts per billion, mg/kg = parts per million.
6. Pre-IRM cesspool and drainage structure sediments were not included in this summary.

Table 6-4
Summary of New York State Criteria for Overburden Groundwater

Spectrum Finishing Corporation RI/FS
West Babylon, New York
Site No. 1-52-029

Parameter	Summary of Site Occurrence				NYSDEC Class GA
	Samples Detected	Samples Tested	Maximum	Location of Maximum	
Volatile Organics (ug/l)					
Chloroethane	1	85	2	GP-5	5 (GV)
Chloroform	3	85	2	MW-12D1	7 (std.)
Chlorobenzene	2	85	17	MW-11S (Repeat)	1 (std.)
1,1,2-Trichloro-1,2,2-trifluoroethane	2	85	3	MW-12D2	5 (std.)
Methylene chloride	1	85	29	GP-18	5 (std.)
Carbon disulfide	4	85	2	GP-5 (80)	60 (GV)
Acetone	13	85	41	GP-9	50 (GV)
Methyl tert-butyl ether	4	85	14	MW-3S	10 (GV)
4-Methyl-2-pentanone	2	85	2	MW-8D1	NV
1, 1 -Dichloroethane	12	85	22	GP-6	5 (std.)
1,1-Dichloroethene	9	85	90	GP-12	5 (std.)
1,2-Dichloroethene (total)	25	85	51	MW-12D1	5 (std.)
1,1,1-Trichloroethane	28	85	17	MW-12D2	5 (std.)
1,2,4-Trimethylbenzene	5	85	5	MW-13D1	5 (std.)
Trichloroethene	47	85	64	MW-3D	5 (std.)
Tetrachloroethene	59	85	610	GP-12	5 (std.)
Benzene	2	85	16	MW-11S (Repeat)	1 (std.)
Ethylbenzene	1	85	2	MW-6D2	5 (std.)
1,3-Dichlorobenzene	5	85	2	MW-13D1	3 (std.)
1,4-Dichlorobenzene	5	85	2	MW-6D2 & MW-13D1	3 (std.)
1,2-Dichlorobenzene	5	85	2	MW-6D2 & MW-13D1	3 (std.)
1,2-Dibromo-3-chloropropane	5	85	2	MW-6D2 & MW-13D1	0.04 (std)
Toluene	8	85	18	MW-8D1	5 (std.)
Xylene (total)	4	85	2	GP-13	5 (std.)
Semi-Volatile Organics (ug/l)					
Bis(2-ethylhexyl)phthalate	2	20	4	MW-5D-1	5 (std.)
Pesticides and PCBs (ug/l)					
Aldrin	2	21	0.034	MW-3S	0.002 (GV)
Alpha-BHC	6	21	0.081	MW-3S	NV
Heptachlor	4	21	0.015	MW-1D1	0.04 (Std)
Heptachlor epoxide	6	21	0.18	MW-4S	0.03 (Std)

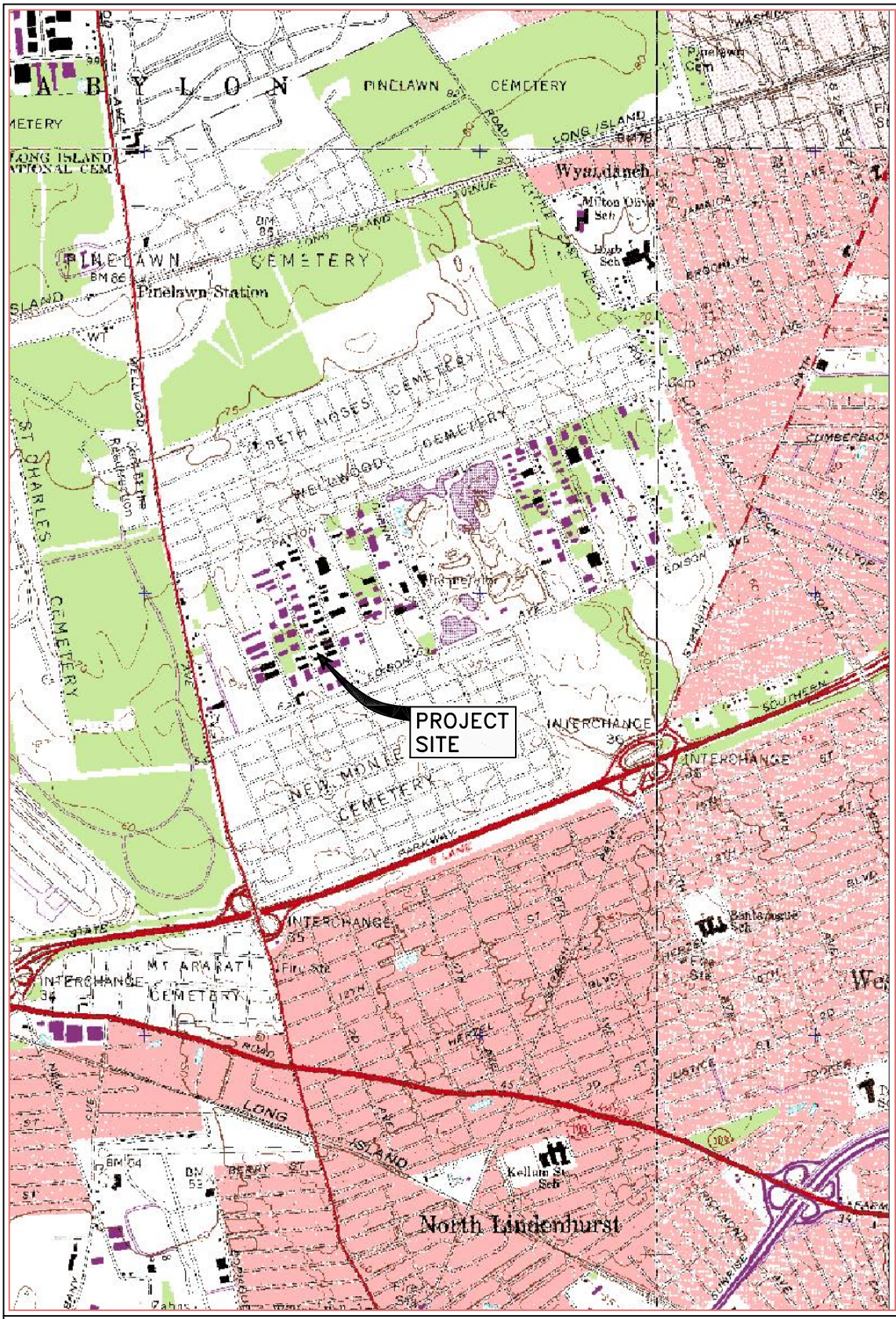
NOTES: (See Page 2.)

Table 6-4
Summary of New York State Criteria for Overburden Groundwater

Spectrum Finishing Corporation RI/FS
West Babylon, New York
Site No. 1-52-029

Parameter	Summary of Site Occurrence				NYSDEC Class GA
	Samples Detected	Samples Tested	Maximum	Location of Maximum	
Unfiltered Metals (ug/l)					
Aluminum	81	84	305,000	GP-7	NV
Antimony	68	84	292	GP-2	3 (std.)
Arsenic	61	84	139	GP-15	25 (std.)
Barium	74	84	2,060	GP-2	1,000 (std.)
Beryllium	64	84	15	GP-2	3 (GV)
Cadmium	53	84	17,200	GP-2	5 (std.)
Calcium	80	84	381,000	MW-7D1	NV
Chromium	75	84	123,000	GP-2	50 (std.)
Hexavalent Chromium	9	30	914	MW-6S	50
Cobalt	83	84	380	GP-44	NV
Copper	65	84	9,520	GP-7	200 (std.)
Iron	83	84	426,000	GP-7	300 (std.)
Lead	58	84	4,940	GP-35	25 (std.)
Magnesium	80	84	53,400	MW-7D1	35,000 (GV)
Manganese	68	84	47,200	GP-44	300 (std.)
Mercury	45	84	5.2	GP-2	0.7 (std.)
Nickel	83	84	7,310	GP-2	100 (std.)
Potassium	82	84	49,700	GP-7	NV
Selenium	34	84	22	GP-7	10 (std.)
Silver	16	84	819	GP-15	50 (std.)
Sodium	83	84	120,000	MW-4S	20,000 (std.)
Thallium	53	84	48.2	GP-44	0.5 (GV)
Vanadium	81	84	326	GP-15	NV
Zinc	69	84	14,200	GP-2	2,000 (GV)
Cyanide	51	75	5,490	GP-2	200 (std.)
Filtered Metals (ug/l)					
Aluminum	20	70	2,930	GP-4	NV
Antimony	69	70	6.5	GP-21	3 (std.)
Arsenic	1	70	4.3	GP-21	25 (std.)
Barium	70	70	256	GP-17	1,000 (std.)
Beryllium	22	70	1.3	GP-4	3 (GV)
Cadmium	55	70	672	MW-4S	5 (std.)
Calcium	70	70	36,700	GP-5	NV
Chromium	23	70	48.1	GP-5	50 (std.)
Cobalt	60	70	23.5	GP-5	NV
Copper	39	70	1910	MW-4S	200 (std.)
Iron	57	70	10,400	GP-11	300 (std.)
Lead	3	70	8.6	GP-33	25 (std.)
Magnesium	70	70	6,880	GP-46	35,000 (GV)
Manganese	70	70	3,150	GP-23	300 (std.)
Nickel	62	70	1,770	GP-9	100 (std.)
Potassium	70	70	15,900	GP-5	NV
Sodium	70	70	104,000	GP-5	20,000 (std.)
Vanadium	41	70	3.3	GP-21	NV
Zinc	64	70	199	GP-4	2,000 (GV)

NOTES:
1. Site occurrence includes maximum and minimum detected values of the respective test parameters.
2. NYSDEC Class GA Groundwater Standards as promulgated in 6 NYCRR 703, dated June 1998; Errata dated January 1999; and Addendum dated April 2000.
3. NV = No Value, std. = Standard, GV = Guidance Value.
4. ug/l = parts per billion.



SCALE IN FEET

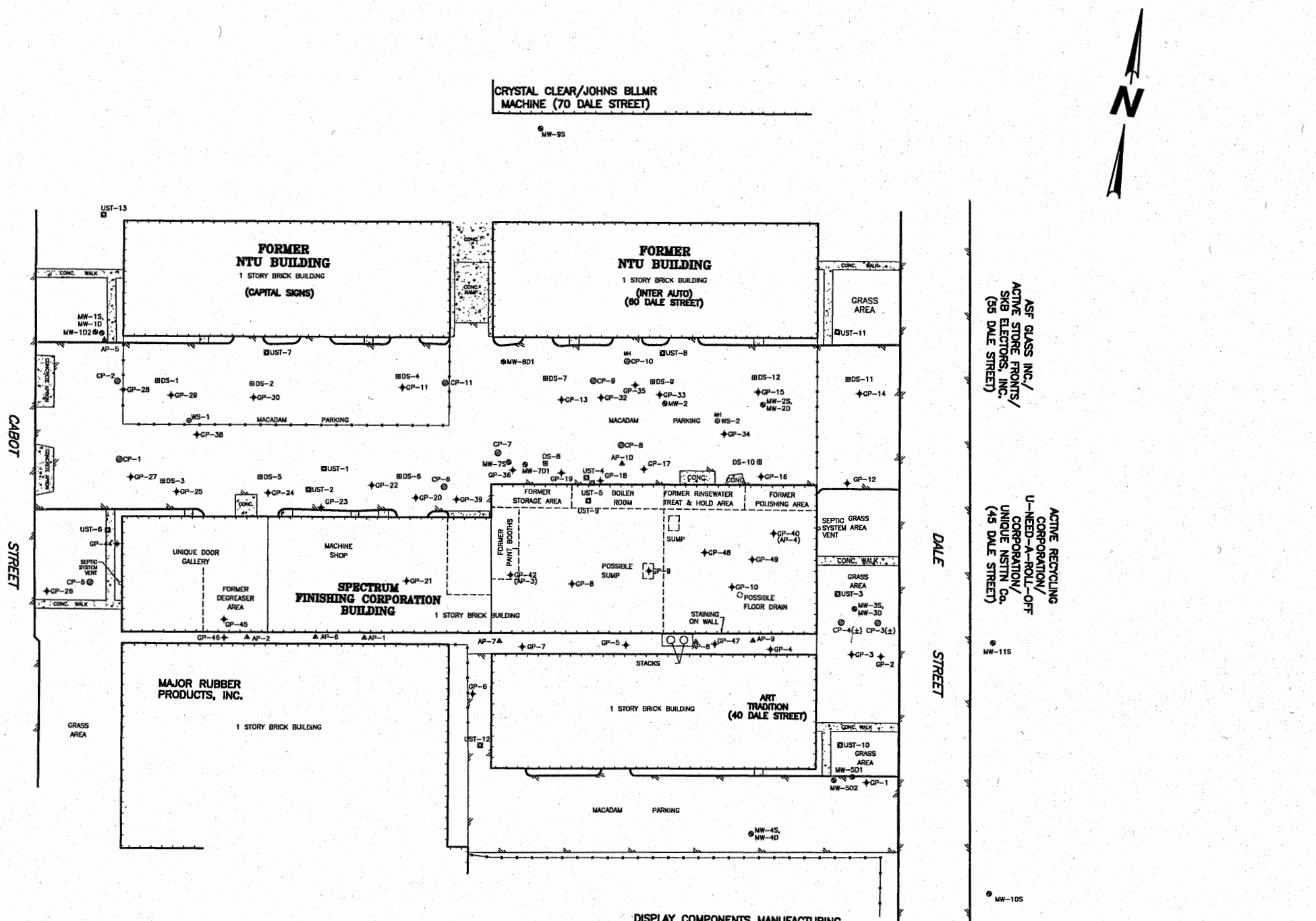
0 1000 2000 4000

NOTE:
BASE MAP ADAPTED FROM U.S.G.S. QUADRANGLE MAPS AMITYVILLE, N.Y. – 1978 AND BAY SHORE WEST, N.Y.–1979.

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK
SITE LOCATION MAP

N

FIGURE No.
1



LEGEND:

- MW ⊕ MONITORING WELL (S=15–25' DEEP, D,D1~50' DEEP, D2~100'DEEP)
- AP ▲ HAND AUGER
- GP ✦ GEOPROBE
- CP ⊘ CESSPOOL (MH=MANHOLE COVER)
- DS ⊞ DRAINAGE STRUCTURE
- UST ⊡ UNDERGROUND STORAGE TANK FILL PORT
- WS ⊕ FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20–21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW–6S, MW–9S, MW–10S, MW–11S, MW–12S, AND CESSPOOL CP–11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW–12D1, MW–12D2, MW–12S, MW–13D1, MW–13D2, MW–13S, MW–14D1, MW–14S, MW–15D1, MW–15S.

2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.

3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

FIGURE No. 2

PROJECT No. 55291

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

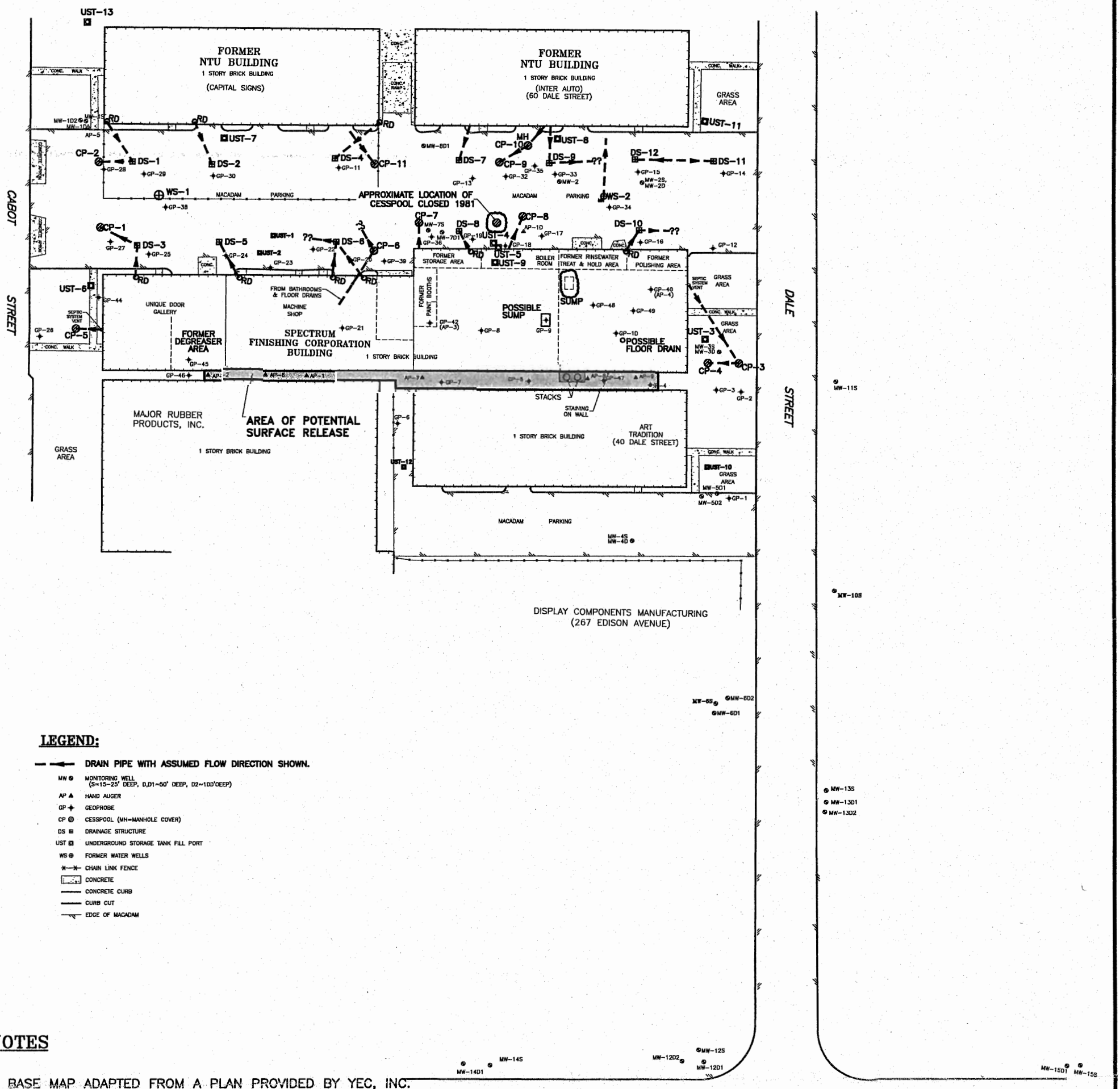
SITE PLAN

REV No.	DESCRIPTION	BY	DATE

SCALE IN FEET
0 30 60 120

DRAWN BY: BWS
DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York



LEGEND:

- DRAIN PIPE WITH ASSUMED FLOW DIRECTION SHOWN.
- MW ⊙ MONITORING WELL (S=15–25' DEEP, D,D1~50' DEEP, D2~100'DEEP)
- AP ▲ HAND AUGER
- GP ✦ GEOPROBE
- CP ⊘ CESSPOOL (MH=MANHOLE COVER)
- DS ⊞ DRAINAGE STRUCTURE
- UST ⊠ UNDERGROUND STORAGE TANK FILL PORT
- WS ⊕ FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20–21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW–6S, MW–9S, MW–10S, MW–11S, MW–12S, AND CESSPOOL CP–11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW–12D1, MW–12D2, MW–12S, MW–13D1, MW–13D2, MW–13S, MW–14D1, MW–14S, MW–15D1, MW–15S.

2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.

3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

4. POTENTIAL SOURCE AREAS ARE SHOWN BOLD.

FIGURE No. 4

PROJECT No. 55291

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

CESSPOOL / DRAINAGE STRUCTURE/ WELL STRUCTURE PIPING LOCATION PLAN

REV No.	DESCRIPTION	BY	DATE

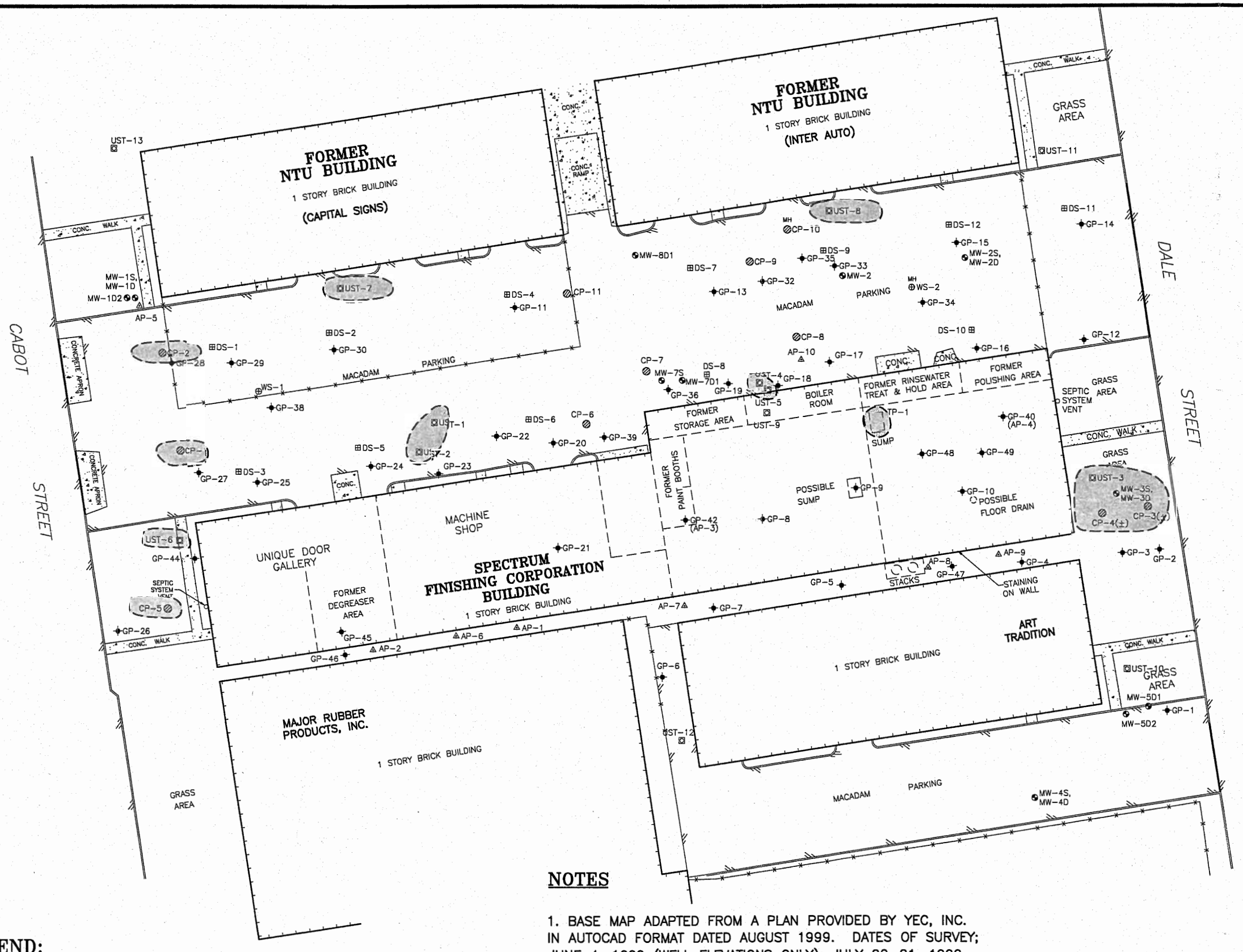
SCALE IN FEET

0 30 60 120

DRAWN BY: BWS

DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York



LEGEND:

- APPROXIMATE AREA OF SITE INVESTIGATED WITH TEST PITS
- MW ⊛ MONITORING WELL (S=15–25' DEEP, D,D1~50' DEEP, D2~100'DEEP)
- AP △ HAND AUGER
- GP ✦ GEOPROBE
- CP ⊘ CESSPOOL (MH=MANHOLE COVER)
- DS ⊞ DRAINAGE STRUCTURE
- UST ⊠ UNDERGROUND STORAGE TANK FILL PORT
- WS ⊕ FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20–21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW–6S, MW–9S, MW–10S, MW–11S, MW–12S, AND CESSPOOL CP–11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW–12D1, MW–12D2, MW–12S, MW–13D1, MW–13D2, MW–13S, MW–14D1, MW–14S, MW–15D1, MW–15S.

2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.

3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

REV No.	DESCRIPTION	BY	DATE

DRAWN BY: BWS

DATE: NOVEMBER 2001

SCALE IN FEET

0 20 40 80

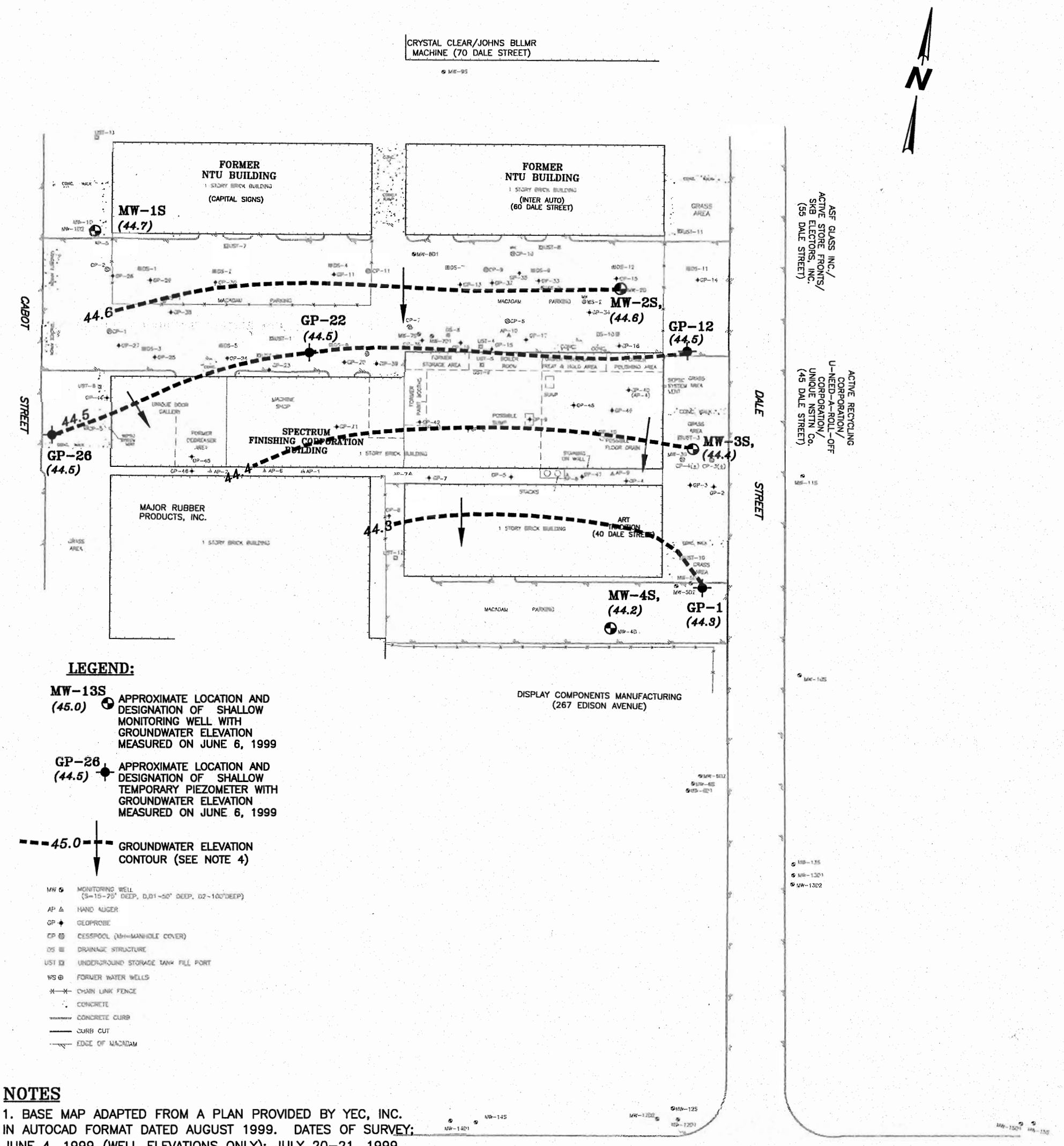
GZA GeoEnvironmental of New York

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK
FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

TEST PIT INVESTIGATION AREAS

PROJECT No. 55291

FIGURE No. 5



LEGEND:

MW-13S (45.0) — APPROXIMATE LOCATION AND DESIGNATION OF SHALLOW MONITORING WELL WITH GROUNDWATER ELEVATION MEASURED ON JUNE 6, 1999

GP-26 (44.5) — APPROXIMATE LOCATION AND DESIGNATION OF SHALLOW TEMPORARY PIEZOMETER WITH GROUNDWATER ELEVATION MEASURED ON JUNE 6, 1999

45.0 — GROUNDWATER ELEVATION CONTOUR (SEE NOTE 4)

- MW — MONITORING WELL (S=15-25' DEEP, D,D1=50' DEEP, D2=100'DEEP)
- AP — HAND AUGER
- GP — GEOPROBE
- CP — CESSPOOL (MH=MANHOLE COVER)
- DS — DRAINAGE STRUCTURE
- UST — UNDERGROUND STORAGE TANK FILL PORT
- WS — FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY: JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20–21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW-6S, MW-9S, MW-10S, MW-11S, MW-12S, AND CESSPOOL CP-11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW-12D1, MW-12D2, MW-12S, MW-13D1, MW-13D2, MW-13S, MW-14D1, MW-14S, MW-15D1, MW-15S.

2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.

3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

4. THE GROUNDWATER ELEVATION CONTOURS SHOWN WERE DEVELOPED BY INTERPOLATING BETWEEN GROUNDWATER ELEVATIONS IN WIDELY SPACED BORINGS AND ARE PRESENTED FOR DISCUSSION PURPOSES ONLY. THE LOCATIONS OF THE CONTOURS SHOWN WILL VARY DUE TO FLUCTUATIONS IN PRECIPITATION, BAROMETRIC PRESSURE, etc.

FIGURE No. 6

PROJECT No. 55291

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

SHALLOW GROUNDWATER ELEVATION CONTOUR PLAN 6/6/99

REV No.	DESCRIPTION	BY	DATE

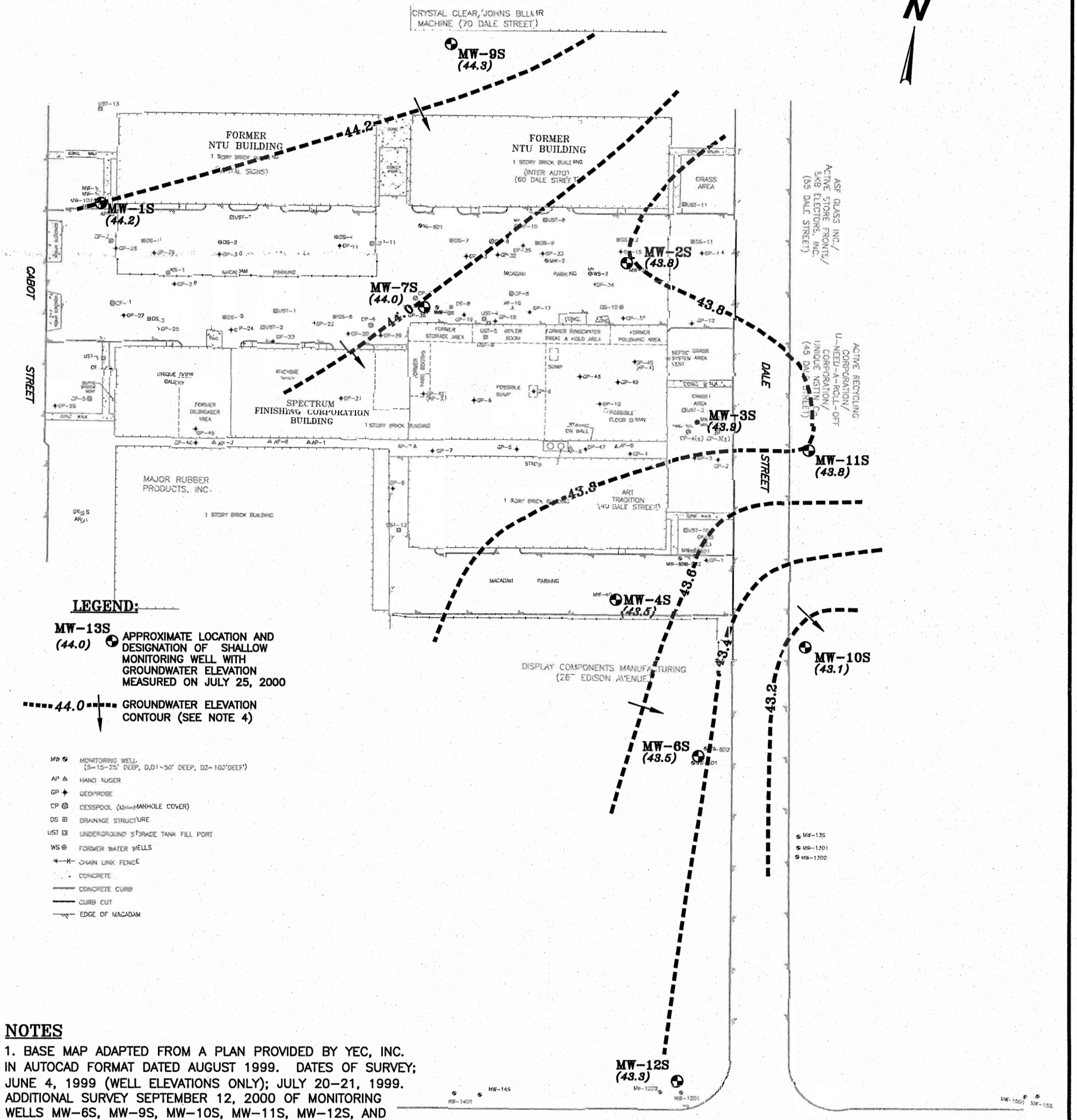
SCALE IN FEET

0 30 60 120

DRAWN BY: BWS

DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York



LEGEND:

MW-13S (44.0) ⊕ APPROXIMATE LOCATION AND DESIGNATION OF SHALLOW MONITORING WELL WITH GROUNDWATER ELEVATION MEASURED ON JULY 25, 2000

44.0 GROUNDWATER ELEVATION CONTOUR (SEE NOTE 4)

- MW ⊕ MONITORING WELL (S=15-25' DEEP, D,D1=50' DEEP, D2=100'DEEP)
- AP △ HAND AUGER
- GP ✦ GEOPROBE
- CP ⊘ CESSPOOL (MH=MANHOLE COVER)
- DS ⊞ DRAINAGE STRUCTURE
- UST ⊠ UNDERGROUND STORAGE TANK FILL PORT
- WS ⊕ FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20-21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW-6S, MW-9S, MW-10S, MW-11S, MW-12S, AND CESSPOOL CP-11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW-12D1, MW-12D2, MW-12S, MW-13D1, MW-13D2, MW-13S, MW-14D1, MW-14S, MW-15D1, MW-15S.

2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.

3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

4. THE GROUNDWATER ELEVATION CONTOURS SHOWN WERE DEVELOPED BY INTERPOLATING BETWEEN GROUNDWATER ELEVATIONS IN WIDELY SPACED BORINGS AND ARE PRESENTED FOR DISCUSSION PURPOSES ONLY. THE LOCATIONS OF THE CONTOURS SHOWN WILL VARY DUE TO FLUCTUATIONS IN PRECIPITATION, BAROMETRIC PRESSURE, etc.

FIGURE No. 7

PROJECT No. 55291

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

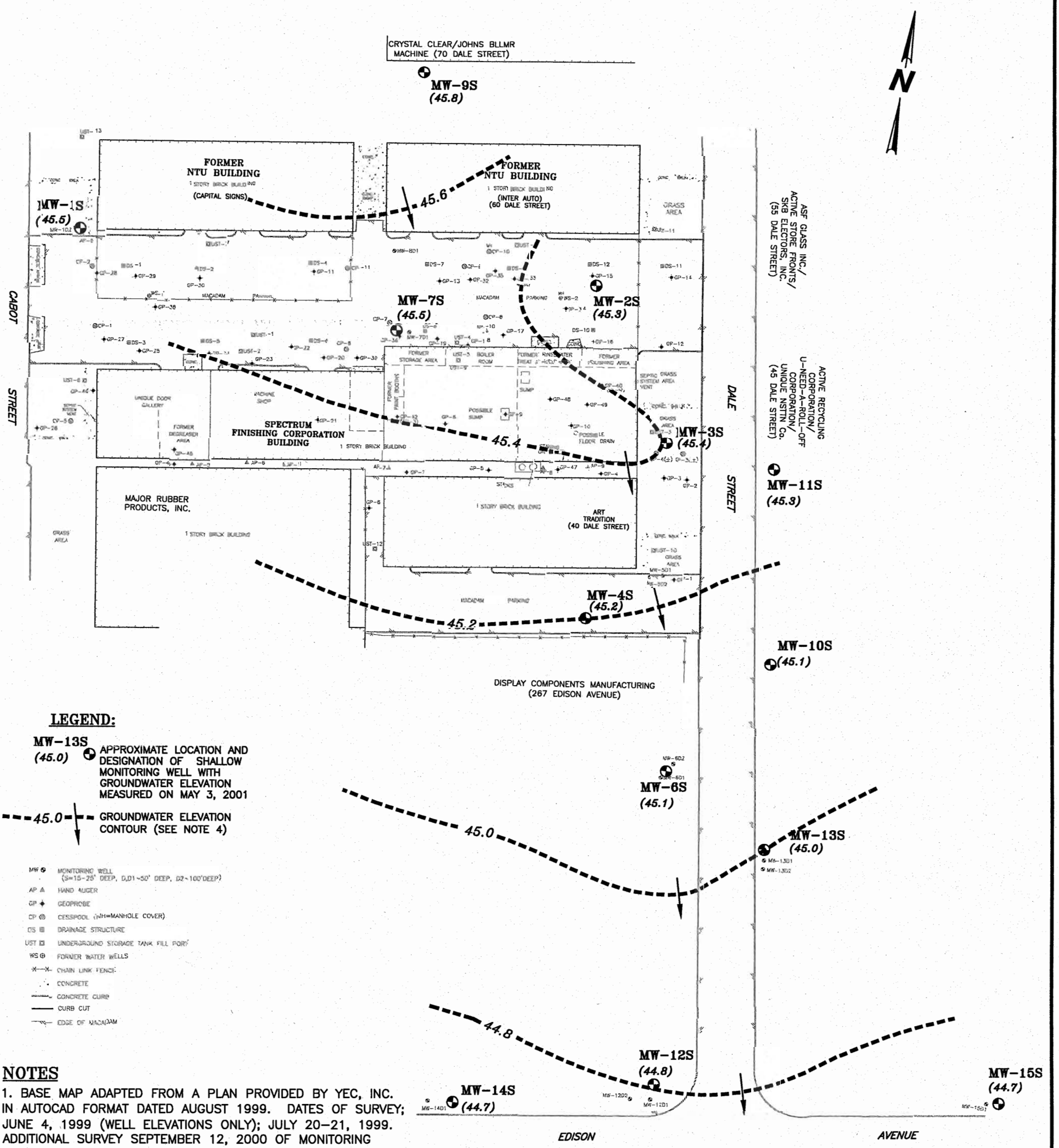
SHALLOW GROUNDWATER ELEVATION CONTOUR PLAN 7/25/00

REV No.	DESCRIPTION	BY	DATE

SCALE IN FEET
0 30 60 120

DRAWN BY: BWS
DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York



LEGEND:

- **MW-13S (45.0)** — APPROXIMATE LOCATION AND DESIGNATION OF SHALLOW MONITORING WELL WITH GROUNDWATER ELEVATION MEASURED ON MAY 3, 2001
- **45.0** — GROUNDWATER ELEVATION CONTOUR (SEE NOTE 4)

- MW — MONITORING WELL (S=15-25' DEEP, D,D1=50' DEEP, D2=100'DEEP)
- AP — HAND AUGER
- GP — GEOPROBE
- CP — CESSPOOL (MH=MANHOLE COVER)
- DS — DRAINAGE STRUCTURE
- UST — UNDERGROUND STORAGE TANK FILL PORT
- WS — FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20–21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW-6S, MW-9S, MW-10S, MW-11S, MW-12S, AND CESSPOOL CP-11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW-12D1, MW-12D2, MW-12S, MW-13D1, MW-13D2, MW-13S, MW-14D1, MW-14S, MW-15D1, MW-15S.

2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.

3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

4. THE GROUNDWATER ELEVATION CONTOURS SHOWN WERE DEVELOPED BY INTERPOLATING BETWEEN GROUNDWATER ELEVATIONS IN WIDELY SPACED BORINGS AND ARE PRESENTED FOR DISCUSSION PURPOSES ONLY. THE LOCATIONS OF THE CONTOURS SHOWN WILL VARY DUE TO FLUCTUATIONS IN PRECIPITATION, BAROMETRIC PRESSURE, etc.

FIGURE No. 8

PROJECT No. 55291

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

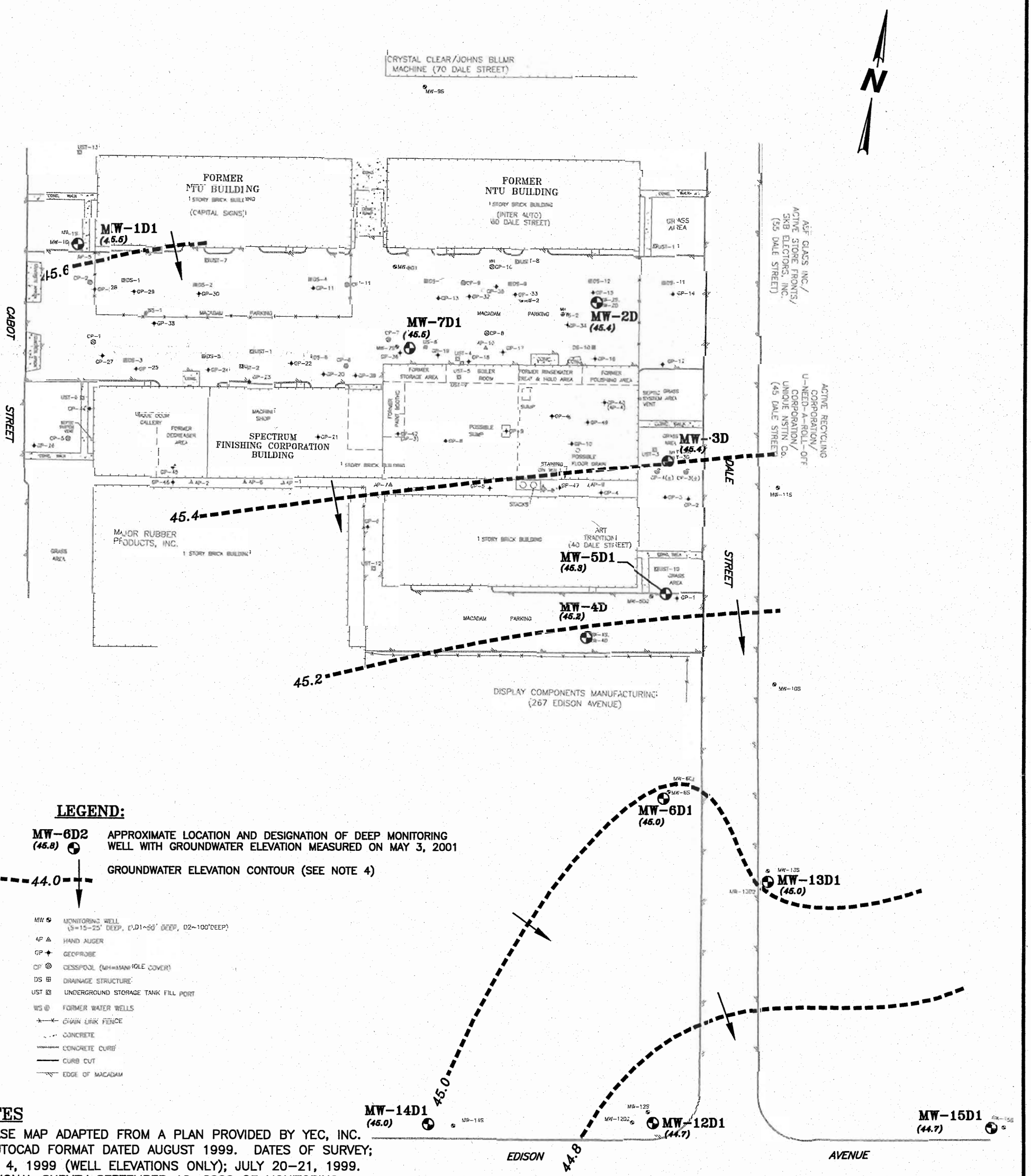
SHALLOW GROUNDWATER ELEVATION CONTOUR PLAN 5/3/01

REV No.	DESCRIPTION	BY	DATE

SCALE IN FEET
0 30 60 120

DRAWN BY: BWS
DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York



LEGEND:

MW-6D2 (45.8) — APPROXIMATE LOCATION AND DESIGNATION OF DEEP MONITORING WELL WITH GROUNDWATER ELEVATION MEASURED ON MAY 3, 2001

44.0 — GROUNDWATER ELEVATION CONTOUR (SEE NOTE 4)

- MW — MONITORING WELL (S=15-25' DEEP, D1=50' DEEP, D2=100'DEEP)
- AP — HAND AUGER
- GP — GEOPROBE
- CP — CESSPOOL (MH=MANHOLE COVER)
- DS — DRAINAGE STRUCTURE
- UST — UNDERGROUND STORAGE TANK FILL PORT
- WS — FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20–21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW–6S, MW–9S, MW–10S, MW–11S, MW–12S, AND CESSPOOL CP–11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW–12D1, MW–12D2, MW–12S, MW–13D1, MW–13D2, MW–13S, MW–14D1, MW–14S, MW–15D1, MW–15S.

2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.

3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

4. THE GROUNDWATER ELEVATION CONTOURS SHOWN ON THIS FIGURE WERE DEVELOPED BY INTERPOLATING BETWEEN GROUNDWATER ELEVATIONS IN WIDELY SPACED BORINGS AND ARE PRESENTED FOR DISCUSSION PURPOSES ONLY. THE LOCATIONS OF THE CONTOURS SHOWN WILL VARY DUE TO FLUCTUATIONS IN PRECIPITATION, BAROMETRIC PRESSURE, etc.

FIGURE No. 9

PROJECT No. 55291

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

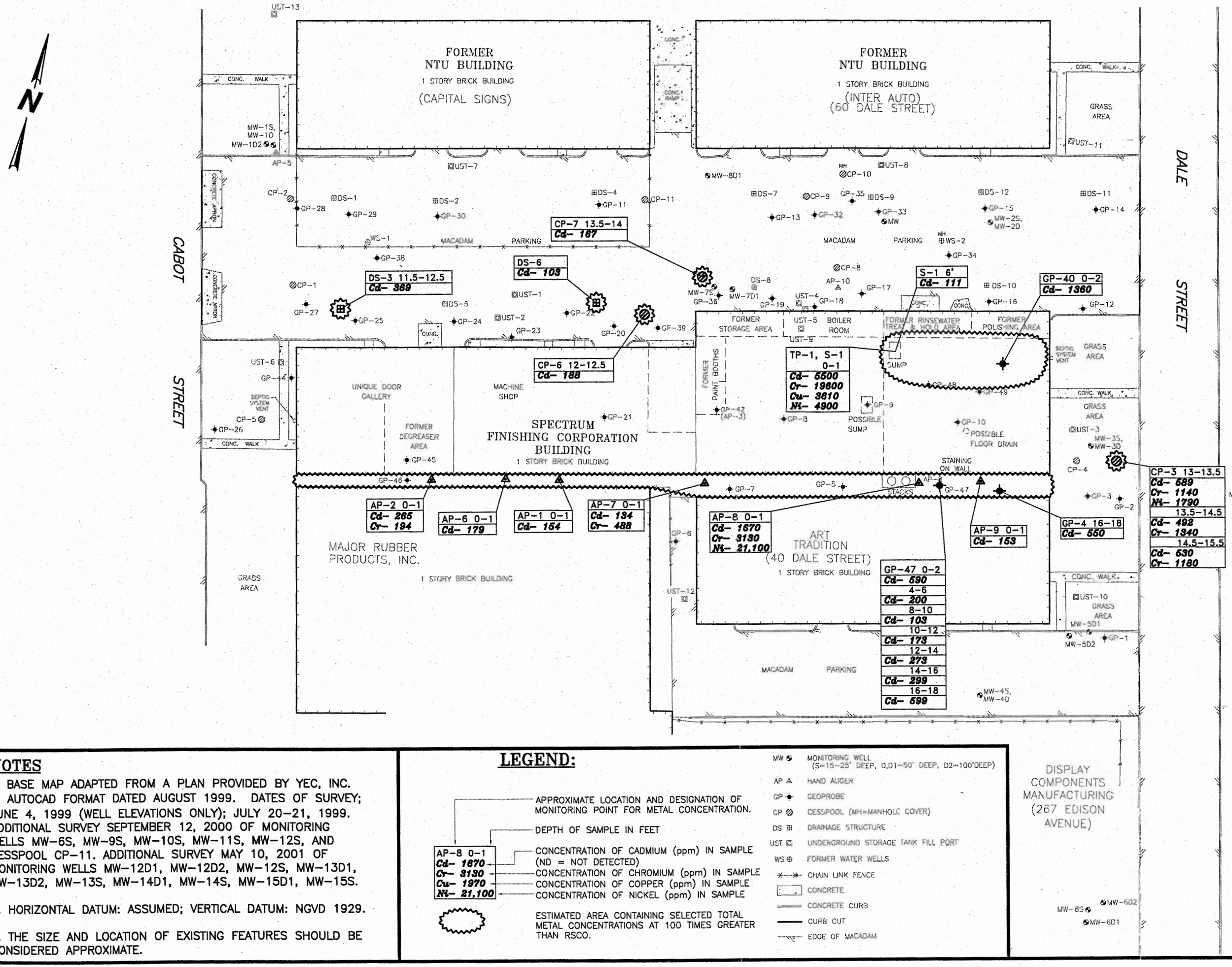
INTERMEDIATE GROUNDWATER ELEVATION CONTOUR PLAN 5/3/01

REV No.	DESCRIPTION	BY	DATE

SCALE IN FEET
0 30 60 120

DRAWN BY: BWS
DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York



NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20–21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW-6S, MW-9S, MW-10S, MW-11S, MW-12S, AND CESSPOOL CP-11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW-12D1, MW-12D2, MW-12S, MW-13D1, MW-13D2, MW-13S, MW-14D1, MW-14S, MW-15D1, MW-15S.

2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.

3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

LEGEND:

AP-8 0-1
Cd- 1670
Cr- 3130
Cu- 1970
Ni- 21,100

- APPROXIMATE LOCATION AND DESIGNATION OF MONITORING POINT FOR METAL CONCENTRATION.
- DEPTH OF SAMPLE IN FEET
- CONCENTRATION OF CADMIUM (ppm) IN SAMPLE (ND = NOT DETECTED)
- CONCENTRATION OF CHROMIUM (ppm) IN SAMPLE
- CONCENTRATION OF COPPER (ppm) IN SAMPLE
- CONCENTRATION OF NICKEL (ppm) IN SAMPLE

ESTIMATED AREA CONTAINING SELECTED TOTAL METAL CONCENTRATIONS AT 100 TIMES GREATER THAN RSCO.

- MW — MONITORING WELL (S=15–25' DEEP, D,D1~50' DEEP, D2~100'DEEP)
- AP — HAND AUGER
- GP — GEOPROBE
- CP — CESSPOOL (MH=MANHOLE COVER)
- DS — DRAINAGE STRUCTURE
- UST — UNDERGROUND STORAGE TANK FILL PORT
- WS — FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

REV No.	DESCRIPTION	BY	DATE

DRAWN BY: BWS

DATE: NOVEMBER 2001

SCALE IN FEET 0 20 40 80

GZA GeoEnvironmental of New York

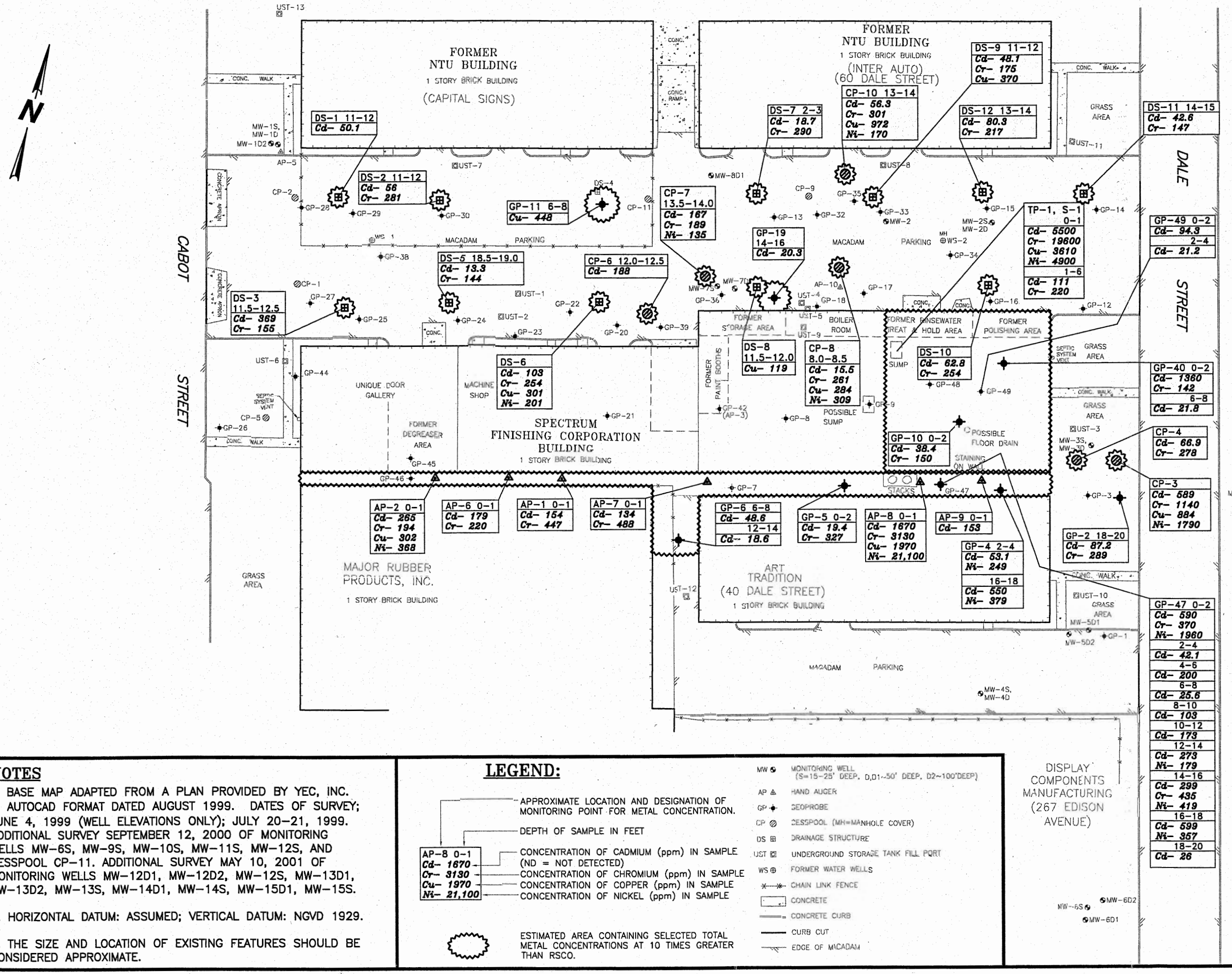
SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

SELECTED TOTAL METAL
SOIL DISTRIBUTION MAP – 100
TIMES EXCEEDANCE OF RSCO

PROJECT No.
55291

FIGURE No.
11



NOTES

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2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.
3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

LEGEND:

- APPROXIMATE LOCATION AND DESIGNATION OF MONITORING POINT FOR METAL CONCENTRATION.
- DEPTH OF SAMPLE IN FEET
- CONCENTRATION OF CADMIUM (ppm) IN SAMPLE (ND = NOT DETECTED)
- CONCENTRATION OF CHROMIUM (ppm) IN SAMPLE
- CONCENTRATION OF COPPER (ppm) IN SAMPLE
- CONCENTRATION OF NICKEL (ppm) IN SAMPLE

AP-8 0-1
Cd- 1670
Cr- 3130
Cu- 1970
Ni- 21,100

ESTIMATED AREA CONTAINING SELECTED TOTAL METAL CONCENTRATIONS AT 10 TIMES GREATER THAN RSCO.

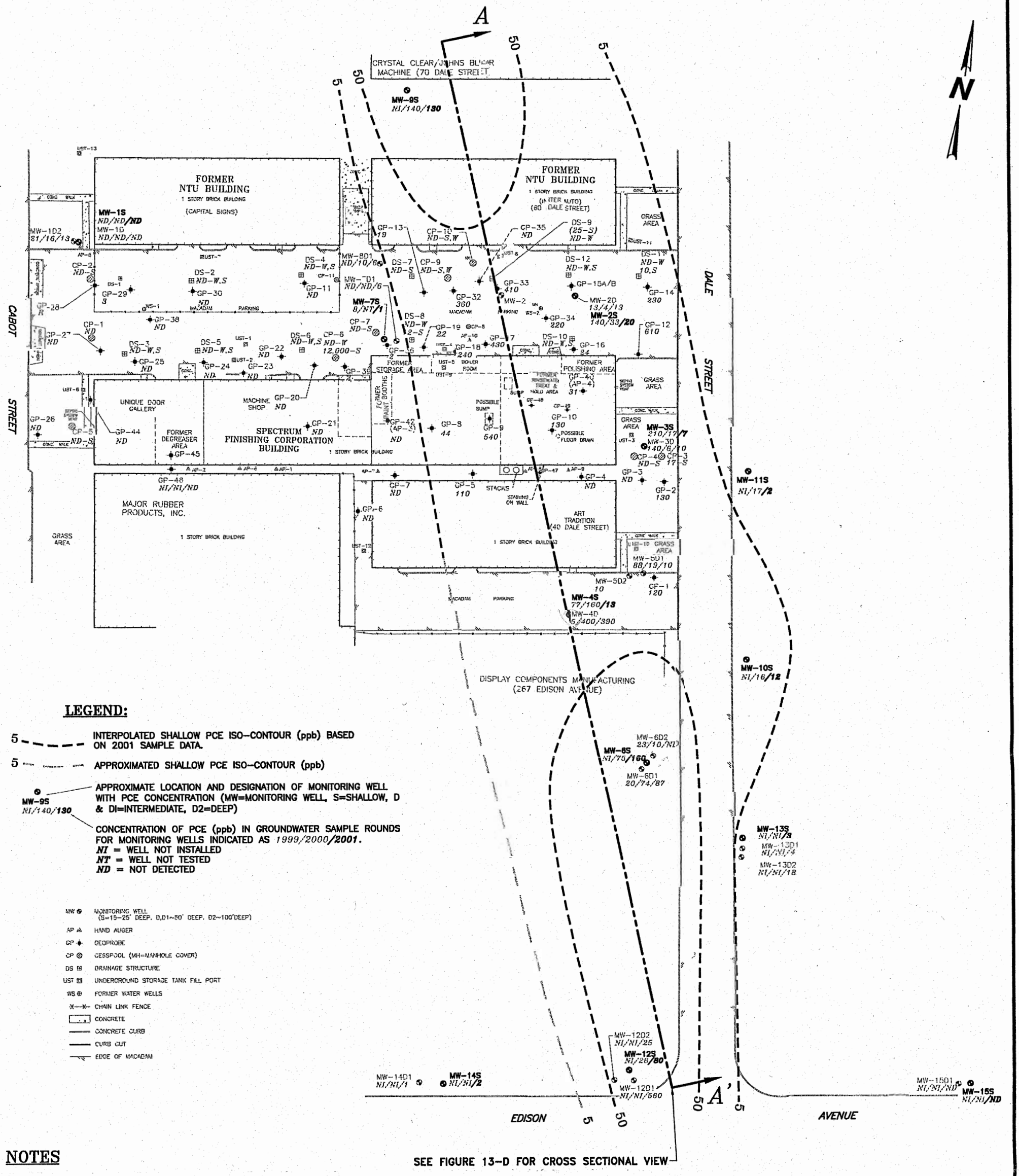
- MW — MONITORING WELL (S=15–25' DEEP, D,D1–50' DEEP, D2–100'DEEP)
- AP — HAND AUGER
- GP — GEOPROBE
- CP — CESSPOOL (MH=MANHOLE COVER)
- DS — DRAINAGE STRUCTURE
- UST — UNDERGROUND STORAGE TANK FILL PORT
- WS — FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK
FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

SELECTED TOTAL METAL
SOIL DISTRIBUTION MAP – 10
TIMES EXCEEDANCE OF RSCO

PROJECT No.
55291

FIGURE No.
12



LEGEND:

- 5 — INTERPOLATED SHALLOW PCE ISO-CONTOUR (ppb) BASED ON 2001 SAMPLE DATA.
- 5 — APPROXIMATED SHALLOW PCE ISO-CONTOUR (ppb)
- MW-9S NI/140/130 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELL WITH PCE CONCENTRATION (MW=MONITORING WELL, S=SHALLOW, D & DI=INTERMEDIATE, D2=DEEP)
- CONCENTRATION OF PCE (ppb) IN GROUNDWATER SAMPLE ROUNDS FOR MONITORING WELLS INDICATED AS *1999/2000/**2001***.
  - ***NI*** = WELL NOT INSTALLED
  - ***NT*** = WELL NOT TESTED
  - ***ND*** = NOT DETECTED

- MW — MONITORING WELL (S=15-25' DEEP, D,DI~50' DEEP, D2~100'DEEP)
- AP — HAND AUGER
- GP — GEOPROBE
- CP — CESSPOOL (MH=MANHOLE COVER)
- DS — DRAINAGE STRUCTURE
- UST — UNDERGROUND STORAGE TANK FILL PORT
- WS — FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20-21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW-6S, MW-9S, MW-10S, MW-11S, MW-12S, AND CESSPOOL CP-11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW-12D1, MW-12D2, MW-12S, MW-13D1, MW-13D2, MW-13S, MW-14D1, MW-14S, MW-15D1, MW-15S.
2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.
3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

FIGURE No. 13-A

PROJECT No. 55291

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

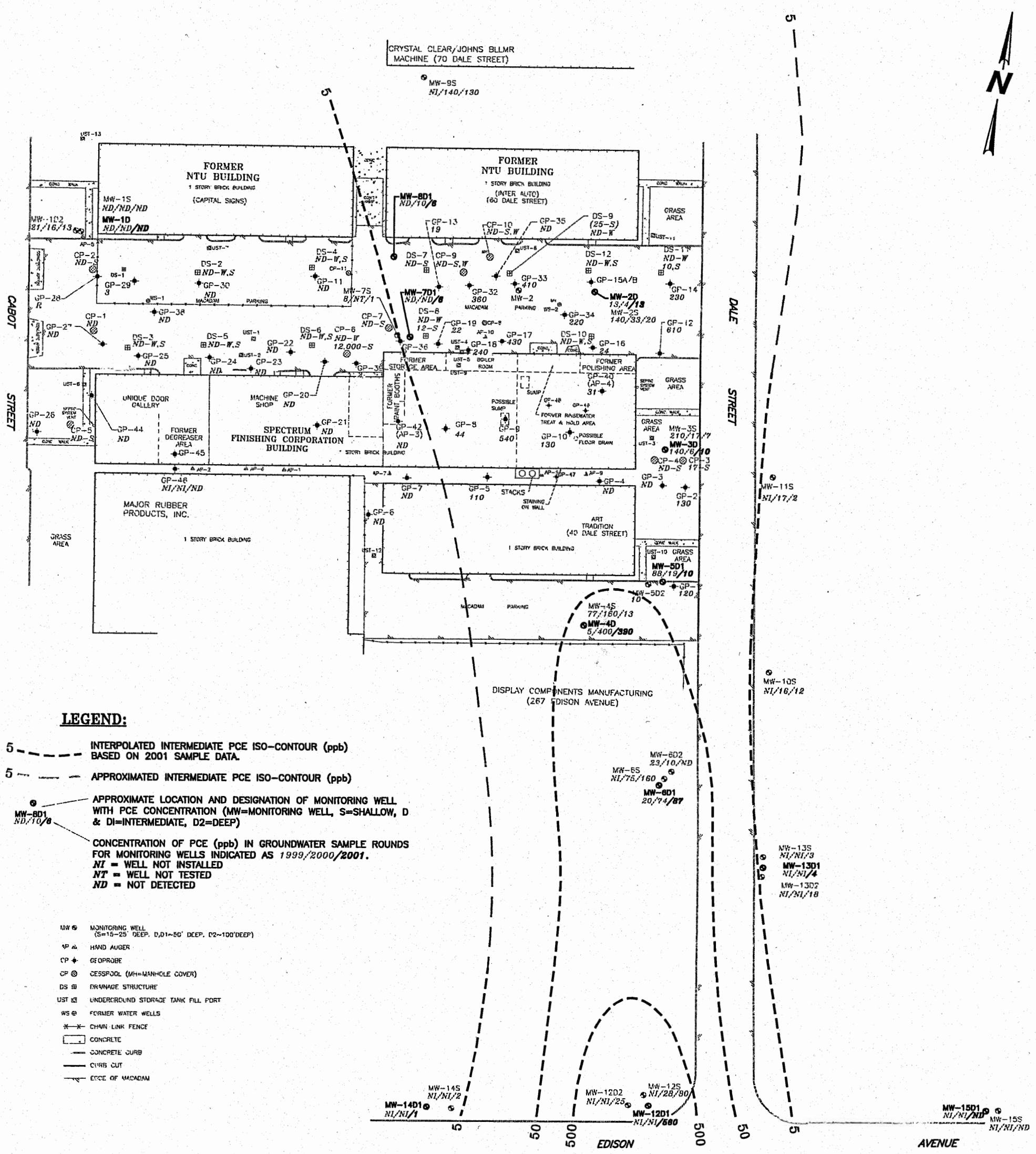
SHALLOW GROUNDWATER PCE CONTOURS (MONITORING WELLS)

REV No.	DESCRIPTION	BY	DATE

SCALE IN FEET
0 30 60 120

DRAWN BY: BWS
DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York



LEGEND:

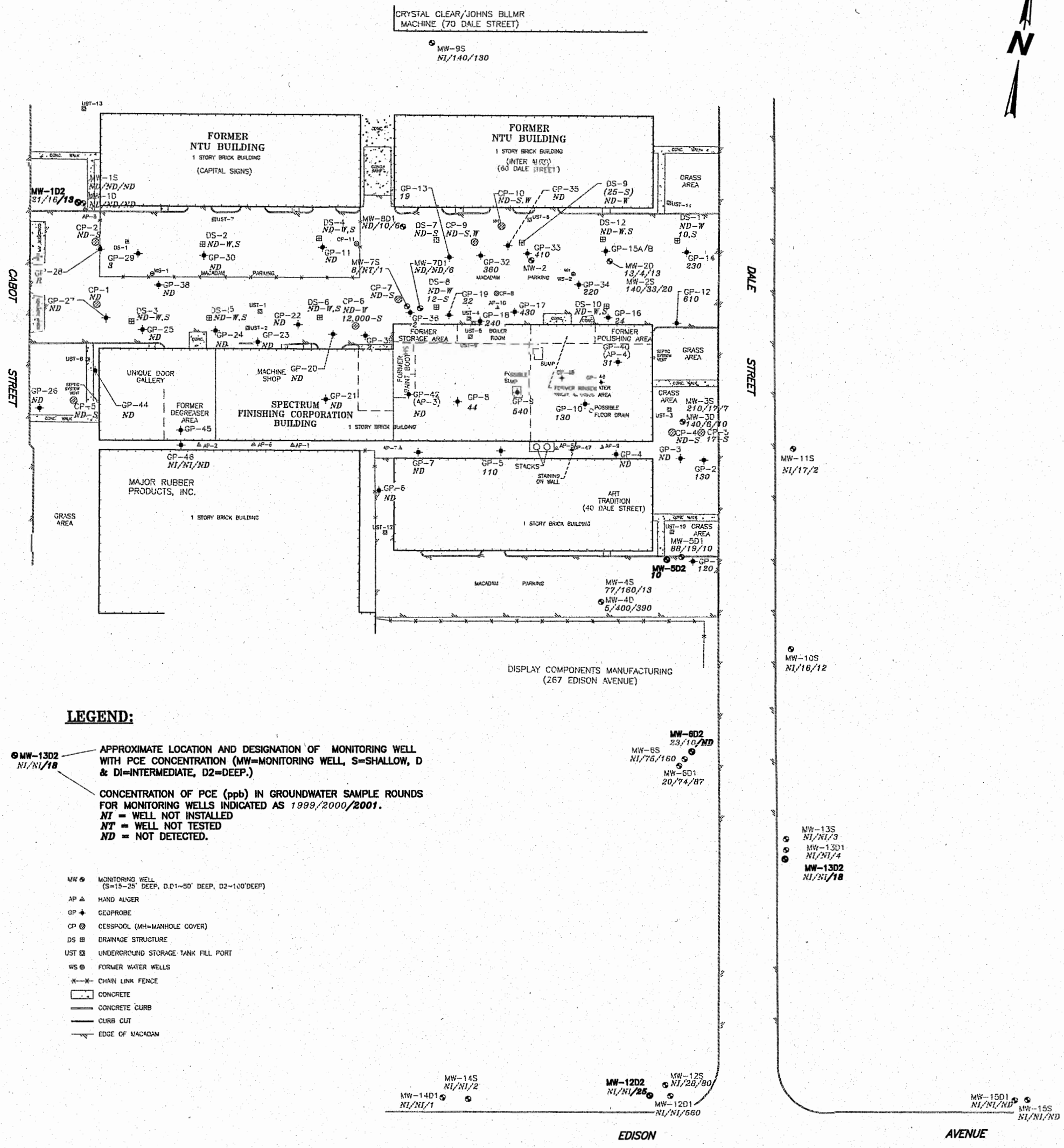
- 5 — — — INTERPOLATED INTERMEDIATE PCE ISO-CONTOUR (ppb) BASED ON 2001 SAMPLE DATA.
- 5 — — — APPROXIMATED INTERMEDIATE PCE ISO-CONTOUR (ppb)
- MW-6D1 ND/10/6 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELL WITH PCE CONCENTRATION (MW=MONITORING WELL, S=SHALLOW, D & DI=INTERMEDIATE, D2=DEEP)
- CONCENTRATION OF PCE (ppb) IN GROUNDWATER SAMPLE ROUNDS FOR MONITORING WELLS INDICATED AS *1999/2000/**2001***.
  - ***NI*** = WELL NOT INSTALLED
  - ***NT*** = WELL NOT TESTED
  - ***ND*** = NOT DETECTED

- MW ⊕ MONITORING WELL (S=15-25' DEEP, D,D1=50' DEEP, D2=100'DEEP)
- AP △ HAND AUGER
- CP ✦ GEOPROBE
- CP ⊗ CESSPOOL (MH=MANHOLE COVER)
- DS ⊞ DRAINAGE STRUCTURE
- UST ⊠ UNDERGROUND STORAGE TANK FILL PORT
- WS ⊕ FORMER WATER WELLS
- ✕—✕— CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20-21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW-6S, MW-9S, MW-10S, MW-11S, MW-12S, AND CESSPOOL CP-11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW-12D1, MW-12D2, MW-12S, MW-13D1, MW-13D2, MW-13S, MW-14D1, MW-14S, MW-15D1, MW-15S.
2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.
3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

FIGURE No. 13-B	PROJECT No. 55291	SPECTRUM FINISHING CORPORATION 50 DALE STREET WEST BABYLON, NEW YORK FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY INTERMEDIATE GROUNDWATER PCE CONTOURS (MONITORING WELLS)	REV No. / DESCRIPTION / BY / DATE SCALE IN FEET 0 30 60 120 DRAWN BY: BWS DATE: NOVEMBER 2001 GZA GeoEnvironmental of New York



LEGEND:

MW-13D2 NI/NI/18 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELL WITH PCE CONCENTRATION (MW=MONITORING WELL, S=SHALLOW, D & DI=INTERMEDIATE, D2=DEEP.)

CONCENTRATION OF PCE (ppb) IN GROUNDWATER SAMPLE ROUNDS FOR MONITORING WELLS INDICATED AS *1999/2000/**2001***.
NI = WELL NOT INSTALLED
NT = WELL NOT TESTED
ND = NOT DETECTED.

- MW — MONITORING WELL (S=15–25' DEEP, D.D1~50' DEEP, D2~100'DEEP)
- AP — HAND AUGER
- GP — GEOPROBE
- CP — CESSPOOL (MH=MANHOLE COVER)
- DS — DRAINAGE STRUCTURE
- UST — UNDERGROUND STORAGE TANK FILL PORT
- WS — FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20–21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW–6S, MW–9S, MW–10S, MW–11S, MW–12S, AND CESSPOOL CP–11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW–12D1, MW–12D2, MW–12S, MW–13D1, MW–13D2, MW–13S, MW–14D1, MW–14S, MW–15D1, MW–15S.

2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.

3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

FIGURE No. 13–C

PROJECT No. 55291

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

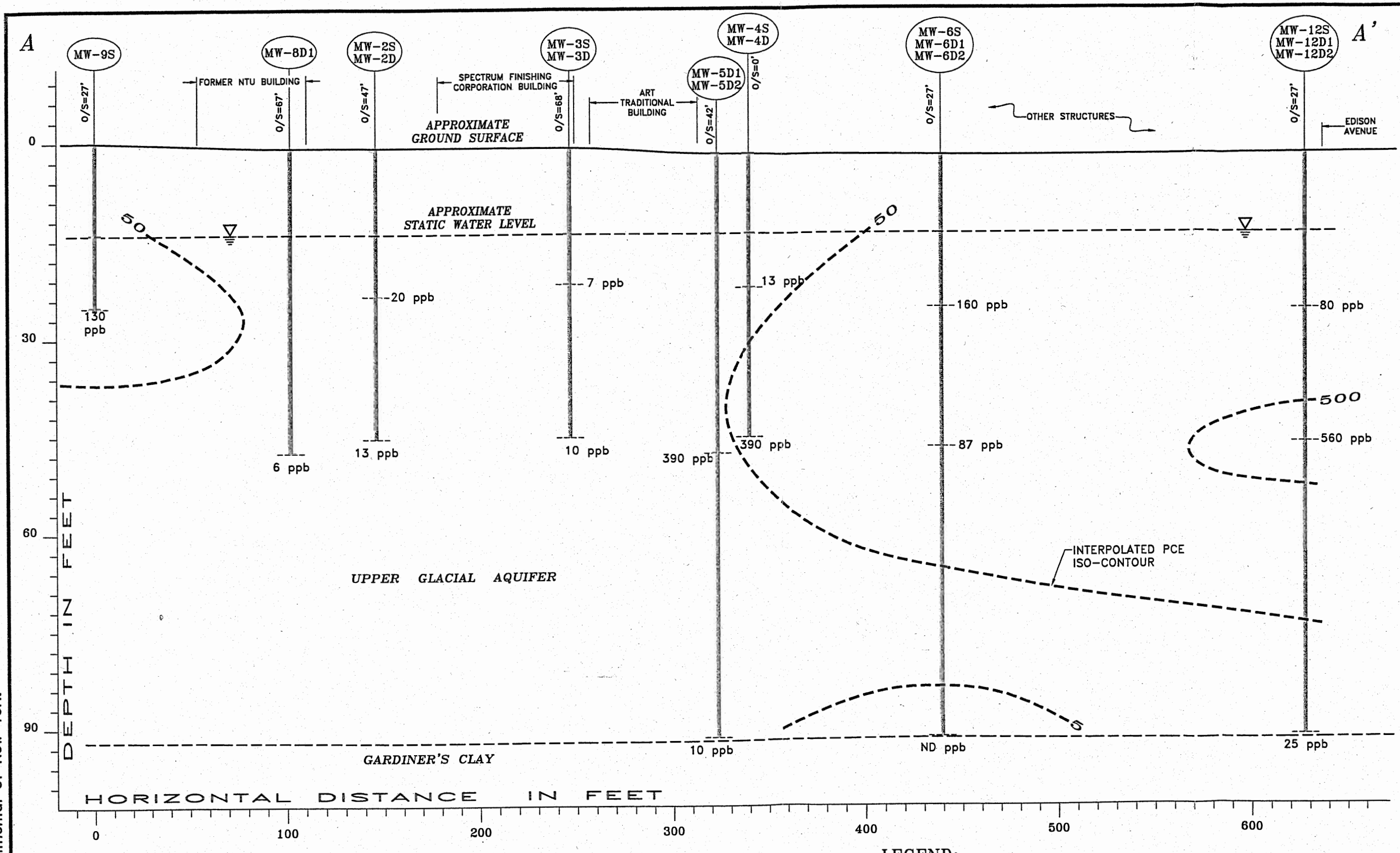
DEEP GROUNDWATER PCE CONCENTRATIONS (MONITORING WELLS)

REV No.	DESCRIPTION	BY	DATE

SCALE IN FEET
0 30 60 120

DRAWN BY: BWS
DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York



NOTES:

1. CONTOURS AND GEOLOGIC UNITS SHOWN ARE GENERALIZED FOR CONCEPTUAL PURPOSES.
2. REFER TO FIGURE 13-A FOR LOCATION OF CROSS-SECTION A-A'.
3. O/S = APPROXIMATE OFFSET DISTANCE FROM SECTION CUTTING PLANE IN FEET.

LEGEND:

MW-3S / MW-3D — MONITORING WELL LOCATION (MW=MONITORING WELL, S=SHALLOW, D & D1=INTERMEDIATE, D2=DEEP

50 — INTERPOLATED PCE ISO-CONTOUR (PARTS PER BILLION)

87 ppb — PCE CONCENTRATION OF GROUNDWATER SAMPLE COLLECTED DURING 2001 ROUND AT APPROXIMATE DEPTH SHOWN.

REV No.	DESCRIPTION	BY	DATE

DRAWN BY: BWS

DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York

APPROXIMATE SCALE IN FEET
HORIZONTAL 0 25 50 100
VERTICAL 0 7.5 15 30

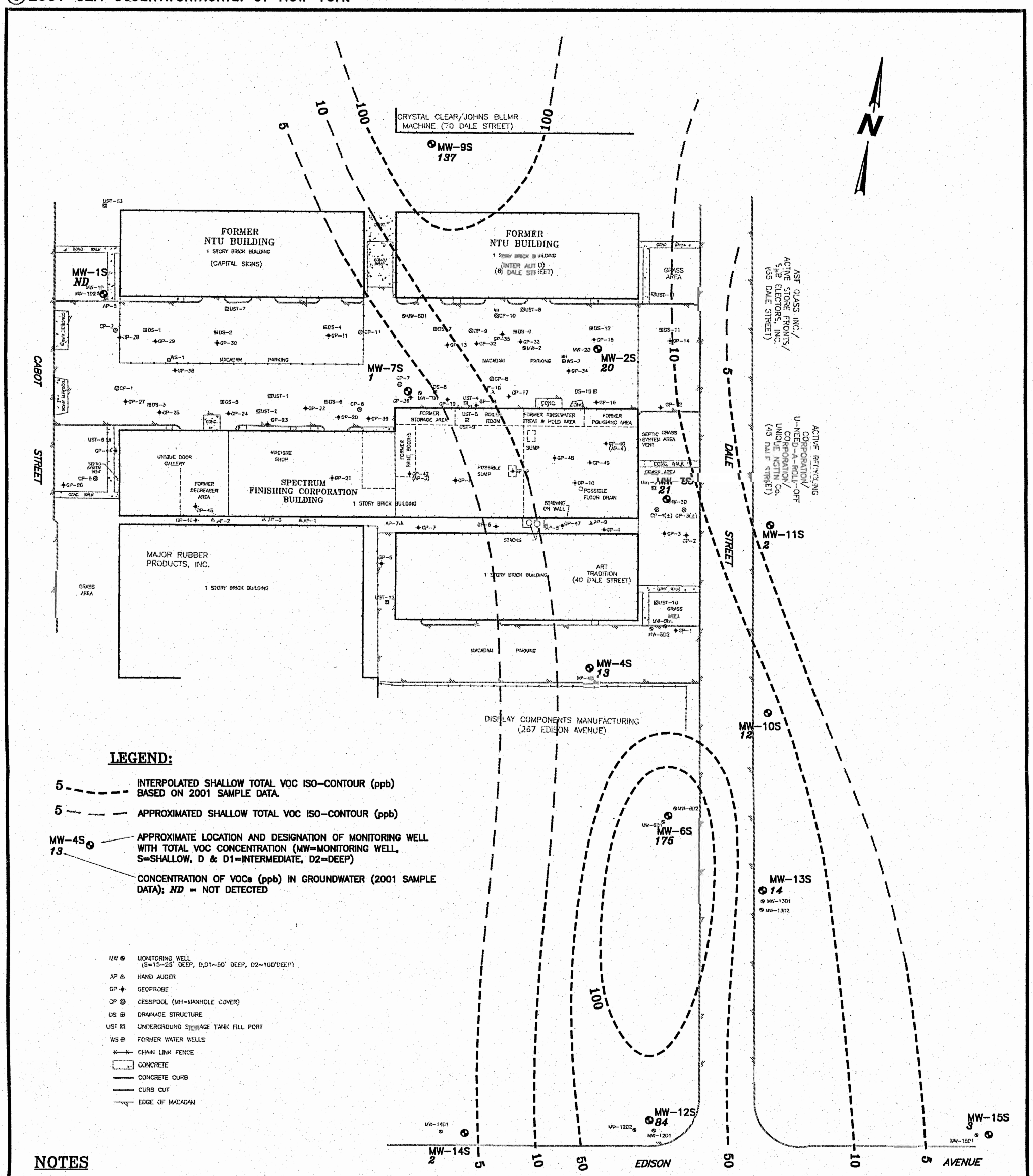
SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

GROUNDWATER PCE CONCENTRATION
CROSS-SECTION A-A'

PROJECT No. 55291

FIGURE No. 13-D



LEGEND:

- 5 — INTERPOLATED SHALLOW TOTAL VOC ISO-CONTOUR (ppb) BASED ON 2001 SAMPLE DATA.
- 5 — APPROXIMATED SHALLOW TOTAL VOC ISO-CONTOUR (ppb)
- MW-4S / 13 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELL WITH TOTAL VOC CONCENTRATION (MW=MONITORING WELL, S=SHALLOW, D & D1=INTERMEDIATE, D2=DEEP)
- CONCENTRATION OF VOCs (ppb) IN GROUNDWATER (2001 SAMPLE DATA); *ND* = NOT DETECTED

- MW — MONITORING WELL (S=15-25' DEEP, D,D1=50' DEEP, D2=100'DEEP)
- AP — HAND AUGER
- GP — GEOPROBE
- CP — CESSPOOL (MH=MANHOLE COVER)
- DS — DRAINAGE STRUCTURE
- UST — UNDERGROUND STORAGE TANK FILL PORT
- WS — FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20-21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW-6S, MW-9S, MW-10S, MW-11S, MW-12S, AND CESSPOOL CP-11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW-12D1, MW-12D2, MW-12S, MW-13D1, MW-13D2, MW-13S, MW-14D1, MW-14S, MW-15D1, MW-15S.

2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.

3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

FIGURE No. 13-E

PROJECT No. 55291

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

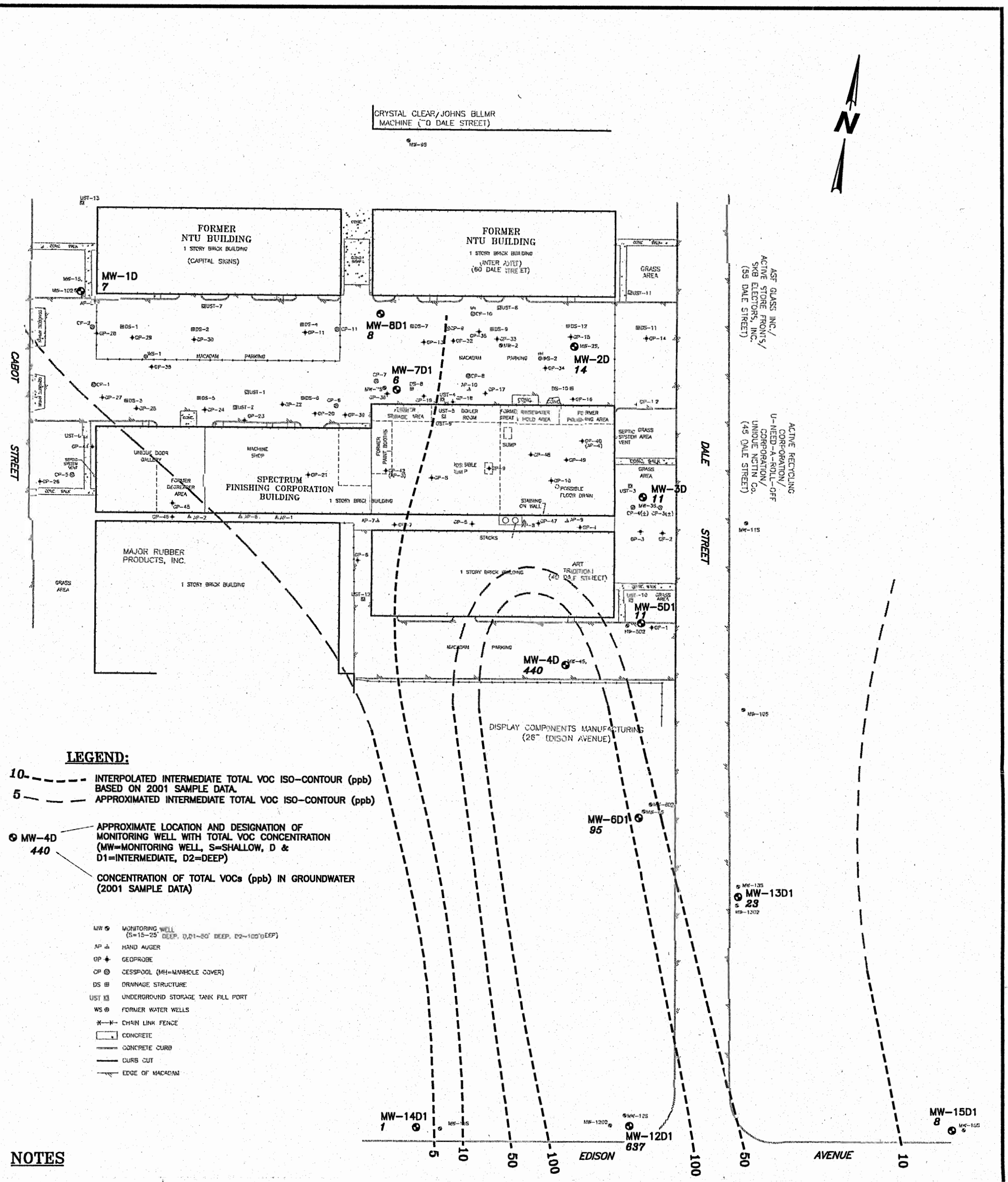
SHALLOW GROUNDWATER TOTAL VOC CONTOURS (MONITORING WELLS)

REV No.	DESCRIPTION	BY	DATE

SCALE IN FEET
0 30 60 120

DRAWN BY: BWS
DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York



LEGEND:

10 — — — INTERPOLATED INTERMEDIATE TOTAL VOC ISO-CONTOUR (ppb) BASED ON 2001 SAMPLE DATA.

5 — — — APPROXIMATED INTERMEDIATE TOTAL VOC ISO-CONTOUR (ppb)

MW-4D / 440 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELL WITH TOTAL VOC CONCENTRATION (MW=MONITORING WELL, S=SHALLOW, D & D1=INTERMEDIATE, D2=DEEP)

CONCENTRATION OF TOTAL VOCs (ppb) IN GROUNDWATER (2001 SAMPLE DATA)

- MW — MONITORING WELL (S=15-25' DEEP, D,D1=50' DEEP, D2=100'DEEP)
- AP — HAND AUGER
- GP — GEOPROBE
- CP — CESSPOOL (MH=MANHOLE COVER)
- DS — DRAINAGE STRUCTURE
- UST — UNDERGROUND STORAGE TANK FILL PORT
- WS — FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20-21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW-6S, MW-9S, MW-10S, MW-11S, MW-12S, AND CESSPOOL CP-11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW-12D1, MW-12D2, MW-12S, MW-13D1, MW-13D2, MW-13S, MW-14D1, MW-14S, MW-15D1, MW-15S.

2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.

3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

FIGURE No. 13-F

PROJECT No. 55291

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

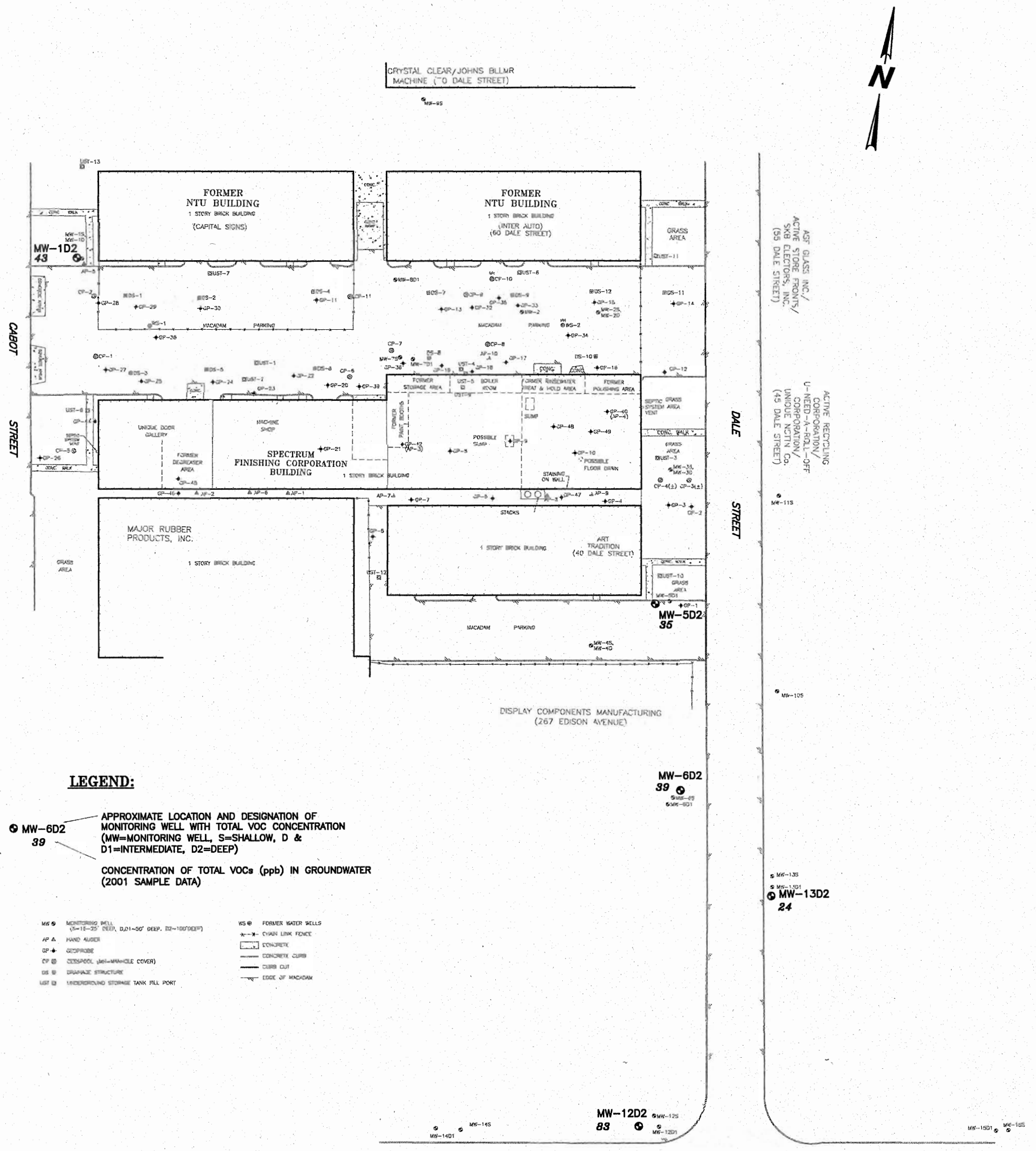
INTERMEDIATE GROUNDWATER TOTAL VOC CONTOURS (MONITORING WELLS)

REV No.	DESCRIPTION	BY	DATE

SCALE IN FEET
0 30 60 120

DRAWN BY: BWS
DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York



LEGEND:

MW-6D2 **39** — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELL WITH TOTAL VOC CONCENTRATION (MW=MONITORING WELL, S=SHALLOW, D & D1=INTERMEDIATE, D2=DEEP)

CONCENTRATION OF TOTAL VOCs (ppb) IN GROUNDWATER (2001 SAMPLE DATA)

- MW ⊕ MONITORING WELL (S=15-35' DEEP, D,D1=50' DEEP, D2=100'DEEP)
- AP △ HAND AUGER
- GP ✦ GEOPROBE
- CP ⊗ CESSPOOL (MH=MANHOLE COVER)
- DS ⊞ DRAINAGE STRUCTURE
- UST ⊡ UNDERGROUND STORAGE TANK FILL PORT
- WS ⊕ FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20–21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW–6S, MW–9S, MW–10S, MW–11S, MW–12S, AND CESSPOOL CP–11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW–12D1, MW–12D2, MW–12S, MW–13D1, MW–13D2, MW–13S, MW–14D1, MW–14S, MW–15D1, MW–15S.

2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.

3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

FIGURE No. 13-G

PROJECT No. 55291

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

DEEP GROUNDWATER TOTAL VOC CONCENTRATIONS (MONITORING WELLS)

REV No.	DESCRIPTION	BY	DATE

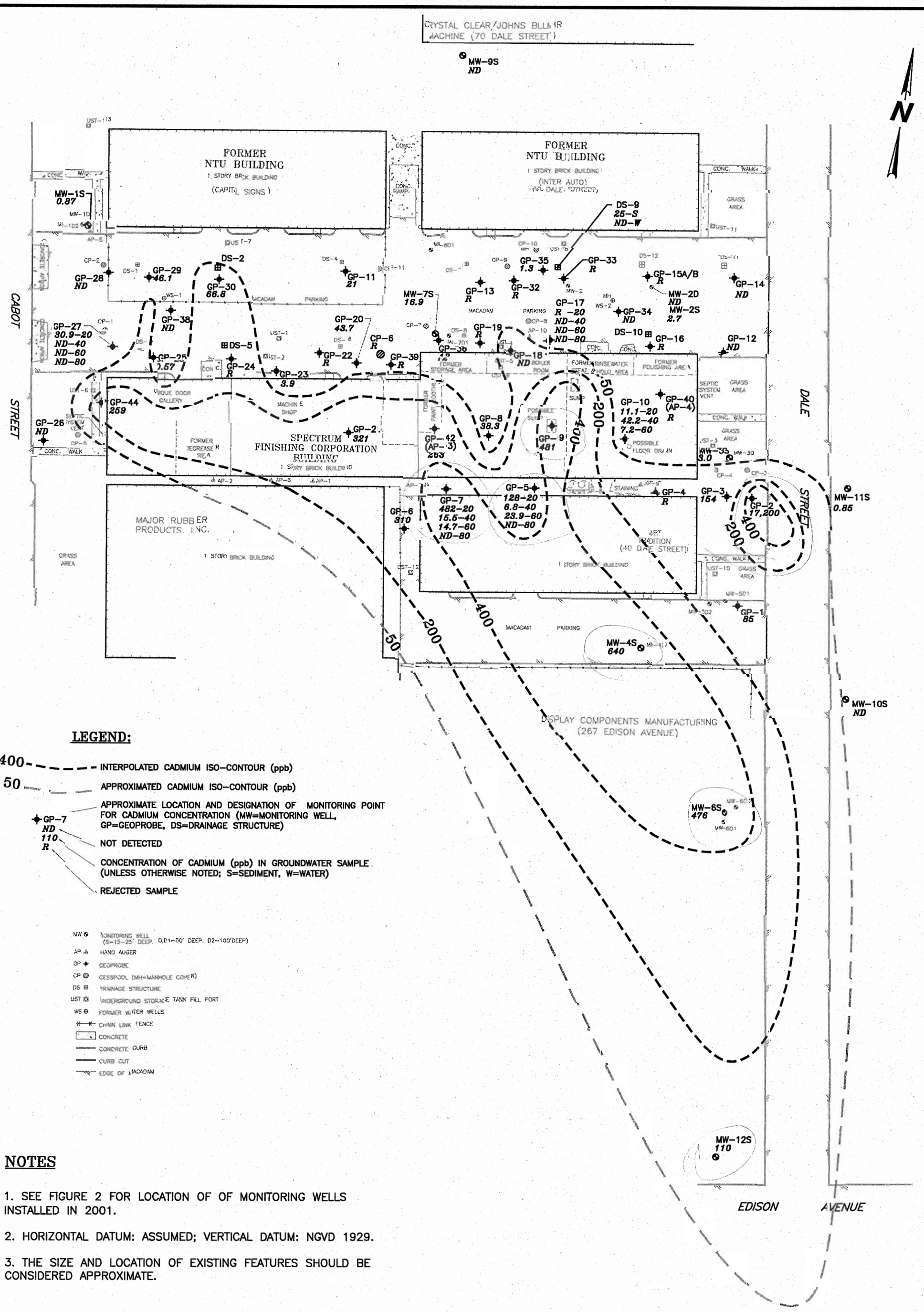
SCALE IN FEET

0 30 60 120

DRAWN BY: BWS

DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York



NOTES

1. SEE FIGURE 2 FOR LOCATION OF OF MONITORING WELLS INSTALLED IN 2001.
2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.
3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

FIGURE No. 15

PROJECT No. 55291

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

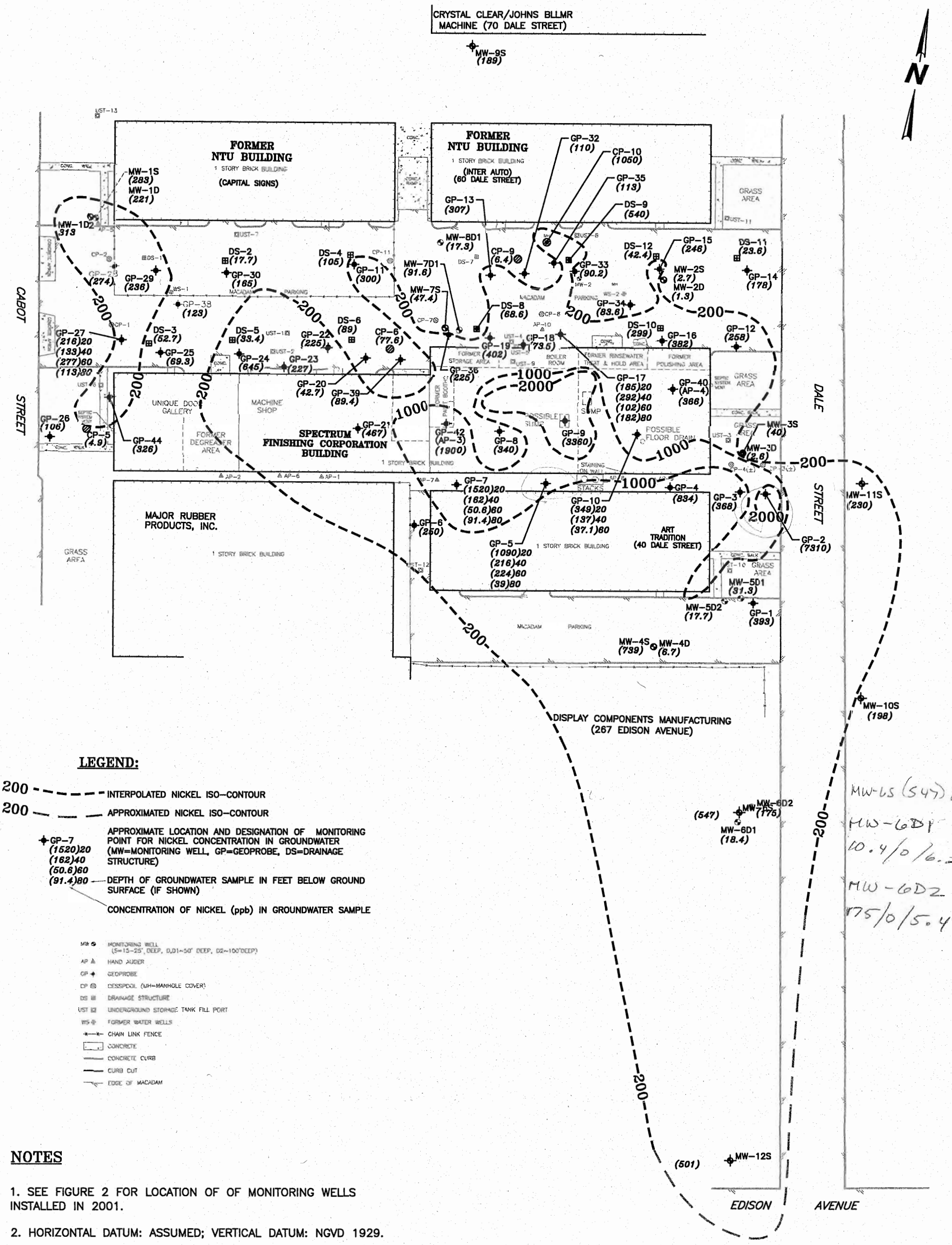
TOTAL CADMIUM CONCENTRATION (ppb) CONTOURS IN SHALLOW GROUNDWATER (1999 AND 2000 ROUNDS)

REV No.	DESCRIPTION	BY	DATE

SCALE IN FEET
0 25 50 100

DRAWN BY: DEW
DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York



LEGEND:

200 — INTERPOLATED NICKEL ISO-CONTOUR

200 — APPROXIMATED NICKEL ISO-CONTOUR

GP-7 (1520)20 (162)40 (50.6)60 (91.4)80 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING POINT FOR NICKEL CONCENTRATION IN GROUNDWATER (MW=MONITORING WELL, GP=GEOPROBE, DS=DRAINAGE STRUCTURE); DEPTH OF GROUNDWATER SAMPLE IN FEET BELOW GROUND SURFACE (IF SHOWN); CONCENTRATION OF NICKEL (ppb) IN GROUNDWATER SAMPLE

- MW ⊕ MONITORING WELL (S=15-25' DEEP, D,D1=50' DEEP, D2=100'DEEP)
- AP △ HAND AUGER
- GP ✦ GEOPROBE
- CP ⊗ CESSPOOL (MH=MANHOLE COVER)
- DS ⊞ DRAINAGE STRUCTURE
- UST ⊡ UNDERGROUND STORAGE TANK FILL PORT
- WS ⊕ FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. SEE FIGURE 2 FOR LOCATION OF OF MONITORING WELLS INSTALLED IN 2001.
2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.
3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

MW-6S (547) 2000
MW-6D1
10.4/0/6.2
MW-6D2
175/0/5.4

FIGURE No. 16

PROJECT No. 55291

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

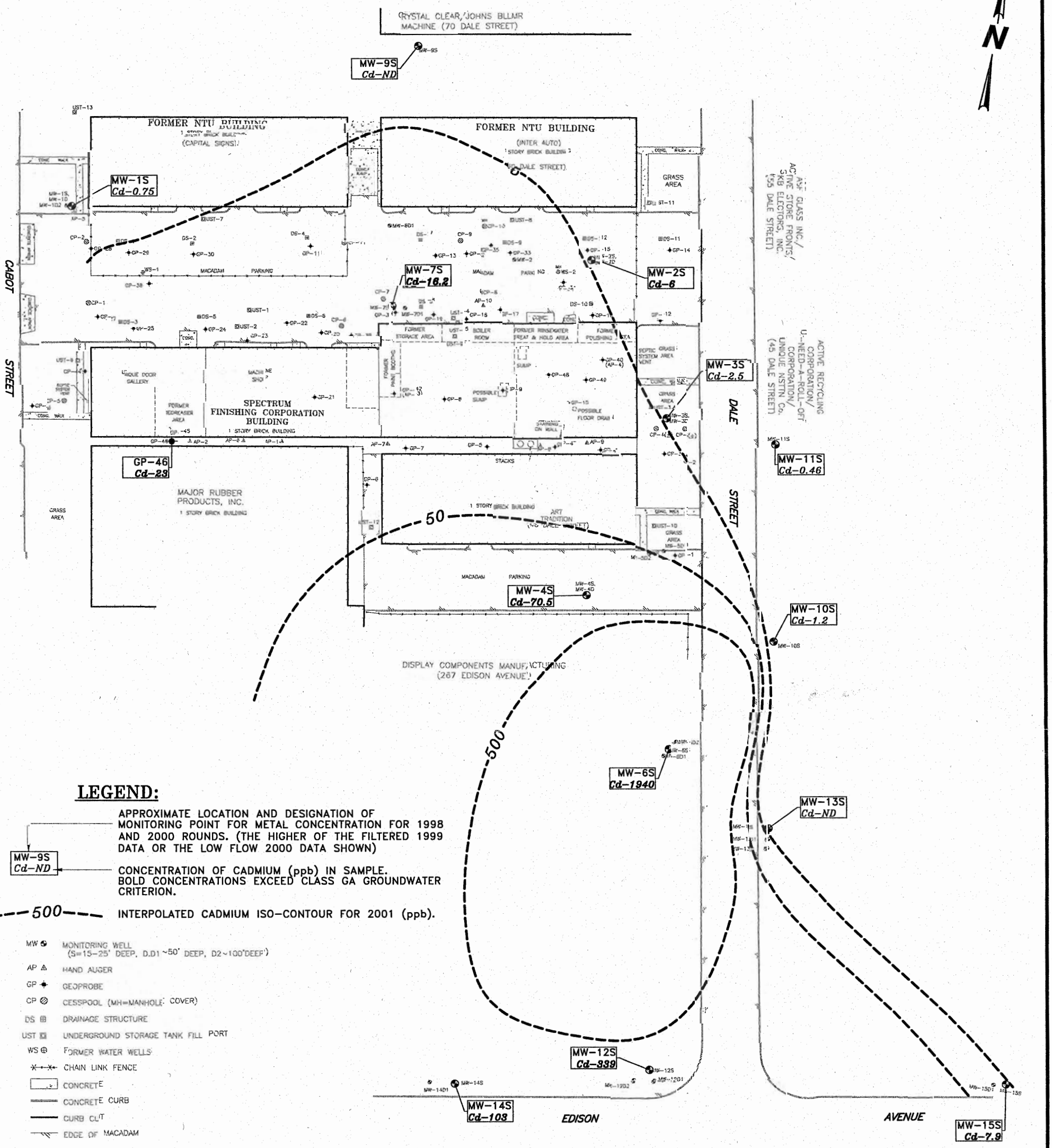
TOTAL NICKEL CONCENTRATION (ppb) CONTOURS IN SHALLOW GROUNDWATER (1999 AND 2000 ROUNDS)

REV No.	DESCRIPTION	BY	DATE

SCALE IN FEET
0 25 50 100

DRAWN BY: DEW
DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York



LEGEND:

MW-9S Cd-ND — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING POINT FOR METAL CONCENTRATION FOR 1998 AND 2000 ROUNDS. (THE HIGHER OF THE FILTERED 1999 DATA OR THE LOW FLOW 2000 DATA SHOWN)

MW-9S Cd-ND — CONCENTRATION OF CADMIUM (ppb) IN SAMPLE. BOLD CONCENTRATIONS EXCEED CLASS GA GROUNDWATER CRITERION.

500 — INTERPOLATED CADMIUM ISO-CONTOUR FOR 2001 (ppb).

- MW — MONITORING WELL (S=15-25' DEEP, D.D1 ~50' DEEP, D2~100'DEEP)
- AP — HAND AUGER
- GP — GEOPROBE
- CP — CESSPOOL (MH=MANHOLE COVER)
- DS — DRAINAGE STRUCTURE
- UST — UNDERGROUND STORAGE TANK FILL PORT
- WS — FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20-21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW-6S, MW-9S, MW-10S, MW-11S, MW-12S, AND CESSPOOL CP-11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW-12D1, MW-12D2, MW-12S, MW-13D1, MW-13D2, MW-13S, MW-14D1, MW-14S, MW-15D1, MW-15S.

2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.

3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

FIGURE No. 17

PROJECT No. 55291

SPECTRUM FINISHING CORPORATION
50 DALE STREET
WEST BABYLON, NEW YORK

FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY

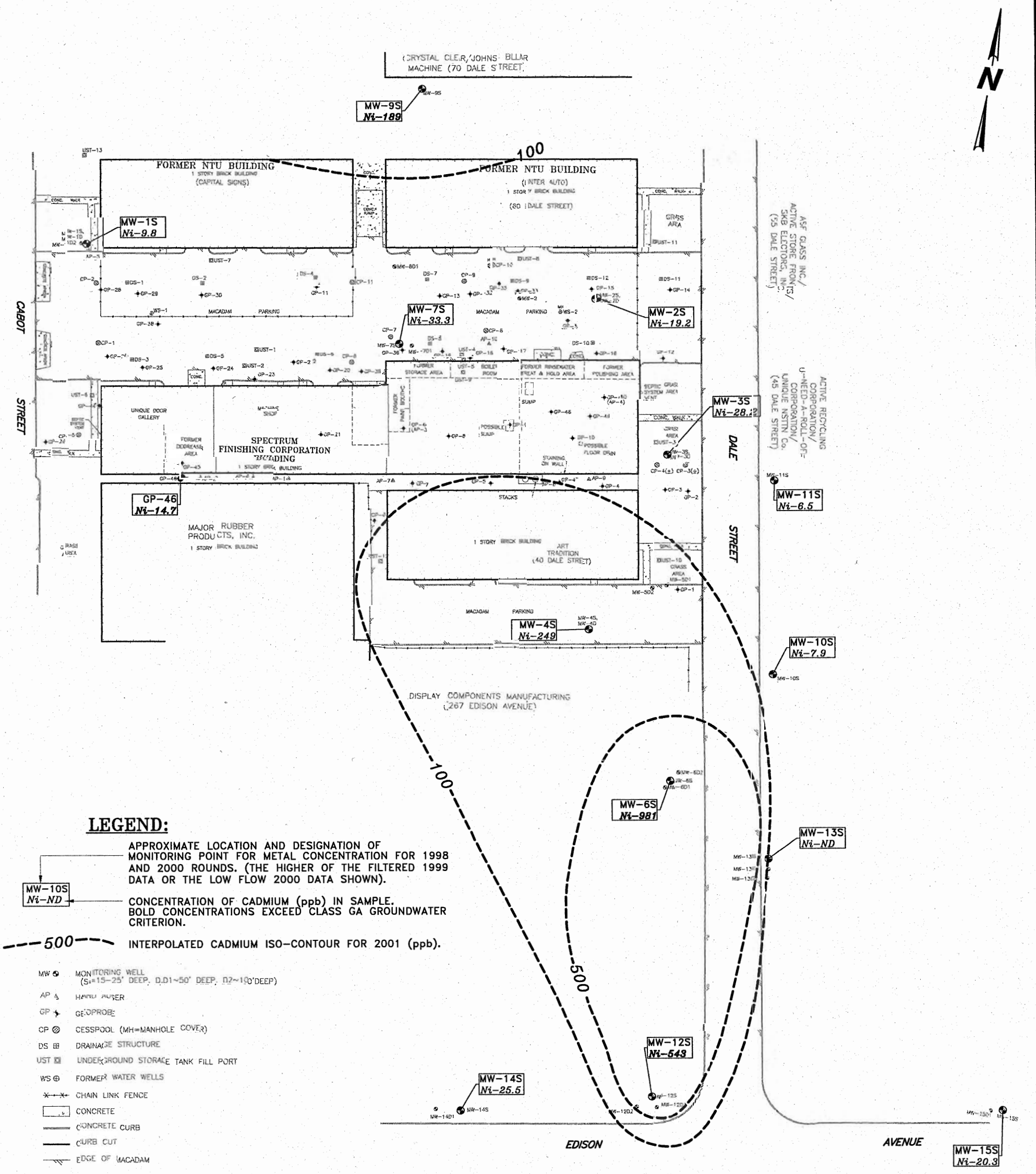
TOTAL (LOW FLOW) CADMIUM CONCENTRATIONS (ppb) CONTOURS IN SHALLOW GROUNDWATER (2001 ROUND)

DESCRIPTION	BY	DATE

SCALE IN FEET
0 30 60 120

DRAWN BY: BWS
DATE: NOVEMBER 2001

GZA GeoEnvironmental of New York



LEGEND:

- MW-10S / Ni-ND — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING POINT FOR METAL CONCENTRATION FOR 1998 AND 2000 ROUNDS. (THE HIGHER OF THE FILTERED 1999 DATA OR THE LOW FLOW 2000 DATA SHOWN).
- MW-10S / Ni-ND — CONCENTRATION OF CADMIUM (ppb) IN SAMPLE. BOLD CONCENTRATIONS EXCEED CLASS GA GROUNDWATER CRITERION.
- 500 — INTERPOLATED CADMIUM ISO-CONTOUR FOR 2001 (ppb).
- MW — MONITORING WELL (S=15-25' DEEP, D.D1~50' DEEP, D2~100'DEEP)
- AP — HAND AUGER
- GP — GEOPROBE
- CP — CESSPOOL (MH=MANHOLE COVER)
- DS — DRAINAGE STRUCTURE
- UST — UNDERGROUND STORAGE TANK FILL PORT
- WS — FORMER WATER WELLS
- CHAIN LINK FENCE
- CONCRETE
- CONCRETE CURB
- CURB CUT
- EDGE OF MACADAM

NOTES

1. BASE MAP ADAPTED FROM A PLAN PROVIDED BY YEC, INC. IN AUTOCAD FORMAT DATED AUGUST 1999. DATES OF SURVEY; JUNE 4, 1999 (WELL ELEVATIONS ONLY); JULY 20-21, 1999. ADDITIONAL SURVEY SEPTEMBER 12, 2000 OF MONITORING WELLS MW-6S, MW-9S, MW-10S, MW-11S, MW-12S, AND CESSPOOL CP-11. ADDITIONAL SURVEY MAY 10, 2001 OF MONITORING WELLS MW-12D1, MW-12D2, MW-12S, MW-13D1, MW-13D2, MW-13S, MW-14D1, MW-14S, MW-15D1, MW-15S.

2. HORIZONTAL DATUM: ASSUMED; VERTICAL DATUM: NGVD 1929.

3. THE SIZE AND LOCATION OF EXISTING FEATURES SHOULD BE CONSIDERED APPROXIMATE.

FIGURE No. 18	PROJECT No. 55291	SPECTRUM FINISHING CORPORATION 50 DALE STREET WEST BABYLON, NEW YORK FOCUSED REMEDIAL INVESTIGATION/FEASIBILITY STUDY	DESCRIPTION	BY / DATE
		TOTAL (LOW FLOW) NICKEL CONCENTRATIONS (ppb) CONTOURS IN SHALLOW GROUNDWATER (2001 ROUND)	SCALE IN FEET 0 30 60 120	DRAWN BY: BWS DATE: NOVEMBER 2001

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