Department of Environmental Conservation

Division of Environmental Remediation

Final Remediation Report for Operable Unit 2 - Spauldite Sheet Basement and K-Line Storm Sewer

Spaulding Composites Site
Tonawanda, Erie County, New York
Site Number 9-15-050

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New York State Department of Environmental Conservation
DAVID PATERSON, *Governor* ALEXANDER B. GRANNIS, *Commissioner*

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1.0 Introduction

1.1 General

The NYSDEC has prepared this *Final Remediation Report for Operable Unit 2 - Spauldite Sheet Basement and K-Line Storm Sewer* to summarize the remediation activities conducted between December 2009 and March 2010 at Operable Unit 2 (OU2) of the Spaulding Composites Site (Site) in the City of Tonawanda, Erie County, New York (Figure 1-1). This work, combined with the Interim Remedial Measure (IRM) completed in 2007, was completed as the final remedy for OU2 as described in the Record of Decision/Statement of Basis (ROD/SOB) issued by the NYSDEC in March 2003. Details concerning the IRM can be found in a July 2008 NYSDEC report entitled *Final IRM Report for Operable Unit 2.*

The remediation activities completed at Operable Unit 2 were designed to meet the remediation goals described in the ROD/SOB. The goals selected for the Spaulding Composites Site are described as follows:

- eliminate, to the extent practicable, the potential for ingestion of contaminated soil and sediment;
- eliminate, to the extent practicable, the generation of particulates from contaminated soil and vapor emissions from contaminated soil and groundwater that could result in inhalation exposures;
- eliminate, to the extent practicable, dermal contact with contaminated soil, sediment, groundwater and surface water;
- eliminate, to the extent practicable, off-site migration of PCB contaminated water; and
- eliminate, to the extent practicable, exceedances of applicable environmental quality standards related to releases of contaminants to groundwater.

The remediation of the Spauldite Sheet Basement and K-Line Storm Sewer achieved the remediation goals for this portion of OU2 through the following activities:

- the excavation, transportation and off-site disposal of PCB contaminated soil and sludge;

- the management of remediation generated debris and waste materials for transportation and off-site disposal at approved disposal facilities;

- the collection of confirmatory soil samples to determine the final limits of the excavation. The established soil cleanup goal for this IRM was to meet the 6 NYCRR Part 375 restricted residential soil cleanup objective for PCBs (1 ppm for both surface and subsurface soil); and

- the partial backfilling of K-Line Storm Sewer excavation with clean soil (the Spauldite Sheet Basement excavation was not backfilled to facilitate the removal of the basement walls under the ERP IRM and demolition program being implemented by Erie County and the City of Tonawanda).

1.2 Site Location and Description

The 46-acre Spaulding Composites Site is located at 310 Wheeler Street in the City of Tonawanda, Erie County, New York (Figure 1-1). The Site is bordered by Dodge and Enterprise avenues and residential property to the north, Wheeler Street and a mix of commercial and residential properties to the east, Hackett Drive and commercial properties to the south, and Hinds Street and a mix of commercial and residential properties to the west (Figures 1-1 and 1-2). The topography of the Site and the surrounding area is relatively flat, with most surface water runoff toward on-site drainage ditches and storm sewers. The Niagara River is located approximately one mile to the north, while Two Mile Creek is located approximately one mile to the west (Figure 1-1).

The Spaulding Composites Site has been subdivided into seven Operable Units (OUs) as shown on Figure 1-2. Operable Units 1 thru 4 are associated with the State Superfund portion of the Site, and consist of multiple Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs). The SWMUs and AOCs were grouped into Operable Units based upon the presence of physical waste (OU1) or contaminant type (OUs 2 and 3). Operable Unit 4 consists of multiple contaminants, and includes the remaining SWMUs and AOCs that require remediation. An Operable Unit is a term that defines a portion of a site that for technical or administrative reasons can be addressed separately to eliminate or mitigate a release, threat of release or exposure pathway resulting from site contamination. A Solid Waste Management Unit is a Resource Conservation and Recovery Act (RCRA) term that defines a discernible unit where solid or hazardous wastes have been placed at any time, or any area where solid wastes have been routinely and systematically released. An Area of Concern is also a RCRA term, and defines an area not known to be a SWMU,

where hazardous waste and/or hazardous constituents are present, or are suspected to be present, as a result of a release from the facility. Operable Units 5 thru 7 are associated with the Environmental Restoration Program (ERP) portion of the Site. These operable units were designated to facilitate the ERP Site Investigation; Operable Units 5 and 7 were not part of Spaulding's manufacturing activities and so were thought to be relatively uncontaminated. Operable Unit 6 includes the manufacturing portion of the Site. Operable Units 1 thru 4 are located within Operable Unit 6, but are not part of the Environmental Restoration Program.

The Operable Units at the Spaulding Composites Site, with the included SWMUs and AOCs, are defined as follows:

OU1: Regulated Landfill Wastes (State Superfund)

SWMU 7 Resin Drum Landfill;
SWMU 8 Laminant Dust Landfill;

OU2: PCB-Contaminated Wastes (State Superfund)

SWMU 11 Sludge Settling Pond;
SWMU 12 Sludge Settling Pond and Former Fuel Oil Tanks;
SWMU 23 Former Tank Farm Area;
SWMU 38 Therminol Building Area (includes the Spauldite Sheet Basement and K-Line Storm sewer);
AOC 48 Transformer Explosion Area;

OU3: Petroleum Contaminated Wastes (State Superfund)

SWMU 13 Former Grinding Oil Tank and Sludge Settling Pond;
SWMU 36 Former Tank Farm Area;

OU4: Multiple Contaminant Wastes (State Superfund)

SWMU 3 Zinc Chloride Sludge Container Storage Area;
SWMU 5 Empty Drum Storage Dock;
SWMU 14 Sludge Settling Pond;
SWMU 26 Paper Sludge Land Application Area;
SWMU 35 Lab Waste Storage Area;
AOC 45 Rail Spur;
AOC 46 Drum Storage Dock;
AOC 47 Bulk Chemical Unloading Area;

OU5: Wheeler Street Parking Lot (Environmental Restoration Program)

OU6: Main Plant Area (Environmental Restoration Program)

OU7: Hinds Street Area (Environmental Restoration Program)

These operable units are shown on Figure 1-2, with the individual SWMUs and AOCs shown on Figure 1-3. The Spauldite Sheet Basement and K-Line Storm Sewer are shown in detail on Figure 1-4.

1.3 Operational/Disposal History

Spaulding began operations as a manufacturer of vulcanized fiber, an early "plastic" made by treating paper with a zinc chloride solution. The paper used to produce vulcanized fiber was also manufactured at the facility. During the late 1940s to early 1950s, the plant began production of composite laminates (Spauldite®) that were made by impregnating natural fibers with phenolic resins (and later, melamine and epoxy resins and synthetic fibers). Many of the phenolic resins used in the production of Spauldite® were manufactured on-site. In the Fall of 1992 Spaulding ceased manufacturing operations at the facility and commenced decommissioning activities of the plant. Spaulding, until January 23, 2004, maintained a limited manpower staff at the Site to: (1) operate an on-site water treatment system; and (2) maintain the facility (e.g., lawn mowing and security). From January 23 to October 11, 2004, the NYSDEC, through use of a Standby Spill Contractor, operated and maintained the water treatment system.

Contamination of Site soils and groundwater (in isolated areas) resulted from a number of sources including: (1) historical leaks and spills (at least 17 incidents were reported between 1958 and 1994); (2) on-site waste disposal in pits excavated into native soils (the State Superfund Resin Drum and Laminant Dust Landfills); (3) the use of settling ponds to remove fine-particles from facility wastewater (four settling ponds were located throughout the Site); and (4) imported fill material (e.g., foundry sand and slag) used as subbase during building construction. In addition, a number of disposal pits were located inside plant buildings; these pits were cleaned during decommissioning activities following facility closure in 1992. Fill material, consisting of slag, cinders and ash, has been disposed of throughout Operable Units 5 and 6.

The former disposal practices at the Spaulding Composites facility that relate to the Spauldite Sheet Basement and K-Line Storm Sewer are described as follows:

- the Therminol Building (SWMU 38; Figure 1-3) housed a Therminol heat exchange unit (Therminol Unit) utilized during the 1960s as part of Spauldite® sheet production. Oil containing 85% PCBs was the heat exchange media of the Therminol Unit. At times of system failure, PCB oils were discharged to the ground surface adjacent to the Therminol Building or to floor drains discharging to the K-Line Storm Sewer;

- the SWMU 11 Settling Lagoon (Figures 1-3 and 1-4) was excavated into native soil and utilized from approximately 1930 to 1972 to settle grinding wastes from Spauldite® sheet and tube production. This lagoon originally discharged to a ditch that is now believed to underlie the Copper and B-Stage Storage rooms (Figure 1-4), and subsequently was discharged to the SWMU 12 Settling Lagoon; and

- the SWMU 12 Settling Lagoon (Figures 1-3 and 1-4) was a "U" shaped lagoon excavated into native soil and utilized to settle grinding wastes from Spauldite® sheet and tube production. This lagoon received grinding wastes from the SWMU 11 Settling Lagoon and discharged directly to the K-Line Storm Sewer. Grinding wastes and other fill material in both the SWMU 11 and SWMU 12 Settling Lagoons became contaminated with PCBs from the Therminol Unit.

1.4 Remedial and Investigative History

This section describes the remedial history of the Spaulding Composites Site as it relates to the Spauldite Sheet Basement and K-Line Storm Sewer. In the late 1980s, a consultant under contract with the United States Environmental Protection Agency (USEPA) conducted a RCRA Facility Assessment (RFA) at the Site. This assessment identified 36 Solid Waste Management Units and several potential Areas of Concern, including the SWMUs associated with the Spauldite Sheet Basement and K-Line Storm Sewer. The RFA Report included a summary of the analytical data for Site surface water, soil and groundwater that were obtained by NUS Corporation in April 1987 during a Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Site Investigation.

In early 1993 Spaulding constructed an on-site water treatment system to treat PCB contaminated water from the Spauldite Sheet Basement sump, the K-Line Storm Sewer and other waste waters generated on-site. In October 1994, that portion of the K-Line Storm Sewer impacted by PCB contamination was isolated from the remaining K-Line system. Contaminated storm water from the isolated portion of the sewer was pumped to the on-site water treatment system and discharged to an off-site storm sewer at Outfall 003 (Figure 1-4). Prior to discharge, however, this

water had to meet applicable PCB discharge limits (65 parts per trillion) as specified in the RCRA Order on Consent. Periodic sampling and analysis of waters from the isolated portion of the K-Line Storm Sewer (treatment system influent), the water treatment system effluent and the remaining (untreated) portions of the K-Line Storm Sewer was conducted by Spaulding and the NYSDEC (after January 23, 2004) until the system was shut down on October 11, 2004.

In June 1993 a portion of the K-Line Storm Sewer was flushed and the sediments removed in accordance with a NYSDEC approved work plan. This work was completed following the detection of PCBs in the K-Line Storm Sewer sediments at concentrations up to 1,065 parts per million (ppm). The removed sediments were dewatered, placed in roll-offs, and sent to Chemical Waste Management in Model City, New York for disposal.

To evaluate the nature and extent of contamination at the Spaulding Composites Site, and to evaluate remedial alternatives to address this contamination, Spaulding completed both a Remedial Investigation/RCRA Facility Investigation (RI/RFI) and a Feasibility Study/Corrective Measures Study (FS/CMS) at the Site. This was a joint project between the State CERCLA and RCRA programs, with overall NYSDEC management, coordination and oversight provided by CERCLA staff. To satisfy both programs, Spaulding decided to conduct a single investigation of the Site. This investigation was conducted in four phases: the first phase was conducted between April and October 1995; the second phase between July and September 1996; the third phase between October and December 1998; and the fourth phase in August 1999. Reports entitled *RCRA Facility Investigation and Remedial Investigation Report* dated September 1998; *Supplemental Remedial Investigation/RCRA Facility Investigation* dated May 24, 1999; and *Limited Groundwater Sampling Program* dated August 30, 1999 were prepared by Spaulding's consultants and describe the field activities and findings of the RI/RFI in detail.

Based upon the RI/RFI results, in comparison to standards, criteria and guidance values (SCGs) and potential public health and environmental exposure routes, the 17 SWMUs and AOCs listed in Section 1.2 (Operable Units 1 thru 4) were identified as requiring remediation. In March 2003 the NYSDEC issued a Record of Decision/Statement of Basis for Operable Units 1 thru 4 of the Spaulding Composites Site. The elements of the selected remedy that pertain to Operable Unit

2, including the K-Line Storm Sewer, are summarized as follows:

- excavation of PCB contaminated soils associated with the SWMU 11 and SWMU 12 Settling Lagoons, and the Therminol Building (SWMU 38), with off-site disposal at an appropriate facility;
- excavation will be to contaminant levels consistent with the goal of meeting the TAGM 4046 soil cleanup objectives for PCBs (1 ppm for surface soils; 10 ppm for subsurface soils);
- all excavated areas will be backfilled with clean soil and restored to grade;
- sampling and analysis of sediment in the K-Line Storm Sewer to evaluate how much contamination, if any, is present in the sewer. If contaminated, these sediments will be removed and disposed of with the contaminated soil from Operable Unit 2; and
- continued operation of the on-site water treatment system following the remediation of Operable Unit 2 until PCBs are no longer detected in K-Line Storm Sewer water. Treated water will continue to be sampled and analyzed during this time for compliance with the 65 parts per trillion (ppt) discharge limit for PCBs.

In February 2001, the NYSDEC learned that Spaulding, for the second time in ten years, had filed for Chapter 11 bankruptcy. At the time of the filing, Spaulding assured the Department that this action would not impact the Tonawanda site nor efforts relating to the NYSDEC Consent Orders. A principal concern of the NYSDEC at that time was Spaulding's continued ability to operate the water treatment system as the influent water remained significantly contaminated with PCBs. As a result, the NYSDEC evaluated several contingency options for the treatment system should the need arise. Of the options evaluated, use of a NYSDEC Spill Contractor to operate and maintain the system was determined to be the best option available.

On October 15, 2003, the United States Bankruptcy court approved a recovery plan for Spaulding that in part provided for the operation of the water treatment system until January 23, 2004. On that date, in order to protect public health and the environment, the NYSDEC took over the operation and maintenance of the system. The system was operated by C&W Environmental, LLC (C&W), a NYSDEC Standby Spill Contractor, until October 11, 2004 when the K-Line Storm Sewer was plugged and abandoned in place.

With Spaulding's obligation ended, the Site was referred to the NYSDEC Division of Environmental Remediation for the implementation of a State funded remediation. Since the time between referral and the beginning of remediation can be several years or more, and knowing that the cost to operate the treatment system for two years was estimated at $187,000, the NYSDEC authorized C&W to evaluate IRM options to remove PCB-contaminated soils from OU2 so that the treatment system could be shut down. Based upon C&W's cost estimate for the IRM, the NYSDEC decided to undertake this remediation and authorized C&W to begin this work.

The IRM of OU2 began in January 2004 and included the excavation, transportation and off-site disposal of PCB contaminated soil and debris. During the IRM approximately 6,800 tons of non-hazardous soil were transported to BFI in Niagara Falls, New York for disposal, while approximately 13,500 tons of hazardous soil were transported to CWM in Model City, New York for disposal. The IRM of Operable Unit 2 was completed in February 2007 at a cost of approximately $3,000,000.

During the remediation of Operable Unit 2, non-aqueous phase liquid (NAPL) was observed in the bedding material underlying the K-Line Storm Sewer where it entered the Saw Room (Figure 1-4). To prevent this NAPL from contaminating the clean backfill of the Therminol Building excavation, concrete was poured around the end of the sewer in June 2005. In addition, it was suspected that soil and gravel below the basement slab of the Spauldite Sheet Basement was hazardous (i.e., PCB concentrations > 50 ppm). The excavation of this material, however, was not completed during the OU2 IRM so that the basement could potentially be used for temporary water storage during the remediation of the other operable units at the Site.

In April 2009 LiRo Engineers conducted a sub-slab investigation of the Spauldite Sheet Basement as part of the ERP Site Investigation to determine the nature and extent of contamination requiring remediation. This investigation revealed that soil and gravel below the basement slab was contaminated with PCBs at concentrations that exceeded the 6 NYCRR Part 375 restricted residential soil cleanup objectives. Because approximately 45 cubic yards of material was estimated to be hazardous, the remediation of this portion of the Site was incorporated into the State Superfund remediation that began in October 2009.

With the remediation of the Spauldite Sheet Basement to be completed under the State Superfund Program, a K-Line Storm Sewer Investigation was conducted in June 2009 to evaluate the nature and extent of contamination in the bedding and backfill material along the K-Line Storm Sewer adjacent to the Spauldite Sheet Basement to determine how much remediation of the sewer was also required. The extent of PCB contamination underlying the Spauldite Sheet Basement and the K-Line Storm Sewer is shown in Figure 1-5. Because the State Superfund remediation project had already gone out to bid by this time, it was decided to complete the remediation of the Spauldite Sheet Basement and K-Line Storm Sewer using a NYSDEC Standby Spill Contractor.

1.5 Roles and Responsibilities

Remediation of the Spauldite Sheet Basement and K-Line Storm Sewer began on December 14, 2009 with the setup of a carbon treatment system to treat contaminated water from the basement and abandoned section of the sewer, and was completed on April 1, 2010. The NYSDEC retained Op-Tech Environmental Services, Inc. (Op-Tech), a Standby Spill Contractor, to complete the remediation activities. The prime subcontractors retained by Op-Tech included the following:

- Price Trucking Corporation (Price Trucking) of Buffalo, New York was utilized to provide transportation services for RCRA-hazardous waste excavated during the project;
- Iroquois Bar Corporation (Iroquois) of Lackawanna, New York was utilized to provide transportation services for non-hazardous waste excavated during the project;
- Allied Waste Niagara Falls Landfill, LLC (Allied) of Niagara Falls, New York was utilized for the off-site disposal of non-hazardous waste excavated during the project;
- CWM Chemical Services, LLC (CWM) of Model City, New York was utilized for the off-site disposal of RCRA-hazardous waste excavated during the project;
- Waste Management, Inc. in Chaffee, New York was utilized for the transportation and off-site disposal of the asbestos pipe covering from the Spauldite Sheet Basement;
- Allied Waste Niagara Falls Landfill, LLC (Allied) in Niagara Falls, New York was also utilized to provide transportation and off-site disposal services for non-hazardous C&D debris generated during the project;

- TestAmerica, Inc. (TestAmerica) of Amherst, New York was utilized to complete off-site analytical testing of excavated materials and post-excavation confirmatory samples; and

- Wm. Schutt & Associates, P.C. (Schutt & Associates) of Lancaster, New York was utilized to provide surveying services during the project.

The remediation activities were documented by the NYSDEC using photographs and Construction Field Reports, with the NYSDEC providing representatives on-site for the duration of the project.

1.6 Report Organization

This *Final Remediation Report for Operable Unit 2 - Spauldite Sheet Basement and K-Line Storm Sewer* summarizes and documents the remediation activities implemented by Op-Tech for the NYSDEC, and has been organized into the following sections:

- Section 1 - Introduction: Provides a brief overview of the remediation activities completed at OU2, provides a description and background information for the Site, identifies the OU2 remediation goals and discusses how these goals were achieved, provides a summary of the ROD/SOB remedy for OU2, identifies the roles and responsibilities of the entities involved during the completion of the remediation activities, and describes the organization of this Final Remediation Report;

- Section 2 - Summary of the Final Remediation Activities for OU2: Summarizes the remediation and restoration activities associated with the Spauldite Sheet Basement and K-Line Storm Sewer;

- Section 3 - Summary of the Final Remediation Sampling and Analytical Activities: Summarizes the analytical data obtained from samples collected during the Spauldite Sheet Basement and K-Line Storm Sewer remediation completed at the Site; and

- Section 4 - Conclusions: Summarizes how the remediation activities associated with the Spauldite Sheet basement and K-Line Storm Sewer achieved the remediation goals described in the ROD/SOB and Section 1.1 of this report.

2.0 Summary of the Final Remediation Activities for OU2

2.1 Pre-Excavation Activities

Prior to mobilizing to the Site to begin excavation activities at the Spauldite Sheet Basement and K-Line Storm Sewer, numerous activities were completed as part of the final remediation of OU2. These activities included:

- the pumping and treatment of contaminated water from the Spauldite Sheet Basement to gain access to the basement to complete asbestos abatement and remediation activities;
- the pumping and treatment of contaminated water from the abandoned section of the K-Line Storm Sewer to facilitate removal of contaminated backfill and bedding material; and
- the removal and off-site disposal of 230 linear feet of asbestos pipe covering and 200 square feet of non-friable roof debris preparatory to the demolition of the concrete floor over the Spauldite Sheet Basement (see the February 3, 2010 Air Monitoring Report by EmpireGeo Services, Inc. and the June 4, 2010 Asbestos Abatement Report by Op-Tech Environmental Services, Inc. for additional details).

2.2 Remediation Proposal and Activities

The remediation activities proposed for the Spauldite Sheet Basement and K-Line Storm Sewer included the following:

- the construction of a dewatering pad to dewater sludge from the Spauldite Sheet Basement;
- the removal and off-site disposal of debris and PCB contaminated sludge from the Spauldite Sheet Basement;
- the removal of the concrete slab over the Spauldite Sheet Basement and K-Line Storm Sewer, the concrete basement slab, portions of the concrete basement wall, and the Therminol Building sump;
- the excavation, transportation and off-site disposal of contaminated soil that exceeded the 1 ppm 6 NYCRR Part 375 restricted residential soil cleanup objective for PCBs;
- the collection and analysis of confirmatory soil samples following the completion of excavation activities;

- the surveying of the final excavation limits and confirmatory sample locations; and
- the backfilling of the excavation with clean soils.

Following the completion of pre-excavation activities on January 25, 2010, remediation of the Spauldite Sheet Basement and K-Line Storm Sewer began on February 2, 2010 and was completed on April 1, 2010. The work completed during remediation included the following:

- the removal and off-site disposal of contaminated debris, spent carbon from the water treatment system, and PCB contaminated sludge from the Spauldite Sheet Basement;
- the removal of the concrete slab over the Spauldite Sheet Basement and K-Line Storm Sewer, the entire concrete basement slab, and portions of the east basement wall to provide access to underlying contaminated soils;
- the excavation of PCB contaminated soil underlying the Spauldite Sheet Basement;
- the excavation of PCB and metals contaminated fill and bedding material surrounding the K-Line Storm Sewer;
- the collection and analysis of confirmatory soil samples following the completion of excavation activities; and
- the surveying of the final excavation limits and confirmatory sample locations.

Specific detail regarding the individual remediation activities is presented below in chronological order.

2.3 Concrete Removal

Following the completion of the asbestos abatement activities, the concrete slab over the Spauldite Sheet Basement and K-Line Storm Sewer, the entire concrete basement slab (Figures 2-1 and 2-2), and a portion of the east basement wall (Figures 2-3 and 2-4) were removed to provide access to underlying contaminated soils. Column supports were stained with oil suspected of containing PCBs. As a result, this concrete was staged in a separate stockpile from concrete that visually looked clean. The stained concrete was sampled on Thursday, February 18, 2010 and submitted to TestAmerica for limited analysis. Based upon these results, a second sample was collected on Thursday, February 25, 2010 and submitted to TestAmerica for analysis of disposal

characteristics. The analytical results from these samples are discussed in Section 3.6. Based upon these results, the stained concrete was broken up into smaller pieces and disposed of with the non-hazardous soil and fill stockpiles.

On Thursday, March 4, 2010, two composite samples of the visually clean concrete stockpile were collected and submitted to TestAmerica for analysis. The analytical results from these samples are discussed in Section 3.6. These results indicated that the visually clean concrete achieved the 6 NYCRR Part 375 restricted residential soil cleanup objectives. As a result, this concrete was left on-site to be crushed and used as backfill during the ERP IRMs.

2.4 Spauldite Sheet Basement

2.4.1 Excavation

Excavation of contaminated soil underlying the Spauldite Sheet Basement began on Friday, February 12, 2010 along the southern portion of the west basement wall. Soil removal activities began in this area to determine if the basement foundation wall prevented the migration of NAPL under the east-west trending side basement; this basement was not part of the original Spauldite Sheet Basement and was added on during subsequent building construction. Excavation proceeded northward along the west foundation wall until the northern limit of the PCB remediation area (Figure 1-5) was reached. Excavation then proceeded eastward across the basement. NAPL was observed in the backfill along the west foundation wall (Figure 2-5), in the bedding of the floor drains (Figures 2-6 and 2-7), and beneath areas where the basement floor had seams in the concrete (e.g., around support footers).

Excavation in the Spauldite Sheet Basement continued on Monday, February 15, 2010 and progressed in a northward direction. NAPL was found to follow the drain lines and foundation walls to the north wall of basement. Removal of NAPL contaminated backfill along the north and south basement foundation walls (Figures 2-8 and 2-9) continued on Tuesday and Wednesday of that week. Once this excavation work was complete, contaminated soil and fill from beneath the southern stairwell was removed. These initial excavation activities were completed on Wednesday, February 17, 2010 (Figures 2-10 and 2-11).

On Thursday, February 18, 2010 twenty-two confirmatory samples from the floor of the Spauldite Sheet Basement excavation (38-001 thru 38-022; Figure 2-12) were collected and submitted to TestAmerica for analysis. The analytical results from these samples are discussed in Section 3.3.

The confirmatory sample results indicated that additional excavation of the Spauldite Sheet Basement was required. This work was completed on Wednesday, February 24, 2010 (Figures 2-13 and 2-14). The following day eight confirmatory samples of the floor (38-001A, 38-002A, 38-006A, 38-007A, 38-008A, 38-011A, 38-015A, and 38-019A; Figure 2-12) were collected and submitted to TestAmerica for analysis. The analytical results from these samples are discussed in Section 3.3.

The confirmatory sample results indicated that additional excavation in the center of the Spauldite Sheet Basement was required. This work was completed on Monday, March 1, 2010 (Figure 2-15). Following this work, five confirmatory samples of the floor (38-006B, 38-007B, 38-008B, 38-011B, and 38-015B; Figure 2-12) were collected and submitted to TestAmerica for analysis. The analytical results from these samples are discussed in Section 3.3.

The final limits of the Spauldite Sheet Basement excavation are shown on Figure 2-12 along with the locations of the confirmatory samples.

2.4.2 Backfilling

Backfilling of the Spauldite Sheet Basement was not completed to facilitate the removal of the basement walls under the ERP IRM and demolition program being implemented by Erie County and the City of Tonawanda. Clean backfill placed in SWMU 38 during the initial IRM was placed in the southern stairwell to form a ramp to enable access to the basement by the excavator (Figure 2-16). This ramp was left in place following remedial activities to stabilize the backfill previously placed in SWMU 38.

2.5 K-Line Storm Sewer

2.5.1 Excavation

Excavation of contaminated soil and fill associated with the K-Line Storm Sewer began on

Friday, February 19, 2010 at the south end of the sewer (Figures 2-17 thru 2-19) and was completed on Thursday, February 25, 2010 (Figure 2-20). In total, approximately 85 linear feet along the K-Line Storm Sewer was excavated. The excavated material was staged in two stockpiles adjacent to the excavation (Figure 2-21).

A small quantity of NAPL was observed when excavating along the south foundation wall of the Saw Room (Figures 2-22 and 2-23). In addition, a clay tile pipe with some NAPL surrounding it was encountered along this wall. As a result, the excavation in this area extended to the east wall of the Spauldite Sheet Basement (Figure 2-19). The K-Line Storm Sewer was also removed from beneath the south wall of the Saw Room (Figure 2-24), as was the concrete plug poured around the end of the sewer during the initial IRM in 2003.

On Thursday, March 4, 2010, twelve confirmatory samples (38-023 thru 38-034; Figure 2-12) were collected from the floor and sidewalls of the K-Line Storm Sewer excavation and submitted to TestAmerica for analysis. The analytical results from these samples are discussed in Section 3.5.

The final limits of the K-Line Storm Sewer excavation are shown on Figure 2-12 along with the locations of the confirmatory samples.

2.5.2 Backfilling

Backfilling of the K-Line Storm Sewer excavation was not completed due to budgetary constraints.

2.6 Transportation and Offsite Disposal

Sampling and analysis completed during the 2009 Spauldite Sheet Basement and K-Line Storm Sewer investigations revealed that soil and fill at these areas were both non-hazardous and RCRA-hazardous solid waste (PCB concentrations >50 ppm). During remediation, therefore, excavated materials were placed into separate stockpiles based upon visual observations. Following the completion of excavation activities, the stockpiles were sampled for disposal characteristics. The analytical results from these samples are discussed in Section 3.5. Based upon these results,

Op-Tech prepared the appropriate waste profile applications for each waste stream.

The waste profile application and waste characterization sampling results for the non-hazardous soil and fill were submitted to several landfills to obtain approval and cost estimates for disposal. Allied Waste Niagara Falls Landfill, LLC (Allied) in Niagara Falls, New York was selected for the transportation and off-site disposal of these soils. In addition, Waste Management in Chaffee, New York was utilized for the transportation and off-site disposal of the asbestos pipe covering from the Spauldite Sheet Basement, while Allied was also utilized for the transportation and off-site disposal of non-hazardous C&D debris generated during the project. A total of 1,609 tons of non-hazardous materials were transported off-site for disposal during the remediation of the Spauldite Sheet Basement and K-Line Storm Sewer (Table 2-1).

The waste profile application and waste characterization sampling results for the RCRA-hazardous soil were submitted to CWM in Model City, New York to obtain approval for disposal. CWM was selected due to their close proximity to the Spaulding Composites Site and because they were only one of three landfills east of the Mississippi River that could accept PCB hazardous waste. A total of 443 tons of RCRA-hazardous soil was transported to CWM for disposal during the remediation effort (Table 2-2).

3.0 Summary of the Final Remediation Sampling and Analytical Activities for OU2

3.1 General

This section describes the analytical data obtained from samples collected during the remediation of the Spauldite Sheet Basement and K-Line Storm Sewer portion of OU2 at the Spaulding Composites Site. These samples include sludge from the Spauldite Sheet Basement, concrete and debris that was removed during the remediation, contaminated soil that was excavated from the Spauldite Sheet Basement and along the K-Line Storm Sewer, and confirmatory samples from the excavations.

Analytical results were evaluated against the restricted residential soil cleanup objectives of Table 375-6.8(b) contained in the December 2006 NYSDEC publication entitled "*6NYCRR Part 375: Environmental Remediation Programs.*" The restricted residential soil cleanup objectives were utilized because the State Superfund and ERP remediations were being completed to this level of cleanup. For contaminants not included in 6 NYCRR Part 375, the soil cleanup objectives identified in the November 2009 NYSDEC Commissioner's Policy entitled "*Soil Cleanup Guidance*" were utilized. When utilized, the soil cleanup objectives for individual contaminants were taken directly from Table 1 of the guidance. The regulatory limits for the hazardous waste characteristics were obtained from the January 1995 NYSDEC publication entitled "*6 NYCRR Part 371: Identification and Listing of Hazardous Wastes*."

3.2 Spauldite Sheet Basement Sludge

In April 2009, LiRo Engineers collected three sludge samples from the Spauldite Sheet Basement: one from a floor drain (sample DS-1), one from a trench (sample S-2) and one from the basement floor (sample S-1). These samples were submitted to ChemTech in Mountainside, New Jersey for analysis of TCL PCBs using USEPA Method 8082.

The analytical results from these samples were compared to the 6 NYCRR Part 371 hazardous waste criteria, and are summarized in Table 3-1. These results indicated that sludge from the trench (sample S-2) was hazardous (i.e., PCB concentrations >50 ppm), while sludge in the floor

drain and on the floor was non-hazardous (i.e., PCB concentrations <50 ppm). These results also indicated that all sludge in the Spauldite Sheet Basement exceeded the 6 NYCRR Part 375 restricted residential PCB soil cleanup objective (Table 3-1) and needed to be removed.

During the pre-excavation activities, sludge from the Spauldite Sheet Basement was piled near the southern stairwell to facilitate later removal. Prior to sludge removal, a composite sample was collected and submitted to TestAmerica for analysis of TCL PCBs using USEPA Method 8082.

The analytical results from this sample were compared to the 6 NYCRR Part 371 hazardous waste criteria, and are summarized in Table 3-1. These results indicated that sludge from the Spauldite Sheet Basement was non-hazardous.

3.3 Confirmatory Samples of the Spauldite Sheet Basement Excavation

Excavation of the Spauldite Sheet Basement took place between Friday, February 12, 2010 and Wednesday, February 17, 2010. On Thursday, February 18, 2010, twenty-two confirmatory samples (38-001 thru 38-022; Figure 2-12) were collected from the floor of the excavation and submitted to TestAmerica for analysis of TCL PCBs using USEPA Method 8082. All samples were collected from native, reddish brown silty clay.

The analytical results from these samples were compared to the 6 NYCRR Part 375 restricted residential soil cleanup objectives, and are summarized in Table 3-2. These results indicated that fourteen of the twenty-two samples achieved the 6 NYCRR Part 375 restricted residential soil cleanup objective for PCBs. The analytical results from the remaining samples (38-001, 38-002, 38-006, 38-007, 38-008, 38-011, 38-015, and 38-019) contained PCBs at concentrations ranging from 1.2 to 3.4 ppm (Table 3-2). As a result, further excavation of the Spauldite Sheet Basement was required.

Additional soil from the Spauldite Sheet Basement was excavated on Wednesday, February 24, 2010. The following day eight confirmatory samples of the floor (38-001A, 38-002A, 38-006A, 38-007A, 38-008A, 38-011A, 38-015A, and 38-019A; Figure 2-12) were collected and submitted to TestAmerica for analysis of TCL PCBs using USEPA Method 8082. All samples were collected

from the approximate locations of the initial confirmatory samples.

The analytical results from these samples were compared to the 6 NYCRR Part 375 restricted residential soil cleanup objectives, and are summarized in Table 3-2. These results indicated that five of the samples (38-006A, 38-007A, 38-008A, 38-011A, and 38-015A) contained PCBs at concentrations that exceeded the 6 NYCRR Part 375 restricted residential soil cleanup objective. Based upon these results, additional soil from the Spauldite Sheet Basement was excavated on Monday, March 1, 2010. Following this work, five confirmatory samples of the floor (38-006B, 38-007B, 38-008B, 38-011B, and 38-015B; Figure 2-12) were collected and submitted to TestAmerica for analysis of TCL PCBs using USEPA Method 8082. All samples were collected from the approximate locations of the initial confirmatory samples.

The analytical results from these samples were compared to the 6 NYCRR Part 375 restricted residential soil cleanup objectives, and are summarized in Table 3-2. These results indicated that all five samples achieved the 6 NYCRR Part 375 restricted residential soil cleanup objective for PCBs.

3.4 Confirmatory Samples of the K-Line Storm Sewer Excavation

On Thursday, March 4, 2010, twelve confirmatory samples of the floor and sidewalls of the K-Line Storm Sewer excavation (38-023 thru 38-034; Figure 2-12) were collected and submitted to TestAmerica for analysis of TCL PCBs using USEPA Method 8082, and TAL arsenic, barium and chromium using USEPA Method 6010/7000. Samples (38-023 and 38-025 thru 38-034) were collected from native, reddish brown silty clay, while sample (38-024) was collected from black, foundry sand overlying the K-Line Storm Sewer at the north end of the excavation.

The analytical results from these samples were compared to the 6 NYCRR Part 375 restricted residential soil cleanup objectives, and are summarized in Table 3-3. These results indicated that eleven of the twelve samples achieved the 6 NYCRR Part 375 restricted residential soil cleanup objective for PCBs. The analytical result from the remaining sample (38-034) contained PCBs at a concentration that only slightly exceeded the 6 NYCRR Part 375 restricted residential soil cleanup objective (1.2 ppm versus 1.0 ppm). Recognizing that an environmental easement will be placed

on the property following all remediation activities, the NYSDEC decided that additional excavation along the K-Line Storm Sewer was not required.

The analytical results from the confirmatory samples also indicated that the black, foundry sand overlying the K-Line Storm Sewer (38-024) contained concentrations of arsenic and barium that exceeded the 6 NYCRR Part 375 restricted residential soil cleanup objectives (Table 3-3). Because PCBs were not detected in this sample, additional excavation along the K-Line Storm Sewer was not completed as the arsenic and barium contamination is not related to SWMU 38.

3.5 Contaminated Soil Stockpiles

On Thursday, February 18, 2010, three composite samples from the soil and fill stockpiles (38-D001 and 38-D002 from Stockpile A, and 38-D003 from Stockpile B) generated during remediation of the Spauldite Sheet Basement were collected and submitted to TestAmerica for analysis of TCL PCBs using USEPA Method 8082 and hazardous waste characteristics of chromium using the Toxicity Characteristic Leaching Procedure (TCLP).

The analytical results from these samples were compared to the 6 NYCRR Part 371 hazardous waste criteria, and are summarized in Table 3-4. These results indicated that both stockpiles were non-hazardous with respect to PCBs and chromium.

On Thursday, February 25, 2010, three composite samples from the Spauldite Sheet Basement stockpiles (38-D001A and 38-D002A from Stockpile A, and 38-D003A from Stockpile B) were collected and submitted to TestAmerica for analysis of TCL PCBs using USEPA Method 8082, and hazardous waste characteristics of volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and metals using the Toxicity Characteristic Leaching Procedure (TCLP). In addition, one composite sample from each stockpile (38-D005 from Stockpile C and 38-D006 from Stockpile D) generated during remediation of the K-Line Storm Sewer were collected and submitted to TestAmerica for analysis of the same parameters.

The analytical results from these samples were compared to the 6 NYCRR Part 371 hazardous waste criteria, and are summarized in Table 3-4. These results indicated that the two

stockpiles generated during the remediation of the Spauldite Sheet Basement (Stockpiles A & B), and one of two stockpiles generated during the K-Line Storm Sewer remediation (Stockpile D), were non-hazardous. The second stockpile generated during the K-Line Storm Sewer remediation (Stockpile C) was hazardous for PCBs (i.e., PCB concentrations >50 ppm).

3.6 Concrete Stockpiles

On Thursday, February 18, 2010, one composite sample from stained concrete (38-D004) was collected and submitted to TestAmerica for analysis of TCL PCBs using USEPA Method 8082 and hazardous waste characteristics of chromium using the Toxicity Characteristic Leaching Procedure (TCLP).

The analytical results from this sample were compared to the 6 NYCRR Part 371 hazardous waste criteria, and are summarized in Table 3-5. These results indicated that the stained concrete was non-hazardous with respect to PCBs and chromium.

On Thursday, February 25, 2010, one composite sample from stained concrete (38-D004A) was collected and submitted to TestAmerica for analysis of TCL PCBs using USEPA Method 8082, and hazardous waste characteristics of volatile organic compounds, semivolatile organic compounds, and metals using the Toxicity Characteristic Leaching Procedure (TCLP).

The analytical results from this sample were compared to the 6 NYCRR Part 371 hazardous waste criteria, and are summarized in Table 3-5. These results indicated that the stained concrete was non-hazardous.

On Thursday, March 4, 2010, two composite samples of the visually clean concrete stockpile were collected and submitted to TestAmerica for analysis of TCL semivolatile organic compounds using USEPA Method 8270, TCL PCBs using USEPA Method 8082, and RCRA metals using USEPA Method 6010/7000.

The analytical results from these samples were compared to the 6 NYCRR Part 375 restricted residential soil cleanup objectives, and are summarized in Table 3-5. These results indicated that

the visually clean concrete achieved the 6 NYCRR Part 375 restricted residential soil cleanup objectives.

4.0 Conclusions

The remediation activities completed at the Spauldite Sheet Basement and K-Line Storm Sewer of Operable Unit 2 were designed to meet the remediation goals for the Spaulding Composites Site as described in the March 2003 Record of Decision/Statement of Basis (ROD/SOB). The remediation goals selected for the Site are described as follows:

- eliminate, to the extent practicable, the potential for ingestion of contaminated soils and sediment;
- eliminate, to the extent practicable, the generation of particulates from contaminated soils and vapor emissions from contaminated soils and groundwater that could result in inhalation exposures;
- eliminate, to the extent practicable, dermal contact with contaminated soils, sediment, groundwater and surface water;
- eliminate, to the extent practicable, off-site migration of PCB contaminated water; and
- eliminate, to the extent practicable, exceedances of applicable environmental quality standards related to releases of contaminants to groundwater.

The remediation activities completed at the Spauldite Sheet Basement and K-Line Storm Sewer have met the remediation goals for Operable Unit 2 as follows:

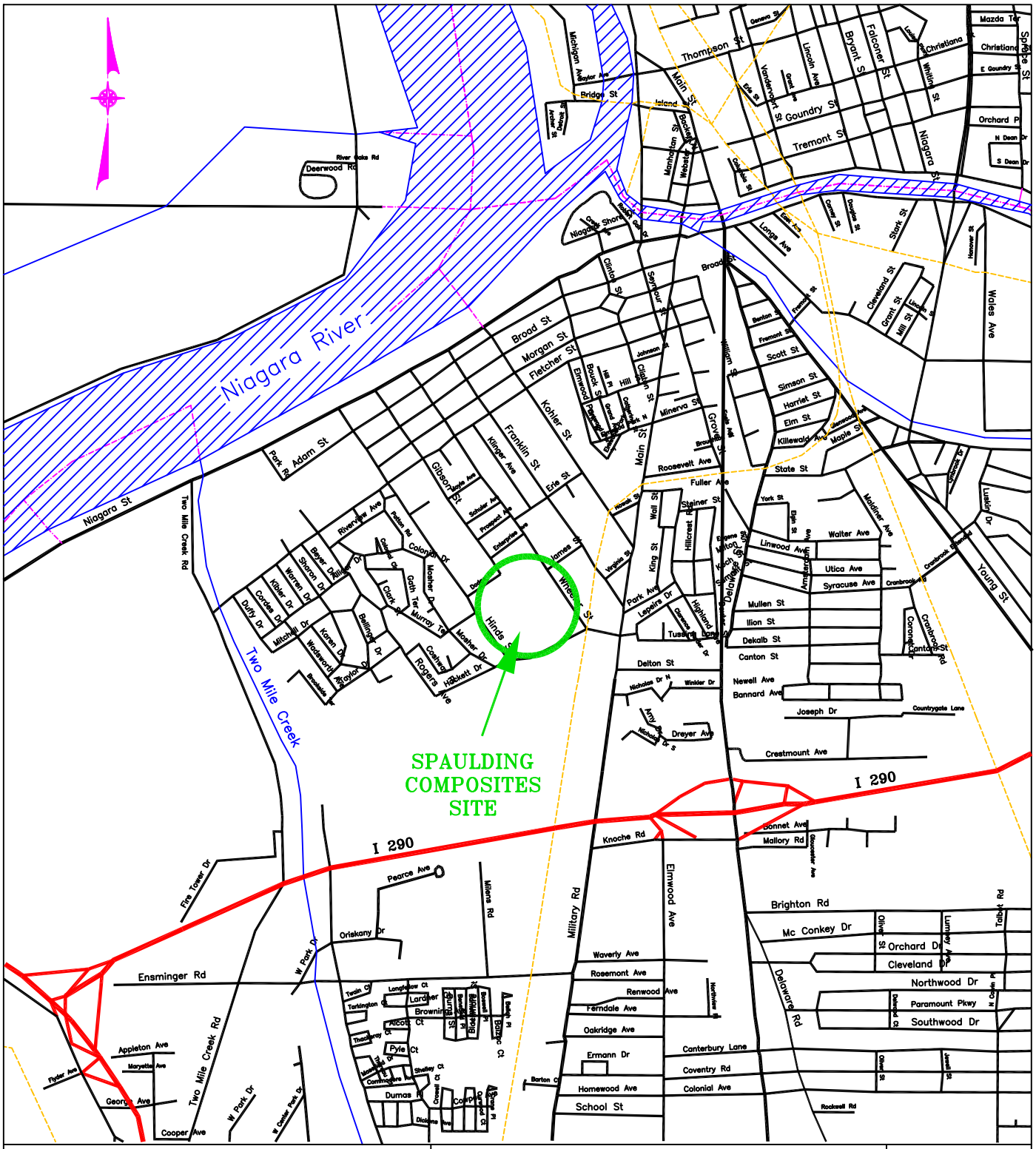
- PCB contaminated soils associated with Operable Unit 2 have been excavated and transported off-site for disposal at approved facilities;
- remediation-generated debris and waste materials have been transported off-site for disposal at approved facilities; and
- confirmatory soil sample results achieved the 6 NYCRR Part 375 restricted residential soil cleanup objective for PCBs (1 ppm).

The removal action completed at the Spauldite Sheet Basement and K-Line Storm Sewer, and described in this report, is consistent with the remedy presented in the March 2003 ROD/SOB.

The Spauldite Sheet Basement and K-Line Storm Sewer remediation was completed at a

cost of approximately $295,000 with the costs distributed as follows:

- project planning and start-up: $1,500;
- treatment system setup, basement pumpout and asbestos removal: $93,700;
- contaminated soil removal (excluding disposal costs): $92,000;
- analysis of confirmatory samples, soil for disposal, concrete and treatment system effluent: $14,700; and
- asbestos, debris and soil disposal: $94,000.



Tonawanda East & West Quadrangles; Buffalo East & West Quadrangles

Scale Depends on Final Plotted Size

SITE LOCATION MAP

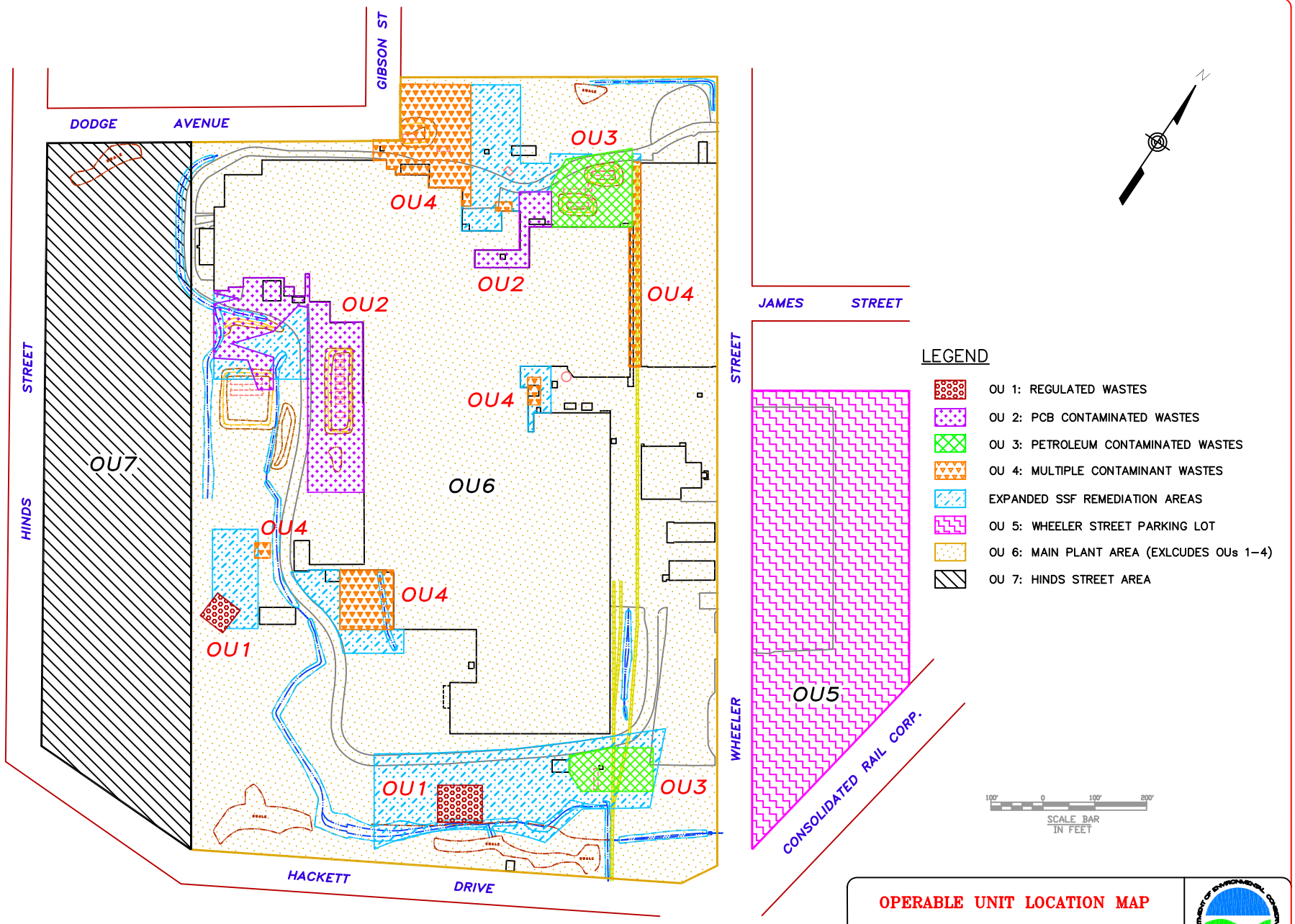
DIVISION OF ENVIRONMENTAL REMEDIATION

DATE: 01/25/01

DRAWING: Site Location Map.dwg

SITE: SPAULDING COMPOSITES SITE

FIGURE 1-1



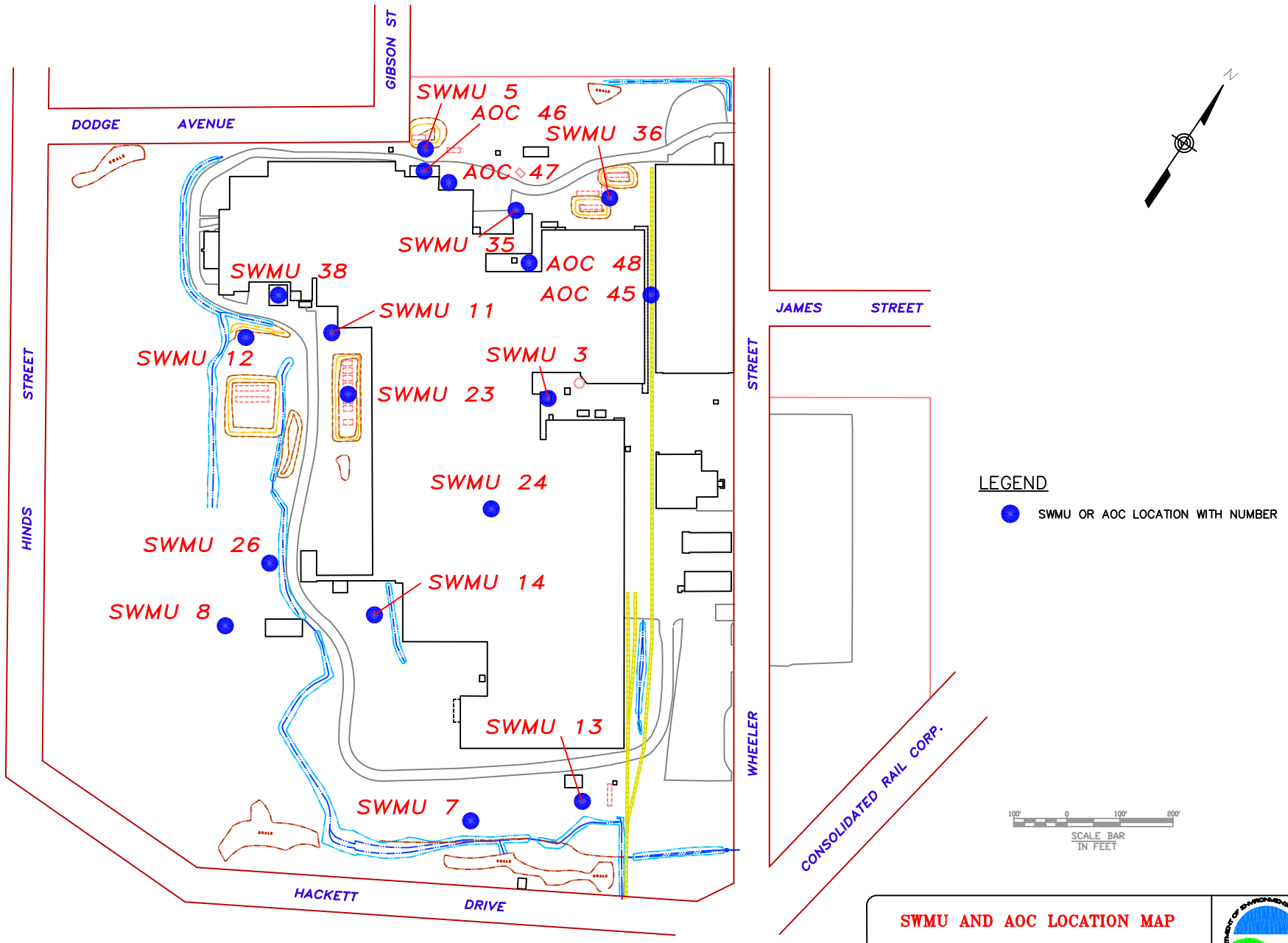
OPERABLE UNIT LOCATION MAP

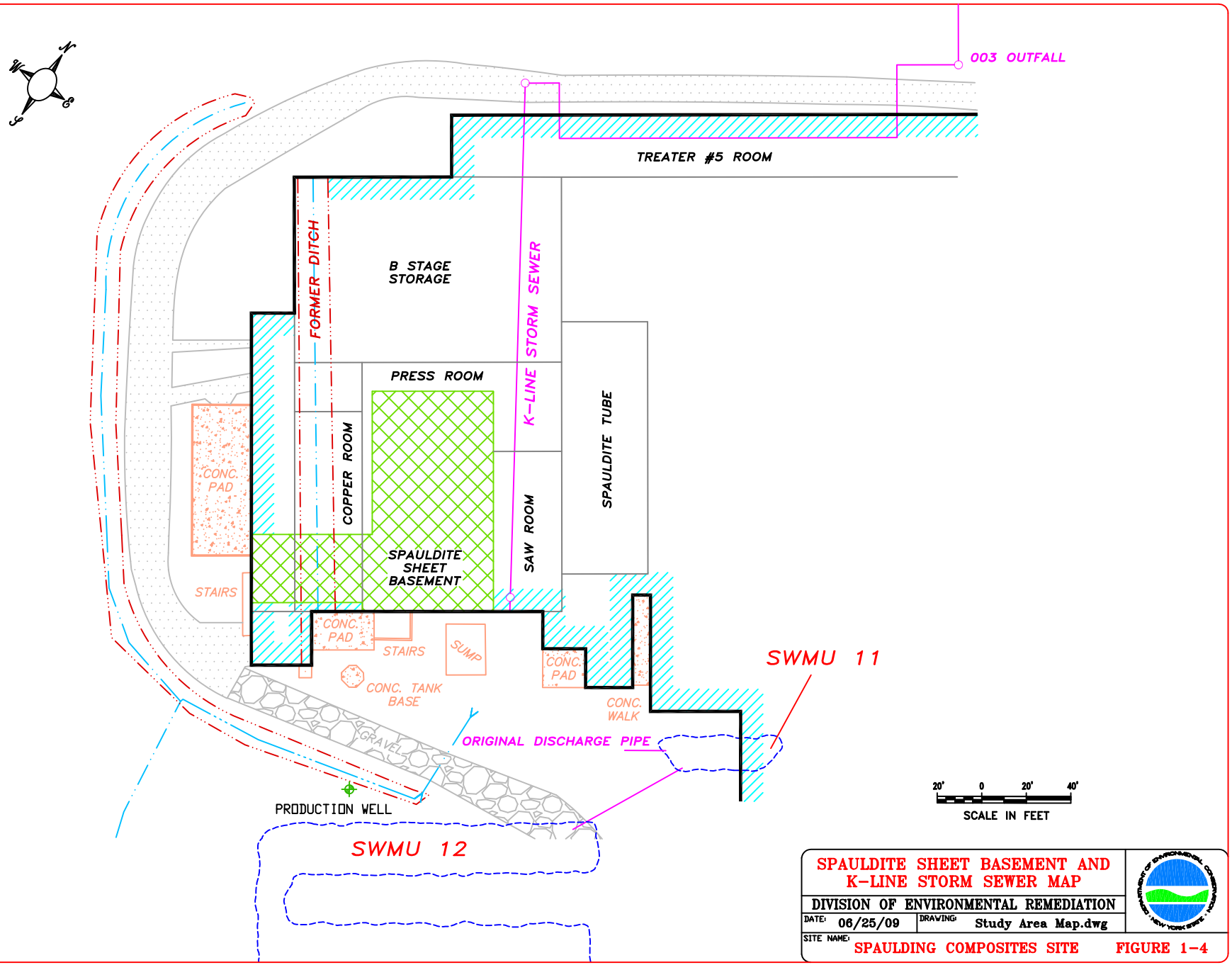
DIVISION OF ENVIRONMENTAL REMEDIATION

DATE: 11/05/08 DRAWING: OU & SWMU Map.dwg

SITE: SPAULDING COMPOSITES SITE

FIGURE 1-2


GIBSON ST
DODGE AVENUE
SWMU 5
AOC 46
SWMU 36
AOC 47
SWMU 35
AOC 48
AOC 45
SWMU 38
SWMU 11
SWMU 12
SWMU 3
SWMU 23
SWMU 24
SWMU 26
SWMU 14
SWMU 8
SWMU 13
SWMU 7
HINDS STREET
JAMES STREET
WHEELER STREET
CONSOLIDATED RAIL CORP.
HACKETT DRIVE
LEGEND
SWMU OR AOC LOCATION WITH NUMBER
100' 0 100' 200'
SCALE BAR IN FEET
SWMU AND AOC LOCATION MAP
DIVISION OF ENVIRONMENTAL REMEDIATION
DATE: 11/05/08
DRAWING: OU & SWMU Map.dwg
SITE: SPAULDING COMPOSITES SITE
FIGURE 1-3


003 OUTFALL
TREATER #5 ROOM
B STAGE STORAGE
FORMER DITCH
K-LINE STORM SEWER
PRESS ROOM
COPPER ROOM
SPAULDITE TUBE
SAW ROOM
CONC. PAD
SPAULDITE SHEET BASEMENT
STAIRS
CONC. PAD
STAIRS
SUMP
CONC. TANK BASE
CONC. PAD
CONC. WALK
SWMU 11
ORIGINAL DISCHARGE PIPE
GRAVEL
PRODUCTION WELL
SWMU 12
20' 0 20' 40'
SCALE IN FEET
SPAULDITE SHEET BASEMENT AND K-LINE STORM SEWER MAP
DIVISION OF ENVIRONMENTAL REMEDIATION
DATE: 06/25/09
DRAWING: Study Area Map.dwg
SITE NAME: SPAULDING COMPOSITES SITE
FIGURE 1-4

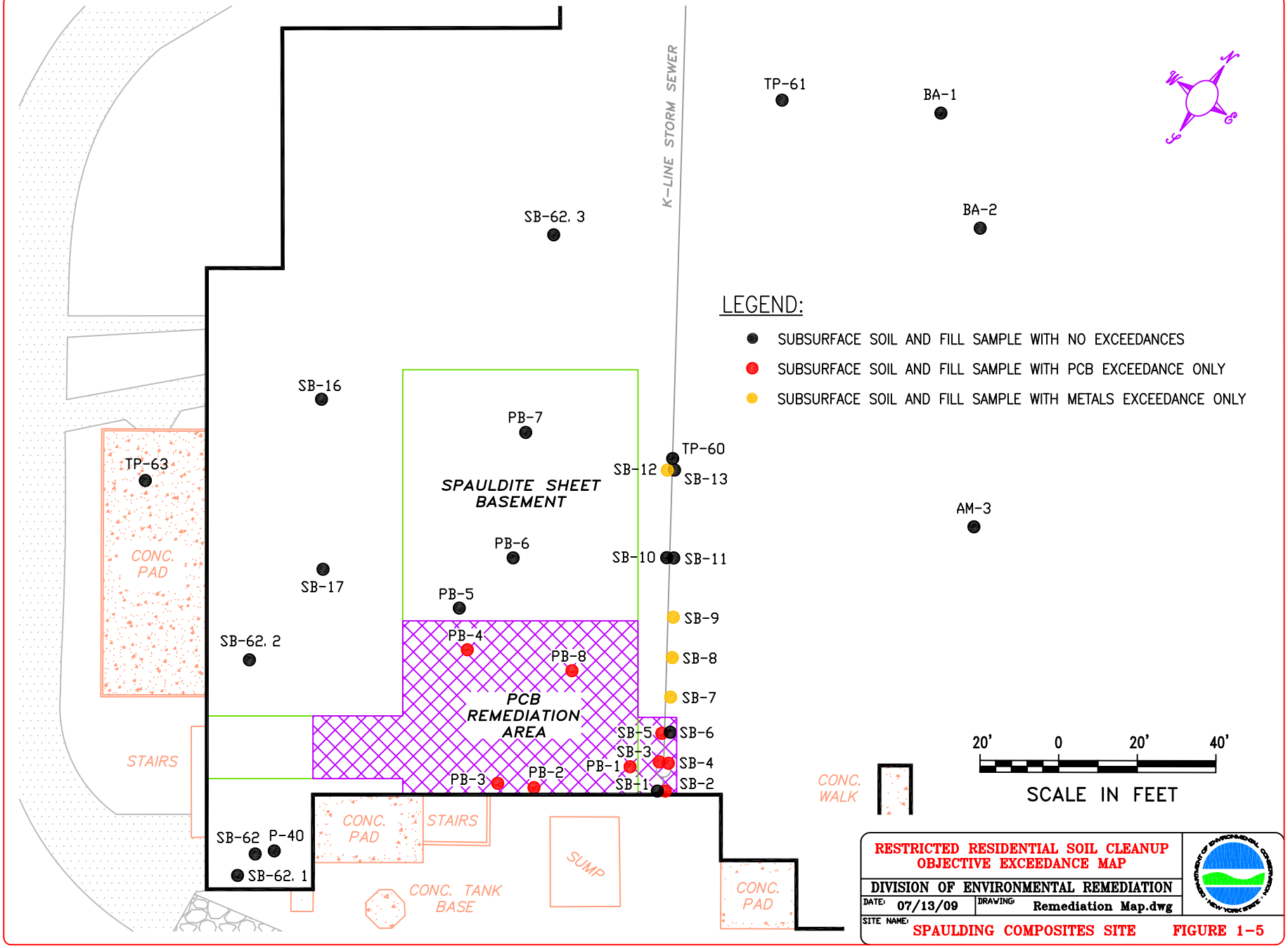

K-LINE STORM SEWER
TP-61
BA-1
BA-2
SB-62. 3
LEGEND:
SUBSURFACE SOIL AND FILL SAMPLE WITH NO EXCEEDANCES
SUBSURFACE SOIL AND FILL SAMPLE WITH PCB EXCEEDANCE ONLY
SUBSURFACE SOIL AND FILL SAMPLE WITH METALS EXCEEDANCE ONLY
SB-16
PB-7
TP-60
TP-63
SB-12
SB-13
SPAULDITE SHEET BASEMENT
AM-3
CONC. PAD
PB-6
SB-10
SB-11
SB-17
PB-5
SB-9
SB-62. 2
PB-4
PB-8
SB-8
PCB REMEDIATION AREA
SB-7
SB-5
SB-6
SB-3
STAIRS
PB-1
SB-4
PB-3
PB-2
SB-1
SB-2
CONC. WALK
20' 0 20' 40'
SCALE IN FEET
SB-62
P-40
CONC. PAD
STAIRS
SUMP
SB-62. 1
CONC. TANK BASE
CONC. PAD
RESTRICTED RESIDENTIAL SOIL CLEANUP OBJECTIVE EXCEEDANCE MAP
DIVISION OF ENVIRONMENTAL REMEDIATION
DATE: 07/13/09
DRAWING: Remediation Map.dwg
SITE NAME: SPAULDING COMPOSITES SITE
FIGURE 1-5

Figure 2-1. Photograph showing the removal of the concrete floor of the Spauldite Sheet Basement. View looking south. Photograph taken by Brian Hutzler on February 9, 2010.

Figure 2-2. Photograph showing the removal of the concrete floor of the Spauldite Sheet Basement. View looking south. Photograph taken by Brian Hutzler on February 9, 2010.

Figure 2-3. Photograph showing the removal of the east foundation wall of the Spauldite Sheet Basement. View looking northeast. Photograph taken by Brian Hutzler on February 11, 2010.

Figure 2-4. Photograph showing the portion of the east foundation wall that was removed during the Spauldite Sheet Basement and K-Line Storm Sewer remediation. View looking southwest. Photograph taken by Glenn May on March 4, 2010.

Figure 2-5. Photograph showing NAPL contaminated fill along the west foundation wall of the Spauldite Sheet Basement. Photograph taken by Brian Hutzler on February 12, 2010.

Figure 2-6. Photograph showing NAPL in the bedding along a floor drain under the Spauldite Sheet Basement. Photograph taken by Brian Hutzler on February 12, 2010.

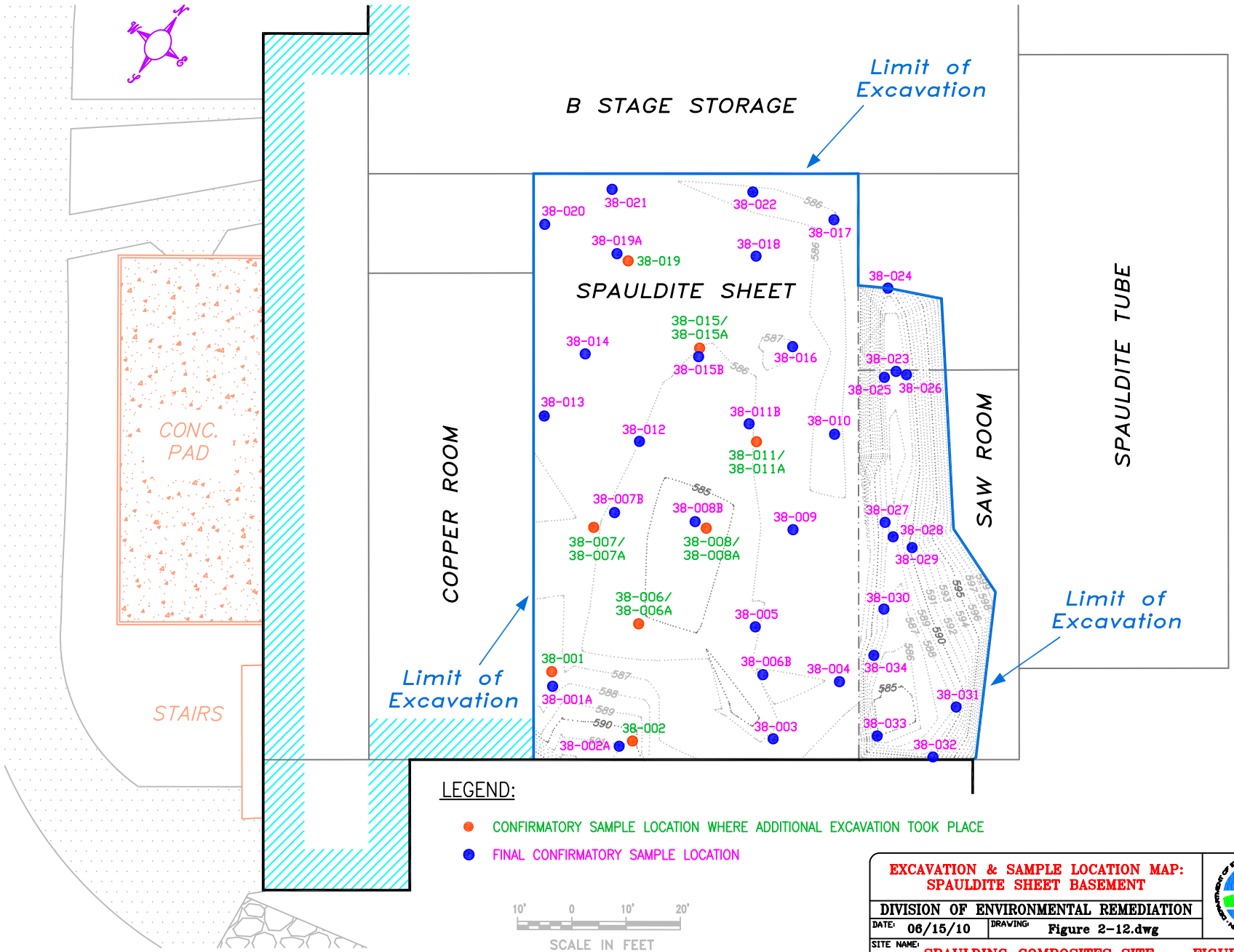
Figure 2-7. Photograph showing NAPL contaminated bedding along a floor drain under the Spauldite Sheet Basement. Photograph taken by Brian Hutzler on February 12, 2010.

Figure 2-8. Photograph showing the excavation of the basement sump along the south foundation wall of the Spauldite Sheet Basement. View looking southwest. Photograph taken by Brian Hutzler on February 16, 2010.

Figure 2-9. Photograph showing the native silty clay underlying the former basement sump along the south foundation wall of the Spauldite Sheet Basement. View looking southeast. Photograph taken by Brian Hutzler on February 16, 2010.

Figure 2-10. Photograph showing the completion of initial excavation activities of the Spauldite Sheet Basement. View looking northwest. Photograph taken by Brian Hutzler on February 17, 2010.

Figure 2-11. Photograph showing the completion of initial excavation activities of the Spauldite Sheet Basement. View looking slightly northwest. Photograph taken by Brian Hutzler on February 17, 2010.


B STAGE STORAGE
Limit of Excavation
SPAULDITE SHEET
SPAULDITE TUBE
COPPER ROOM
SAW ROOM
CONC. PAD
STAIRS
Limit of Excavation
Limit of Excavation
38-020
38-021
38-022
38-017
38-019A
38-019
38-018
38-024
38-015/ 38-015A
38-014
38-016
38-023
38-015B
38-025
38-026
38-013
38-011B
38-010
38-012
38-011/ 38-011A
38-007B
38-008B
38-009
38-027
38-028
38-007/ 38-007A
38-008/ 38-008A
38-029
38-006/ 38-006A
38-030
38-005
38-001
38-006B
38-004
38-034
38-001A
38-031
38-002
38-003
38-033
38-002A
38-032
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LEGEND:
CONFIRMATORY SAMPLE LOCATION WHERE ADDITIONAL EXCAVATION TOOK PLACE
FINAL CONFIRMATORY SAMPLE LOCATION
10' 0 10' 20'
SCALE IN FEET
EXCAVATION & SAMPLE LOCATION MAP:
SPAULDITE SHEET BASEMENT
DIVISION OF ENVIRONMENTAL REMEDIATION
DATE: 06/15/10
DRAWING: Figure 2-12.dwg
SITE NAME: SPAULDING COMPOSITES SITE
FIGURE 2-12

Figure 2-13. Photograph showing the Spauldite Sheet Basement following additional excavation. View looking southwest. Photograph taken by Glenn May on February 24, 2010.

Figure 2-14. Photograph showing the Spauldite Sheet Basement following additional excavation. View looking northwest. Photograph taken by Glenn May on February 24, 2010.

Figure 2-15. Photograph showing the completed excavation of the Spauldite Sheet Basement. View looking northwest. Photograph taken by Glenn May on March 4, 2010.

Figure 2-16. Photograph showing the ramp into the Spauldite Sheet Basement for excavator access. This ramp was left in place following remedial activities. View looking southwest. Photograph taken by Glenn May on March 4, 2010.

Figure 2-17. Photograph showing the start of excavation along the K-Line Storm Sewer. View looking slightly southeast. Photograph taken by Brian Hutzler on February 19, 2010.

Figure 2-18. Photograph showing the K-Line Storm Sewer and the black fill material overlying the sewer. View looking west. Photograph taken by Brian Hutzler on February 19, 2010.

Figure 2-19. Photograph showing the excavation of the southern portion of the K-Line Storm Sewer. View looking slightly southeast. Photograph taken by Brian Hutzler on February 19, 2010.

Figure 2-20. Photograph showing the completed excavation along the K-Line Storm Sewer. View looking slightly southeast. Photograph taken by Glenn May on March 4, 2010.

Figure 2-21. Photograph showing one of two soil and fill stockpiles from the K-Line Storm Sewer excavation. View looking southwest. Photograph taken by Glenn May on February 24, 2010.

Figure 2-22. Photograph showing NAPL contaminated soil under the K-Line Storm Sewer where it exits the south foundation wall of the Saw Room. Photograph taken by Brian Hutzler on February 19, 2010.

Figure 2-23. Photograph showing NAPL droplets on water in the K-Line Storm Sewer excavation. Photograph taken by Brian Hutzler on February 19, 2010.

Figure 2-24. Photograph showing the south foundation wall of the Saw Room following removal of the K-Line Storm Sewer. View looking south. Photograph taken by Brian Hutzler on February 19, 2010.

TABLE 2-1
SPAULDING COMPOSITES SITE
SUMMARY OF NON-HAZARDOUS WASTE DISPOSAL FROM THE SPAULDITE SHEET BASEMENT AND K-LINE STORM SEWER REMEDIATION

Manifest or Ticket Number	Date	Waste Type	Weight (tons)	Transporter	Disposal Location
566905	02/01/10	Asbestos Piping	0.67	Waste Management	Allied, Niagara Falls, NY
391025	03/01/10	Debris	15.82	Allied	Allied, Niagara Falls, NY
392907	03/29/10	Contaminated Soil	19.88	Iroquois Bar	Allied, Niagara Falls, NY
392908	03/29/10	Contaminated Soil	21.82	Iroquois Bar	Allied, Niagara Falls, NY
392909	03/29/10	Contaminated Soil	22.25	Iroquois Bar	Allied, Niagara Falls, NY
392913	03/29/10	Contaminated Soil	21.93	Iroquois Bar	Allied, Niagara Falls, NY
392919	03/29/10	Contaminated Soil	23.39	Iroquois Bar	Allied, Niagara Falls, NY
392920	03/29/10	Contaminated Soil	20.89	Iroquois Bar	Allied, Niagara Falls, NY
392922	03/29/10	Contaminated Soil	22.99	Iroquois Bar	Allied, Niagara Falls, NY
392923	03/29/10	Contaminated Soil	26.60	Iroquois Bar	Allied, Niagara Falls, NY
392935	03/29/10	Contaminated Soil	21.53	Iroquois Bar	Allied, Niagara Falls, NY
392936	03/29/10	Contaminated Soil	23.88	Iroquois Bar	Allied, Niagara Falls, NY
392937	03/29/10	Contaminated Soil	24.38	Iroquois Bar	Allied, Niagara Falls, NY
392938	03/29/10	Contaminated Soil	17.81	Iroquois Bar	Allied, Niagara Falls, NY
392939	03/29/10	Contaminated Soil	20.53	Iroquois Bar	Allied, Niagara Falls, NY
392942	03/29/10	Contaminated Soil	20.20	Iroquois Bar	Allied, Niagara Falls, NY
392945	03/29/10	Contaminated Soil	17.05	Iroquois Bar	Allied, Niagara Falls, NY
392949	03/29/10	Contaminated Soil	17.74	Iroquois Bar	Allied, Niagara Falls, NY
392952	03/29/10	Contaminated Soil	23.67	Iroquois Bar	Allied, Niagara Falls, NY
392954	03/29/10	Contaminated Soil	18.90	Iroquois Bar	Allied, Niagara Falls, NY
392961	03/29/10	Contaminated Soil	24.79	Iroquois Bar	Allied, Niagara Falls, NY
392963	03/29/10	Contaminated Soil	19.83	Iroquois Bar	Allied, Niagara Falls, NY
392965	03/29/10	Contaminated Soil	21.69	Iroquois Bar	Allied, Niagara Falls, NY
392967	03/29/10	Contaminated Soil	25.03	Iroquois Bar	Allied, Niagara Falls, NY
392968	03/29/10	Contaminated Soil	23.58	Iroquois Bar	Allied, Niagara Falls, NY
392970	03/29/10	Contaminated Soil	24.09	Iroquois Bar	Allied, Niagara Falls, NY
392972	03/29/10	Contaminated Soil	24.61	Iroquois Bar	Allied, Niagara Falls, NY
392976	03/29/10	Contaminated Soil	23.08	Iroquois Bar	Allied, Niagara Falls, NY
392977	03/29/10	Contaminated Soil	21.96	Iroquois Bar	Allied, Niagara Falls, NY
392979	03/29/10	Contaminated Soil	25.56	Iroquois Bar	Allied, Niagara Falls, NY
392986	03/29/10	Contaminated Soil	23.34	Iroquois Bar	Allied, Niagara Falls, NY
392988	03/29/10	Contaminated Soil	22.03	Iroquois Bar	Allied, Niagara Falls, NY
392991	03/29/10	Contaminated Soil	21.99	Iroquois Bar	Allied, Niagara Falls, NY
392993	03/29/10	Contaminated Soil	24.12	Iroquois Bar	Allied, Niagara Falls, NY
392994	03/29/10	Contaminated Soil	22.76	Iroquois Bar	Allied, Niagara Falls, NY
392995	03/29/10	Contaminated Soil	22.25	Iroquois Bar	Allied, Niagara Falls, NY
392996	03/29/10	Contaminated Soil	26.94	Iroquois Bar	Allied, Niagara Falls, NY
392998	03/29/10	Contaminated Soil	28.52	Iroquois Bar	Allied, Niagara Falls, NY
393002	03/29/10	Contaminated Soil	22.86	Iroquois Bar	Allied, Niagara Falls, NY
393003	03/29/10	Contaminated Soil	25.12	Iroquois Bar	Allied, Niagara Falls, NY
393028	03/30/10	Contaminated Soil	21.73	Iroquois Bar	Allied, Niagara Falls, NY
393034	03/30/10	Contaminated Soil	22.24	Iroquois Bar	Allied, Niagara Falls, NY
393035	03/30/10	Contaminated Soil	21.00	Iroquois Bar	Allied, Niagara Falls, NY
393044	03/30/10	Contaminated Soil	23.61	Iroquois Bar	Allied, Niagara Falls, NY
393048	03/30/10	Contaminated Soil	25.64	Iroquois Bar	Allied, Niagara Falls, NY
393049	03/30/10	Contaminated Soil	23.24	Iroquois Bar	Allied, Niagara Falls, NY
393057	03/30/10	Contaminated Soil	21.82	Iroquois Bar	Allied, Niagara Falls, NY
393060	03/30/10	Contaminated Soil	24.56	Iroquois Bar	Allied, Niagara Falls, NY
393064	03/30/10	Contaminated Soil	24.91	Iroquois Bar	Allied, Niagara Falls, NY

TABLE 2-1
SPAULDING COMPOSITES SITE
SUMMARY OF NON-HAZARDOUS WASTE DISPOSAL FROM THE SPAULDITE SHEET BASEMENT AND K-LINE STORM SEWER REMEDIATION

Manifest or Ticket Number	Date	Waste Type	Weight (tons)	Transporter	Disposal Location
393069	03/30/10	Contaminated Soil	27.06	Iroquois Bar	Allied, Niagara Falls, NY
393074	03/30/10	Contaminated Soil	21.79	Iroquois Bar	Allied, Niagara Falls, NY
393077	03/30/10	Contaminated Soil	22.69	Iroquois Bar	Allied, Niagara Falls, NY
393078	03/30/10	Contaminated Soil	26.66	Iroquois Bar	Allied, Niagara Falls, NY
393081	03/30/10	Contaminated Soil	23.84	Iroquois Bar	Allied, Niagara Falls, NY
393087	03/30/10	Contaminated Soil	20.66	Iroquois Bar	Allied, Niagara Falls, NY
393096	03/30/10	Contaminated Soil	20.50	Iroquois Bar	Allied, Niagara Falls, NY
393097	03/30/10	Contaminated Soil	20.19	Iroquois Bar	Allied, Niagara Falls, NY
393099	03/30/10	Contaminated Soil	21.21	Iroquois Bar	Allied, Niagara Falls, NY
393103	03/30/10	Contaminated Soil	23.83	Iroquois Bar	Allied, Niagara Falls, NY
393108	03/30/10	Contaminated Soil	25.54	Iroquois Bar	Allied, Niagara Falls, NY
393112	03/30/10	Contaminated Soil	22.18	Iroquois Bar	Allied, Niagara Falls, NY
393114	03/30/10	Contaminated Soil	21.56	Iroquois Bar	Allied, Niagara Falls, NY
393115	03/30/10	Contaminated Soil	20.77	Iroquois Bar	Allied, Niagara Falls, NY
393119	03/30/10	Contaminated Soil	21.46	Iroquois Bar	Allied, Niagara Falls, NY
393146	03/31/10	Contaminated Soil	22.00	Iroquois Bar	Allied, Niagara Falls, NY
393148	03/31/10	Contaminated Soil	21.36	Iroquois Bar	Allied, Niagara Falls, NY
393162	03/31/10	Contaminated Soil	28.09	Iroquois Bar	Allied, Niagara Falls, NY
393167	03/31/10	Contaminated Soil	26.65	Iroquois Bar	Allied, Niagara Falls, NY
393181	03/31/10	Contaminated Soil	20.07	Iroquois Bar	Allied, Niagara Falls, NY
393185	03/31/10	Contaminated Soil	23.38	Iroquois Bar	Allied, Niagara Falls, NY
393196	03/31/10	Contaminated Soil	30.56	Iroquois Bar	Allied, Niagara Falls, NY
393199	03/31/10	Contaminated Soil	11.75	Iroquois Bar	Allied, Niagara Falls, NY
			1,608.63	**Total Tonnage**	

TABLE 2-2
SPAULDING COMPOSITES SITE
SUMMARY OF HAZARDOUS WASTE DISPOSAL FROM THE SPAULDITE SHEET BASEMENT AND K-LINE STORM SEWER REMEDIATION

Manifest Number	Date	Waste Type	Weight (tons)	Transporter	Disposal Location
007052076	03/15/10	Contaminated Soil	40.93	Price Trucking	CWM, Model City, NY
007052077	03/15/10	Contaminated Soil	38.22	Price Trucking	CWM, Model City, NY
007052078	03/15/10	Contaminated Soil	34.32	Price Trucking	CWM, Model City, NY
007052079	03/15/10	Contaminated Soil	33.45	Price Trucking	CWM, Model City, NY
007052080	03/15/10	Contaminated Soil	32.31	Price Trucking	CWM, Model City, NY
007052081	03/15/10	Contaminated Soil	30.15	Price Trucking	CWM, Model City, NY
007052082	03/15/10	Contaminated Soil	33.04	Price Trucking	CWM, Model City, NY
007052083	03/15/10	Contaminated Soil	36.00	Price Trucking	CWM, Model City, NY
007052084	03/16/10	Contaminated Soil	35.72	Price Trucking	CWM, Model City, NY
007052085	03/16/10	Contaminated Soil	39.94	Price Trucking	CWM, Model City, NY
007052086	03/16/10	Contaminated Soil	34.67	Price Trucking	CWM, Model City, NY
007052087	03/16/10	Contaminated Soil	33.96	Price Trucking	CWM, Model City, NY
007052088	03/16/10	Contaminated Soil	19.86	Price Trucking	CWM, Model City, NY
Total Tonnage:			**442.57**		

TABLE 3-1
SPAULDING COMPOSITES SITE
ANALYTICAL RESULTS FOR SLUDGE SAMPLES COLLECTED FROM THE SPAULDITE SHEET BASEMENT

Sample Number Date Sampled Sample Location Sample Description	NYSDEC Part 371 Haz. Waste Criterion	NYSDEC Part 375 Restricted Residential	S-1 04/10/09 Basement Sludge	S-2 04/10/09 Basement Sludge	DS-1 04/17/09 Basement Sludge	2010-013 01/25/10 Basement Sludge
PCBs (mg/kg or ppm)						
Aroclor 1242			ND (0.0037)	ND (0.0043)	ND (0.0021)	ND (0.28)
Aroclor 1248			29.0	72.0	20.0	0.64
Aroclor 1254			ND (0.0083)	ND (0.0095)	ND (0.0047)	ND (0.28)
Aroclor 1260			ND (0.0066)	ND (0.0076)	ND (0.0037)	1.5
Total PCBs	50	1.0	**29.0**	**72.0**	**20.0**	**2.14**

Notes:
ND = Not detected above the laboratory method detection limit (MDL) or reporting limit (RL) given in parentheses.
Shaded = Result exceeds the 6 NYCRR Part 371 hazardous waste criterion.
Shaded = Result exceeds the 6 NYCRR Part 375 restricted residential soil cleanup objectives.

TABLE 3-2
SPAULDING COMPOSITES SITE
ANALYTICAL RESULTS OF CONFIRMATORY SAMPLES COLLECTED FROM THE SPAULDITE SHEET BASEMENT

Sample Number Date Sampled Sample Location Sample Description	NYSDEC Part 375 Restricted Residential	38-001 02/18/10 Floor RBSC	38-001A 02/24/10 Floor RBSC	38-002 02/18/10 Floor RBSC	38-002A 02/24/10 Floor RBSC	38-003 02/18/10 Floor RBSC	38-004 02/18/10 Floor RBSC	38-005 02/18/10 Floor RBSC
PCBs (mg/kg or ppm)								
Aroclor 1242		ND (0.24)	ND (0.25)	ND (0.23)	ND (0.27)	ND (0.26)	ND (0.22)	ND (0.22)
Aroclor 1248		1.2	ND (0.25)	1.4	0.071 J	0.79	0.63	0.63
Aroclor 1254		ND (0.24)	ND (0.25)	ND (0.23)	ND (0.27)	ND (0.26)	ND (0.22)	ND (0.22)
Aroclor 1260		ND (0.24)	ND (0.25)	ND (0.23)	ND (0.27)	ND (0.26)	ND (0.22)	ND (0.22)
Total PCBs	1.0	**1.2**	ND (0.25)	**1.4**	0.071 J	0.79	0.63	0.63

Sample Number Date Sampled Sample Location Sample Description	NYSDEC Part 375 Restricted Residential	38-006 02/18/10 Floor RBSC	38-006A 02/25/10 Floor RBSC	38-006B 03/01/10 Floor RBSC	38-007 02/18/10 Floor RBSC	38-007A 02/25/10 Floor RBSC	38-007B 03/01/10 Floor RBSC	38-008 02/18/10 Floor RBSC
PCBs (mg/kg or ppm)								
Aroclor 1242		ND (0.26)	ND (0.28)	ND (0.020)	ND (0.26)	ND (1.2)	ND (0.018)	ND (0.25)
Aroclor 1248		1.5	2.4	ND (0.020)	2.0	9.6	ND (0.018)	1.8
Aroclor 1254		ND (0.26)	ND (0.28)	ND (0.020)	ND (0.26)	ND (1.2)	ND (0.018)	ND (0.25)
Aroclor 1260		ND (0.26)	ND (0.28)	ND (0.020)	ND (0.26)	ND (1.2)	ND (0.018)	ND (0.25)
Total PCBs	1.0	**1.5**	**2.4**	ND (0.020)	**2.0**	**9.6**	ND (0.018)	**1.8**

Sample Number Date Sampled Sample Location Sample Description	NYSDEC Part 375 Restricted Residential	38-008A 02/25/10 Floor RBSC	38-008B 03/01/10 Floor RBSC	38-009 02/18/10 Floor RBSC	38-010 02/18/10 Floor RBSC	38-011 02/18/10 Floor RBSC	38-011A 02/25/10 Floor RBSC	38-011B 03/01/10 Floor RBSC
PCBs (mg/kg or ppm)								
Aroclor 1242		ND (0.25)	ND (0.018)	ND (0.21)	ND (0.23)	ND (0.23)	ND (1.2)	ND (0.020)
Aroclor 1248		2.9	0.025	0.26	0.12 J	2.2	6.4	0.010 J
Aroclor 1254		ND (0.25)	ND (0.018)	ND (0.21)	ND (0.23)	ND (0.23)	ND (1.2)	ND (0.020)
Aroclor 1260		ND (0.25)	ND (0.018)	ND (0.21)	ND (0.23)	ND (0.23)	ND (1.2)	ND (0.020)
Total PCBs	1.0	**2.9**	0.025	0.26	0.12 J	**2.2**	**6.4**	0.010 J

TABLE 3-2
SPAULDING COMPOSITES SITE
ANALYTICAL RESULTS OF CONFIRMATORY SAMPLES COLLECTED FROM THE SPAULDITE SHEET BASEMENT

Sample Number Date Sampled Sample Location Sample Description	NYSDEC Part 375 Restricted Residential	38-012 02/18/10 Floor RBSC	38-013 02/18/10 Floor RBSC	38-014 02/18/10 Floor RBSC	38-015 02/18/10 Floor RBSC	38-015A 02/25/10 Floor RBSC	38-015B 03/01/10 Floor RBSC	38-016 02/18/10 Floor RBSC
PCBs (mg/kg or ppm)								
Aroclor 1242		ND (0.25)	ND (0.23)	ND (0.25)	ND (0.26)	ND (0.25)	ND (0.019)	ND (0.21)
Aroclor 1248		0.86	0.10 J	0.17 J	3.4	1.9	0.15	0.42
Aroclor 1254		ND (0.25)	ND (0.23)	ND (0.25)	ND (0.26)	ND (0.25)	ND (0.019)	ND (0.21)
Aroclor 1260		ND (0.25)	ND (0.23)	ND (0.25)	ND (0.26)	ND (0.25)	ND (0.019)	ND (0.21)
Total PCBs	1.0	0.86	0.10 J	0.17 J	**3.4**	**1.9**	0.15	0.42

Sample Number Date Sampled Sample Location Sample Description	NYSDEC Part 375 Restricted Residential	38-017 02/18/10 Floor RBSC	38-018 02/18/10 Floor RBSC	38-019 02/18/10 Floor RBSC	38-019A 02/25/10 Floor RBSC	38-020 02/18/10 Floor RBSC	38-021 02/18/10 Floor RBSC	38-022 02/18/10 Floor RBSC
PCBs (mg/kg or ppm)								
Aroclor 1242		ND (0.28)	ND (0.21)	ND (0.27)	ND (0.24)	ND (0.21)	ND (0.25)	ND (0.26)
Aroclor 1248		ND (0.28)	0.20 J	1.6	ND (0.24)	0.74	0.13 J	0.55
Aroclor 1254		ND (0.28)	ND (0.21)	ND (0.27)	ND (0.24)	ND (0.21)	ND (0.25)	ND (0.26)
Aroclor 1260		ND (0.28)	ND (0.21)	ND (0.27)	ND (0.24)	ND (0.21)	ND (0.25)	ND (0.26)
Total PCBs	1.0	ND (0.28)	0.20 J	**1.6**	ND (0.24)	0.74	0.13 J	0.55

Notes:
RBSC = Reddish brown silty clay.
J = Compound reported at an estimated concentration below the sample quantitation limit.
ND = Not detected above the laboratory method detection limit (MDL) or reporting limit (RL) given in parentheses.
Shaded = Result exceeds the 6 NYCRR Part 375 restricted residential soil cleanup objectives.
Shaded = Final confirmatory sample results.

TABLE 3-3
SPAULDING COMPOSITES SITE
ANALYTICAL RESULTS OF CONFIRMATORY SAMPLES COLLECTED FROM THE K-LINE STORM SEWER

Sample Number **Date Sampled** **Sample Location** **Sample Description**	**NYSDEC Part 375 Restricted Residential**	**38-023 03/04/10 Floor RBSC**	**38-024 03/04/10 Sidewall Fill**	**38-025 03/04/10 Sidewall RBSC**	**38-026 03/04/10 Sidewall RBSC**	**38-027 03/04/10 Sidewall RBSC**	**38-028 03/04/10 Floor RBSC**
PCBs (mg/kg or ppm)							
Aroclor 1242		ND (0.25)	ND (0.38)	ND (0.24)	ND (0.24)	ND (0.20)	ND (0.24)
Aroclor 1248		ND (0.25)	ND (0.38)	ND (0.24)	ND (0.24)	0.093 J	ND (0.24)
Aroclor 1254		ND (0.25)	ND (0.38)	ND (0.24)	ND (0.24)	ND (0.20)	ND (0.24)
Aroclor 1260		ND (0.25)	ND (0.38)	ND (0.24)	ND (0.24)	ND (0.20)	ND (0.24)
Total PCBs	1.0	ND (0.25)	ND (0.38)	ND (0.24)	ND (0.24)	0.093 J	ND (0.24)
Metals (mg/kg or ppm)							
Arsenic	16	2.8	**66.7**	3.1	2.6	1.1 J	3.0
Barium	400	117	**467**	83.3	87.2	48.1	87.1
Chromium	180	10.4	60.7	11.1	12.0	8.97	14.1

Sample Number **Date Sampled** **Sample Location** **Sample Description**	**NYSDEC Part 375 Restricted Residential**	**38-029 03/04/10 Sidewall RBSC**	**38-030 03/04/10 Sidewall RBSC**	**38-031 03/04/10 Sidewall RBSC**	**38-032 03/04/10 Sidewall RBSC**	**38-033 03/04/10 Sidewell RBSC**	**38-034 03/04/10 Floor RBSC**
PCBs (mg/kg or ppm)							
Aroclor 1242		ND (0.24)	ND (0.24)	ND (0.25)	ND (0.27)	ND (0.21)	ND (0.25)
Aroclor 1248		ND (0.24)	ND (0.24)	ND (0.25)	ND (0.27)	0.19 J	1.2
Aroclor 1254		ND (0.24)	ND (0.24)	ND (0.25)	ND (0.27)	ND (0.21)	ND (0.25)
Aroclor 1260		ND (0.24)	ND (0.24)	ND (0.25)	ND (0.27)	ND (0.21)	ND (0.25)
Total PCBs	1.0	ND (0.24)	ND (0.24)	ND (0.25)	ND (0.27)	0.19 J	**1.2**
Metals (mg/kg or ppm)							
Arsenic	16	3.7	3.0	3.9	4.6	2.5	3.1
Barium	400	91.9	91.5	105	163	97.5	87.1
Chromium	180	18.7	11.0	19.5	18.3	9.78	10.7

Notes:
RBSC = Reddish brown silty clay.
J = Compound reported at an estimated concentration below the sample quantitation limit.
ND = Not detected above the laboratory method detection limit (MDL) or reporting limit (RL) given in parentheses.
Shaded = Result exceeds the 6 NYCRR Part 375 restricted residential soil cleanup objectives.

TABLE 3-4
SPAULDING COMPOSITES SITE
ANALYTICAL RESULTS OF CONTAMINATED SOIL STOCKPILES

Sample Number Date Sampled Sample Location Sample Description	NYSDEC Part 371 Haz. Waste Criterion	38-D001 02/18/10 Stockpile A Soil & Fill	38-D001A 02/25/10 Stockpile A Soil & Fill	38-D002 02/18/10 Stockpile A Soil & Fill	38-D002A 02/25/10 Stockpile A Soil & Fill	38-D003 02/18/10 Stockpile B Soil & Fill
TCLP Volatile Organic Compounds (ug/L or ppb)						
None Detected		NA		NA		NA
TCLP Semivolatile Organic Compounds (ug/L or ppb)						
None Detected		NA		NA		NA
Total PCBs (mg/kg or ppm)						
Aroclor 1242		ND (1.3)	ND (1.8)	ND (0.22)	ND (2.0)	ND (1.2)
Aroclor 1248		7.0	21.0	4.0	14.0	11.0
Aroclor 1254		ND (1.3)	ND (1.8)	ND (0.22)	ND (2.0)	ND (1.2)
Aroclor 1260		ND (1.3)	ND (1.8)	ND (0.22)	ND (2.0)	ND (1.2)
Total PCBs	50.0	7.0	21.0	4.0	14.0	11.0
TCLP Metals (mg/L or ppm)						
Arsenic	5.0	NA	ND (0.05)	NA	ND (0.05)	NA
Barium	100.0	"	1.38 BT, B	"	2.46 BT, B	"
Cadmium	1.0	"	0.0059	"	0.0079	"
Chromium	5.0	ND (0.004)	0.0050	ND (0.004)	0.0046	ND (0.004)
Lead	5.0	NA	0.0457	NA	0.0117	NA
Mercury	0.2	"	ND (0.0002)	"	0.0003	"
Selenium	1.0	"	ND (0.015)	"	ND (0.015)	"
Silver	5.0	"	ND (0.003)	"	ND (0.003)	"

Sample Number Date Sampled Sample Location Sample Description	NYSDEC Part 371 Haz. Waste Criterion	38-D003A 02/25/10 Stockpile B Soil & Fill	38-D005A 02/25/10 Stockpile C Soil & Fill	38-D006A 02/25/10 Stockpile D Soil & Fill		
TCLP Volatile Organic Compounds (ug/L or ppb)						
None Detected						
TCLP Semivolatile Organic Compounds (ug/L or ppb)						
None Detected						
Total PCBs (mg/kg or ppm)						
Aroclor 1242		ND (2.2)	ND (4.5)	ND (0.21)		
Aroclor 1248		25.0	57.0	ND (0.21)		
Aroclor 1254		ND (2.2)	ND (4.5)	ND (0.21)		
Aroclor 1260		ND (2.2)	ND (4.5)	ND (0.21)		
Total PCBs	50.0	25.0	**57.0**	ND (0.21)		
TCLP Metals (mg/L or ppm)						
Arsenic	5.0	ND (0.05)	ND (0.05)	ND (0.05)		
Barium	100.0	1.94 BT, B	1.80 BT, B	1.47 BT, B		
Cadmium	1.0	0.0024	0.0038	0.0081		
Chromium	5.0	0.0061	0.0041	ND (0.004)		
Lead	5.0	0.0238	0.0086	0.0079		
Mercury	0.2	ND (0.0002)	ND (0.0002)	ND (0.0002)		
Selenium	1.0	ND (0.015)	ND (0.015)	ND (0.015)		
Silver	5.0	ND (0.003)	ND (0.003)	ND (0.003)		

Notes:
B = Analyte was detected in the associated method blank.
BT = Analyte detected in the TCLP extractor blank. Analyte at least five times less than the TCLP regulatory limit.
NA = Not analyzed.
ND = Not detected above the laboratory method detection limit (MDL) or reporting limit (RL) given in parentheses.
Blanks = Sample was analyzed for the associated compound but it was not detected.
Shaded = Result exceeds the 6 NYCRR Part 371 Hazardous Waste Criterion.

TABLE 3-5
SPAULDING COMPOSITES SITE
ANALYTICAL RESULTS OF CONCRETE STOCKPILES

Sample Number Date Sampled Sample Location Sample Description	NYSDEC Part 371 Haz. Waste Criterion	NYSDEC Part 375 Restricted Residential	38-D004 02/18/10 Stained Concrete	38-D004A 02/25/10 Stained Concrete	38-D007 03/04/10 Clean Concrete	38-D008 03/04/10 Clean Concrete
Volatile Organic Compounds - TCLP (ug/L or ppb)						
None Detected					NA	NA
Semivolatile Organic Compounds - Total (mg/kg or ppm)						
None Detected			NA	NA		
Semivolatile Organic Compounds - TCLP(ug/L or ppb)						
4-Methylphenol	200,000	NC	NA	1.5 J	NA	NA
PCBs - Total (mg/kg or ppm)						
Aroclor 1242			ND (0.25)	ND (0.22)	ND (0.22)	ND (0.23)
Aroclor 1248			ND (0.25)	1.2	0.89	0.049 J
Aroclor 1254			ND (0.25)	ND (0.22)	ND (0.22)	ND (0.23)
Aroclor 1260			ND (0.25)	ND (0.22)	ND (0.22)	ND (0.23)
Total PCBs	50.0	1.0	ND (0.25)	**1.2**	0.89	0.049 J
Metals - Total (mg/kg or ppm)						
Arsenic	"	16.0	NA	NA	4.2	3.8
Barium	"	400.0	"	"	28.3	40.2
Beryllium	"	72.0	"	"	0.278	0.364
Cadmium	"	4.3	"	"	ND (0.175)	0.18
Chromium	"	180.0	"	"	5.59	8.31
Cobalt	"	30.0 *	"	"	1.76	2.49
Copper	"	270.0	"	"	4.1	8.1
Iron	"	2,000 *	"	"	**3,810**	**6,870**
Lead	"	400.0	"	"	10.9	4.5
Manganese	"	2,000	"	"	209	278
Mercury	"	0.81	"	"	ND (0.0196)	ND (0.0203)
Nickel	"	310.0	"	"	6.31	7.75
Vanadium	"	100.0 *	"	"	6.89 B	12.6
Zinc	"	10,000	"	"	9.5	28.3
Metals - TCLP (mg/L or ppm)						
Arsenic	5.0	NC	NA	ND (0.05)	NA	NA
Barium	100.0	"	"	0.661 B	"	"
Cadmium	1.0	"	"	ND (0.001)	"	"
Chromium	5.0	"	ND (0.004)	0.0107	"	"
Lead	5.0	"	NA	0.0050	"	"
Mercury	0.2	"	"	ND (0.0002)	"	"
Selenium	1.0	"	"	ND (0.015)	"	"
Silver	5.0	"	"	ND (0.003)	"	"

Notes:
* = Residential soil cleanup objective from the Commissioner's Policy entitled "Soil Cleanup Guidance".
B = Value is greater than or equal to the instrument detection limit, but less than the contract required detection limit.
J = Compound reported at an estimated concentration below the sample quantitation limit.
NA = Not analyzed.
NC = No criteria.
ND = Not detected above the laboratory method detection limit (MDL) or reporting limit (RL) given in parentheses.
Blanks = Sample was analyzed for the associated compound but it was not detected.
Shaded = Result exceeds the 6 NYCRR Part 371 Hazardous Waste Criterion.
Shaded = Result exceeds the Commissioner's Policy residential soil cleanup objective.