Department of Environmental Conservation

Division of Environmental Remediation

Sampling Report

Water Street Properties, City of Lockport, Niagara County, New York

March 2003

New York State Department of Environmental Conservation
Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

Sampling Report

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City of Lockport,
Niagara County, New York

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1.0 EXECUTIVE SUMMARY

During 2002 the New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH) and Niagara County Health Department (NCHD), conducted three separate sampling events of Eighteenmile Creek and properties along Water Street in the City of Lockport, Niagara County, New York (Figures 1-1 and 1-2). The objective of the three sampling events was to obtain information sufficient to determine if the properties along Water Street are being impacted by the Former Flintkote Plant Site and/or Eighteenmile Creek. This objective was evaluated through the analysis of waste, surface soil and sediment samples obtained from Water Street properties, Eighteenmile Creek and wooded property south of the Former Flintkote Plant Site.

On April 16, 2002 the Department collected one waste and three surface soil samples from the property at 143 Water Street. This property was sampled due to it's close proximity to the Former Flintkote Plant Site, and because of the potential for contaminants to migrate to the property from Eighteenmile Creek during flood events. While the Former Flintkote Plant Site is not listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State (Registry), a Site Investigation conducted by the Department's Division of Environmental Remediation (DER) in 1999 revealed that some of the ash disposed at the Site is a characteristic hazardous waste for lead (D008). This waste also contains numerous semivolatile (primarily PAHs) and inorganic compounds at concentrations above the soil cleanup objectives contained in the Department's Technical and Administrative Guidance Memoranda (TAGM) No. 4046. PCBs were also detected in this waste. Similar contaminants have been detected in sediment of Eighteenmile Creek and the millrace adjacent to the Site.

Based upon the results of the April 16th sampling event, fifteen additional surface soil samples were collected from properties along Water Street on July 23, 2002. During this sampling event, the NYSDEC also collected one sediment sample from Eighteenmile Creek and two waste samples from wooded property south of the Former Flintkote Plant Site. The July 23rd sampling was completed to further evaluate the extent of lead contamination detected at 143 Water Street and to verify the PCB results obtained from a surface soil sample collected near Eighteenmile Creek.

On November 7, 2002 during an inspection of Eighteenmile Creek to identify potential sampling locations, NYSDEC and NCHD personnel discovered a fenced containment structure downstream of the Clinton Street dam. This structure may have housed transformers and/or capacitors, which historically contained PCB oil. As a result, this area was identified as a potential source of PCBs to Eighteenmile Creek.

To evaluate this potential, two surface soil samples and three sediment samples were collected from this area on November 26, 2002.

During the April 16th sampling event, one waste sample (SS-3) was collected and analyzed for PCBs and lead. These contaminants were selected for analysis because PCBs are known to exist in Eighteenmile Creek sediment, while ash at the Former Flintkote Plant Site contains high concentrations of lead. Four additional waste samples (SS-5 through SS-7 and SS-13) were collected on July 23, 2002 and also analyzed for PCBs and/or lead. Sample SS-3 was collected from a small ridge along Eighteenmile Creek that consisted primarily of rust colored ash containing slag and buttons. This ash is similar in appearance to the ash observed on the island of the Former Flintkote Plant Site. Sample SS-5 was collected inside the garage at 131 Water Street, and consisted primarily of black ash, slag and cinders. Samples SS-6 and SS-7, collected from the wooded property on Mill Street, consisted primarily of black to red, fine-grained ash and cinders. Finally, sample SS-13 was collected from a shallow depression in the side yard of the 143 Water Street property, and was similar in appearance to the fill in the garage. The analytical results of these samples indicate that PCBs are not present in these wastes, but that lead is present at concentrations ranging from 4.5 to 4,250 mg/kg (parts per million). Only the lead concentration in sample SS-3, however, exceeded the TAGM 4046 soil cleanup objective (500 mg/kg) for this contaminant. This sample also exceeded the TCLP Regulatory Limit for lead, indicating that this ash is a characteristic hazardous waste (D008).

Surface soil samples were collected during each of the sampling events conducted in 2002. Three samples (SS-1, SS-2 and SS-4) were collected on April 16, 2002; thirteen samples (SS-8 through SS-21) were collected on July 23, 2002; and two samples (SS-22 and SS-24) were collected on November 26, 2002. Five of these samples were collected from the 143 Water Street property, four of these samples were collected from the 131 Water Street property, and the remaining samples were collected from other properties along Water Street. All samples were analyzed for PCBs and/or lead.

The lead concentration in thirteen of these samples exceeded the NYSDEC's TAGM 4046 soil cleanup objective for this contaminant. Samples that exceeded the soil cleanup objective included SS-1 (shallow swale; 143 Water Street), SS-2 (garden; 143 Water Street), SS-4 (creek bank; 131 Water Street), SS-8 (creek bank; 131 Water Street), SS-9 (creek bank; 131 Water Street), SS-10 (creek bank; 131 Water Street), SS-11 (dog trail; 143 Water Street), SS-12 (garden; 143 Water Street), SS-15 (flood prone area; 127 Water Street), SS-19 (swing set; 99 Water Street), SS-20 (flood prone area; 99 Water Street), SS-21 (wooded property; 97 Water Street) and SS-22 (transformer area). The concentration of lead in these samples ranged

from 549 to 4,630 mg/kg.

PCBs were detected in four of eight surface soil samples collected from properties along Water Street at concentrations that exceeded the NYSDEC's TAGM 4046 surface soil cleanup objective (1,000 Fg/kg) for this contaminant. Samples that exceeded the surface soil cleanup objective included SS-4 (creek bank; 131 Water Street), SS-8 (creek bank; 131 Water Street), SS-9 (creek bank; 131 Water Street) and SS-24 (transformer area). The concentration of PCBs in these samples ranged from 1,210 to 17,400 Fg/kg. PCBs were also detected in samples SS-1 (shallow swale; 143 Water Street), SS-2 (garden; 143 Water Street), SS-10 (creek bank; 131 Water Street) and SS-22 (transformer area), but the concentrations did not exceed the NYSDEC's TAGM 4046 surface soil cleanup objective.

Four sediment samples were collected from Eighteenmile Creek during the three sampling events conducted in 2002. To date, the NYSDEC has collected twenty sediment samples from fifteen locations in Eighteenmile Creek between Remick Parkway (south of the New York State Barge Canal) and the Former Flintkote Plant Site. Seven of these samples (six locations) were collected from the millrace, while two samples (two locations) were collected from Eighteenmile Creek adjacent to the Former Flintkote Plant Site. Upstream of the Former Flintkote Plant Site, two samples (one location) were collected near Olcott Street, five samples (four locations) were collected near the Clinton Street dam, two samples (one location) were collected near Clinton Street and two samples (one location) were collected near Remick Parkway.

The analytical results of these samples indicate that PCBs were detected in eighteen of nineteen samples (the twentieth sample was not analyzed for PCBs) at concentrations ranging from 13.3 to 24,926 Fg/kg. Although only one of these concentrations exceeds the NYSDEC's sediment criteria (19,300 Fg/kg) for chronic toxicity to benthic aquatic life, all eighteen concentrations exceed the sediment criteria (0.8 Fg/kg) for human health bioaccumulation. Thirteen of these concentrations also exceed the TAGM 4046 surface soil cleanup objective. These results also indicate that lead was detected in all fifteen samples in which this contaminant was analyzed at concentrations ranging from 103 to 25,400 mg/kg. Although fourteen of these concentrations exceed the sediment criteria (110 mg/kg) for the severe effect level, only six concentrations exceed the TAGM 4046 soil cleanup objective.

The source(s) of the lead and PCBs that were detected in surface soil at the 143 Water Street property include(s) surface water/solids runoff from the ash ridge along Eighteenmile Creek, the presence of ash fill in the garden, and the deposition of contaminated sediments from Eighteenmile Creek during flood events.

The available analytical data indicates, however, that the ash, slag and cinder fill that was collected from inside the garage at 131 Water Street and from the shallow depression in the side yard of 143 Water Street is not the source of lead as this waste contained relatively low (29.8 to 140 mk/kg) concentrations of this contaminant. Also, leaded paint and leaded gasoline do not appear to be a significant source of lead as the background sample collected from the 143 Water Street property contained a relatively low (172 mg/kg) concentration of lead.

For the remaining Water Street properties, the source of lead and PCBs appears to be the deposition of contaminated sediment from Eighteenmile Creek during flood events; PCBs and lead were detected in creek sediment from Remick Parkway to the confluence with the millrace adjacent to the Former Flintkote Plant Site. Plots of these data from upstream to downstream locations indicate that lead concentrations are below 600 mg/kg except for four locations: Station-8 at Clinton Street (1,330 mg/kg), SED-7 at the former transformer area (25,400 mg/kg), SED-6 at Olcott Street (805 and 6,000 mg/kg) and SED-5 near William Street (5,940 mg/kg). The exact source of this lead is unknown, but with the possible exception of sample SED-5, appears to be a source other than the Former Flintkote Plant Site.

Upstream of the Clinton Street dam, PCB concentrations were relatively low, ranging from 13.3 to 361Fg/kg. Immediately downstream of the dam, PCB concentrations increase substantially (840 to 3,662 Fg/kg), and remain elevated throughout the portion of Eighteenmile Creek evaluated in this study. These data suggest a source of PCBs near the Clinton Street dam. This source, however, does not appear to be the former transformer area or the extensive ash fill that was observed south of the Former Flintkote Plant Site. At this time the source remains unknown.

Collection and analysis of additional sediment samples from Eighteenmile Creek is necessary to further evaluate the nature and extent of contamination in the creek. Special emphasis should be placed on the Clinton Street dam area, which appears to be associated with an unidentified source of PCBs. Additional surface soil samples from selected properties along Water Street should also be collected and analyzed to further evaluate the nature and extent of lead contamination. The wooded property between 143 Water Street and Eighteenmile Creek also warrants further investigation, which is included in the Flintkote Brownfields Investigation work plan.

2.0 INTRODUCTION

During 2002 the New York State Department of Environmental Conservation (NYSDEC) conducted three separate sampling events of Eighteenmile Creek and properties along Water Street in the City of Lockport, Niagara County, New York. This report summarizes the findings of these sampling events and how the results may relate to known contamination in Eighteenmile Creek and at the Former Flintkote Plant Site.

2.1 Background

In early April 2002, Mr. Paul Dicky from the Niagara County Health Department (NCHD) received a citizen request for sample collection and evaluation of soils from their property at 143 Water Street. Mr. Dicky telephoned this Department, and following a discussion of the issues, agreed to complete an inspection of the property. During this inspection, which was conducted on April 8, 2002, Mr Dicky had further discussion with the property owners. The residents concerns and issues regarding the property are summarized as follows:

- The property owners first became concerned of possible contaminant migration from Eighteenmile Creek after a family case of cancer inspired research into available environmental data regarding the creek. Concern was raised over elevated PCB concentrations.

- Eighteenmile Creek abuts the back and side yard of 143 Water Street and occasionally floods the yard due to debris or ice blocking the cross-culverts under William Street. The property owners expressed concern about the poor to non-existent maintenance of the creek by the City of Lockport.

- Severe flooding occurs about 100 feet into the yard approximately once every two years. Lesser flooding may occur several times a year depending upon local precipitation and blockage of the cross-culverts.

- Frequent flooding also occurs on a small strip of wooded property between Eighteenmile Creek and a stone wall. This strip of land is about 20 feet wide.

Mr Dicky identified a portion of the yard that would flood during high water events, and concluded that the flood complaint was plausible. In addition, a small vegetable garden was observed adjacent to the reported

flood area. Based upon these findings, the Niagara County Health Department requested the investigatory assistance of the NYSDEC as the county was concerned that "a potential migration pathway may exist between *contaminated* creek sediments and backyard soils due to regular flooding events [italics ours]."

On April 16, 2002 the NYSDEC collected four samples from the property at 143 Water Street. In addition to being adjacent to Eighteenmile Creek, the subject property is also in close proximity to the Former Flintkote Plant Site, which is located at 198 and 300 Mill Street (Figures 1-1 and 1-2). While this Site is not listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State (Registry), a Site Investigation conducted by the NYSDEC's Division of Environmental Remediation (DER) in 1999 revealed that some of the ash disposed at the Site is a characteristic hazardous waste for lead (D008). This waste also contains numerous semivolatile (primarily PAHs) and inorganics compounds at concentrations above the soil cleanup objectives contained in the NYSDEC's Technical and Administrative Guidance Memoranda (TAGM) No. 4046. Similar contaminants have been detected in site groundwater, and sediment of Eighteenmile Creek and the millrace adjacent to the Site. Historical sampling by the NYSDEC's Division of Water (DOW) and DER indicates also that sediment of Eighteenmile Creek is contaminated by PCBs and dioxins. In the near future Niagara County will complete a more detailed investigation of the former Flintkote property through the NYSDEC's Brownfields Program.

The property at 143 Water Street was sampled due to it's close proximity to the Former Flintkote Plant Site, and because of the potential for contaminants to migrate onto the property from Eighteenmile Creek during flood events. Based upon the results of this sampling event, the New York State Department of Health (NYSDOH) determined that it was necessary to sample additional Water Street properties. As a result, on July 23, 2002 the NYSDEC, in consultation with the NYSDOH and NCHD, collected fifteen samples from properties along Water Street, one sediment sample from Eighteenmile Creek and two waste samples from wooded property south of the Former Flintkote Plant Site.

On November 7, 2002 during an inspection of Eighteenmile Creek to identify potential sampling locations, NYSDEC and NCHD personnel discovered a fenced containment structure downstream of the Clinton Street dam that may have housed transformers and/or capacitors (Figure 2-1). Historically, such equipment contained PCB oil. As a result, this area was identified as a potential source of PCBs to Eighteenmile Creek. To evaluate this potential, two soil samples and three sediment samples were collected from this area on November 26, 2002.

2.2 Report Organization

Following this introductory section (Section 2.0), the remaining sections of this report are organized as follows:

- **Section 3.0, Sampling Objective and Scope of Work:** Section 3.0 describes the objective of the three sampling events at properties along Water Street and the activities that were completed as part of these events.

- **Section 4.0, Previous Investigations:** Section 4.0 presents a brief description and history of the Former Flintkote Plant Site, and briefly summarizes key investigations conducted at the Site and in Eighteenmile Creek.

- **Section 5.0, Sampling Results:** Section 5.0 presents the results of the three sampling events, including general observations and a summary of the analytical results obtained from various environmental media (i.e., waste, surface soil and sediment).

- **Section 6.0, Discussions and Conclusions:** Section 6.0 discusses the results of the three sampling events as they relate to the objective presented in Section 3.0. Conclusions drawn from the sampling events are also discussed.

- **Section 7.0, Recommendations:** Section 7.0 discusses the NYSDEC's recommendations for future sampling activities regarding Eighteenmile Creek and properties along Water Street.

- **Section 8.0, References:** Section 8.0 contains a list of references utilized or cited in this report.

Figures, tables and appendices, in that order, follow Section 8.0.

3.0 SAMPLING OBJECTIVE AND SCOPE OF WORK

3.1 Objective

The objective of the three sampling events was to obtain information sufficient to determine if the properties along Water Street are being impacted by the Former Flintkote Plant Site and/or Eighteenmile Creek. This objective was evaluated through the analysis of waste, surface soil and sediment samples obtained from Water Street properties, Eighteenmile Creek and wooded property south of the Former Flintkote Plant Site.

3.2 Scope of Work

To meet the above objective, the following activities were completed as part of the sampling events: (1) property inspections, (2) collection of environmental samples for chemical analysis, (3) preparation of a site map, and (4) preparation of this report. These activities are briefly described in the following sections. All field work was conducted in level D personal protective equipment with dedicated sampling equipment.

3.2.1 *Property Inspections*

Prior to collecting any samples, a walk through of each property was conducted to identify sample locations. All sample locations were selected based upon visual observations or the potential for human exposure through direct contact or ingestion.

3.2.2 *Sample Collection and Analysis*

Four sediment samples (SED-6 through SED-9) were collected from the locations shown on Figure 3-1, which also shows the locations of historical sediment samples collected from Eighteenmile Creek. Five waste samples and eighteen surface soil samples (SS-1 through SS-22, and SS-24) were collected from the locations shown on Figure 3-2. All sampling was completed by NYSDEC staff utilizing Department owned equipment. Sample analysis was completed by Severn Trent Laboratories, Inc. in Amherst, New York, a NYSDEC contract laboratory. All twenty-seven samples collected during the three sampling events were analyzed for lead, with fifteen of the samples also analyzed for PCBs. Four waste samples and one surface soil sample were also analyzed for lead using the Toxicity Characteristic Leaching Procedure (TCLP) to determine if these samples were characteristic hazardous waste. Information concerning sample collection and analysis is given in Table 3-1.

3.2.3 *Mapping*

A map of the Former Flintkote Plant Site was prepared by the Department as part of the 1999 Site

Investigation. The area mapped included the entire site boundaries; site buildings; the shoreline of the island, millrace, and Eighteenmile Creek in the vicinity of the Site; all soil boring and monitoring well locations; and the locations of all samples collected as part of the Site Investigation. For this report, the Flintkote map was expanded to the New York State Barge canal by digitizing City of Lockport tax maps. All samples collected during the three sampling events were located using a tape measure and plotted on the expanded map.

3.2.4 *Report Preparation*

This report was prepared to describe the three sampling events; present the analytical results of the samples collected from Water Street properties, Eighteenmile Creek and wooded property south of the Former Flintkote Plant Site; discuss how the results may relate to known contamination at the Former Flintkote Plant Site and Eighteenmile Creek; and present recommendations for further evaluation and study.

4.0 PREVIOUS INVESTIGATIONS

Previous investigations of the Former Flintkote Plant Site and Eighteenmile Creek by the NYSDEC had identified the presence of organic and inorganic contamination at the Site and in the creek. Given the close proximity of Eighteenmile Creek and the Former Flintkote Plant Site to Water Street, a brief description and history of the Site, along with a summary of previous investigations conducted at the Site and in the creek is provided.

4.1 Former Flintkote Plant Site

4.1.1 *Site Description*

The Former Flintkote Plant consisted of property at 198, 225 and 300 Mill Street in the City of Lockport, Niagara County, New York (Figure 1-2). Only the property at 198 and 300 Mill Street, which occupies a total area of approximately 6 acres, was included in the Department's 1999 Site Investigation. The Site is bordered by Eighteenmile Creek to the west, Mill Street to the east, a commercial property to the north and vacant land to the south (Figure 1-2). The property was formerly operated as a felt and composite laminate plant, but is now vacant and in disrepair. Residential property is located west of the Site across Eighteenmile Creek and east of the Site across Mill Street. The Site is bisected by William Street (Figure 1-2), which divides the Site into north (300 Mill Street) and south portions (198 Mill Street). William Street is no longer open to vehicular traffic, but until recently when access was restricted, pedestrian use was common.

As shown on Figure 1-2, Eighteenmile Creek is diverted westward from its apparent natural course for approximately 300 feet along William Street by a dam approximately ten feet high. William Street is located on top of this dam. The creek then continues northward through cross-culverts beneath William Street to return to its original natural channel farther downstream. A pair of sluice gates are located at the east end of the dam and formerly allowed water from Eighteenmile Creek to enter a millrace. These sluice gates have been closed for at least thirty years. The millrace runs along the west side of the buildings at 300 Mill Street and empties into Eighteenmile Creek approximately 600 feet downstream (Figure 1-2). The millrace now contains a sluggish stream approximately six inches to one foot deep.

4.1.2 *Site History*

Flintkote began operations as a manufacturer of felt and felt products in 1928 when the property was purchased from the Beckman Dawson Roofing Company. In 1935, Flintkote began production of sound-deadening and tufting felt for ultimate installation and use in automobiles. Manufacturing of this product line

was continued at Flintkote until December 1971, when operations ceased and the plant closed. It is also believed that Flintkote manufactured composite laminates similar to those produced at the Former Spaulding Composites Company, in Tonawanda, New York. Such material was observed in the southernmost demolished building on the 198 Mill Street Property.

A portion of the property at 300 Mill Street near William Street and Eighteenmile Creek was formerly listed as Site No. 932072 in the Registry of Inactive Hazardous Waste Disposal Sites in New York State and assigned a Classification Code of 3. This classification is given to sites that do not present a significant threat to public health or the environment and that further action can be deferred. The basis for listing the site in the Registry was the presence of seven drums containing sweepings, solid materials and PCB transformer oil stored in the basement of an on-site building. During an inspection of the Site on May 12, 1983 the drums were observed to be stored in accordance with federal regulations. Analysis of the waste oil (March 1983) indicated that none of the oil contained more than 2 ppm of PCBs. In January 1984 the owner of the property had these drums removed from the Site by a waste oil processor. As a result of this action the Site was removed from the Registry in 1985.

In 1989, the City of Lockport Building Inspection Department reported that a number of drums containing chemicals were found in various locations throughout the buildings at 300 Mill Street. Subsequent investigation revealed that 28 of these drums contained hazardous wastes. These drums were disposed off site in May 1991 during a NYSDEC Drum Removal Action.

4.1.3 *Previous Investigations*

Analytical results of two ash samples from the island were included in an April 1996 NYSDEC study entitled "*Trackdown of Chemical Contaminants to Lake Ontario from New York State Tributaries*". These samples contained mercury, dioxins and furans. As a result, the Former Flintkote Plant Site was cited by the Division of Water as a potential source of contaminants to Eighteenmile Creek. Two ash samples from the island were also collected by the Division of Environmental Remediation in August 1996. Both samples failed the TCLP Regulatory Limit for lead, making the ash a characteristic hazardous waste (D008). The findings and conclusions of the April 1996 study and the results of the August 1996 sampling event indicated the need for additional investigation at the Site.

In late 1999 the Department conducted an investigation of the entire Flintkote property, with the results of that investigation presented in a September 2000 report entitled "*Site Investigation Report, Former*

Flintkote Plant Site". This investigation revealed that the Flintkote property received various wastes, refuse and debris over the years, with much of these wastes being visible at the surface and along the embankments of Eighteenmile Creek and the millrace. The subsurface investigation revealed that most of the waste at the Site is ash containing glass, coal, coke, slag, ceramic, bottles, brick, buttons and wood. The thickness of this ash is variable, ranging from 0.9 to 23.1 feet. This waste material covers an area of approximately 3.6 acres.

During the Site Investigation, sixteen ash samples were analyzed for hazardous waste characteristics using the Toxicity Characteristic Leaching Procedure. Seven of these samples failed the TCLP Regulatory Limit for lead, indicating that some ash at the Site is characteristic hazardous waste (D008). One ash sample also failed the TCLP Regulatory Limit for cadmium. The ash also contains numerous semivolatile (primarily PAHs) and inorganics compounds at concentrations above the NYSDEC's TAGM 4046 soil cleanup objectives. These exceedances were documented in waste samples collected throughout the Site and are not restricted to those samples that are characteristic hazardous waste. Eleven ash samples were also analyzed for PCBs, with seven of these samples containing PCBs at concentrations ranging from 22J to 6,840 Fg/kg (parts per billion). None of these concentrations, however, exceeded the 10,000 Fg/kg TAGM 4046 soil cleanup objective.

4.2 Eighteenmile Creek

4.2.1 *Previous Investigations*

Between 1987 and 1998 the NYSDEC's Division of Water collected ten sediment samples from Eighteenmile Creek between Remick Parkway (south of the New York State Barge Canal) and the Former Flintkote Plant Site. Six additional sediment samples between Clinton Street and the Former Flintkote Plant Site were collected by the NYSDEC's Division of Environmental Remediation in 1996. The analytical results for these samples have been presented in various NYSDEC publications including: (1) "*Trackdown of Chemical Contaminants to Lake Ontario from New York State Tributaries*", DOW, April 1996; (2) "*Eighteenmile Creek Remedial Action Plan*", DOW, August 1997; (3) "*Site Investigation Report, Former Flintkote Plant Site*", DER, September 2000; and (4) "*Final Report, Eighteenmile Creek Sediment Study*", DOW, December 2001. The results for all sediment samples collected from Eighteenmile Creek between Remick Parkway and the confluence with the millrace will be discussed in detail in Section 5.0 of this report.

5.0 SAMPLING RESULTS

A brief description of the activities completed during the three sampling events along Water Street and Eighteenmile Creek was presented in Section 3.0. In this section, a detailed evaluation of the observations made during the property inspections and the analytical results obtained from the samples are presented. Analytical results are summarized by environmental media (e.g., waste material, surface soil and sediment).

5.1 General Observations

On April 16, 2002 the NYSDEC collected four samples from the property at 143 Water Street. This property was sampled due to it's close proximity to the Former Flintkote Plant Site, and because of the potential for contaminants to migrate to the property from Eighteenmile Creek during flood events. The sampling team consisted of the following individuals:

Mr. Glenn May, New York State Department of Environmental Conservation;
Mr. Brian Sadowski, New York State Department of Environmental Conservation;
Mr. Paul Dicky, Niagara County Health Department;
Ms. Holly D'Angelo, Niagara County Health Department; and
Mr. Matthew Forcucci, New York State Department of Health.

Prior to collecting any samples, a walk through of the property was conducted to identify sample locations. During this reconnaissance, ash fill (Figure 5-1) was observed at the surface of a small ridge along Eighteenmile Creek on a small strip of wooded property (Figure 5-2). Tax records indicate that this property is part of the former Flintkote property that is now owned by Niagara County. Extensive ash fill was also observed in the bank of Eighteenmile Creek (Figure 5-3).

A small vegetable garden in the backyard was also inspected; buttons, coal and glass were observed. When asked, the property owners informed us that the garden was rototilled in place. The portion of the yard that floods during high water events was also identified.

As a result of the property inspection, four sample locations were selected (SS-1 through S-4). These locations, shown on Figure 3-2, were selected based upon visual observations or the potential for human exposure through direct contact or ingestion.

On July 23, 2002 the NYSDEC collected fifteen samples from eight properties along Water Street, one sediment sample from Eighteenmile Creek and two waste samples from wooded property south of the Former Flintkote Plant Site. The Water Street properties were sampled to determine the extent of contamination identified during the April 2002 sampling event, while the sediment sample was collected to determine upstream contaminant concentrations. The waste samples were collected to determine if the ash observed at the wooded property on Mill Street was similar to the ash at the adjacent Former Flintkote Plant Site. The sampling team for the second sampling event consisted of the following individuals:

Mr. Glenn May, New York State Department of Environmental Conservation;
Mr. James Tuk, New York State Department of Environmental Conservation;
Mr. Paul Dicky, Niagara County Health Department;
Ms. Holly D'Angelo, Niagara County Health Department; and
Ms. Charlotte Bethoney, New York State Department of Health.

Prior to collecting any samples, a walk through of the properties was conducted to identify sample locations. During this reconnaissance, extensive ash, slag and cinder fill was observed at the southwest portion of the 143 Water Street property and across most of the 131 Water Street property. Based upon ground surface elevation differences (Figure 5-4), this fill is at least 3 feet thick. Extensive ash fill was also observed along the entire eastern bank of Eighteenmile Creek from the Clinton Street dam to the Former Flintkote Plant Site. Fill material intermixed with soil was observed at the 99, 113 and 117 Water Street properties. The small vegetable garden in the backyard of 143 Water Street was no longer being utilized and was overgrown with grass and weeds.

As a result of the property inspections, eighteen sample locations were selected (SS-5 through SS-21 and SED-6). These locations, shown on Figures 3-1 and 3-2, were selected based upon visual observations or the potential for human exposure through direct contact or ingestion.

On November 7, 2002 during an inspection of Eighteenmile Creek to identify potential sampling locations, Mr. Glenn May of the NYSDEC and Mr. Paul Dicky of the NCHD discovered a fenced in containment structure downstream of the Clinton Street dam. This structure may have housed transformers and/or capacitors, which historically contained PCB oil. As a result, this area was identified as a potential source of PCBs to Eighteenmile Creek. To evaluate this potential, two soil samples (SS-22 and SS-24) and three sediment samples (SED-7 through SED-9) were collected from this area on November 26, 2002. These

sample locations are also shown on Figures 3-1 and 3-2.

5.2 Waste Material

During the April 16th sampling event, one waste sample (SS-3) was collected and submitted to Severn Trent Laboratories (STL) for chemical analysis of PCBs and lead (Table 3-1). These contaminants were selected for analysis because PCBs are known to exist in Eighteenmile Creek sediment, while ash at the Former Flintkote Plant Site contains high concentrations of lead. Four additional waste samples (SS-5 through SS-7 and SS-13) were collected on July 23, 2002 and also submitted to STL for chemical analysis of PCBs and/or lead (Table 3-1). Sample SS-3 was collected from the small ridge along Eighteenmile Creek, and consisted primarily of rust colored ash containing slag and buttons (Figure 5-1). This ash is similar in appearance to the ash observed on the island of the Former Flintkote Plant Site. Sample SS-5 was collected inside the garage at 131 Water Street, and consisted primarily of black ash, slag and cinders (Figure 5-5). Samples SS-6 and SS-7, collected from the wooded property on Mill Street, consisted primarily of black to red, fine-grained ash and cinders. Finally, sample SS-13 was collected from a shallow depression in the side yard of the 143 Water Street property, and was similar in appearance to the fill in the garage.

The analytical results of the waste samples are summarized in Table 5-1. These results indicate that PCBs were not present in the waste, but that lead was detected in all five samples at concentrations ranging from 4.5 to 4,250 mg/kg (parts per million). Only the lead concentration in sample SS-3, however, exceeded the TAGM 4046 soil cleanup objective for this contaminant. This sample also exceeded the TCLP Regulatory Limit for lead (Table 5-1), indicating that this ash is a characteristic hazardous waste (D008).

5.3 Surface Soil

Surface soil samples were collected during each of the sampling events conducted in 2002. The number of samples collected, along with the dates of sample collection, are summarized as follows: three samples (SS-1, SS-2 and SS-4) were collected on April 16, 2002; thirteen samples (SS-8 through SS-21) were collected on July 23, 2002; and two samples (SS-22 and SS-24) were collected on November 26, 2002. All samples were submitted to Severn Trent Laboratories for chemical analysis of PCBs and/or lead (Table 3-1). Five of these samples were collected from the 143 Water Street property, four of these samples were collected from the 131 Water Street property, and the remaining samples were collected from other properties along Water Street (Table 3-1).

5.3.1 *143 Water Street*

Sample SS-1 was collected from the portion of the side yard that floods during high water events. This area is at the end of a natural drainage swale to Eighteenmile Creek (Figure 5-6), and would be the first area to flood during high water events and the last area from which flood waters would recede. This sample consisted primarily of black topsoil with no visible evidence of waste material. The analytical results for this sample are shown in Table 5-2, and indicate that lead is present at a concentration of 887 mg/kg. This concentration exceeds the 500 mg/kg TAGM 4046 soil cleanup objective for lead. PCBs were also detected in this sample at a concentration of 64J Fg/kg, which is below the 1,000 Fg/kg TAGM 4046 surface soil cleanup objective.

Samples SS-2 and SS-12 were collected from the small vegetable garden in the side yard of the 143 Water Street property (Figure 5-7). These samples consisted primarily of medium brown soil with glass, buttons and coal fragments. The analytical results of these samples are shown in Table 5-2, and indicate that lead is present at concentrations of 686 and 1,330 mg/kg. These concentrations exceed the TAGM 4046 soil cleanup objective for lead. PCBs were also detected in garden soils, but at a concentration (24J Fg/kg) below the TAGM 4046 surface soil cleanup objective.

Sample SS-11 was collected from bare soil consisting of black topsoil with a few pieces of slag near the dog house in the side yard of this property. This sample contained lead at a concentration of 913 mg/kg (Table 5-2), a concentration that exceeds the TAGM 4046 soil cleanup objective. Sample SS-14 was collected approximately equidistant from the house and Water Street, and was collected to evaluate other potential sources of lead (e.g., leaded paint and leaded gasoline). This sample consisted primarily of topsoil with small rock fragments. Lead was detected in sample SS-14 (Table 5-2), but at a concentration (172 mg/kg) below the TAGM 4046 soil cleanup objective.

5.3.2 *131 Water Street*

To evaluate the potential migration pathway between contaminated creek sediments and backyard soils due to creek flooding events, sample SS-4 was collected from a location approximately 4 feet from the shore of Eighteenmile Creek in an area visibly devoid of waste and other fill material (Figure 5-8). This sample consisted primarily of dark brown soil with a peat moss-like consistency. The analytical results for this sample are shown in Table 5-3, and indicate that lead is present at a concentration of 1,270 mg/kg. Due to this relatively high concentration of lead, the NYSDEC also decided to analyze this sample for lead using the Toxicity Characteristic Leaching Procedure. The result from this analysis is also shown in Table 5-3, and

indicates that the soil is not a characteristic hazardous waste with respect to lead. PCBs were also detected in this sample at a concentration (17,400 Fg/kg) significantly above the TAGM 4046 surface soil cleanup objective.

In order to further evaluate the high PCB and lead concentrations in sample SS-4, three additional surface soil samples were collected from this property near the creek (Figure 3-2). Sample SS-8 was collected at the location of sample SS-4, while samples SS-9 and SS-10 were collected 14½ feet north and 58 feet south of sample SS-4, respectively. The analytical results for these samples are summarized in Table 5-3, and indicate that lead was detected in all three samples at concentrations that exceed the TAGM 4046 soil cleanup objective. PCBs were also detected in all three samples, with the concentration in samples SS-8 (6,300 Fg/kg) and SS-9 (8,000 Fg/kg) exceeding the TAGM 4046 surface soil cleanup objective.

5.3.3 *Other Water Street Properties*

Nine surface soil samples were collected from other properties along Water Street (Figure 3-2). Samples SS-15 (127 Water Street), SS-16 (117 Water Street), SS-18 (113 Water Street), SS-20 (99 Water Street), SS-21 (97 Water Street), SS-22 (transformer area) and SS-24 (transformer area) were collected from areas prone to flooding. Sample SS-17 was collected in a flower bed at 125 Water Street, while sample SS-19 was collected from bare soil under a swing set at 99 Water Street.

The analytical results for these samples are summarized in Table 5-4, and indicate that lead was detected in all nine samples at concentrations ranging from 56.2 to 3,680 mg/kg. The TAGM 4046 soil cleanup objective for lead was exceeded in samples SS-15 (1,110 mg/kg), SS-19 (549 mg/kg), SS-20 (936 mg/kg), SS-21 (3,680 mg/kg) and SS-22 (1,060 mg/kg). Only samples SS-22 and SS-24, which were collected from the former transformer area near the Clinton Street dam (Figure 3-2), were analyzed for PCBs. PCBs were detected in both samples (Table 5-4), with the concentration in Sample SS-24 (1,210 Fg/kg) exceeding the TAGM 4046 surface soil cleanup objective.

5.4 Sediment

Between 1987 and 2002 the NYSDEC collected twenty sediment samples from fifteen locations in Eighteenmile Creek between Remick Parkway (south of the New York State Barge Canal; Figure 1-1) and the confluence with the millrace adjacent to the Former Flintkote Plant Site. Seven of these samples (six locations) were collected from the millrace, while two samples (two locations) were collected from Eighteenmile Creek adjacent to the Former Flintkote Plant Site. Upstream of the Former Flintkote Plant Site,

two samples (one location) were collected near Olcott Street, five samples (four locations) were collected near the Clinton Street dam, two samples (one location) were collected near Clinton Street and two samples (one location) were collected near Remick Parkway. The locations of these samples, with the exception of the two Remick Parkway samples, are shown on Figure 3-1.

The analytical results for these samples are summarized in Table 5-5, which also summarizes the analytical results from two sediment samples collected from the New York State Barge Canal upstream of Eighteenmile Creek. This table indicates that PCBs were detected in eighteen of nineteen samples (the twentieth sample was not analyzed for PCBs) at concentrations ranging from 13.3 to 24,926 Fg/kg. Although only one of these concentrations exceeds the NYSDEC's sediment criteria (19,300 Fg/kg) for chronic toxicity to benthic aquatic life, all eighteen concentrations exceed the sediment criteria (0.8 Fg/kg) for human health bioaccumulation. Thirteen of these concentrations also exceed the TAGM 4046 surface soil cleanup objective.

Table 5-5 indicates that lead was detected in all fifteen samples in which this contaminant was analyzed at concentrations ranging from 103 to 25,400 mg/kg. Although fourteen of these concentrations exceed the sediment criteria (110 mg/kg) for the severe effect level, only six concentrations exceed the TAGM 4046 soil cleanup objective. Table 5-5 also shows that other inorganic contaminants are present in Eighteenmile Creek sediment. Metal concentrations that exceed sediment criteria include arsenic (1 sample), cadmium (1 sample), chromium (1 sample), copper (9 samples), iron (1 sample), mercury (3 samples), nickel (2 samples), silver (4 samples) and zinc (10 samples). The most exceedances were observed in sample SED-5, which is located in Eighteenmile Creek near the Former Flintkote Plant Site (Figure 3-1).

6.0 DISCUSSIONS AND CONCLUSIONS

6.1 Discussion

The objective of the three sampling events conducted during 2002 was to obtain information sufficient to determine if the properties along Water Street are being impacted by the Former Flintkote Plant Site and/or Eighteenmile Creek. This objective was evaluated through the analysis of waste, surface soil and sediment samples obtained from Water Street properties, Eighteenmile Creek and wooded property south of the Former Flintkote Plant Site. This section discusses the analytical results presented in Section 5.0 as they relate to this objective.

6.2 Lead Results

Lead was detected at concentrations that exceeded the NYSDEC's TAGM 4046 soil cleanup objective (500 mg/kg) in thirteen of eighteen surface soil samples collected from properties along Water Street. Samples that exceeded the soil cleanup objective included SS-1 (shallow swale; 143 Water Street), SS-2 (garden; 143 Water Street), SS-4 (creek bank; 131 Water Street), SS-8 (creek bank; 131 Water Street), SS-9 (creek bank; 131 Water Street), SS-10 (creek bank; 131 Water Street), SS-11 (dog trail; 143 Water Street), SS-12 (garden; 143 Water Street), SS-15 (flood prone area; 127 Water Street), SS-19 (swing set; 99 Water Street), SS-20 (flood prone area; 99 Water Street), SS-21 (wooded property; 97 Water Street) and SS-22 (transformer area). The concentration of lead in these samples ranged from 549 to 4,630 mg/kg.

Analytical results from an ash sample collected from the small ridge adjacent to the 143 Water Street property revealed the presence of lead at a concentration (4,250 mg/kg) that exceeded the Department's TAGM 4046 soil cleanup objective. This sample also exceeded the TCLP Regulatory Limit for lead, indicating that this ash is a characteristic hazardous waste (D008). This ash is similar in appearance to the ash observed on the island of the Former Flintkote Plant Site, which is also a characteristic hazardous waste for lead (D008). While surface water/solids runoff from this ridge to the 143 Water Street property may explain the relatively high concentrations of lead in surface soil samples SS-1 (shallow swale), SS-2 (garden), SS-11 (dog trail) and SS-12 (garden), this ash does not explain the high concentrations of lead detected at other Water Street properties. Also, the possible presence of ash fill in the garden at 143 Water Street, as suggested by the buttons, coal and glass that were observed, could explain the high concentration of lead in samples SS-2 and SS-12.

Another source of lead is the ash, slag and cinder fill that was observed on portions of the 131 and 143 Water Street properties, and the extensive ash fill that was observed along the entire eastern bank of

Eighteenmile Creek from the Clinton Street dam to the Former Flintkote Plant Site. Samples of these wastes, however, contained relatively low (4.5 to 226 mg/kg) concentrations of lead, suggesting that these wastes are different from the waste at the Former Flintkote Plant Site. These data also suggest that the waste sampled during the three sampling events (with the exception of the ash ridge) is not the source of lead contamination detected at properties along Water Street. Also, leaded paint and leaded gasoline do not appear to be a significant source of lead as the background sample collected from the 143 Water Street property contained a relatively low (172 mg/kg) concentration of lead.

Yet another source of lead is contaminated sediment in Eighteenmile Creek that could be deposited on low-lying property during flood events. Lead was detected in all fifteen sediment samples in which this contaminant was analyzed at concentrations ranging from 103 to 25,400 mg/kg. Although fourteen of these concentrations exceed the sediment criteria (110 mg/kg) for the severe effect level, only six concentrations exceed the TAGM 4046 soil cleanup objective.

The sediment lead results are shown graphically in Figure 6-1, which is plotted from upstream to downstream locations to show spatial variability. This figure indicates that lead concentrations are below 600 mg/kg except for four locations: Station-8 at Clinton Street (1,330 mg/kg), SED-7 at the former transformer area (25,400 mg/kg), SED-6 at Olcott Street (805 and 6,000 mg/kg) and SED-5 near William Street (5,940 mg/kg). While the high concentrations of lead in samples SED-6, SED-5 and Station-8 (all near roads that cross the creek) could be related to the historical use of leaded gasoline in automobiles, the relatively low (172 mg/kg) concentration of lead in the background sample collected from the 143 Water Street property does not appear to support this idea. The high lead concentration in sample SED-5 could be related to the Former Flintkote Plant Site, as ash from the 198 Mill Street property contains lead at concentrations ranging from 144 to 23,100 mg/kg. High lead concentrations at the Former Flintkote Plant Site, however, do not explain the high lead concentrations at upstream sample locations (e.g., SED-6, SED-7 and Station-8). The extensive ash fill observed south of the Former Flintkote Plant Site is not the source either, as lead was only detected in this ash at concentrations of 4.5 and 226 mg/kg. The source of the high lead concentration in sample SED-7 is also unknown, but appears to be restricted to the area close to the former transformer area as sample SED-8, located approximately 40 feet downstream, contained a significantly lower (449 mk/kg) concentration of lead.

The presence of lead in Eighteenmile Creek sediment may explain the high lead concentrations detected in surface soil samples SS-4, SS-8, SS-9, SS-10, SS-15, SS-20, SS-21 and SS-22 as these samples

were collected from low-lying flood prone areas. The lead in samples SS-8 (1,100 mg/kg) and SS-9 (1,360 mg/kg) was present at concentrations similar to that of sample SS-4 (1,270 mg/kg). The concentration of lead in nearby sample SS-10, however, was significantly higher at 4,630 mg/kg. While the reason for the high lead concentration in this sample is uncertain, it may be related to the shards of metal observed at the sample SS-10 location. The concentration of lead in sample SS-21 was also anomalously high (3,680 mg/kg), but so was the concentration of lead in Eighteenmile Creek sediment near this location (6,000 mg/kg).

6.3 PCB Results

PCBs were detected at concentrations that exceeded the NYSDEC's TAGM 4046 surface soil cleanup objective (1,000 Fg/kg) in four of eight surface soil samples collected from properties along Water Street. Samples that exceeded the surface soil cleanup objective included SS-4 (creek bank; 131 Water Street), SS-8 (creek bank; 131 Water Street), SS-9 (creek bank; 131 Water Street) and SS-24 (transformer area). The concentration of PCBs in these samples ranged from 1,210 to 17,400 Fg/kg. PCBs were also detected in samples SS-1 (shallow swale; 143 Water Street), SS-2 (garden; 143 Water Street), SS-10 (creek bank; 131 Water Street) and SS-22 (transformer area), but the concentrations did not exceed the NYSDEC's TAGM 4046 surface soil cleanup objective.

PCBs were also detected in sediment of Eighteenmile Creek; eighteen of nineteen samples contained PCBs at concentrations ranging from 13.3 to 24,926 Fg/kg. Although only one of these concentrations exceeds the NYSDEC's sediment criteria (19,300 Fg/kg) for chronic toxicity to benthic aquatic life, all eighteen concentrations exceed the sediment criteria (0.8 Fg/kg) for human health bioaccumulation. Thirteen of these concentrations also exceed the TAGM 4046 surface soil cleanup objective.

The sediment PCB results are shown graphically in Figure 6-2, which is plotted from upstream to downstream locations to show spatial variability. Although PCBs were detected at Remick Parkway, the concentrations were relatively low (below the TAGM 4046 surface soil cleanup objective). The PCB concentration at Clinton Street (361 Fg/kg) was slightly higher (although still below the TAGM 4046 surface soil cleanup objective), but was consistent with PCB concentrations (122.6 and 420 Fg/kg) in sediment of the New York State Barge Canal. PCBs were not detected in sample SED-9, which is located approximately 100 feet upstream of the Clinton Street dam. Immediately downstream of the dam, however, PCB concentrations increase substantially, ranging from 840 to 3,662 Fg/kg (samples OLC-8, SED-7 and SED-8). PCB concentrations further downstream remain elevated, ranging from 360 to 24,926 Fg/kg. It is important to note that the PCB concentration in sample Station-12 (24,926 Fg/kg) is significantly higher than the PCB

concentrations in other sediment samples collected from Eighteenmile Creek, the millrace and ash at the Former Flintkote Plant Site. The PCB results from this sample, therefore, appear to be anomalous.

The source of PCBs detected at the 143 Water Street property is uncertain. While the ash sample (SS-3) did not contain PCBs, PCBs at low concentrations (22J to 6,840 Fg/kg) were detected in 7 of 11 ash samples collected from the Former Flintkote Plant Site during the Department's 1999 Site Investigation. It is possible, therefore, that some of the ash observed in the ash ridge along Eighteenmile Creek contains PCBs. It is also known that sediment in the creek contains elevated concentrations of PCBs that could be deposited on the 143 Water Street property during flood events. The PCB concentrations detected in samples SS-1 and SS-2, however, are much lower than expected based upon the concentrations of PCBs in creek sediment.

Sample SS-4 was collected to evaluate the potential migration pathway between contaminated creek sediments and backyard soils due to creek flooding events. This sample location was selected because the area was visibly devoid of waste and other fill material, while being located close to the creek. PCBs were detected in this sample at a concentration of 17,400 Fg/kg, a concentration that is significantly higher than the PCB concentrations in upstream sediment samples (e.g., SED-6, SED-7 and SED-8). As a result, surface soil samples SS-8 through SS-10 were collected on July 23, 2002 to further evaluate PCB contamination in this area.

PCBs were detected in these three samples, but the results were inconsistent with each other and with sample SS-4. The PCB concentration in sample SS-8 was 6,300 Fg/kg, a value 2.75 times lower than that detected in sample SS-4. Both samples were collected at the same location. In addition, sample SS-4 contained PCB aroclors 1254 and 1260, while sample SS-8 contained PCB aroclors 1248 and 1254. The aroclors detected in the later sample, however, are consistent with the aroclors detected in samples SS-9 and SS-10, and with the aroclors historically detected in Eighteenmile Creek sediment (Table 5-5). The PCB results from sample SS-4, therefore, appear to be anomalous.

PCBs were also detected in the two surface soil samples collected from the former transformer area near the Clinton Street dam (samples SS-22 and SS-24). The concentrations of PCBs, however, were relatively low (499J and 1,210 Fg/kg, respectively), suggesting that this area is not currently a significant source of PCBs to Eighteenmile Creek. Both samples also contained PCB aroclors 1248, 1254 and 1260, a finding which is inconsistent with the aroclors historically detected in Eighteenmile Creek sediment.

6.4 Conclusion

Elevated concentrations of lead and PCBs were detected in surface soil samples collected from properties along Water Street. At the 143 Water Street property, the source(s) of lead include(s) surface water/solids runoff from the ash ridge along Eighteenmile Creek, the presence of ash fill in the garden, and the deposition of contaminated sediments from Eighteenmile Creek during flood events. The principle source of lead may be the ash ridge; the ash observed is similar in appearance to the ash observed on the island of the Former Flintkote Plant Site, which is also a characteristic hazardous waste for lead (D008). The available analytical data indicates, also, that the ash, slag and cinder fill that was collected from inside the garage at 131 Water Street and from the shallow depression in the side yard of 143 Water Street is not the source of lead as this waste contained relatively low (29.8 to 140 mk/kg) concentrations of this contaminant. Also, leaded paint and leaded gasoline do not appear to be a significant source of lead as the background sample collected from the 143 Water Street property contained a relatively low (172 mg/kg) concentration of lead. The source of PCBs detected at the 143 Water Street property is unknown.

For the remaining Water Street properties, the source of lead and PCBs appears to be the deposition of contaminated sediment from Eighteenmile Creek during flood events; PCBs and lead were detected in creek sediment from Remick Parkway to the confluence with the millrace adjacent to the Former Flintkote Plant Site. Plots of these data from upstream to downstream locations indicate that lead concentrations are below 600 mg/kg except for four locations: Station-8 at Clinton Street (1,330 mg/kg), SED-7 at the former transformer area (25,400 mg/kg), SED-6 at Olcott Street (805 and 6,000 mg/kg) and SED-5 near William Street (5,940 mg/kg). The exact source of this lead is unknown, but appears to be a source other than the Former Flintkote Plant Site.

The available analytical data suggest a source of PCBs near the Clinton Street dam; immediately downstream of the dam PCB concentrations increase substantially (840 to 3,662 Fg/kg) and remain elevated throughout the portion of Eighteenmile Creek evaluated in this study. This source, however, does not appear to be the former transformer area or the extensive ash fill that was observed south of the Former Flintkote Plant Site. At this time the source remains unknown.

7.0 RECOMMENDATIONS

Based upon the results of the three 2002 sampling events of Eighteenmile Creek and properties along Water Street, the following recommendations regarding future investigative activities at the Former Flintkote Plant Site, Eighteenmile Creek and the Water Street properties are offered:

- Collect additional samples from the wooded property between 143 Water Street and Eighteenmile Creek to further determine the nature and extent of ash fill in this area.

- Collect additional sediment samples from Eighteenmile Creek for chemical analysis to further evaluate the nature and extent of contamination in the creek. These samples should be collected from the creek between the New York State Barge Canal and the confluence with the millrace. Special emphasis should be placed on the Clinton Street dam area, which appears to be associated with an unidentified source of PCBs.

- Collect additional surface soil samples from properties along Water Street for chemical analysis to further evaluate the nature and extent of lead and PCB contamination near Eighteenmile Creek.

8.0 REFERENCES

NYSDEC, 1995, Determination of Soil Cleanup Objectives and Cleanup Levels: New York State Department of Environmental Conservation, Division of Environmental Remediation Technical and Administrative Guidance Memorandum # HWR-95-4046, Albany, New York.

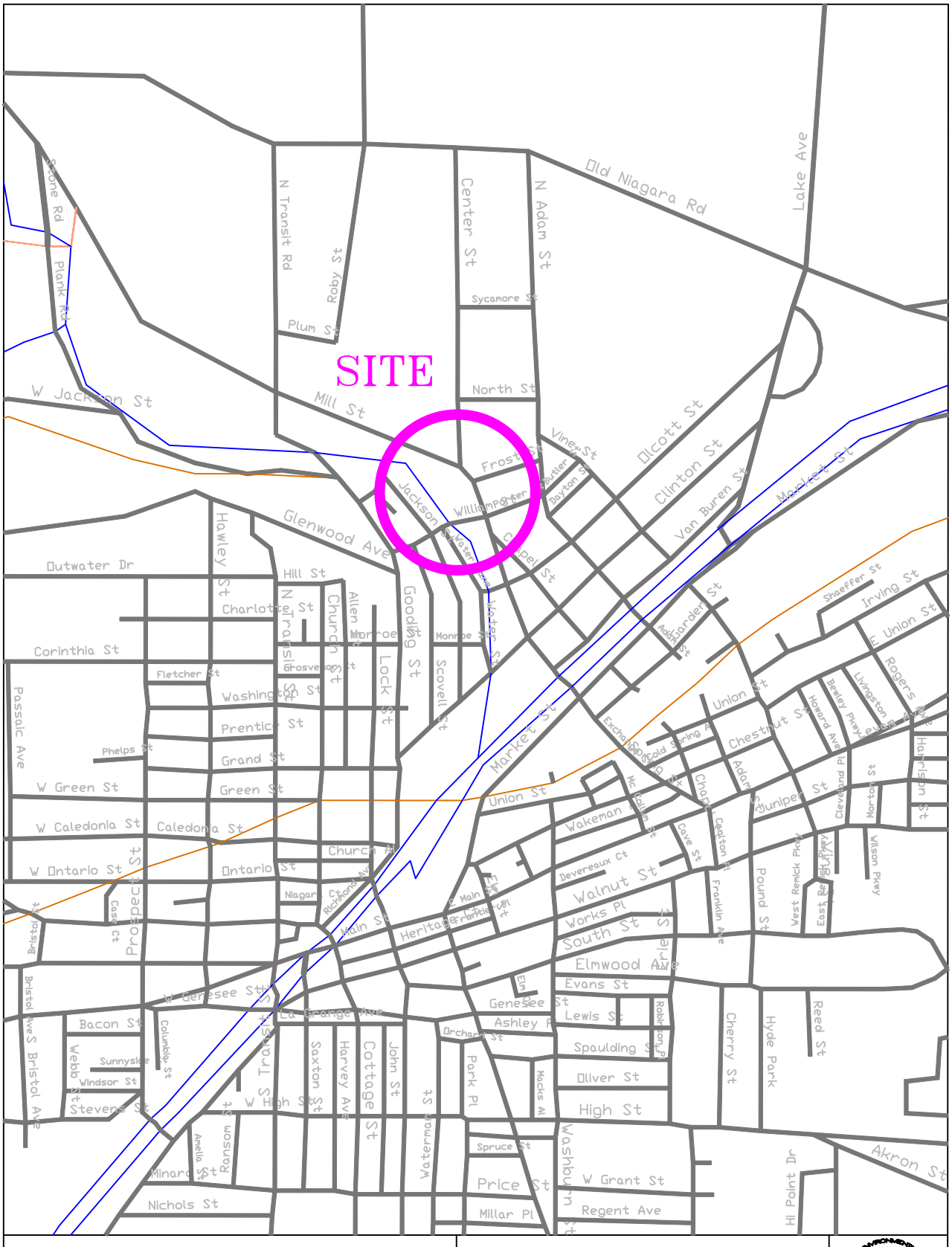
NYSDEC, 1995, Identification and Listing of Hazardous Wastes, New York State Codes, Rules and Regulations Title 6, Part 371: New York State Department of Environmental Conservation, Division of Hazardous Substances Regulation, Albany, New York.

NYSDEC, 1996, Trackdown of Chemical Contaminants to Lake Ontario from New York State Tributaries: New York State Department of Environmental Conservation, Division of Water, Albany, New York.

NYSDEC, 1997, Eighteenmile Creek Remedial Action Plan: New York State Department of Environmental Conservation, Division of Water, Albany, New York.

NYSDEC, 1999, Technical Guidance for Screening Contaminated Sediments: New York State Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources, Albany, New York.

NYSDEC, 2000, Site Investigation Report, Former Flintkote Plant Site, 198 & 300 Mill Street, City of Lockport, Niagara County, New York: New York State Department of Environmental Conservation, Division of Environmental Remediation, Buffalo, New York.



Lockport Quadrangle

Scale Depends on Final Plotted Size

SITE LOCATION MAP

DIVISION OF ENVIRONMENTAL REMEDIATION

DATE: 02/20/03 | DRAWING: Location Map.dwg

SITE: FORMER FLINTKOTE PLANT SITE

FIGURE 1-1

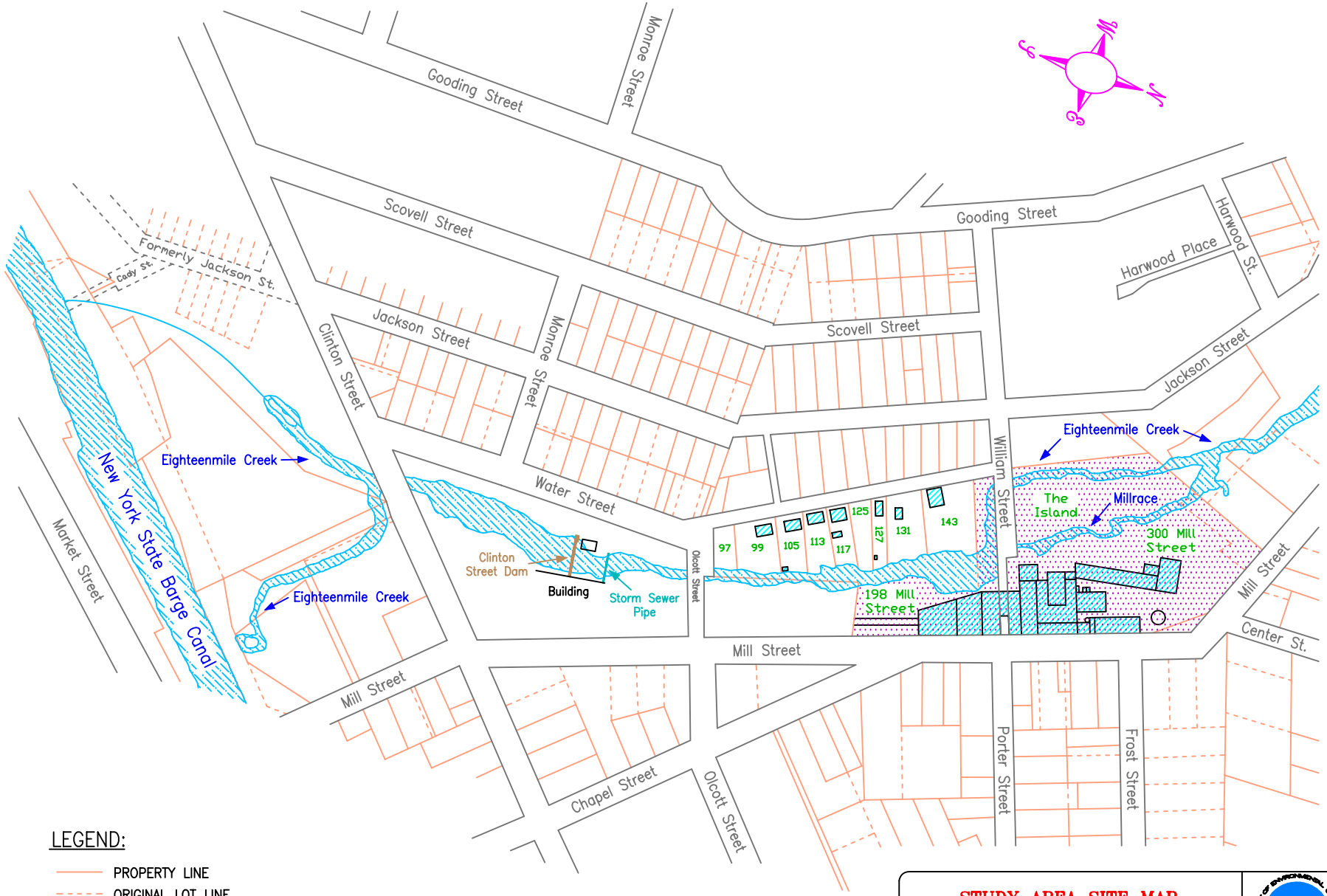
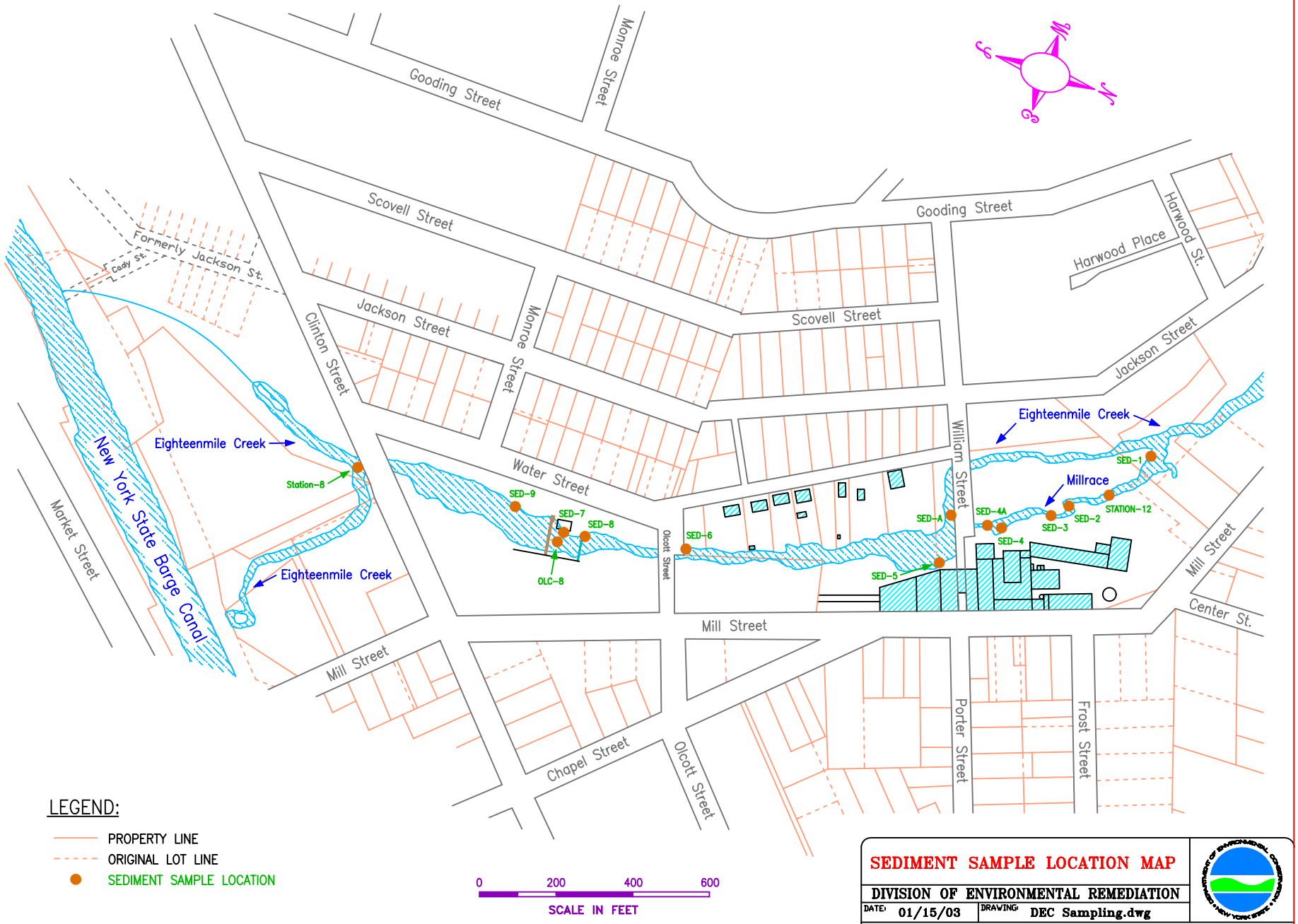

Gooding Street
Monroe Street
Scovell Street
Gooding Street
Harwood Place
Harwood St.
Formerly Jackson St.
Cady St.
Jackson Street
Monroe Street
Clinton Street
Scovell Street
Jackson Street
Eighteenmile Creek
William Street
Eighteenmile Creek
New York State Barge Canal
Water Street
The Island
Millrace
300 Mill Street
97
99
105
113
117
125
127
131
143
Clinton Street Dam
Building
Storm Sewer Pipe
Olcott Street
198 Mill Street
Market Street
Eighteenmile Creek
Mill Street
Mill Street
Center St.
Chapel Street
Olcott Street
Porter Street
Frost Street
LEGEND:
PROPERTY LINE
ORIGINAL LOT LINE
FORMER FLINTKOTE PLANT SITE
0
200
400
600
SCALE IN FEET
STUDY AREA SITE MAP
DIVISION OF ENVIRONMENTAL REMEDIATION
DATE: 01/15/03
DRAWING: DEC Sampling.dwg
SITE NAME: FORMER FLINTKOTE PLANT SITE
FIGURE 1-2

Figure 2-1. Photograph of the fenced containment structure that may have housed transformers and/or capacitors containing PCB oil. The Clinton Street dam is in the background, while Eighteenmile Creek is to the left. Photograph taken by Paul Dicky on November 21, 2002.


Gooding Street
Monroe Street
Scovell Street
Gooding Street
Harwood Place
Harwood St.
Formerly Jackson St.
Cady St.
Jackson Street
Monroe Street
Clinton Street
Scovell Street
Jackson Street
Eighteenmile Creek
Station-8
New York State Barge Canal
Market Street
Water Street
William Street
Eighteenmile Creek
SED-1
Millrace
SED-9
SED-7
SED-8
SED-4A
SED-2
SED-3
STATION-12
SED-A
SED-6
SED-4
Olcott Street
SED-5
OLC-8
Eighteenmile Creek
Mill Street
Mill Street
Center St.
Mill Street
Chapel Street
Olcott Street
Porter Street
Frost Street
LEGEND:
PROPERTY LINE
ORIGINAL LOT LINE
SEDIMENT SAMPLE LOCATION
0
200
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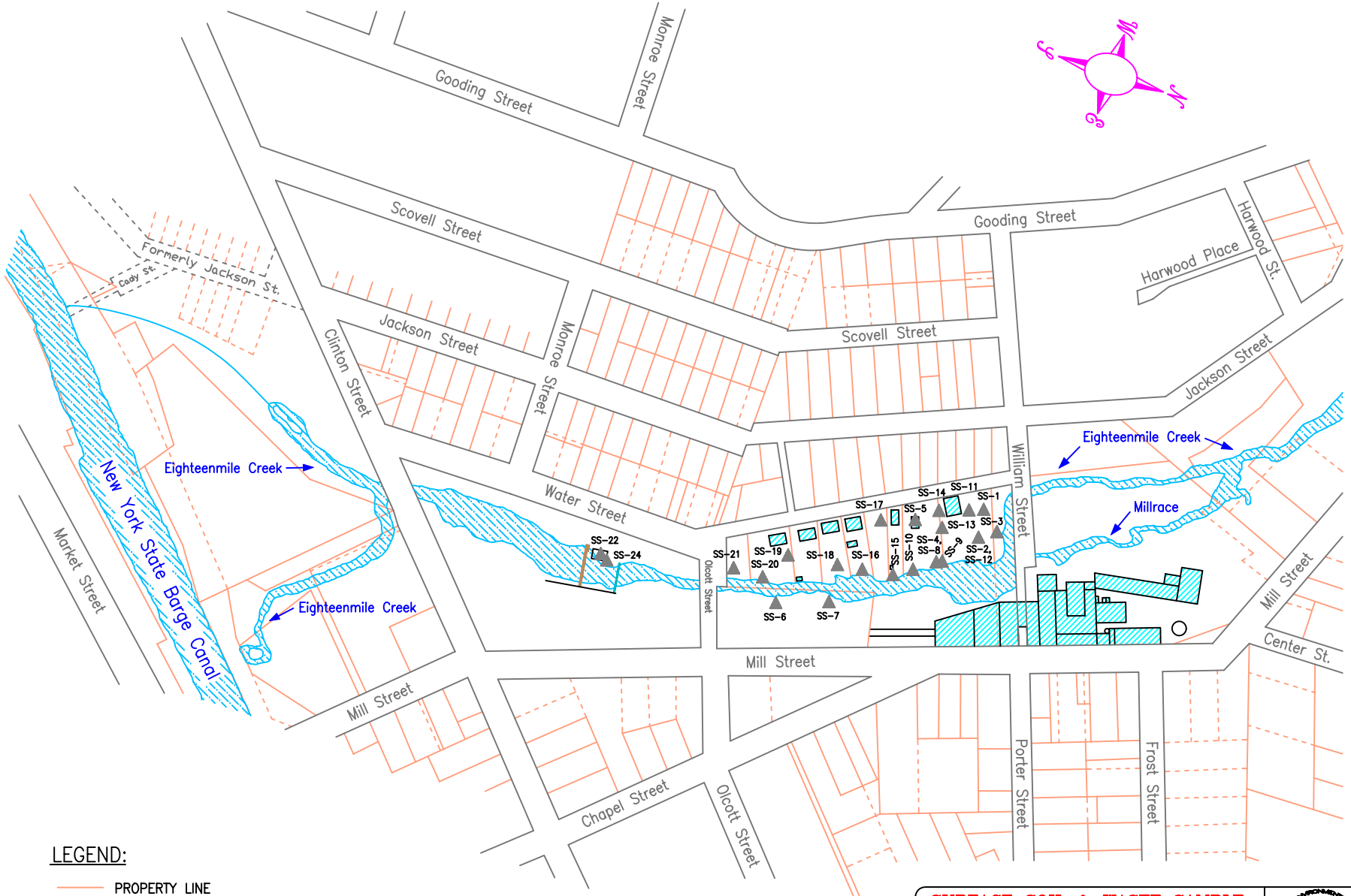
SCALE IN FEET
SEDIMENT SAMPLE LOCATION MAP
DIVISION OF ENVIRONMENTAL REMEDIATION
DATE: 01/15/03
DRAWING: DEC Sampling.dwg
SITE NAME: FORMER FLINTKOTE PLANT SITE
FIGURE 3-1



SURFACE SOIL & WASTE SAMPLE LOCATION MAP

DIVISION OF ENVIRONMENTAL REMEDIATION

DATE: 01/15/03 | DRAWING: DEC Sampling.dwg

SITE NAME: FORMER FLINTKOTE PLANT SITE

FIGURE 3-2

Figure 5-1. Photograph of ash from a small ridge along Eighteenmile Creek. This area was the location of sample SS-3. Photograph taken by Paul Dicky on April 16, 2002.

Figure 5-2. Photograph of the small ridge of ash fill along Eighteenmile Creek. The grassy area in the background is the side yard of the property at 143 Water Street. Photograph taken by Paul Dicky on April 16, 2002.

Figure 5-3. Photograph of ash fill in the creek bank along Eighteenmile Creek. Observe the buttons, which are characteristic of the ash fill on the island of the former Flintkote property. Photograph taken by Paul Dicky on April 16, 2002.

Figure 5-4. Photograph of the property line between 131 and 127 Water Street. The elevation difference (about 3 feet) delineates the extent of ash-cinder fill at the 143 and 131 Water Street properties. Photograph taken by Paul Dicky on April 16, 2002.

Figure 5-5. Photograph of the floor inside the garage at 131 Water Street. This ash-cinder fill is found throughout the mound shown in Figure 5-4. Photograph taken by Paul Dicky on April 16, 2002.

Figure 5-6. Photograph of the natural drainage swale from the side yard of 143 Water Street to Eighteenmile Creek. The cross-culverts beneath William Street can be observed in the background. Note the debris partially blocking these culverts. Photograph taken by Paul Dicky on April 16, 2002.

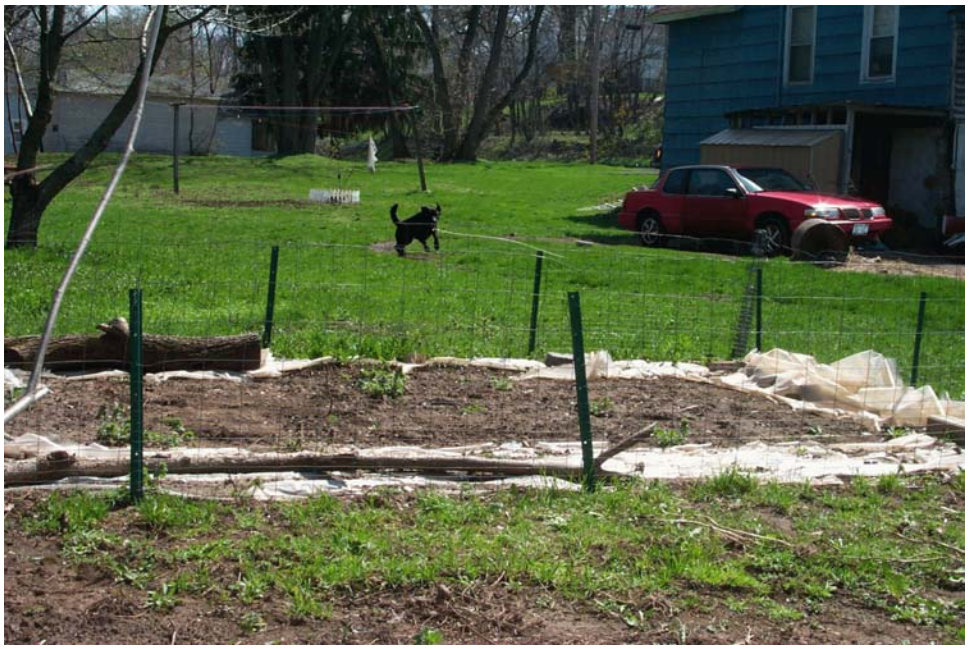


Figure 5-7. Photograph of the small garden at 143 Water Street. Samples SS-2 and SS-12 were collected from the center of this garden. Photograph taken by Paul Dicky on April 16, 2002.

Figure 5-8. Photograph of sample location SS-4 and SS-8 (at the brick) along Eighteenmile Creek. The former Flintkote buildings can be observed in the background. Photograph taken by Paul Dicky on April 16, 2002.

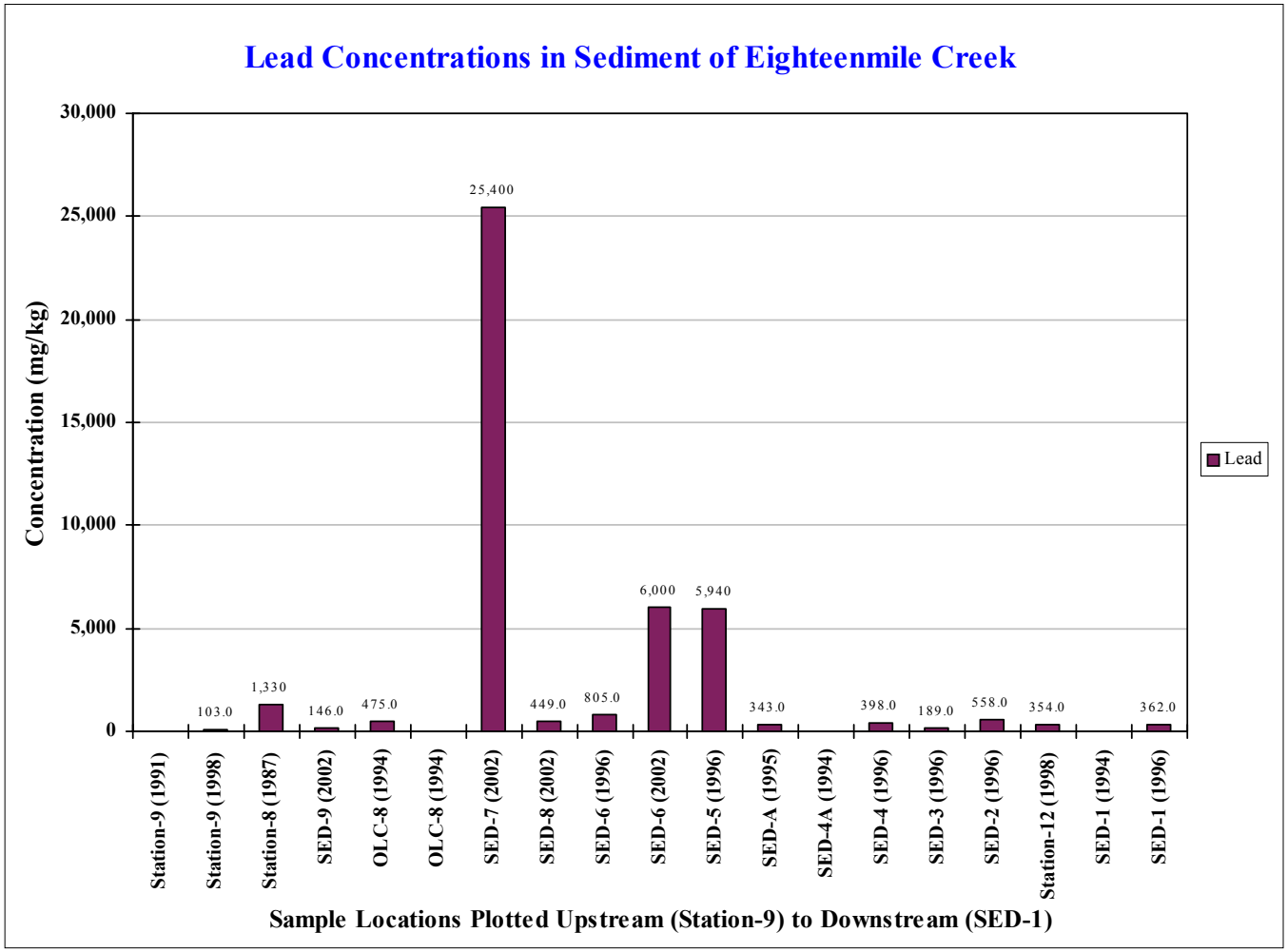


Figure 6-1. Lead concentrations in sediment of Eighteenmile Creek from Remick Parkway (Station-9) to the Former Flintkote Plant Site (SED-5 to SED-1).

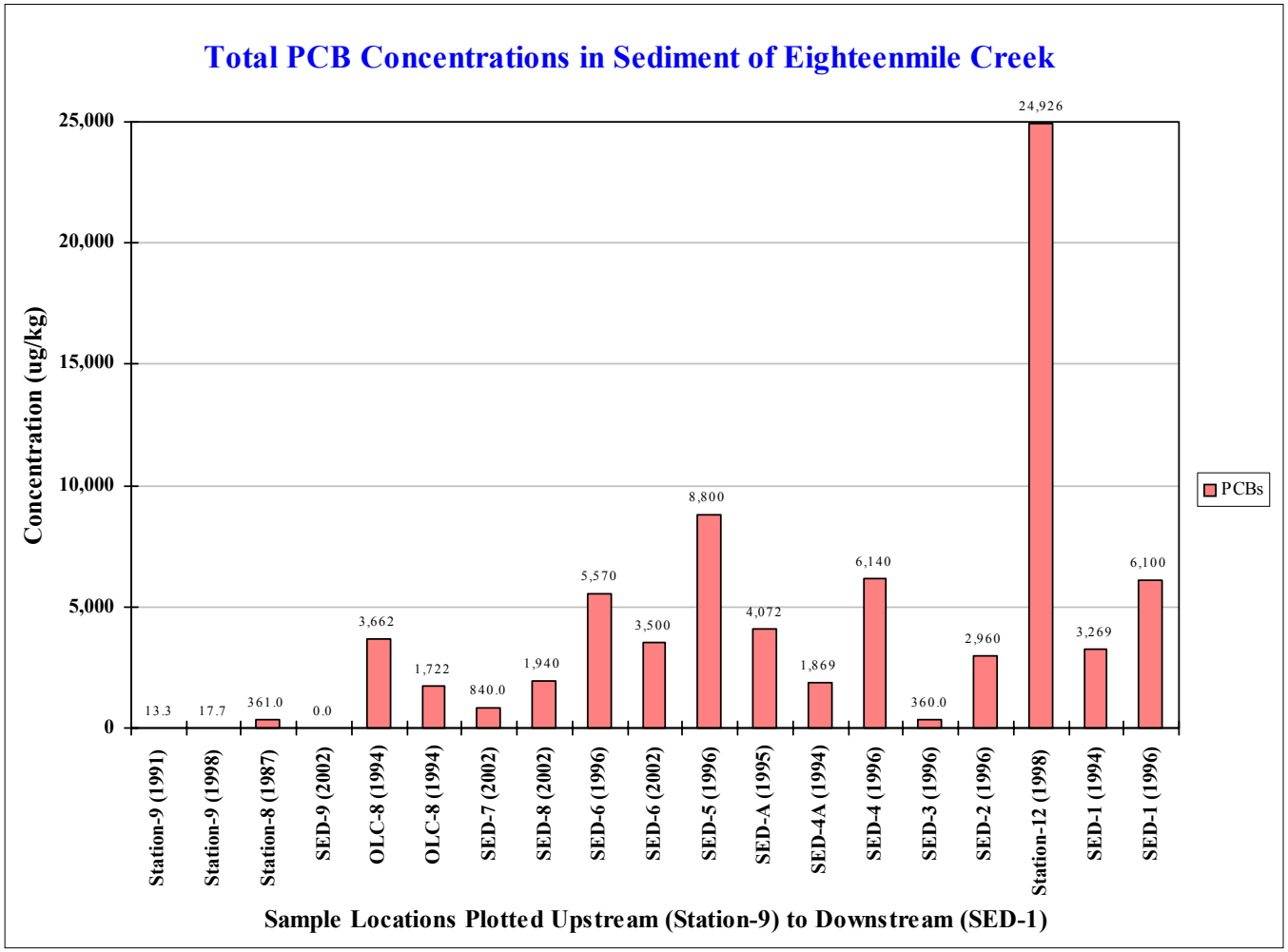


Figure 6-2. PCB concentrations in sediment of Eighteenmile Creek from Remick Parkway (Station-9) to the Former Flintkote Plant Site (SED-5 to SED-1).

Table 3-1.
Sample Summary Key for Samples Collected along Water Street in Lockport.

Sample ID	Sample Location	Date Sampled	Time Sampled	Interval Sampled*	Analytical Parameters	Comments	Table Reference
Waste Samples							
D32103	SS-3 (143 Water St.)	04/16/02	11:50	0'-0.17'	PCBs, Total Lead, TCLP Lead	berm of waste along Eighteenmile Creek	Table 5-1
D32105	SS-5 (131 Water St.)	07/23/02	10:40	0'-0.17'	Total Lead, TCLP Lead	ash & cinders in garage	Table 5-1
D32106	SS-6 (Mill St.)	07/23/02	13:10	0'-0.17'	PCBs, Total Lead, TCLP Lead	vacant property south of Flintkote	Table 5-1
D32107	SS-7 (Mill St.)	07/23/02	13:20	0'-0.17'	PCBs, Total Lead, TCLP Lead	vacant property south of Flintkote	Table 5-1
D32113	SS-13 (143 Water St.)	07/23/02	10:16	0'-0.17'	Total Lead	18" diameter depression in side yard	Table 5-1
Surface Soil Samples							
D32101	SS-1 (143 Water St.)	04/16/02	11:28	0'-0.17'	PCBs, Total Lead	shallow swale near tributary	Table 5-2
D32102	SS-2 (143 Water St.)	04/16/02	11:40	0'-0.17'	PCBs, Total Lead	in garden	Table 5-2
D32104	SS-4 (131 Water St.)	04/16/02	12:00	0'-0.17'	PCBs, Total Lead, TCLP Lead	flood plain along Eighteenmile Creek	Table 5-3
D32108	SS-8 (131 Water St.)	07/23/02	10:50	0'-0.17'	PCBs, Total Lead	PCB confirmation of SS-4	Table 5-3
D32109	SS-9 (131 Water St.)	07/23/02	10:53	0'-0.17'	PCBs, Total Lead	14½' north of SS-8	Table 5-3
D32110	SS-10 (131 Water St.)	07/23/02	10:58	0'-0.17'	PCBs, Total Lead	58' south of SS-8	Table 5-3
D32111	SS-11 (143 Water St.)	07/23/02	10:00	0'-0.17'	Total Lead	bare soil near dog house	Table 5-2
D32112	SS-12 (143 Water St.)	07/23/02	10:09	0'-0.17'	Total Lead	lead confirmation of SS-2	Table 5-2
D32114	SS-14 (143 Water St.)	07/23/02	10:25	0'-0.17'	Total Lead	background lead sample	Table 5-2
D32115	SS-15 (127 Water St.)	07/23/02	11:30	0'-0.17'	Total Lead	flood prone area	Table 5-4
D32116	SS-16 (117 Water St.)	07/23/02	11:35	0'-0.17'	Total Lead	flood prone area	Table 5-4
D32117	SS-17 (125 Water St.)	07/23/02	11:47	0'-0.17'	Total Lead	in flower bed by flagpole	Table 5-4
D32118	SS-18 (113 Water St.)	07/23/02	12:03	0'-0.17'	Total Lead	flood prone area	Table 5-4

Table 3-1 (Continued).
Sample Summary Key for Samples Collected along Water Street in Lockport.

Sample ID	Sample Location	Date Sampled	Time Sampled	Interval Sampled*	Analytical Parameters	Comments	Table Reference
Surface Soil Samples (Continued)							
D32119	SS-19 (99 Water St.)	07/23/02	12:20	0'-0.17'	Total Lead	under swing set	Table 5-4
D32120	SS-20 (99 Water St.)	07/23/02	12:30	0'-0.17'	Total Lead	flood prone area	Table 5-4
D32121	SS-21 (97 Water St.)	07/23/02	12:50	0'-0.17'	Total Lead	wooded property	Table 5-4
D32122	SS-22	11/26/02	13:48	0'-0.17'	PCBs, Total Lead	former transformer area	Table 5-4
D32124	SS-24	11/26/02	14:12	0'-0.17'	PCBs, Total Lead	former transformer area	Table 5-4
Sediment Samples							
Unknown	Station-8 (at Clinton St.)	1987	Unknown	Unknown	Metals	DOW Sampling; results in Remedial Action Plan **	Table 5-5
18MI-CLINTON	Station-8 (at Clinton St.)	07/11/91	Unknown	0'-0.04'	PCBs, Dioxins, Furans	DOW Sampling; results in Remedial Action Plan	Table 5-5
18MI-REMICK	Station-9 (Remick Pkwy)	07/11/91	Unknown	0'-0.04'	PCBs, Dioxins, Furans	DOW Sampling; results in Remedial Action Plan	Table 5-5
Unknown	OLC-8 (downstream of Clinton St. dam)	1994	Unknown	0'-0.17'	PCBs, Metals	DOW Sampling; results in Remedial Action Plan	Table 5-5
Unknown	SED-1 (Millrace)	1994	Unknown	Unknown	PCBs	DOW Sampling; results in Remedial Action Plan	Table 5-5
Unknown	SED-4A (Millrace)	1994	Unknown	Unknown	PCBs	DOW Sampling; results in Remedial Action Plan; near SED-4	Table 5-5
EC-LKPTMAIN	SED-B (Erie Canal)	03/22/94	Unknown	0.46'-0.61'	PCBs, Dioxins, Furans	DOW Sampling; west end of big bridge near Transit Road	Table 5-5
OLC-08	OLC-8 (downstream of Clinton St. dam)	10/12/94	Unknown	0'-0.33'	PCBs, Mirex	DOW Sampling	Table 5-5
18MI-WILLIAM	SED-A (at William St.)	10/27/95	Unknown	0'-0.17'	PAHs, PCBs, Pesticides, Metals, Dioxins, Furans	DOW Sampling	Table 5-5

Table 3-1 (Continued).
Sample Summary Key for Samples Collected along Water Street in Lockport.

Sample ID	Sample Location	Date Sampled	Time Sampled	Interval Sampled*	Analytical Parameters	Comments	Table Reference
Sediment Samples (Continued)							
B081S1	SED-1 (Millrace)	08/07/96	10:00	0'-0.17'	VOCS, SVOCS, PCBs, Pesticides, Metals	DER Sampling; near confluence with Eighteenmile Creek	Table 5-5
B081S2	SED-2 (Millrace)	08/07/96	10:25	0'-0.17'	VOCS, SVOCS, PCBs, Pesticides, Metals	DER Sampling	Table 5-5
B081S3	SED-3 (Millrace)	08/07/96	10:40	0'-0.17'	VOCS, SVOCS, PCBs, Pesticides, Metals	DER Sampling	Table 5-5
B081S4	SED-4 (Millrace)	08/07/96	11:00	0'-0.17'	VOCS, SVOCS, PCBs, Pesticides, Metals	DER Sampling	Table 5-5
B081S5	SED-5 (near William St.)	08/07/96	13:10	0'-0.17'	VOCS, SVOCS, PCBs, Pesticides, Metals	DER Sampling	Table 5-5
B081S6	SED-6 (at Olcott St.)	08/07/96	13:50	0'-0.17'	VOCS, SVOCS, PCBs, Pesticides, Metals	DER Sampling	Table 5-5
Unknown	Station-9 (Remick Pkwy)	08/17/98	16:30	0'-0.17'	PAHs, PCBs, Pesticides, Metals, Dioxins, Furans	DOW Sampling; 30 meters upstream of East Remick Parkway	Table 5-5
Unknown	Station-12 (Millrace)	08/19/98	18:00	0'-0.59'	PAHs, PCBs, Pesticides, Metals, Dioxins, Furans	DOW Sampling; 100 meters downstream of William Street	Table 5-5
Unknown	Station-8A (Erie Canal)	08/20/98	11:45	0'-0.33'	PAHs, PCBs, Pesticides, Metals, Dioxins, Furans	DOW Sampling; between Prospect and 13th Street bridges - north side of canal	Table 5-5
D321S7	SED-6 (at Olcott St.)	07/23/02	12:50	0'-0.17'	PCBs, Total Lead	DER Sampling	Table 5-5
D32123	SED-7 (downstream of Clinton St. dam)	11/26/02	13:55	0'-0.17'	PCBs, Total Lead	DER Sampling	Table 5-5
D32125	SED-8 (downstream of Clinton St. dam)	11/26/02	14:20	0.17'-0.33	PCBs, Total Lead	DER Sampling	Table 5-5

Table 3-1 (Continued).
Sample Summary Key for Samples Collected along Water Street in Lockport.

Sample ID	Sample Location	Date Sampled	Time Sampled	Interval Sampled*	Analytical Parameters	Comments	Table Reference
Sediment Samples (Continued)							
D32126	SED-9 (upstream of Clinton St. dam)	11/26/02	14:33	0'-0.17'	PCBs, Total Lead	DER Sampling	Table 5-5

***** **Intervals in feet below ground surface.**
****** **Eighteenmile Creek Remedial Action Plan, NYSDEC, August 1997.**
VOCS **Volatile organic compounds.**
SVOCS **Semivolatile organic compounds.**
PCBs **Polychlorinated biphenyls.**

Table 5-1.
Analytical Results of Waste Samples Collected from Properties along Eighteenmile Creek in the City of Lockport.

Sample Number Date Sampled Sample Depth Sample Location	Soil Cleanup Objective * or Regulatory Limit +	SS-3 04/16/02 0"-2" Ash Ridge	SS-5 07/23/02 0"-2" Garage	SS-6 07/23/02 0"-2" Woods	SS-7 07/23/02 0"-2" Woods	SS-13 7/23/02 0"-2" Depression
PCBs (Fg/kg or ppb)						
Aroclor-1248						
Aroclor-1254						
Aroclor-1260						
Total PCBs	1,000	ND		ND	ND	
Inorganic Compounds (mg/kg or ppm unless otherwise noted)						
Lead - Total	500 **	**4,250 E**	29.8 E	4.5 E	226 E	140 E
Lead - TCLP (mg/l)	5.0	**355.0**	0.020	0.003	0.057	

***** **NYSDEC Technical and Guidance Memorandum (TAGM) 4046: Determination of Soil Cleanup Objectives and Cleanup Levels, 1995.**

+ **6 NYCRR Part 371: Identification and Listing of Hazardous wastes, January 14, 1995.**

E **Estimated concentration due to the presence of interference.**

ND **Compound was analyzed for but not detected.**

****** **The TAGM 4046 soil cleanup objective for lead is site background. In general, background concentrations vary widely, with average concentrations in undeveloped, rural areas ranging from 4-61 ppm, and from 200-500 ppm in metropolitan or suburban areas. A specific site background concentration for the Former Flintkote Plant Site has not been determined, so a 500 ppm value has been utilized for screening purposes.**

Blanks indicate that the sample was not analyzed for the associated compound.

Shaded values equal or exceed the TAGM 4046 soil cleanup objectives or TCLP Regulatory Limits.

Table 5-2.
Analytical Results of Surface Soil Samples Collected from the Property at 143 Water Street.

Sample Number Date Sampled Sample Depth Sample Location or Type	Soil Cleanup Objective *	SS-1 04/16/02 0"-2" Shallow Swale	SS-2 04/16/02 0"-2" Garden	SS-12 + 7/23/02 0"-2" Garden	SS-11 7/23/02 0"-2" Dog Trail	SS-14 07/23/02 0"-2" Background
PCBs (Fg/kg or ppb)						
Aroclor-1248						
Aroclor-1254		64 J	24 J			
Aroclor-1260						
Total PCBs	1,000	64 J	24 J			
Inorganic Compounds (mg/kg or ppm unless otherwise noted)						
Lead - Total	500 **	**887 E**	**686 E**	**1,330 E**	**913 E**	172 E
Lead - TCLP (mg/l)	5.0					

***** NYSDEC Technical and Guidance Memorandum (TAGM) 4046: Determination of Soil Cleanup Objectives and Cleanup Levels, 1995.

J Compound reported at an estimated concentration below the reporting limit.

E Estimated concentration due to the presence of interference.

ND Compound was analyzed for but not detected.

****** The TAGM 4046 soil cleanup objective for lead is site background. In general, background concentrations vary widely, with average concentrations in undeveloped, rural areas ranging from 4-61 ppm, and from 200-500 ppm in metropolitan or suburban areas. A specific site background concentration for the Former Flintkote Plant Site has not been determined, so a 500 ppm value has been utilized for screening purposes.

+ Sample collected near the location of sample SS-2.

Blanks indicate that the sample was not analyzed for the associated compound.

Shaded values equal or exceed the TAGM 4046 soil cleanup objectives.

Table 5-3.
Analytical Results of Surface Soil Samples Collected from the Property at 131 Water Street.

Sample Number Date Sampled Sample Depth Sample Location or Type	Soil Cleanup Objective *	SS-4 04/16/02 0"-2" Creek Bank	SS-8 + 07/23/02 0"-2" Creek Bank	SS-9 07/23/02 0"-2" Creek Bank	SS-10 07/23/02 0"-2" Creek Bank
PCBs (Fg/kg or ppb)					
Aroclor-1248			2,800	3,700	220 J
Aroclor-1254		9,400	3,500	4,300	240 J
Aroclor-1260		8,000			
Total PCBs	1,000	**17,400**	**6,300**	**8,000**	460 J
Inorganic Compounds (mg/kg or ppm unless otherwise noted)					
Lead - Total	500 **	**1,270 E**	**1,100 E**	**1,360 E**	**4,630 E**
Lead - TCLP (mg/l)	5.0	1.54			

***** **NYSDEC Technical and Guidance Memorandum (TAGM) 4046: Determination of Soil Cleanup Objectives and Cleanup Levels, 1995.**

J **Compound reported at an estimated concentration below the reporting limit.**

E **Estimated concentration due to the presence of interference.**

****** **The TAGM 4046 soil cleanup objective for lead is site background. In general, background concentrations vary widely, with average concentrations in undeveloped, rural areas ranging from 4-61 ppm, and from 200-500 ppm in metropolitan or suburban areas. A specific site background concentration for the Former Flintkote Plant Site has not been determined, so a 500 ppm value has been utilized for screening purposes.**

+ **Sample collected at the location of sample SS-4.**

Blanks indicate that the sample was not analyzed for the associated compound.

Shaded values equal or exceed the TAGM 4046 soil cleanup objectives.

Table 5-4.
Analytical Results of Surface Soil Samples Collected from Other Water Street Properties.

Sample Number Date Sampled Sample Depth Sample Location	Soil Cleanup Objective *	SS-15 7/23/02 0"-2" 127 Water St.	SS-16 7/23/02 0"-2" 117 Water St.	SS-17 7/23/02 0"-2" 125 Water St.	SS-18 7/23/02 0"-2" 113 Water St.	SS-19 7/23/02 0"-2" 99 Water St.
PCBs (Fg/kg or ppb)						
Aroclor-1248						
Aroclor-1254						
Aroclor-1260						
Total PCBs	1,000					
Inorganic Compounds (mg/kg or ppm)						
Lead - Total	500 **	**1,110 E**	438 E	56.2 E	227 E	**549 E**

Table 5-4 (Continued).
Analytical Results of Surface Soil Samples Collected from Other Water Street Properties.

Sample Number Date Sampled Sample Depth Sample Location	Soil Cleanup Objective *	SS-20 7/23/02 0"-2" 99 Water St.	SS-21 07/23/02 0"-2" 97 Water St.	SS-22 11/26/02 0"-2" Transformer Area	SS-24 11/26/02 0"-2" Transformer Area
PCBs (Fg/kg or ppb)					
Aroclor-1248				99 J	520.0
Aroclor-1254				240 J	490.0
Aroclor-1260				160 J	200 J
Total PCBs	1,000			499 J	**1,210**
Inorganic Compounds (mg/kg or ppm)					
Lead - Total	500 **	**936 E**	**3,680 E**	**1,060**	344.0

Table 5-4 (Continued).
Analytical Results of Surface Soil Samples Collected from Other Water Street Properties.

*	NYSDEC Technical and Guidance Memorandum (TAGM) 4046: Determination of Soil Cleanup Objectives and Cleanup Levels, 1995.
E	Estimated concentration due to the presence of interference.
J	Compound reported at an estimated concentration below the reporting limit.
**	The TAGM 4046 soil cleanup objective for lead is site background. In general, background concentrations vary widely, with average concentrations in undeveloped, rural areas ranging from 4-61 ppm, and from 200-500 ppm in metropolitan or suburban areas. A specific site background concentration for the Former Flintkote Plant Site has not been determined, so a 500 ppm value has been utilized for screening purposes.
	Blanks indicate that the sample was not analyzed for the associated compound.
	Shaded values equal or exceed the TAGM 4046 soil cleanup objectives.

Table 5-5.
Analytical Results of Sediment Samples Collected from the Erie Canal, Eighteenmile Creek and the Millrace at the Former Flintkote Plant Site.
Results for Eighteenmile Creek are Summarized from Upstream (Station-9) to Downstream (SED-1) Locations.
The Two Erie Canal Samples Were Collected Upstream of Eighteenmile Creek.

Sample Number **Date Sampled** **Sample Depth** **Sample Location**	**Sediment Criteria ***	**Station-8A** **08/20/98** **0"-4"** **Erie Canal**	**SED-B** **03/22/94** **5.5"-7.3"** **Erie Canal**	**Station-9** **07/11/91** **0"-0.5"** **Remick Pkwy.**	**Station-9** **08/17/98** **0"-2"** **Remick Pkwy.**	**Station-8** **1987** **Unknown** **Clinton St.**	**SED-9** **11/26/02** **0"-2"** **Dam ■**	**OLC-8** **1994** **0"-2"** **Dam ●**
PCBs (Fg/kg or ppb)								
Aroclor-1242								
Aroclor-1248			420.0					
Aroclor-1254								
Aroclor-1260								
Total PCBs	0.8 **	**122.6 @**	**420.0**	**13.3**	**17.7 @**	**361.0 +**	ND (140)	**3,662**
Inorganic Compounds (mg/kg or ppm)								
Arsenic	33.0	5.7			7.7	4.7		3.6
Barium	NS	NR			NR	158.0		NR
Cadmium	9.0	0.24 B			0.86 B	2.9		2.0
Chromium	110.0	29.4			17.9	95.0		44.8
Cobalt	NS	NR			NR	5.3		NR
Copper	110.0	40.0			20.2	**650.0**		**238.0**
Iron	40,000	29,300			24,900	27,600		14,400
Lead	110.0	33.6			103.0	**1,330**	**146.0**	**475.0**
Mercury	1.3	0.12			NR	**1.8**		0.66
Nickel	50.0	32.1			22.9	**50.0**		31.8
Selenium	NS	NR			NR	ND		1.4
Silver	2.2	0.33 B			ND	**4.0**		2.1
Zinc	270.0	212.0			170.0	**833.0**		**423.0**

Table 5-5 (Continued).
Analytical Results of Sediment Samples Collected from the Erie Canal, Eighteenmile Creek and the Millrace at the Former Flintkote Plant Site.
Results for Eighteenmile Creek are Summarized from Upstream (Station-9) to Downstream (SED-1) Locations.
The Two Erie Canal Samples Were Collected Upstream of Eighteenmile Creek.

Sample Number Date Sampled Sample Depth Sample Location	Sediment Criteria *	OLC-8 10/12/94 0"-4" Dam ●	SED-7 11/26/02 0"-2" Dam ●	SED-8 11/26/02 0"-2" Dam ●	SED-6 08/07/96 0"-2" Olcott St.	SED-6 07/23/02 0"-2" Olcott St.	SED-5 08/07/96 0"-2" 300 Mill	SED-A 10/27/95 0"-2" William St.
PCBs (Fg/kg or ppb)								
Aroclor-1242			600.0					
Aroclor-1248				830.0	4,800 X	1,800	4,900 PX	
Aroclor-1254			240.0	760.0	770 PX	1,700	3,900 PX	
Aroclor-1260				350.0				
Total PCBs	0.8 **	**1,722 @**	**840.0**	**1,940**	**5,570**	**3,500**	**8,800**	**4,072 (2,138)**
Inorganic Compounds (mg/kg or ppm)								
Arsenic	33.0				3.5		**36.8**	4.7
Barium	NS				142 E		784 E	NA
Cadmium	9.0				3.0		**26.3**	1.3
Chromium	110.0				18.5		**167.0**	28.2
Cobalt	NS				3.5 B		23.4 B	NA
Copper	110.0				**388 EN**		**7,550 EN**	**244.0**
Iron	40,000				16,200 E		**293,000 E**	13,600
Lead	110.0		**25,400**	**449.0**	**805 E**	**6,000 E**	**5,940 E**	**343.0**
Mercury	1.3				ND		**4.9 N**	1.025
Nickel	50.0				11.8 B		**333.0**	29.9
Selenium	NS				1.4 B		14.5	0.95
Silver	2.2				0.66 B		**15.4**	1.4
Zinc	270.0				**905.0**		**13,000**	**483.0**

Table 5-5 (Continued).
Analytical Results of Sediment Samples Collected from the Erie Canal, Eighteenmile Creek and the Millrace at the Former Flintkote Plant Site.
Results for Eighteenmile Creek are Summarized from Upstream (Station-9) to Downstream (SED-1) Locations.
The Two Erie Canal Samples Were Collected Upstream of Eighteenmile Creek.

Sample Number Date Sampled Sample Depth Sample Location	Sediment Criteria *	SED-4A 1994 Unknown Millrace	SED-4 08/07/96 0"-2" Millrace	SED-3 08/07/96 0"-2" Millrace	SED-2 08/07/96 0"-2" Millrace	Station-12 08/19/98 0"-7" Millrace	SED-1 1994 Unknown Millrace	SED-1 08/07/96 0"-2" Downstream
PCBs (Fg/kg or ppb)								
Aroclor-1242								
Aroclor-1248			5,700 PX		2,100 X			4,100 X
Aroclor-1254			440 JPX	360.0	860 JPX			2,000 PX
Aroclor-1260								
Total PCBs	0.8 **	**1,869**	**6,140**	**360.0**	**2,960**	**24,926 @**	**3,269**	**6,100**
Inorganic Compounds (mg/kg or ppm)								
Arsenic	33.0		6.3	2.1 B	4.8 B	6.2		3.6 B
Barium	NS		167 E	100 E	322 E	NR		142 E
Cadmium	9.0		0.12 B	0.2 B	3.1 B	1.3 B		1.5 B
Chromium	110.0		43.9	20.7	74.0	42.6		36.0
Cobalt	NS		9.8 B	6.6 B	6.2 B	NR		8.3 B
Copper	110.0		**181 EN**	108 EN	**415 EN**	**252.0**		**352 EN**
Iron	40,000		30,400 E	16,300 E	13,900 E	16,600		19,800 E
Lead	110.0		**398 E**	**189 E**	**558 E**	**354.0**		**362 E**
Mercury	1.3		0.69 N	0.26 N	**2.1 N**	NR		0.73 N
Nickel	50.0		32.7	20.2	31.1	25.5		29.8
Selenium	NS		3.0 B	ND	4.0	NR		3.0
Silver	2.2		1.1 B	0.86 B	**3.9 B**	1.5 B		**2.6 B**
Zinc	270.0		**723.0**	**427.0**	**1,020**	**640.0**		**712.0**

Table 5-5 (Continued).
Analytical Results of Sediment Samples Collected from the Erie Canal, Eighteenmile Creek and the Millrace at the Former Flintkote Plant Site.
Results for Eighteenmile Creek are Summarized from Upstream (Station-9) to Downstream (SED-1) Locations.
The Two Erie Canal Samples Were Collected Upstream of Eighteenmile Creek.

*	NYSDEC Technical Guidance for Screening Contaminated Sediments, January 1999. Sediment criteria given are for the severe effect level unless otherwise noted.
■	Sample collected upstream of the Clinton Street dam.
●	Sample collected downstream of the Clinton Street dam.
**	Sediment criteria for human health bioaccumulation.
@	Total PCB concentration calculated from the results of different PCB congeners.
+	Results from a sediment sample collected on July 11, 1991.
ND (3)	The compound was analyzed for but not detected at the detection limit in parentheses (if known).
NS	No standard or guidance value available.
NR	Not reported.
NA	Not analyzed.
J	Compound reported at an estimated concentration below the reporting limit.
P	>25% difference between the analytical results on two GC columns. The lower value is reported.
X	Manually integrated and calculated.
N	Spike sample recovery is not within control limits (inorganics).
E	Estimated concentration due to the presence of interference (inorganics).
B	Value greater than or equal to the instrument detection limit, but less than the contract required detection limit (inorganics).
	Blanks indicate that the sample was not analyzed for the associated compound or that the results were not reported (e.g., in the Eighteenmile Creek Remedial Action Plan dated August 1997).
	Shaded values equal or exceed the DEC sediment criteria.

APPENDIX A

LAB ANALYTICAL DATA

SEVERN TRENT SERVICES

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ANALYTICAL REPORT

Job#: A02-3616

STL Project#: NY1A8770.9
SDG#: 0416
Site Name: NYS DEC ASP Contract #C004154 - Region 9
Task: CASE SH902

Mr. John Ryan
NYSDEC
625 Broadway - 4th Floor
Albany, NY 12233

CC: Mr. Glenn May

STL Buffalo

Brian J. Fischer
Project Manager

Susan L. Mazur
Laboratory Director

04/30/2002

This report contains 580 pages which are individually numbered.

SEVERN TRENT SERVICES

000004

NON-CONFORMANCE SUMMARY

Job#: A02-3616

STL Project#: NY1A8770.9
SDG#: 0416
Site Name: NYS DEC ASP Contract #C004154 - Region 9

General Comments

The enclosed data have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A02-3616
Sample Cooler(s) were received at the following temperature(s); 2°C.

GC Extractable Data

The recovery of surrogate Decachlorobiphenyl for the Method 8082 (PCB) analysis of soil samples 032101, 032101 matrix spike and 032101 matrix spike duplicate was outside of established quality control limits (high) due to sample matrix interference. The recovery of surrogate Tetrachloro-m-xylene was within quality control limits for these samples, no corrective action was required.

Soil sample 032104 for Method 8082 (PCB) analysis required dilution prior to analysis due to high concentration of target analytes. The surrogates were diluted out of this sample extract.

Sample 032101 exhibited the presence of Aroclor 1254 which could not be quantified for the matrix spike and matrix spike duplicate of this sample due to the presence of the spiking mixture.

Metals Data

Sample 032102 Matrix Duplicate exceeded the Quality Control Limits for Lead. The LFB was acceptable.

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Wet Chemistry Data

No deviations from protocol were encountered during the analytical procedures.

****

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

"I certify that this package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and electronic deliverable has been authorized by the Laboratory Director or her designee, as verified by the following signature."

Susan L. Mazur
Laboratory Director

4/30/2002
Date

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

ND or U	Indicates compound was analyzed for, but not detected.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS.
B	This flag is used when the analyte is found in the associated blank, as well as in the sample.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at the secondary dilution factor.
N	Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
P	This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the data page and flagged with a "P".
A	This flag indicates that a TIC is a suspected aldol-condensation product.
'	Indicates coelution.
*	Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U	Indicates element was analyzed for, but not detected. Report with the detection limit value.
J or B	Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
N	Indicates spike sample recovery is not within the quality control limits.
K	Indicates the post digestion spike recovery is not within the quality control limits.
S	Indicates value determined by the Method of Standard Addition.
M	Indicates duplicate injection results exceeded quality control limits.
W	Post digestion spike for Furnace AA analysis is out of quality control limits (85-115%) while sample absorbance is less than 50% of spike absorbance.
E	Indicates a value estimated or not reported due to the presence of interferences.
H	Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
•	Indicates analysis is not within the quality control limits.
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

000013

Client No.

032101

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: _____ SDG No.: 0416

Matrix: (soil/water) SOIL Lab Sample ID: A2361601

Sample wt/vol: 30.81 (g/mL) G Lab File ID: LB03328.TX0

% Moisture: 31.3 decanted: (Y/N) N Date Samp/Recv: 04/16/2002 04/16/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 04/17/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/19/2002

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	PCB-1016	110	U
11104-28-2	PCB-1221	110	U
11141-16-5	PCB-1232	110	U
53469-21-9	PCB-1242	110	U
12672-29-6	PCB-1248	110	U
11097-69-1	PCB-1254	64	J
11096-82-5	PCB-1260	110	U

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

000014

Client No.

032102

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: _____ SDG No.: 0416

Matrix: (soil/water) SOIL Lab Sample ID: A2361602

Sample wt/vol: 30.59 (g/mL) G Lab File ID: LB03331.TX0

% Moisture: 25.7 decanted: (Y/N) N Date Samp/Recv: 04/16/2002 04/16/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 04/17/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/19/2002

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.45 Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
12674-11-2	PCB-1016	100	U
11104-28-2	PCB-1221	100	U
11141-16-5	PCB-1232	100	U
53469-21-9	PCB-1242	100	U
12672-29-6	PCB-1248	100	U
11097-69-1	PCB-1254	24	J
11096-82-5	PCB-1260	100	U

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

000015

Client No.

032103

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: _____ SDG No.: 0416

Matrix: (soil/water) SOIL Lab Sample ID: A2361603

Sample wt/vol: 30.15 (g/mL) G Lab File ID: LB03332.TX0

% Moisture: 20.4 decanted: (Y/N) N Date Samp/Recv: 04/16/2002 04/16/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 04/17/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/19/2002

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.64 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	PCB-1016	100	U
11104-28-2	PCB-1221	100	U
11141-16-5	PCB-1232	100	U
53469-21-9	PCB-1242	100	U
12672-29-6	PCB-1248	100	U
11097-69-1	PCB-1254	100	U
11096-82-5	PCB-1260	100	U

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

000016

Client No.

032104

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: _____ SDG No.: 0416

Matrix: (soil/water) SOIL Lab Sample ID: A2361604

Sample wt/vol: 30.14 (g/mL) G Lab File ID: LB03333.TX0

% Moisture: 37.3 decanted: (Y/N) N Date Samp/Recv: 04/16/2002 04/16/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 04/17/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/19/2002

Injection Volume: 1.00 (uL) Dilution Factor: 20.00

GPC Cleanup: (Y/N) N pH: 7.51 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	PCB-1016	2500	U
11104-28-2	PCB-1221	2500	U
11141-16-5	PCB-1232	2500	U
53469-21-9	PCB-1242	2500	U
12672-29-6	PCB-1248	9400	
11097-69-1	PCB-1254	8000	
11096-82-5	PCB-1260	2500	U

NYS DEC

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

032101

Contract: NY00-096

Lab Code: STL BFLO Case No.: SH902 SAS No.: SDG NO.: 0416

Matrix (soil/water): SOIL Lab Sample ID: AD206332

Level (low/med): LOW Date Received: 4/16/02

% Solids: 69

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	887		E*	P

Color Before: BROWN Clarity Before: N/A Texture: TOPSOIL

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

NYS DEC

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

032102

Contract: NY00-096

Lab Code: STL BFLO Case No.: SH902 SAS No.: SDG NO.: 0416

Matrix (soil/water): SOIL Lab Sample ID: AD206333

Level (low/med): LOW Date Received: 4/16/02

% Solids: 74

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	686		E*	P

Color Before: BROWN Clarity Before: N/A Texture: TOPSOIL

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

NYS DEC

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

032103

Contract: NY00-096

Lab Code: STL BFLO Case No.: SH902 SAS No.: SDG NO.: 0416

Matrix (soil/water): SOIL Lab Sample ID: AD206334

Level (low/med): LOW Date Received: 4/16/02

% Solids: 80

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	4250		E*	P

Color Before: BROWN Clarity Before: N/A Texture: TOPSOIL

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

NYS DEC

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

032104

Contract: NY00-096

Lab Code: STL BFLO Case No.: SH902 SAS No.: SDG NO.: 0416

Matrix (soil/water): SOIL Lab Sample ID: AD206335

Level (low/med): LOW Date Received: 4/16/02

% Solids: 63

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	1270		E*	P

Color Before: BROWN Clarity Before: N/A Texture: TOPSOIL

Color After: GRAY Clarity After: CLOUDY Artifacts:

Comments:

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (1200)

Client: NYSDEC	Project Manager: Glenn May	Date: 4-16-02	Chain of Custody Number: 100211
Address: 270 Michigan Ave	Telephone Number (Area Code)/Fax Number: 716-851-7220	Lab Number:	Page 1 of 1
City: Buffalo / State: NY / Zip Code: 14203	Site Contact:	Lab Contact:	
Project Name and Location (State): FlintKote	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.:			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: Lead, PCBs	Special Instructions/ Conditions of Receipt
D32101	4/16/02	1128				X	X						X	
D32102	"	1140				X	X						X	
D32103	"	1150				X	X						X	
D32104	"	1200				X	X						X	

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other As per contract

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: Glenn M May	4/16/02	1335	1. Received By:	4-16-02	1:25 PM
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments: 20

0000040

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report. PINK - Field Copy

SEVERN
TRENT
SERVICES

STL Buffalo
10 Hazelwood Drive
Suite 106
Amherst, NY 14228

Tel: 716 691 2600
Fax: 716 691 7991
www.stl-inc.com

ANALYTICAL REPORT
Revised

Job#: A02-4346

STL Project#: NY1A8770.9
SDG#: 0416
Site Name: NYS DEC ASP Contract #C004154 - Region 9
Task: CASE SH902

Mr. John Ryan
NYSDEC
625 Broadway - 4th Floor
Albany, NY 12233

CC: Mr. Glenn May

STL Buffalo

Brian S. Fischer
Project Manager

for Susan L. Mazur
Laboratory Director

05/28/2002

This report contains 517 pages which are individually numbered.

SEVERN TRENT SERVICES

000004

NON-CONFORMANCE SUMMARY

Job#: A02-4346

STL Project#: NY1A8770.9
SDG#: 0416
Site Name: NYS DEC ASP Contract #C004154 - Region 9

General Comments

The enclosed data have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A02-4346
Sample Cooler(s) were received at the following temperature(s); 2°C.

Revision Comments

Metals Data (Revision)

The recovery of sample 032103 Matrix Spike fell above the quality control limits for Lead. The sample result was four times greater than the spike amount, therefore no qualifier was required. The relative percent difference between sample 032103 and 032103 Matrix Duplicate exceeded Quality Control Limits for Lead. The LFB was acceptable.

Wet Chemistry Data (Revision)

Sample 032103 was set with 24.96 grams of sample. Sample 032104 was set with 8.21 grams of sample. Both samples were scaled down according to the amount of sample used. No fluid determining step was run, due to limited sample volume. Samples were set with fluid number one, as instructed by the Program Manager.

****

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

"I certify that this package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and electronic deliverable has been authorized by the Laboratory Director or her designee, as verified by the following signature."

_____

Susan L. Mazur
Laboratory Director

_____

Date

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

ND or U	Indicates compound was analyzed for, but not detected.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS.
B	This flag is used when the analyte is found in the associated blank, as well as in the sample.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at the secondary dilution factor.
N	Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
P	This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the data page and flagged with a "P".
A	This flag indicates that a TIC is a suspected aldol-condensation product.
'	Indicates coelution.
*	Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U	Indicates element was analyzed for, but not detected. Report with the detection limit value.
J or B	Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit
N	Indicates spike sample recovery is not within the quality control limits.
K	Indicates the post digestion spike recovery is not within the quality control limits.
S	Indicates value determined by the Method of Standard Addition.
M	Indicates duplicate injection results exceeded quality control limits.
W	Post digestion spike for Furnace AA analysis is out of quality control limits (85-115%) while sample absorbance is less than 50% of spike absorbance.
E	Indicates a value estimated or not reported due to the presence of interferences.
H	Indicates analytical holding time exceedance. The value obtained should be considered an estimate
*	Indicates analysis is not within the quality control limits.
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995

NYS DEC
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
032103

Contract: NY00-096

Lab Code: STL BFLO Case No.: SH902 SAS No.: SDG NO.: 0416

Matrix (soil/water): WATER Lab Sample ID: AD207387

Level (low/med): LOW Date Received: 5/3/02

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	355000		*	P

Color Before: YELLOW Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: TCLP EXTRACT

NYS DEC
-I-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
032104

Contract: NY00-096

Lab Code: STL BFLO Case No.: SH902 SAS No.: SDG NO.: 0416

Matrix (soil/water): WATER Lab Sample ID: AD207390

Level (low/med): LOW Date Received: 5/3/02

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	1540		*	P

Color Before: YELLOW Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: TCLP EXTRACT

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (1200)

Client: NYSDEC	Project Manager: Glenn May	Date: 4-16-02	Chain of Custody Number: 100211
Address: 270 Michigan Ave	Telephone Number (Area Code)/Fax Number: 716-851-7220	Lab Number:	Page 1 of 1
City: Buffalo / State: NY / Zip Code: 14203	Site Contact:	Lab Contact:	
Project Name and Location (State): FlintKote	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.:			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed	Soil	Containers & Preservatives: Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: Lead, PCBs	Special Instructions/ Conditions of Receipt
D32101	4/16/02	1128				X	X						X	
D32102	"	1140				X	X						X	
D32103	"	1150				X	X						X	
D32104	"	1200				X	X						X	Analyze for TCLP Pb per GMPY on 5/3 (BJ 5/3)

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other As per Contract

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: Glenn M May	4/16/02	1335	1. Received By:	4-16-02	1:27 PM
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments: 20

000040 000000 620000

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

SEVERN TRENT SERVICES

STL Buffalo
10 Hazelwood Drive
Suite 106
Amherst, NY 14228

Tel: 716 691 2600
Fax: 716 691 7991
www.stl-inc.com

ANALYTICAL REPORT

Job#: A02-7443

STL Project#: NY1A8770.9
SDG#: 0723
Site Name: NYS DEC ASP Contract #C004154 - Region 9
Task: CASE SH902

Mr. Larry Bailey
NYSDEC
625 Broadway - 4th Floor
Albany, NY 12233

CC: Mr. Glenn May

STL Buffalo

Brian J. Fischer
Project Manager

Susan L. Mazur
Laboratory Director

08/20/2002

This report contains 921 pages which are individually numbered.

NON-CONFORMANCE SUMMARY

Job#: A02-7443

STL Project#: NY1A8770.9
SDG#: 0723
Site Name: NYS DEC ASP Contract #C004154 - Region 9

General Comments

The enclosed data have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A02-7443
Sample Cooler(s) were received at the following temperature(s); AMBIANT °C
All samples were received in good condition.

GC Extractable Data

Several samples analyzed for Method 8082 (PCB) required dilution prior to analysis due to the high concentration of target analytes. The surrogates were diluted out of samples D32108, D32108MS, D32108MSD, D32109 and SED-7 due to dilution of the extracts. The spikes were also diluted out of the matrix spike and matrix spike duplicate of sample D32108. The recovery of the matrix spike blank was acceptable.

Metals Data

The recovery of Lead fell below the QC limits in sample SED-7 Matrix Spike. The sample result is more than four times greater than the spike added, therefore, no qualifiers are needed. The LCS was acceptable.

Wet Chemistry Data

No deviations from protocol were encountered during the analytical procedures.

****

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

"I certify that this package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and electronic deliverable has been authorized by the Laboratory Director or her designee, as verified by the following signature."

Susan L. Mazur
Laboratory Director

6/20/02
Date

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

ND or U	Indicates compound was analyzed for, but not detected
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS.
B	This flag is used when the analyte is found in the associated blank, as well as in the sample.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at the secondary dilution factor.
N	Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
P	This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the data page and flagged with a "P"
A	This flag indicates that a TIC is a suspected aldol-condensation product
'	Indicates coelution.
*	Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U	Indicates element was analyzed for, but not detected. Report with the detection limit value.
J or B	Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit
N	Indicates spike sample recovery is not within the quality control limits.
K	Indicates the post digestion spike recovery is not within the quality control limits
S	Indicates value determined by the Method of Standard Addition.
M	Indicates duplicate injection results exceeded quality control limits
W	Post digestion spike for Furnace AA analysis is out of quality control limits (85-115%) while sample absorbance is less than 50% of spike absorbance
E	Indicates a value estimated or not reported due to the presence of interferences
H	Indicates analytical holding time exceedance. The value obtained should be considered an estimate
*	Indicates analysis is not within the quality control limits
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

000013

Client No.

D32106

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: _____ SDG No.: 0723

Matrix: (soil/water) SOIL Lab Sample ID: A2744302

Sample wt/vol: 30.50 (g/mL) G Lab File ID: SB04768.TX0

% Moisture: 18.0 decanted: (Y/N) N Date Samp/Recv: 07/23/2002 07/23/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 07/30/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/30/2002

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	PCB-1016	96	U
11104-28-2	PCB-1221	96	U
11141-16-5	PCB-1232	96	U
53469-21-9	PCB-1242	96	U
12672-29-6	PCB-1248	96	U
11097-69-1	PCB-1254	96	U
11096-82-5	PCB-1260	96	U

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

000014

Client No.

D32107

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: _____ SDG No.: 0723

Matrix: (soil/water) SOIL Lab Sample ID: A2744303

Sample wt/vol: 30.98 (g/mL) G Lab File ID: SB04769.TX0

% Moisture: 13.9 decanted: (Y/N) N Date Samp/Recv: 07/23/2002 07/23/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 07/30/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/30/2002

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	PCB-1016	90	U
11104-28-2	PCB-1221	90	U
11141-16-5	PCB-1232	90	U
53469-21-9	PCB-1242	90	U
12672-29-6	PCB-1248	90	U
11097-69-1	PCB-1254	90	U
11096-82-5	PCB-1260	90	U

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

000015

Client No.

D32108

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: _____ SDG No.: 0723

Matrix: (soil/water) SOIL Lab Sample ID: A2744304

Sample wt/vol: 30.16 (g/mL) G Lab File ID: SB04770.TX0

% Moisture: 37.0 decanted: (Y/N) N Date Samp/Recv: 07/23/2002 07/23/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 07/30/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/30/2002

Injection Volume: 1.00 (uL) Dilution Factor: 20.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	PCB-1016	2500	U
11104-28-2	PCB-1221	2500	U
11141-16-5	PCB-1232	2500	U
53469-21-9	PCB-1242	2500	U
12672-29-6	PCB-1248	2800	
11097-69-1	PCB-1254	3500	
11096-82-5	PCB-1260	2500	U

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

000016

Client No.

D32109

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: _____ SDG No.: 0723

Matrix: (soil/water) SOIL Lab Sample ID: A2744305

Sample wt/vol: 30.56 (g/mL) G Lab File ID: SB04773.TX0

% Moisture: 30.4 decanted: (Y/N) N Date Samp/Recv: 07/23/2002 07/23/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 07/30/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/30/2002

Injection Volume: 1.00 (uL) Dilution Factor: 20.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	PCB-1016	2200	U
11104-28-2	PCB-1221	2200	U
11141-16-5	PCB-1232	2200	U
53469-21-9	PCB-1242	2200	U
12672-29-6	PCB-1248	3700	
11097-69-1	PCB-1254	4300	
11096-82-5	PCB-1260	2200	U

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

000017

Client No.

D32110

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: _____ SDG No.: 0723

Matrix: (soil/water) SOIL Lab Sample ID: A2744306

Sample wt/vol: 30.98 (g/mL) G Lab File ID: SB04774.TX0

% Moisture: 34.4 decanted: (Y/N) N Date Samp/Recv: 07/23/2002 07/23/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 07/30/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/30/2002

Injection Volume: 1.00 (uL) Dilution Factor: 5.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	PCB-1016	590	U
11104-28-2	PCB-1221	590	U
11141-16-5	PCB-1232	590	U
53469-21-9	PCB-1242	590	U
12672-29-6	PCB-1248	220	J
11097-69-1	PCB-1254	240	J
11096-82-5	PCB-1260	590	U

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

000018

Client No.

SED-7

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: _____ SDG No.: 0723

Matrix: (soil/water) SOIL Lab Sample ID: A2744318

Sample wt/vol: 30.19 (g/mL) G Lab File ID: SB04775.TX0

% Moisture: 36.5 decanted: (Y/N) Y Date Samp/Recv: 07/23/2002 07/23/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 07/30/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/30/2002

Injection Volume: 1.00 (uL) Dilution Factor: 10.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	PCB-1016	1200	U
11104-28-2	PCB-1221	1200	U
11141-16-5	PCB-1232	1200	U
53469-21-9	PCB-1242	1200	U
12672-29-6	PCB-1248	1800	
11097-69-1	PCB-1254	1700	
11096-82-5	PCB-1260	1200	U

NYS DEC

000019

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

D32105

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220415

Level (low/med): LOW Date Received: 7/23/02

% Solids: 96

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	29.8		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC

-1-

INORGANIC ANALYSIS DATA SHEET

000020

SAMPLE NO.

D32105 TCLP

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): WATER Lab Sample ID: AD216945

Level (low/med): LOW Date Received: 7/23/02

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	19.9			P

Color Before: GRAY Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NYS DEC

-1-

INORGANIC ANALYSIS DATA SHEET

000081

SAMPLE NO.

D32106

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220416

Level (low/med): LOW Date Received: 7/23/02

% Solids: 82

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	4.5		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC

-1-

INORGANIC ANALYSIS DATA SHEET

000022

SAMPLE NO.

D32106 TCLP

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): WATER Lab Sample ID: AD216946

Level (low/med): LOW Date Received: 7/23/02

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	3.0			P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NYS DEC

-1-

INORGANIC ANALYSIS DATA SHEET

000023

SAMPLE NO.

D32107

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220417

Level (low/med): LOW Date Received: 7/23/02

% Solids: 86

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	226		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC

-1-

INORGANIC ANALYSIS DATA SHEET

000024

SAMPLE NO.

D32107 TCLP

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): WATER Lab Sample ID: AD216949

Level (low/med): LOW Date Received: 7/23/02

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	56.8			P

Color Before: GRAY Clarity Before: CLOUDY Texture: NONE

Color After: GRAY Clarity After: CLEAR Artifacts:

Comments:

STL BUFFALO

NYS DEC

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INORGANIC ANALYSIS DATA SHEET

000085

SAMPLE NO.

D32108

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220418

Level (low/med): LOW Date Received: 7/23/02

% Solids: 63

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	1100		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC

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INORGANIC ANALYSIS DATA SHEET

000096

SAMPLE NO.

D32109

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220419

Level (low/med): LOW Date Received: 7/23/02

% Solids: 70

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	1360		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

D32110

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220420

Level (low/med): LOW Date Received: 7/23/02

% Solids: 66

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	4630		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

STL BUFFALO

NYS DEC

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INORGANIC ANALYSIS DATA SHEET

000028

SAMPLE NO.

D32111

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220421

Level (low/med): LOW Date Received: 7/23/02

% Solids: 72

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	913		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
D32112

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220422

Level (low/med): LOW Date Received: 7/23/02

% Solids: 80

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	1330		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

D32113

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220423

Level (low/med): LOW Date Received: 7/23/02

% Solids: 90

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	140		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC

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INORGANIC ANALYSIS DATA SHEET

000011

SAMPLE NO.

D32114

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220424

Level (low/med): LOW Date Received: 7/23/02

% Solids: 80

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	172		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC

-1-

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

D32115

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220425

Level (low/med): LOW Date Received: 7/23/02

% Solids: 60

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	1110		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: D32116

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220426

Level (low/med): LOW Date Received: 7/23/02

% Solids: 61

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	438		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

D32117

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220427

Level (low/med): LOW Date Received: 7/23/02

% Solids: 60

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	56.2		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
D32118

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220428

Level (low/med): LOW Date Received: 7/23/02

% Solids: 53

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	227		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

D32119

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220429

Level (low/med): LOW Date Received: 7/23/02

% Solids: 76

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	549		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC

0009 ?

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

D32120

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220430

Level (low/med): LOW Date Received: 7/23/02

% Solids: 71

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	936		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
D32121

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220431

Level (low/med): LOW Date Received: 7/23/02

% Solids: 57

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	3680		E*	P

Color Before: BLACK Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

NYS DEC

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SED-7

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723

Matrix (soil/water): SOIL Lab Sample ID: AD220432

Level (low/med): LOW Date Received: 7/23/02

% Solids: 64

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	6000		E*	P

Color Before: BROWN Clarity Before: N/A Texture: SLUDGE

Color After: BROWN Clarity After: CLDY/FI Artifacts:

Comments:

STL
Committed To *Your* Success

Report To:
Contact: Glenn May
Company: NYSDEC
Address: 270 Michigan Ave
Buffalo, NY 14031
Phone: 716 - 851-7220
Fax:
E-Mail:

Bill To:
Contact:
Company:
Address: As per contract
Phone:
Fax:
POI: Quote:

Internal Use Only

Sampler Name: Glenn May
Signature: Glenn M May
Project Name: Water Street
Project Number: D321
Project Location: Lockport
Date Required: As per contract

STL Sample No.	Client Sample ID	Sampling Date	Sampling Time	MATRIX	COMP / GRAB	TCLP Lead	Total Lead	PCBs by 8082	Additional Analyses / Remarks
	D321 16	7/23/02	1155	S	G		X		
	" 17	"	1147	"	"		X		
	" 18	"	1203	"	"		X		
	" 19	"	1220	"	"		X		
	" 20	"	1230	"	"		X		
	" 21	"	1250	"	"		X		
	SED-7	"	1250	"	"		X	X	2 Jars

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
Jim Peck	NYSDEC	7/23/02	1513	Jim Boyd	STL	07/23/02	15 15
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous Solids
OL = Oil
A = Air
O = _____

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
—

Preservative Key
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn Acetate, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:
AMBIENT

Courier:
Bill of Lading: 280000

STL COC 10/98 Rev. 0

Chain of Custody Record

SEVERN TRENT SERVICES — **Severn Trent Laboratories, Inc.**

STL-4124 (0720)

Client	Project Manager	Date	Chain of Custody Number
NYS DEC	Glenn May	7-23-02	013032
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 2
270 Michigan Avenue	716-851-7220		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Buffalo / NY / 14203			
Project Name and Location (State)	**Carrier/Waybill Number**		
Water Street			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H_2SO_4	HNO_3	HCl	NaOH	ZnAc/NaOH	Analysis: TCLP Lead	Total Lead	PCBs by 8082	Special Instructions/ Conditions of Receipt
D32105	7/23/02	1040				X	X						X	X		
" 06	"	1310				X	X						X	X	X	2 Jars
" 07	"	1320				X	X						X	X	X	2 Jars
" 08	"	1050				X	X							X	X	
" 09	"	1053				X	X							X	X	
" 10	"	1058				X	X							X	X	
" 11	"	1000				X	X							X		
" 12	"	1009				X	X							X		
" 13	"	1016				X	X							X		
" 14	"	1025				X	X							X		
" 15	"	1130				X	X							X		
~~" 16~~	"	~~1135~~ 1203				X	X							X		

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Dan Pink NYSDEC	7/23/02	1513	1. Received By: Jan Bagby STL	07/23/02	1515
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: AMBIENT

000083

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

SEVERN TRENT STL

ANALYTICAL REPORT

Job#: A02-B828

STL Project#: NY1A8770.9
SDG#: 0723B
Site Name: NYS DEC ASP Contract #C004154 - Region 9
Task: CASE SH902

Mr. Larry Bailey
NYSDEC
625 Broadway - 4th Floor
Albany, NY 12233

CC: Mr. Glenn May

STL Buffalo

Brian J. Fischer
Project Manager

Christopher A. Spencer
Laboratory Manager

12/17/2002

This report contains 66 pages which are individually numbered.

Severn Trent Laboratories, Inc.
STL Buffalo • 10 Hazelwood Drive, Suite 106, Amherst, NY 14228
tel 716 691 2600 Fax 716 691 7991 • www.stl-inc.com

NON-CONFORMANCE SUMMARY

Job#: A02-B828

STL Project#: NY1A8770.9
SDG#: 0723B
Site Name: NYS DEC ASP Contract #C004154 - Region 9

General Comments

The enclosed data have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A02-B828
Sample Cooler(s) were received at the following temperature(s); AMBIENT °C
All samples were received in good condition.

GC Extractable Data

No deviations from protocol were encountered during the analytical procedures.

Metals Data

No deviations from protocol were encountered during the analytical procedures.

Wet Chemistry Data

No deviations from protocol were encountered during the analytical procedures.

SEVERN TRENT STL

****

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

"I certify that this package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and electronic deliverable has been authorized by the Laboratory Director or her designee, as verified by the following signature."

Christopher A. Spencer
Laboratory Manager

12/17/2002
Date

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

ND or U	Indicates compound was analyzed for, but not detected.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS.
B	This flag is used when the analyte is found in the associated blank, as well as in the sample.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at the secondary dilution factor.
N	Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
P	This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the data page and flagged with a "P"
A	This flag indicates that a TIC is a suspected aldol-condensation product.
'	Indicates coelution.
*	Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U	Indicates element was analyzed for, but not detected. Report with the detection limit value.
J or B	Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
N	Indicates spike sample recovery is not within the quality control limits.
K	Indicates the post digestion spike recovery is not within the quality control limits.
S	Indicates value determined by the Method of Standard Addition.
M	Indicates duplicate injection results exceeded quality control limits.
W	Post digestion spike for Furnace AA analysis is out of quality control limits (85-115%) while sample absorbance is less than 50% of spike absorbance.
E	Indicates a value estimated or not reported due to the presence of interferences.
H	Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
*	Indicates analysis is not within the quality control limits.
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

000013

Client No.

D32122

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: _____ SDG No.: 0723B

Matrix: (soil/water) SOIL Lab Sample ID: A2B82801

Sample wt/vol: 30.19 (g/mL) G Lab File ID: LB10276.TX0

% Moisture: 55.5 decanted: (Y/N) N Date Samp/Recv: 11/26/2002 11/26/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 12/03/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/04/2002

Injection Volume: 1.00 (uL) Dilution Factor: 2.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	PCB-1016	360	U
11104-28-2	PCB-1221	360	U
11141-16-5	PCB-1232	360	U
53469-21-9	PCB-1242	360	U
12672-29-6	PCB-1248	99	J
11097-69-1	PCB-1254	240	J
11096-82-5	PCB-1260	160	J

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

000014

Client No.

D32123

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: _____ SDG No.: 0723B

Matrix: (soil/water) SOIL Lab Sample ID: A2B82802

Sample wt/vol: 30.69 (g/mL) G Lab File ID: LB10272.TX0

% Moisture: 25.3 decanted: (Y/N) N Date Samp/Recv: 11/26/2002 11/26/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 12/03/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/04/2002

Injection Volume: 1.00 (uL) Dilution Factor: 2.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	PCB-1016	210	U
11104-28-2	PCB-1221	210	U
11141-16-5	PCB-1232	210	U
53469-21-9	PCB-1242	600	
12672-29-6	PCB-1248	210	U
11097-69-1	PCB-1254	240	
11096-82-5	PCB-1260	210	U

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

000015

Client No.

D32124

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: _____ SDG No.: 0723B

Matrix: (soil/water) SOIL Lab Sample ID: A2B82803

Sample wt/vol: 30.00 (g/mL) G Lab File ID: LB10273.TX0

% Moisture: 41.7 decanted: (Y/N) N Date Samp/Recv: 11/26/2002 11/26/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 12/03/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/04/2002

Injection Volume: 1.00 (uL) Dilution Factor: 2.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	PCB-1016	270	U
11104-28-2	PCB-1221	270	U
11141-16-5	PCB-1232	270	U
53469-21-9	PCB-1242	270	U
12672-29-6	PCB-1248	520	
11097-69-1	PCB-1254	490	
11096-82-5	PCB-1260	200	J

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

000016

Client No.

D32125

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: _____ SDG No.: 0723B

Matrix: (soil/water) SOIL Lab Sample ID: A2B82804

Sample wt/vol: 30.10 (g/mL) G Lab File ID: LB10274.TX0

% Moisture: 38.2 decanted: (Y/N) N Date Samp/Recv: 11/26/2002 11/26/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 12/03/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/04/2002

Injection Volume: 1.00 (uL) Dilution Factor: 2.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	PCB-1016	260	U
11104-28-2	PCB-1221	260	U
11141-16-5	PCB-1232	260	U
53469-21-9	PCB-1242	260	U
12672-29-6	PCB-1248	830	
11097-69-1	PCB-1254	760	
11096-82-5	PCB-1260	350	

NYS DEC
NYS DEC ASP CONTRACT #C004154 - REGION 9 000017
NYSDEC - METHOD 8082 - PCBS- S
ANALYSIS DATA SHEET

Client No.

D32126

Lab Name: STL Buffalo Contract: C004154

Lab Code: RECNY Case No.: SH902 SAS No.: ____ SDG No.: 0723B

Matrix: (soil/water) SOIL Lab Sample ID: A2B82805

Sample wt/vol: 30.50 (g/mL) G Lab File ID: LB10275.TX0

% Moisture: 44.6 decanted: (Y/N) N Date Samp/Recv: 11/26/2002 11/26/2002

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 12/03/2002

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/04/2002

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	PCB-1016	140	U
11104-28-2	PCB-1221	140	U
11141-16-5	PCB-1232	140	U
53469-21-9	PCB-1242	140	U
12672-29-6	PCB-1248	140	U
11097-69-1	PCB-1254	140	U
11096-82-5	PCB-1260	140	U

NYS DEC
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
D32122

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723B

Matrix (soil/water): SOIL Lab Sample ID: AD242777

Level (low/med): LOW Date Received: 11/26/02

% Solids: 45

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	1060			P

Color Before: BROWN Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

NYS DEC

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

D32123

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723B

Matrix (soil/water): SOIL Lab Sample ID: AD242778

Level (low/med): LOW Date Received: 11/26/02

% Solids: 75

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	25400			P

Color Before: BROWN Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

NYS DEC

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

D32124

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723B

Matrix (soil/water): SOIL Lab Sample ID: AD242779

Level (low/med): LOW Date Received: 11/26/02

% Solids: 58

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	344			P

Color Before: BLACK Clarity Before: N/A Texture: O.HOR

Color After: BLACK Clarity After: CLOUDY Artifacts:

Comments:

NYS DEC
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
D32125

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723B

Matrix (soil/water): SOIL Lab Sample ID: AD242780

Level (low/med): LOW Date Received: 11/26/02

% Solids: 62

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	449			P

Color Before: BROWN Clarity Before: N/A Texture: SILT

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

NYS DEC

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

D32126

Contract: NY00-096

Lab Code: STLBFLO Case No.: SH902 SAS No.: SDG NO.: 0723B

Matrix (soil/water): SOIL Lab Sample ID: AD242781

Level (low/med): LOW Date Received: 11/26/02

% Solids: 55

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	146			P

Color Before: BROWN Clarity Before: N/A Texture: CLAY

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

ST-4124 (0901)

Client: NYSDEC	Project Manager: Glenn May	Date: 11-26-02	Chain of Custody Number: 132926
Address: 270 Michigan Ave	Telephone Number (Area Code)/Fax Number: 716-851-7220	Lab Number:	Page ____ of ____
City: Buffalo / State: NY / Zip Code: 14203	Site Contact:	Lab Contact:	
Project Name and Location (State): Flintkote	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.:			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: PCBs (8082)	Lead	Special Instructions/ Conditions of Receipt
D32122	11-26-02	1348				X	X						X	X	
" 23	"	1355			X		X						X	X	
" 24	"	1412				X	X						X	X	
" 25	"	1420			X		X						X	X	
" 26	"	1433			X		X						X	X	

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other ____

QC Requirements (Specify):

1. Relinquished By: Glenn M May	Date: 11/26/02	Time: 1545	1. Received By: STL BUFFALO	Date: 11/26/02	Time: 1545
2. Relinquished By:	Date:	Time:	2. Received By:	Date:	Time:
3. Relinquished By:	Date:	Time:	3. Received By:	Date:	Time:

Comments: 12°C - Ambient

000046

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy