

Division of Environmental Remediation

Remediation Report

**Barker Chemical Site
Barker, Niagara County, New York
Site Number 932119**

May 2015

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

TABLE OF CONTENTS

SECTION	PAGE
1.0 INTRODUCTION AND BACKGROUND	1
1.1 GENERAL	1
1.2 ROLES AND RESPONSIBILITIES.....	2
1.3 REPORT ORGANIZATION	3
2.0 SITE DESCRIPTION AND REMEDIAL HISTORY.....	4
2.1 SITE DESCRIPTION	4
2.2 PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIVITIES	4
3.0 EXTENT OF CONTAMINATION INVESTIGATION.....	8
3.1 INVESTIGATION ACTIVITIES	8
3.2 SURFACE SOIL SAMPLES.....	10
3.3 SUBSURFACE SOIL SAMPLES	11
3.2.1 2 Feet Depth.....	11
3.2.2 4 Feet Depth.....	12
3.2.3 6 Feet Depth.....	12
3.2.4 8 Feet Depth.....	12
4.0 SUMMARY OF THE REMEDIAL ACTIVITIES.....	14
4.1 PROPOSED EXCAVATION AREA	14
4.2 REMEDIATION ACTIVITIES.....	14
4.3 TRANSPORTATION AND OFF-SITE DISPOSAL.....	16
4.4 BACKFILLING.....	17
5.0 SUMMARY OF THE CONFIRMATORY SAMPLE RESULTS.....	18
5.1 SAMPLE COLLECTION AND ANALYSIS	18
5.2 SIDEWALL SAMPLES	18
5.3 FLOOR SAMPLES	18
6.0 DISCUSSION, PROJECT COSTS AND RECOMMENDATIONS	19
6.1 DISCUSSION	19
6.2 PROJECT COSTS.....	19
6.3 RECOMMENDATIONS	20
7.0 REFERENCES	22

LIST OF FIGURES (Following Text)

Figure 1-1	Site Location Map
Figure 2-1	Barker Chemical Site Map
Figure 2-2	EPA Removal Action
Figure 2-3	Historic Arsenic Concentration Map
Figure 3-1	Arsenic Concentrations in Surface Soil and Sediment
Figure 3-2	Arsenic Concentrations in Subsurface Soil at 2' Depth
Figure 3-3	Arsenic Concentrations in Subsurface Soil at 4' Depth
Figure 3-4	Arsenic Concentrations in Subsurface Soil at 6' Depth
Figure 3-5	Arsenic Concentrations in Subsurface Soil at 8' Depth
Figure 4-1	Proposed Excavation Map
Figure 4-2	Excavation and Confirmatory Sample Location Map

LIST OF TABLES (Following Figures)

Table 2-1	Metal Results for Historic Surface Soil Samples Collected from the Southern Portion of the Site
Table 2-2	Metal Results for Historic Subsurface Soil Samples Collected from the Southern Portion of the Site
Table 2-3	Metal Results for Confirmatory Samples Collected by the USEPA from the Southern Portion of the Site
Table 2-4	Metal Results for Historic Sediment Samples Collected from the Southern Portion of the Site
Table 3-1A	Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site – Row A
Table 3-1B	Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site – Row B
Table 3-1C	Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site – Row C
Table 3-1D	Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site – Row D
Table 3-1E	Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site – Row E
Table 3-1F	Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site – Row F
Table 3-1G	Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site – Row G
Table 3-1H	Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site – Miscellaneous Locations
Table 3-2	Metal Results for Subsurface Soil Samples Collected from the Southern Portion of the Site
Table 4-1	Summary of Non-Hazardous Waste Disposal from Excavation Activities at the Southern Portion of the Site
Table 4-2	Summary of Weight Tickets for Backfill Used at the Southern Portion of the Site
Table 5-1	Arsenic Results for Confirmatory Samples Collected During Excavation Activities at the Southern Portion of the Site

LIST OF APPENDICES

Appendix A	Soil Boring Logs
Appendix B	Analytical Data: Surface Soil
Appendix C	Analytical Data: Subsurface Soil
Appendix D	Analytical Data: Confirmatory Samples
Appendix E	Non-Hazardous Waste Manifests
Appendix F	Excavation Work Plan
Appendix G	Site Photographs

1.0 INTRODUCTION AND BACKGROUND

1.1 General

The NYSDEC has prepared this “*Remediation Report*” to document the remediation activities completed at the Former Barker Chemical Site (Site No. 932119) in the Village of Barker, Town of Somerset, Niagara County, New York (Figure 1-1). These activities were completed following a request from Mr. Daniel M. Engert, Town of Somerset supervisor, to address arsenic contaminated soil identified during a 2012 Phase II Environmental Site Assessment (ESA) completed at the Site.

The remediation activities completed at the Site consisted of the following major activities:

- The collection of surface soil samples to delineate the extent of arsenic contamination in surface soil across the southeastern portion of the Site;
- The clearing of vegetation across the southern portion of the Site to facilitate investigation and remediation activities;
- The collection of subsurface soil samples to delineate the horizontal and vertical extent of arsenic contamination across the southern portion of the Site;
- The excavation, transportation and disposal of arsenic contaminated soils at an approved disposal facility;
- The collection of confirmatory samples to determine the final limits of the excavation. The soil cleanup goal for this project was 16 parts per million (ppm) arsenic;
- The implementation of an air monitoring plan to protect both Site workers and the community;
- The backfilling of excavated areas with clean crusher run and the restoration of the Site upon the completion of remediation activities.

1.2 Roles and Responsibilities

The remediation activities were completed at the Site between April 26, 2013 and March 21, 2014. Major activities at the Site included the staking of a grid across the southeastern portion of the Site on April 26 and May 2, 2013; the collection of surface soil samples on May 7 and May 14, 2013; the clearing of vegetation across the southern portion of the Site between June 18 and June 21, 2013; the completion of a subsurface investigation between July 10 and August 7, 2013; and the excavation of arsenic contaminated soils from the southern portion of the Site between February 25 and March 21, 2014.

The NYSDEC retained Empire Geo Services, Inc. (Empire) to complete the subsurface investigation, and to implement and coordinate the remediation. The prime subcontractors retained by Empire and the NYSDEC included the following:

- DC Family Tree Service of Gasport, New York was retained to complete Site clearing activities;
- EnSol, Inc. (Town of Tonawanda Landfill) of Tonawanda, New York was retained to provide off-site disposal of non-hazardous soil and fill excavated during the remediation activities;
- LaFarge North America of Lockport, New York was retained to provide the crusher run utilized as backfill;
- Michael Serafini, Inc. of Cheektowaga, New York was retained to transport contaminated soil and fill to the Town of Tonawanda Landfill for disposal, and to transport crusher run from LaFarge North America to the Site to be utilized as backfill;
- TestAmerica Laboratories of Amherst, New York was retained to complete analytical testing of soil samples (both surface and subsurface) collected during the Extent of Contamination Investigation; and
- Alpha Analytical of Westborough, Massachusetts was retained to complete analytical testing of post-excavation confirmatory samples for total arsenic.

Site investigation and remediation activities were documented by the NYSDEC and Empire using photographs and Construction Field Reports, with the NYSDEC providing representatives on-site for the duration of the project. Empire managed the remediation activities and conducted air monitoring in accordance with standard air monitoring practices and the NYSDOH Community Air Monitoring Plan.

1.3 Report Organization

Following this introductory section (Section 1.0), the remaining sections of this report are organized as follows:

- **Section 2.0, Site Description and Remedial History:** This section describes the salient features of the Former Barker Chemical Site, and presents a brief summary of historic investigations, sampling events and remediation activities completed at the Site;
- **Section 3.0, Extent of Contamination Investigation:** This section presents the results of the investigation that was conducted in 2013 to delineate the horizontal and vertical extent of arsenic contamination across the southern portion of the Site;
- **Section 4.0, Summary of the Remedial Activities:** This section summarizes the remediation and backfilling activities completed at the Site;
- **Section 5.0, Summary of the Confirmatory Sample Results:** This section summarizes the analytical results from post-excavation confirmatory samples;
- **Section 6.0, Discussion, Project Costs, and Recommendations:** This section discusses how the remediation completed in 2014 met the remediation goal for the Site, summarizes project costs by major elements, and makes recommendations regarding redevelopment of the Site; and
- **Section 7.0, References:** This section contains a list of references utilized or cited in this report.

2.0 SITE DESCRIPTION AND REMEDIAL HISTORY

2.1 *Site Description*

The Former Barker Chemical Site is located at 8473 West Somerset Road in the Village of Barker, Town of Somerset, Niagara County, New York (Figure 1-1). The total area of the property is approximately 10 acres. The Site is located in a mixed agricultural and residential setting, and is bordered to the north and east by woodlands, to the south by West Somerset Road and to the west by a vacant field (Figure 2-1). Residences are located near the Site to the west, south and east, with eleven residences located within ¼ mile of the property.

Historically, the Site contained five abandoned buildings, an above ground storage tank, two lagoons (the North and South Lagoons), one filled lagoon (the Filled Lagoon), a ditch containing low pH water (Low pH Trough), and two large areas void of vegetation (the Barren Strip and Lime Waste Area; Figure 2-1). The Barren Strip contained a brownish-gray, fine-grained waste material, while the Lime Waste Area contained a whitish-gray, lime waste containing large quantities of sulfur. An open drainage ditch (the Eastern Boundary Ditch) parallels the eastern boundary of the Site from West Somerset Road to the north end of the South Lagoon, where it makes a sharp eastward turn (Figure 2-1). This ditch ultimately feeds Golden Hill Creek (Figure 1-1), a tributary to Lake Ontario.

2.2 *Previous Investigations and Remedial Activities*

From 1930 to the early 1970s Barker Chemical formulated, warehoused and distributed a wide variety of agricultural chemicals for local wholesale and retail sales. By December 1999, when the NYSDEC became involved with the Site, the property had been vacant for nearly twenty years, with the buildings in various stages of disrepair.

In 1999 the Niagara County Department of Planning, Development & Tourism solicited proposals from environmental consultants for the completion of a Phase I Environmental Site Assessment of the Former Barker Chemical property. During the solicitation process the county inspected the Site and observed the presence of exposed lime waste in the central portion of the property, blue-green chips on the north berm of the North Lagoon and areas void of vegetation (Figure 2-1). Based upon these findings, Niagara County requested that the NYSDEC collect samples from those areas for chemical analysis. The NYSDEC agreed to this request.

During December 1999 and January 2000 the NYSDEC inspected the Site, collected sludge, waste and surface water samples, and measured the pH of surface water at various locations throughout the Site. While the analytical results of the waste, sludge and surface water samples indicated that concentrations of various metals exceeded NYSDEC standards and guidance values, it was the low pH of surface water (1.71 to 3.62) that caused the most concern because local children were ice skating on the South Lagoon, thereby increasing their exposure potential to low pH water.

In late January 2000, based upon the presence of low pH surface water, the Niagara County Health Department issued a public health advisory to nearby residents cautioning against entry onto the Site. In response to this advisory the NYSDEC implemented an emergency Site security action by placing warning signs across the front of the property and installing high visibility fencing around the direct contact areas of concern.

In May 2000 the NYSDEC requested that the United States Environmental Protection Agency (USEPA) evaluate the Site and perform removal actions, as appropriate, to address the public health threats from low pH surface waters, and to identify, contain, control and/or remediate any other hazardous wastes or hazardous substances found at the Site. Due to the public health threat that existed, USEPA agreed to this request.

In response to the NYSDEC referral, USEPA completed a Removal Site Evaluation in June 2000 to determine the nature and extent of contamination at the Site. Samples were collected from waste piles, the two lagoons, ditches, process and production areas, suspected dumping areas, spill areas and the filled lagoon. The analytical results from these samples identified areas of contamination requiring remediation.

Following the completion of the Removal Site Evaluation, the USEPA removal action was authorized on September 29, 2000. The removal action was initiated in October 2000 and included the remediation of: (1) the Barren Strip; (2) the Low pH Trough; (3) the Ponded Water Area; (4) the South Lagoon; (5) the North Lagoon; (6) the Lime Waste Area; (7) the above ground storage tank; (8) the Chip Area; and (9) the demolition of four on-site buildings (Figures 2-1 and 2-2). Details concerning the USEPA removal action can be found in the March 2007 Site Investigation Report completed by the NYSDEC. The USEPA removal action was completed in November 2001 at a cost of \$1,241,000.

In 2003 the NYSDEC completed a Site Investigation at the Site to evaluate areas not remediated by USEPA, and to evaluate the removal action to ensure that it continued to remain protective of public health and the environment. The Site Investigation determined that a consequential amount of hazardous substances remained at the Site. The presence of hazardous substances, combined with low pH surface water and contaminants at concentrations that exceeded NYSDEC cleanup objectives for soil, sediment and surface water indicated that the Site presented a continued threat to the public and the environment.

The Site Investigation Report recommended that the pH of surface water throughout the Site be monitored on a periodic basis to: (1) document trends in the pH of surface water in the Low pH Trough and Ponded Water Area (Figure 2-1); and (2) document trends in the high pH surface water in the North Lagoon (Figure 2-1). It was suspected that the high pH conditions in the North Lagoon resulted from the leaching of weathered lime and Portland cement utilized by USEPA to stabilize sludge in the South Lagoon, while the acidic surface water in the Low pH Trough and Ponded Water Area likely resulted from the formation of sulfuric acid from the very high concentrations of sulfur in the waste remaining at the Site.

The Site Investigation Report further recommended that groundwater at the Site be sampled and analyzed for TCL volatile organic compounds, TCL semivolatile organic compounds, pesticides, herbicides, metals, sulfate, sulfide and pH to determine the degree to which waste and sludge had contaminated Site groundwater. Although eight monitoring wells were installed during the Site Investigation, they were not sampled at that time because four of them went dry before they could be sampled.

In 2008 the NYSDEC completed a Supplemental Site Investigation at the Site. During this investigation, three surface water samples were collected for chemical analysis to compare with the analytical results obtained in 2003, groundwater samples were collected from seven of the eight monitoring wells for chemical analysis, and pH of surface water was measured throughout the year to evaluate pH conditions at the Site.

The results of the 2008 Supplemental Site Investigation revealed that hazardous waste was not present at the Former Barker Chemical Site and that the Site did not qualify for inclusion in the NYSDEC Registry of Inactive Hazardous Waste Disposal Sites in New York State. Because waste material was present at the Site, along with contaminated groundwater, contaminated

surface water and low pH surface water, the Supplemental Site Investigation Report recommended that redevelopment activities be restricted to the southern portion of the Site between West Somerset Road and the Central Drainage Ditch (Figure 2-1).

In 2012 a Phase II Environmental Site Assessment (ESA) was completed at the Site by LaBella Associates for the Niagara County Department of Economic Development. This ESA documented the presence of elevated arsenic concentrations in the southeastern portion of the Site in an area that was not extensively evaluated during previous investigations. Historic arsenic concentrations for the southern portion of the Site are shown on Figure 2-3, while analytical results for metals are summarized in Tables 2-1 through 2-4.

In February 2013 the NYSDEC and NYSDOH received a letter from Mr. Daniel M. Engert, Town of Somerset supervisor, requesting that the Departments assist with the remediation recommended in the Phase II ESA Report. The NYSDEC responded to this request in March 2013 by informing the supervisor that the Department would take the necessary steps to address this contamination through the hiring of a State remedial contractor. The NYSDEC also informed the supervisor that due to regulatory limits, the Department would not be able to address the asbestos materials at the Site.

3.0 EXTENT OF CONTAMINATION INVESTIGATION

3.1 *Investigation Activities*

In order to determine the extent of arsenic contaminated soils requiring remediation, the NYSDEC completed an Extent of Contamination Investigation during the spring and summer of 2013. Investigation activities began on Friday, April 26, 2013 and were completed on Wednesday, August 7, 2013. Details of the investigation are summarized by day as follows:

04/26/13

NYSDEC personnel begin staking a grid in the wooded area of the southern portion of the Site, east of the gravel parking lot. Surface soil samples would subsequently be collected at the grid nodes, followed by the collection of subsurface soil samples using direct-push drilling technology (e.g., Geoprobe).

05/02/13

Staking of the grid is complete.

05/07/13

NYSDEC personnel collect 20 surface soil samples from the Site for arsenic analysis.

05/14/13

NYSDEC personnel collect 11 surface soil samples from the Site. Surface soil sampling is complete.

06/10/13

Empire personnel meet on-site with DC Family Tree Service, the low bidder for Site clearing.

06/18/13

Clearing of the southern portion of the Site begins. Photographs showing Site clearing activities are contained in Appendix G.

06/21/13

Clearing of the southern portion of the Site is almost complete. Trees that were cut still need to be transported and stored near the existing building on-site. Additional grass and brush

near the fence of the parking lot also needs to be cleared.

07/09/13

Clearing activities are complete. NYSDEC personnel stake additional grid nodes in preparation for the start of the subsurface investigation.

07/10/13

Mobilization of equipment, personnel and tools to the Site to begin the subsurface investigation. Completion of 10 direct push soil borings to bedrock. Soil samples are collected every two feet for arsenic analysis. Soil boring logs from the subsurface investigation are contained in Appendix A, while photographs taken during the investigation are contained in Appendix G.

07/12/13

Completion of 12 direct push soil borings to bedrock. Soil samples are collected every two feet for arsenic analysis.

07/15/13

Completion of 12 direct push soil borings to bedrock. Soil samples are collected every two feet for arsenic analysis.

07/16/13

Completion of 13 direct push soil borings to bedrock. Soil samples are collected every two feet for arsenic analysis.

07/17/13

Completion of 7 direct push soil borings to bedrock. Soil samples are collected every two feet for arsenic analysis. The subsurface investigation is complete.

08/02/13

NYSDEC personnel stake additional grid nodes in preparation for the start of the Phase 2 subsurface investigation. This investigation was required to better delineate the extent of arsenic contamination across the southern portion of the Site.

08/05/13

The Phase 2 subsurface investigation begins. Completion of 6 direct push soil borings to

4 feet depth to collect samples not obtained during the Phase 1 subsurface investigation due to poor sample recovery. Completion of 6 direct push soil borings to bedrock. Soil samples are collected every two feet for arsenic analysis.

08/06/13

Completion of 8 direct push soil borings to bedrock. Soil samples are collected every two feet for arsenic analysis.

08/07/13

Completion of 8 direct push soil borings to bedrock. Soil samples are collected every two feet for arsenic analysis. The Phase 2 subsurface investigation is complete.

3.2 Surface Soil Samples

Thirty-six (36) surface soil samples were collected from the southeastern portion of the Former Barker Chemical Site during the Extent of Contamination Investigation. The locations of these samples are shown on Figure 3-1. Samples were not collected from the southwestern portion of the Site due to the presence of a gravel parking lot that was constructed during the USEPA removal action. Locations of historic surface soil samples and sediment samples collected from 0-2 inch depth are also shown on Figure 3-1.

The Extent of Contamination samples were collected to delineate the extent of arsenic contamination in surface soil across the southeastern portion of the Site. All samples were submitted to TestAmerica Laboratories in Amherst, New York for chemical analysis of total arsenic. The analytical results for these samples are summarized in Table 3-1 and shown on Figure 3-1. Analytical results for the historic surface soil samples are summarized in Table 2-1, while the analytical results for the historic sediment samples are summarized in Table 2-4. The arsenic results from these samples are also shown on Figure 3-1. The analytical results from Test America for the surface soil samples collected during the Extent of Contamination Investigation are contained in Appendix B.

The results of the arsenic analyses revealed that arsenic contamination of surface soil was widespread across the southeastern portion of the Site. The most extensive contamination was associated with rows A, B, C, and the western portion of row D. In these rows, arsenic was detected in sixteen samples at concentrations that exceeded the NYSDEC Part 375 commercial

use soil cleanup objective (16 ppm). The highest arsenic concentrations were documented in row C, which is a shallow drainage ditch that starts near the former production area and discharges into the East Boundary Ditch.

Arsenic was detected in two samples from row E at concentrations that exceeded the NYSDEC Part 375 commercial use soil cleanup objective, and in two samples from a shallow ditch in the southernmost portion of the site.

3.3 Subsurface Soil Samples

All subsurface soil samples collected during the Extent of Contamination Investigation were submitted to TestAmerica Laboratories in Amherst, New York for chemical analysis of total arsenic. The analytical results for these samples are summarized in Table 3-1 and shown on Figures 3-2 through 3-5. Analytical results for the historic subsurface soil samples are summarized in Table 2-2, with the arsenic results also shown on Figures 3-2 through 3-5. Select samples collected during the Extent of Contamination Investigation were analyzed for Target Analyte List (TAL) metals. The results from these samples are summarized in Table 3-2, with the arsenic results shown on Figures 3-2 through 3-5. The analytical results from Test America for the subsurface soil samples collected during the Extent of Contamination Investigation are contained in Appendix C.

3.2.1 2 Feet Depth

Seventy-two (72) subsurface soil samples from 2 feet depth were collected from the southern portion of the Site during the Extent of Contamination Investigation. The analytical results for these samples are summarized in Table 3-1 and shown on Figure 3-2. Analytical results for the historic subsurface soil samples are summarized in Table 2-2, with the arsenic results also shown on Figure 3-2.

The results of the arsenic analyses revealed that arsenic contamination of subsurface soil at 2 feet depth was widespread across the south central portion of the Site, which was the former production area for Barker Chemical. Arsenic was detected in samples from each row (18 samples total) at concentrations that exceeded the NYSDEC Part 375 commercial use soil cleanup objective.

Arsenic contamination was more sporadic further east, with the most extensive

contamination in this area documented in row C, where four samples contained arsenic at concentrations that exceeded the NYSDEC Part 375 commercial use soil cleanup objective. Arsenic in this area of the Site was also detected in one sample from row D and in one sample from row E at concentrations that exceeded the NYSDEC Part 375 commercial use soil cleanup objective.

3.2.2 4 Feet Depth

Seventy-two (72) subsurface soil samples from 4 feet depth were collected from the southern portion of the Site during the Extent of Contamination Investigation. The analytical results for these samples are summarized in Table 3-1 and shown on Figure 3-3. Analytical results for the historic subsurface soil samples are summarized in Table 2-2, with the arsenic results also shown on Figure 3-3.

The results of the arsenic analyses revealed that only nine samples of subsurface soil at 4 feet depth contained arsenic at concentrations that exceeded the NYSDEC Part 375 commercial use soil cleanup objective. Seven of these samples were collected from the former production area of the Site. Further east, arsenic was detected in one sample from row A and in one sample from row C at concentrations that slightly exceeded the NYSDEC Part 375 commercial use soil cleanup objective.

3.2.3 6 Feet Depth

Sixty-six (66) subsurface soil samples from 6 feet depth were collected from the southern portion of the Site during the Extent of Contamination Investigation. The analytical results for these samples are summarized in Table 3-1 and shown on Figure 3-4. Analytical results for the historic subsurface soil samples are summarized in Table 2-2, with the arsenic results also shown on Figure 3-4.

The results of the arsenic analyses revealed that none of the subsurface soil samples collected from 6 feet depth contained arsenic at concentrations that exceeded the NYSDEC Part 375 commercial use soil cleanup objective.

3.2.4 8 Feet Depth

Twenty-nine (29) subsurface soil samples from 8 feet depth were collected from the southern portion of the Site during the Extent of Contamination Investigation. The analytical

results for these samples are summarized in Table 3-1 and shown on Figure 3-5. Analytical results for the historic subsurface soil samples are summarized in Table 2-2, with the arsenic results also shown on Figure 3-5. Samples from 8 feet depth were not collected from the southeastern portion of the Site because bedrock was encountered before that depth (see the soil boring logs in Appendix A).

The results of the arsenic analyses revealed that none of the subsurface soil samples collected from 8 feet depth contained arsenic at concentrations that exceeded the NYSDEC Part 375 commercial use soil cleanup objective.

4.0 SUMMARY OF THE REMEDIAL ACTIVITIES

4.1 *Proposed Excavation Area*

Based upon the analytical results discussed in Section 3.0, the proposed excavation areas were delineated as shown on Figure 4-1. Proposed depths of excavation ranged from 2 to 5 feet, with the areas of excavation centered on the grid nodes (Figure 4-1).

4.2 *Remediation Activities*

Remediation of arsenic contaminated soil at the Former Barker Chemical Site began on Tuesday, February 25, 2014 and was completed on Friday, March 21, 2014. Details of the remediation are summarized by day as follows:

02/25/14

Mobilization of equipment, personnel and tools to the Site. Demarcation of excavation areas.

02/26/14

Excavation of contaminated soils begins at grid markers A1, B3 and B4 (Figure 4-1). Excavated soils are loaded directly into trucks for transport to the Town of Tonawanda Landfill for disposal. Following excavation, eight confirmatory samples are collected for arsenic analysis. Photographs taken during remediation are contained in Appendix G. Confirmatory sample locations are shown on Figure 4-2.

02/27/14

Continue to excavate at grid markers B-4 and B-3. Excavated soils are stockpiled on-site for later disposal.

02/28/14

Loading of stockpiled soils into trucks for transport to the Town of Tonawanda Landfill. Excavation of contaminated soils at grid markers B2 and B1 (Figure 4-1). Five confirmatory samples are collected for arsenic analysis.

03/03/14

Excavation of contaminated soils at grid markers A6, B6 and the western portion of the

drainage ditch along row C (Figure 4-1). Excavated soils are loaded directly into trucks for transport to the Town of Tonawanda Landfill. Eighteen confirmatory samples are collected for arsenic analysis.

03/04/14

Excavation of contaminated soils at grid markers C1, C2, C3, D2, and the floor of B3 at the location of confirmatory sample F-4 (Figures 4-1 and 4-2). Excavated soils are loaded directly into trucks for transport to the Town of Tonawanda Landfill. Ten confirmatory samples are collected for arsenic analysis.

03/05/14

Excavation of contaminated soils at grid markers D3, E2 and E4 (Figure 4-1). Excavated soils are loaded directly into trucks for transport to the Town of Tonawanda Landfill. Thirteen confirmatory samples are collected for arsenic analysis.

03/06/14

Backfilling of several excavations to provide access to additional excavation areas.

03/07/14

Excavation of contaminated soils at grid markers A4 and A5 (Figure 4-1). Excavated soils are loaded directly into trucks for transport to the Town of Tonawanda Landfill. Partial backfilling of excavations. Identification of the limits of excavation at grid marker A-1. Seven confirmatory samples are collected for arsenic analysis.

03/10/14

Excavation of contaminated soils at grid markers A-1, B0 and C0 (Figure 4-1). Excavated soils are loaded directly into trucks for transport to the Town of Tonawanda Landfill. Partial backfilling of excavations. Identification of the limits of excavation at the east gate entrance. Fourteen confirmatory samples are collected for arsenic analysis.

03/11/14

Excavation of contaminated soils at grid markers F1, G0, and the undesignated grid near the east gate (Figure 4-1). Excavated soils are loaded directly into trucks for transport to the Town of Tonawanda Landfill. Partial backfilling of excavations. Fifteen confirmatory samples are collected for arsenic analysis.

03/12/14

Backfilling of several excavations with previously stockpiled crusher run.

03/13/14

Backfilling of several excavations to provide access to additional excavation areas.

03/14/14

Excavation of contaminated soils at grid markers F-1, F0, and E-1 (Figure 4-1). Excavated soils are loaded directly into trucks for transport to the Town of Tonawanda Landfill. Partial backfilling of excavations. Nine confirmatory samples are collected for arsenic analysis.

03/17/14

Excavation of contaminated soils at grid markers D-1 and E0 (Figure 4-1). Excavated soils are loaded directly into trucks for transport to the Town of Tonawanda Landfill. Partial backfilling of excavations. Eight confirmatory sample are collected for arsenic analysis.

03/18/14

Excavation of contaminated soils at grid markers D-2, E-2, the southeastern drainage ditch, and the wall of A6 at the location of confirmatory sample W-8 (Figures 4-1 and 4-2). Excavated soils are loaded directly into trucks for transport to the Town of Tonawanda Landfill. Partial backfilling of excavations. Fifteen confirmatory samples are collected for arsenic analysis.

03/19/14

Partial backfilling of excavations.

03/20/14

Partial backfilling of excavations including the southeast drainage ditch excavation.

03/21/14

Finalize backfilling of excavations and completion of Site grading activities. Stockpiling of tree trunks and roots in a centralized location. Removal of miscellaneous debris from the Site.

4.3 Transportation and Off-Site Disposal

Sampling and analysis completed during the 2013 Extent of Contamination Investigation revealed that soil and fill at the southern portion of the Former Barker Chemical Site were non-hazardous for arsenic. Empire prepared the appropriate non-hazardous waste profile

application, and submitted the application, along with the waste characterization sampling results, to several landfills to obtain approval and cost estimates for disposal. EnSol, Inc. (Town of Tonawanda Landfill) in Tonawanda, New York was selected for the off-site disposal of these materials. A total of 3,769.06 tons of non-hazardous soil and fill were transported to the Town of Tonawanda Landfill for disposal (Table 4-1). The non-hazardous waste manifests are contained in Appendix E.

4.4 Backfilling

Backfilling of the excavation began on March 6, 2014 after the confirmatory sample results indicated that the NYSDEC Part 375 commercial use soil cleanup objective for arsenic had been achieved, and to provide access to additional excavation areas. The excavation was backfilled with 2-inch crusher run obtained from LaFarge North America of Lockport, New York. Backfilling activities occurred intermittently during the remediation as described in Section 4.2. A total of 4,228.22 tons of 2-inch crusher run were utilized as backfill during the project (Table 4-2).

5.0 SUMMARY OF THE CONFIRMATORY SAMPLE RESULTS

5.1 *Sample Collection and Analysis*

Confirmatory samples of the floor and sidewalls of each excavated grid were collected as the excavation progressed. The number of samples and date of collection are given in Section 4.2. All samples were collected from the native, reddish brown silty clay soil. In total, sixty-three (63) sidewall samples and fifty-nine (59) floor samples were collected (Figure 4-2) and submitted to Alpha Analytical in Westborough, Massachusetts for chemical analysis of total arsenic. These lab data are contained in Appendix D.

The analytical results from these samples were compared to the NYSDEC Part 375 commercial use soil cleanup objective for arsenic (16 ppm), and are summarized in Table 5-1.

5.2 *Sidewall Samples*

The analytical results of the final confirmatory sidewall samples indicated that all samples, with the exception of samples W-3 and W-17 (Figure 4-2), achieved the NYSDEC Part 375 commercial use soil cleanup objective for arsenic (Table 5-1). These results also achieved the NYSDEC Part 375 unrestricted soil cleanup objective for arsenic of 13 ppm (Table 5-1).

The arsenic results for samples W-3 and W-17 were 21 ppm and 21 ppm, respectively. Since these results were only slightly above the NYSDEC Part 375 commercial use soil cleanup objective, additional excavation from the associated sidewalls was not completed.

5.3 *Floor Samples*

The analytical results of the final confirmatory floor samples indicated that all samples (Figure 4-2) achieved the NYSDEC Part 375 commercial use soil cleanup objective for arsenic (Table 5-1). These results also achieved the NYSDEC Part 375 unrestricted soil cleanup objective for arsenic (Table 5-1).

6.0 DISCUSSION, PROJECT COSTS AND RECOMMENDATIONS

6.1 Discussion

This report describes the investigation activities completed at the southern portion of the Former Barker Chemical Site to delineate the extent of arsenic contamination in surface and subsurface soils at the Site. This report also describes the remediation activities completed at the Site to address the arsenic contamination. The remediation goal selected for the Site is described as follows:

- Eliminate, to the extent practicable, arsenic contamination in surface and subsurface soils at the southern portion of the Former Barker Chemical Site.

The completed remediation met this remediation goal as follows:

- Arsenic contaminated soil from the southern portion of the Former Barker Chemical Site was excavated and transported off-site for disposal at a NYSDEC permitted landfill;
- Confirmatory sample results indicate that the remediation achieved both the NYSDEC Part 375 unrestricted and commercial use soil cleanup objectives for arsenic, with the exception of two locations, where remaining arsenic concentrations were 21 ppm;
- Air monitoring to protect both Site workers and the community was conducted during remedial activities; and
- The excavated areas were backfilled with 2-inch crusher run and the Site was restored to grade.

6.2 Project Costs

The remediation of arsenic contaminated soil from the southern portion of the Former Barker Chemical Site was completed at a cost of \$248,228.77 with the costs distributed as follows:

- Project coordination for the Extent of Contamination Investigation: \$1,224.50;
- Site clearing: \$5,067.38;
- Subsurface investigation (not including analytical costs): \$11,912.47;
- Sample analysis during the Extent of Contamination Investigation: \$5,671.25;
- Project coordination for the soil excavation: \$2,031.30;
- Equipment and labor to complete the soil excavation: \$26,738.80;
- Soil disposal at the Town of Tonawanda Landfill: \$82,919.32;
- Transportation of contaminated soil to the landfill and crusher run to the Site to be utilized as backfill: \$70,781.97;
- Crusher run purchase: \$35,161.88; and
- Confirmatory sample analysis: \$6,719.90.

6.3 Recommendations

Redevelopment of the Former Barker Chemical Site should ideally be restricted to that portion of the Site between West Somerset Road and the Central Drainage Ditch (Figure 2-1). Contamination in this area was partially remediated by the USEPA between October 2000 and November 2001, with arsenic contamination in the eastern two-thirds of this area remediated by the NYSDEC in February and March, 2014. A Phase II Environmental Site Assessment completed at the Site in 2012 suggests that the wooded area north of the North Lagoon may also be suitable for redevelopment. During redevelopment, however, should waste, stained soil, or other signs of contamination be encountered, the Excavation Work Plan in Appendix F should be followed.

It is also recommended that limited subsurface activities take place in the Filled and South Lagoons (Figure 2-1) as residual waste may still be present in these areas. In addition, these high sulfur wastes were producing low pH surface water in 2008 when the NYSDEC completed a Supplemental Site Investigation at the Site (see Table F-4 of Appendix F). During the Phase II Environmental Site Assessment in 2012, the historical low pH surface water bodies

were dry so more recent pH measurements could not be obtained. The pH of surface water was not measured by the NYSDEC during the Extent of Contamination Investigation so current site conditions are not known.

If excavation in these lagoons is necessary, excavated materials should be evaluated for chemical contamination or low pH conditions. If such conditions exist, the excavated material must be handled appropriately and in accordance with NYSDEC regulations as discussed in the Excavation Work Plan (Appendix F). Methods should also be put in place to avoid direct contact with low pH and contaminated surface water at the Site, if encountered.

Finally, groundwater underlying the Site should not be utilized as a source of potable or process water without necessary water quality treatment as determined by the Niagara County Health Department as this water may be contaminated with volatile organic compounds (VOCs), metals and sulfur compounds (see Table F-5 of Appendix F). The VOC contaminated groundwater is located near the former storage tank and spill area in the southern portion of the Site (Figure 2-1). Groundwater throughout the Site is contaminated with low levels of arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, thallium, and sulfur compounds at concentrations that exceed the NYSDEC groundwater standards or guidance values (Table F-5).

7.0 REFERENCES

EPA, 2007, Effects of Acid Rain - Surface Waters and Aquatic Animals: United States Environmental Protection Agency website at:
http://www.epa.gov/acidrain/effects/surface_water.html.

LaBella, 2012, Phase II Environmental Site Assessment of the Barker Chemical Site: LaBella Associates, P.C., Buffalo, New York.

Lockheed Martin, 2000, Removal Site Evaluation Report: Lockheed Martin Technology Services Group, Edison, New Jersey.

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, 1998, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations: New York State Department of Environmental Conservation, Division of Water Technical and Operational Guidance Series (1.1.1), Albany, New York.

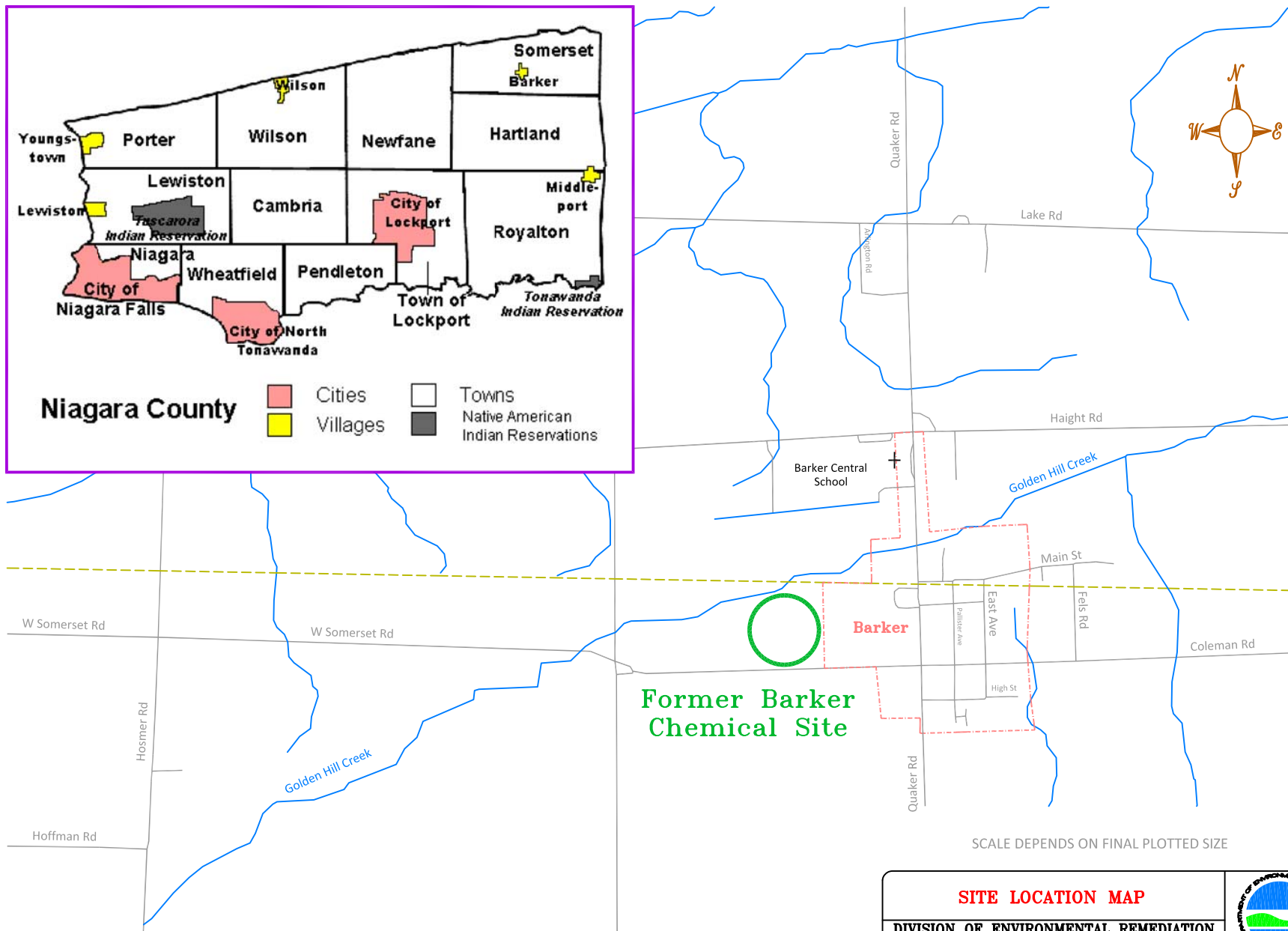
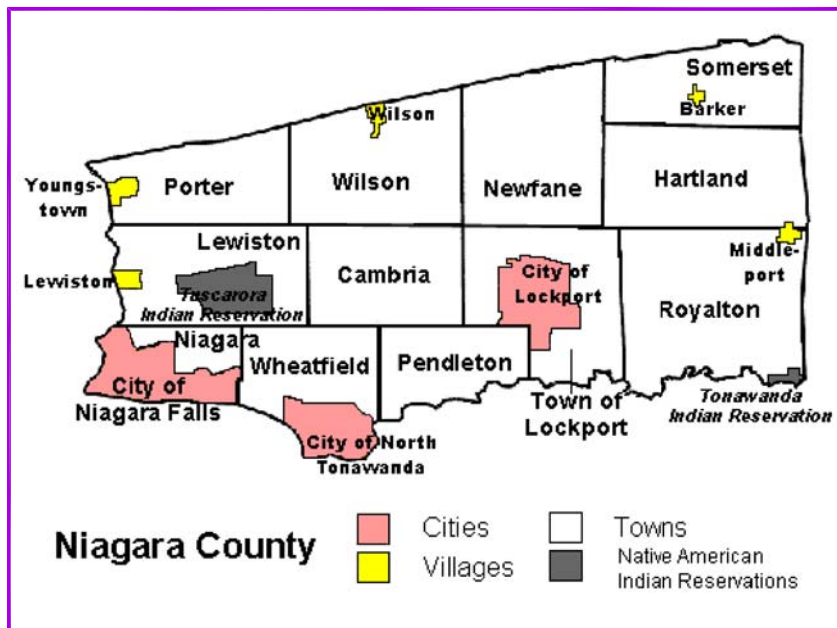
NYSDEC, 1999, Technical Guidance for Screening Contaminated Sediments: New York State Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources, Albany, New York.

NYSDEC, 2006, 6 NYCRR Part 375: Environmental Remediation Programs, Soil Cleanup Objectives: New York State Department of Environmental Conservation, Division of Environmental Remediation, Albany, New York.

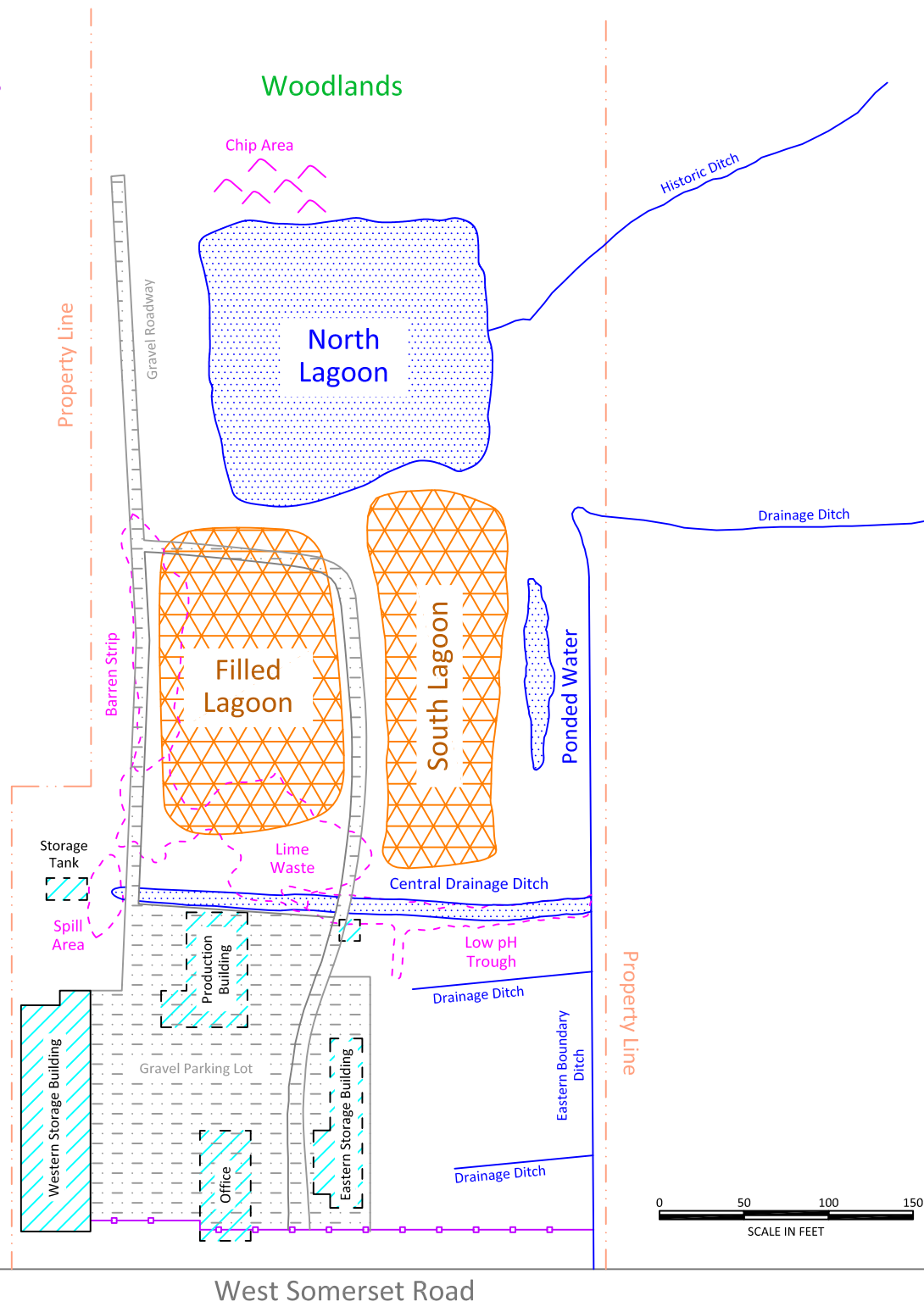
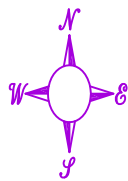
NYSDEC, 2007, Site Investigation Report of the Former Barker Chemical Site, Village of Barker, Niagara County, New York: New York State Department of Environmental Conservation, Division of Environmental Remediation, Buffalo, New York.

NYSDEC, 2009, Supplemental Site Investigation Report of the Former Barker Chemical Site, Village of Barker, Niagara County, New York: New York State Department of Environmental Conservation, Division of Environmental Remediation, Buffalo, New York.

FIGURES

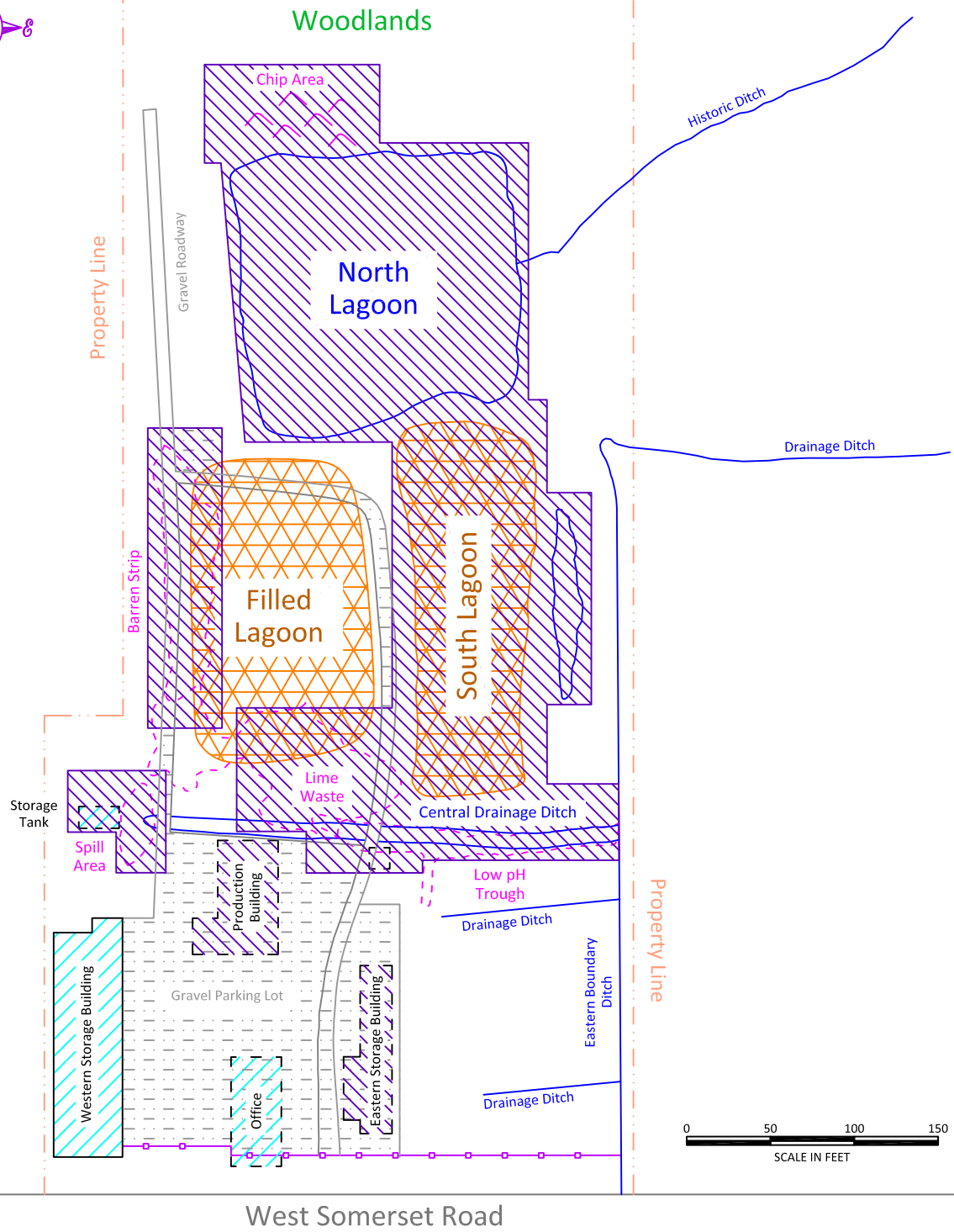
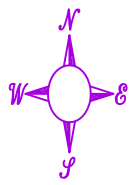


SITE LOCATION MAP		
DIVISION OF ENVIRONMENTAL REMEDIATION		
DATE: 08/14/03	DRAWING: Site Location Map.dwg	
SITE NAME: BARKER CHEMICAL SITE		



BARKER CHEMICAL SITE MAP		
DIVISION OF ENVIRONMENTAL REMEDIATION		
DATE: 06/06/03	DRAWING: Barker.dwg	
BARKER CHEMICAL SITE		

FIGURE 2-1



LEGEND:

 AREAS REMEDIATED BY EPA

EPA REMOVAL ACTION

DIVISION OF ENVIRONMENTAL REMEDIATION

DATE: 06/06/03

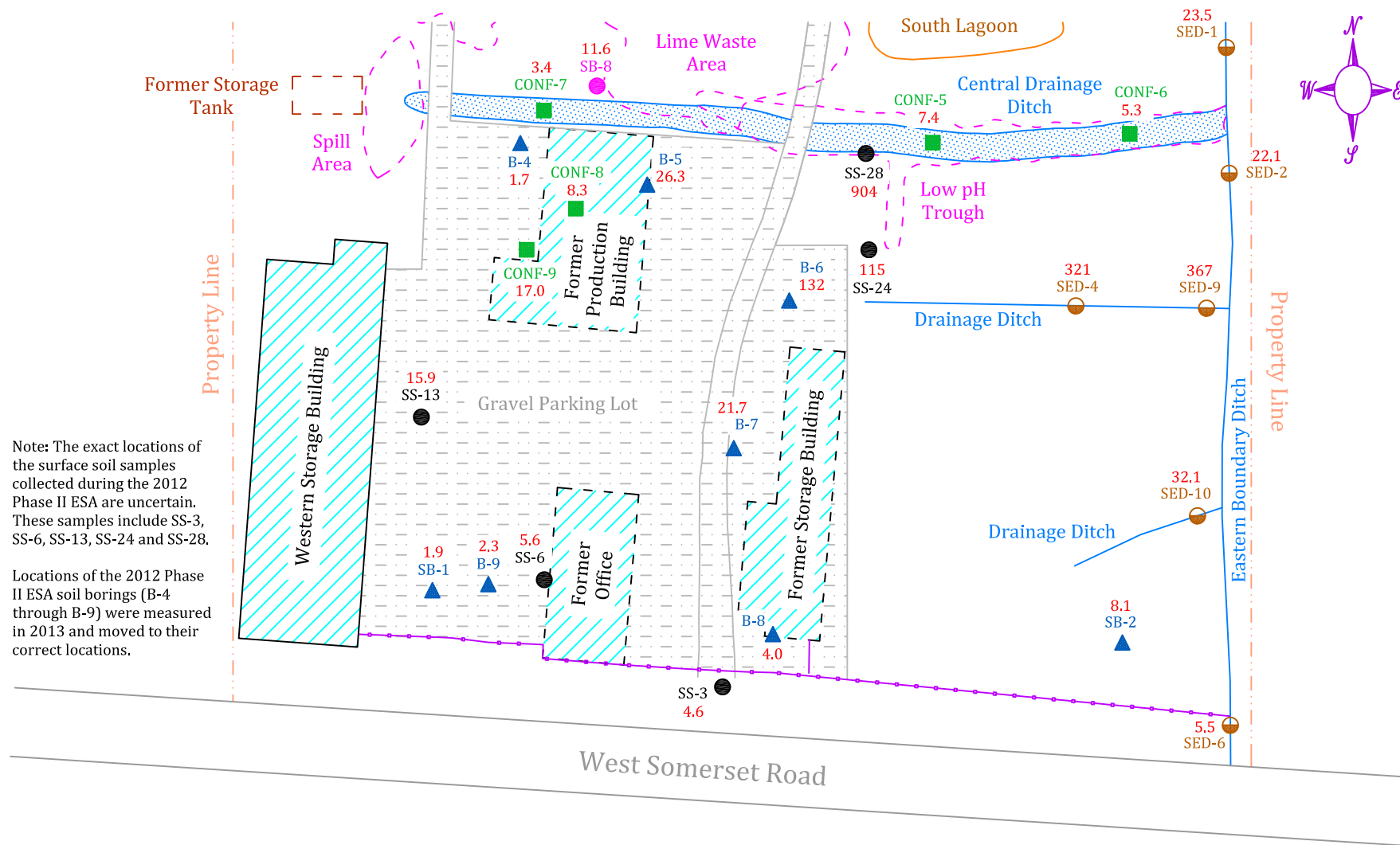
DRAWING: Barker.dwg

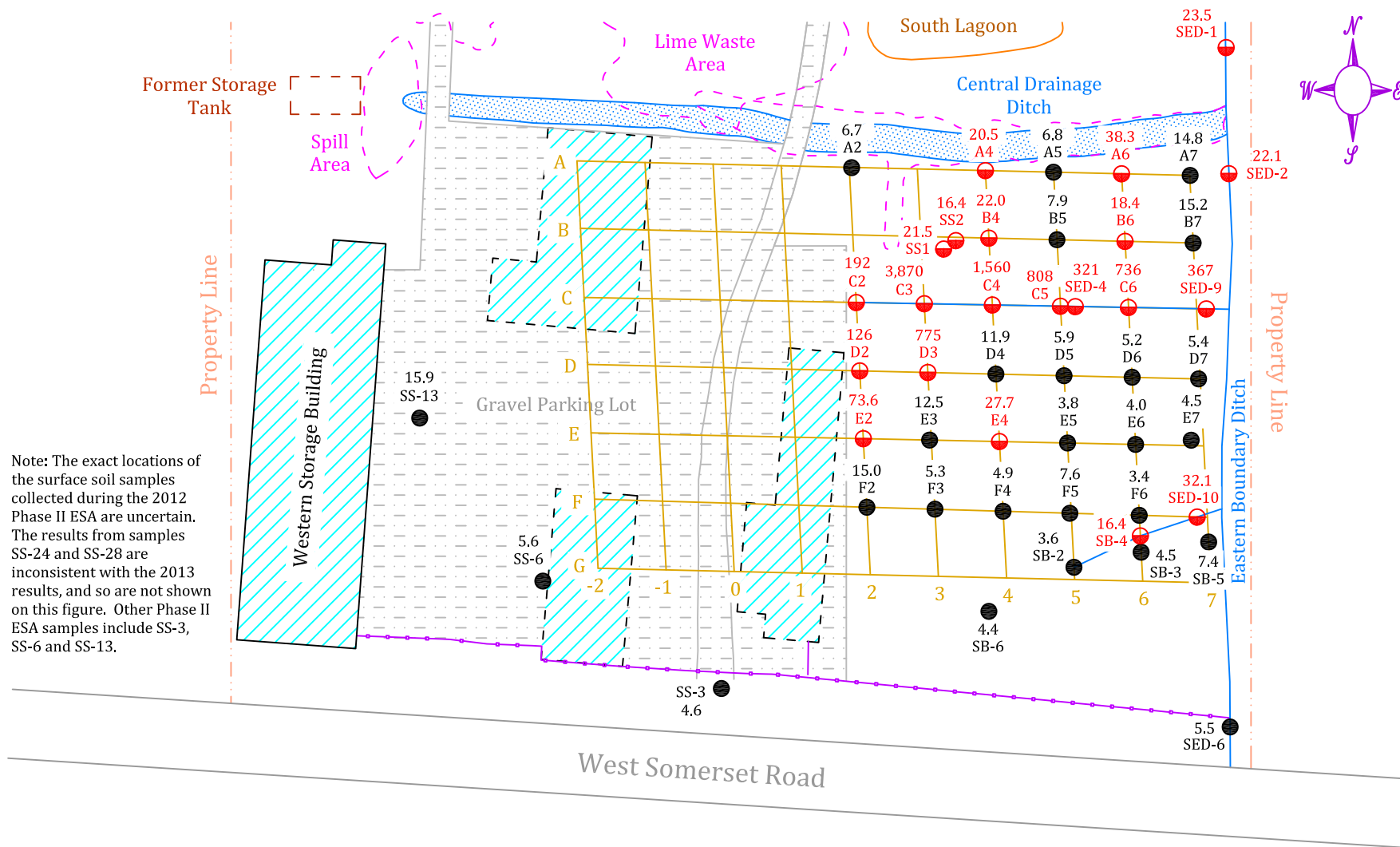
SITE:

BARKER CHEMICAL SITE

FIGURE 2-2





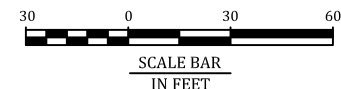


Note: The exact locations of the surface soil samples collected during the 2012 Phase II ESA are uncertain. The results from samples SS-24 and SS-28 are inconsistent with the 2013 results, and so are not shown on this figure. Other Phase II ESA samples include SS-3, SS-6 and SS-13.

LEGEND:

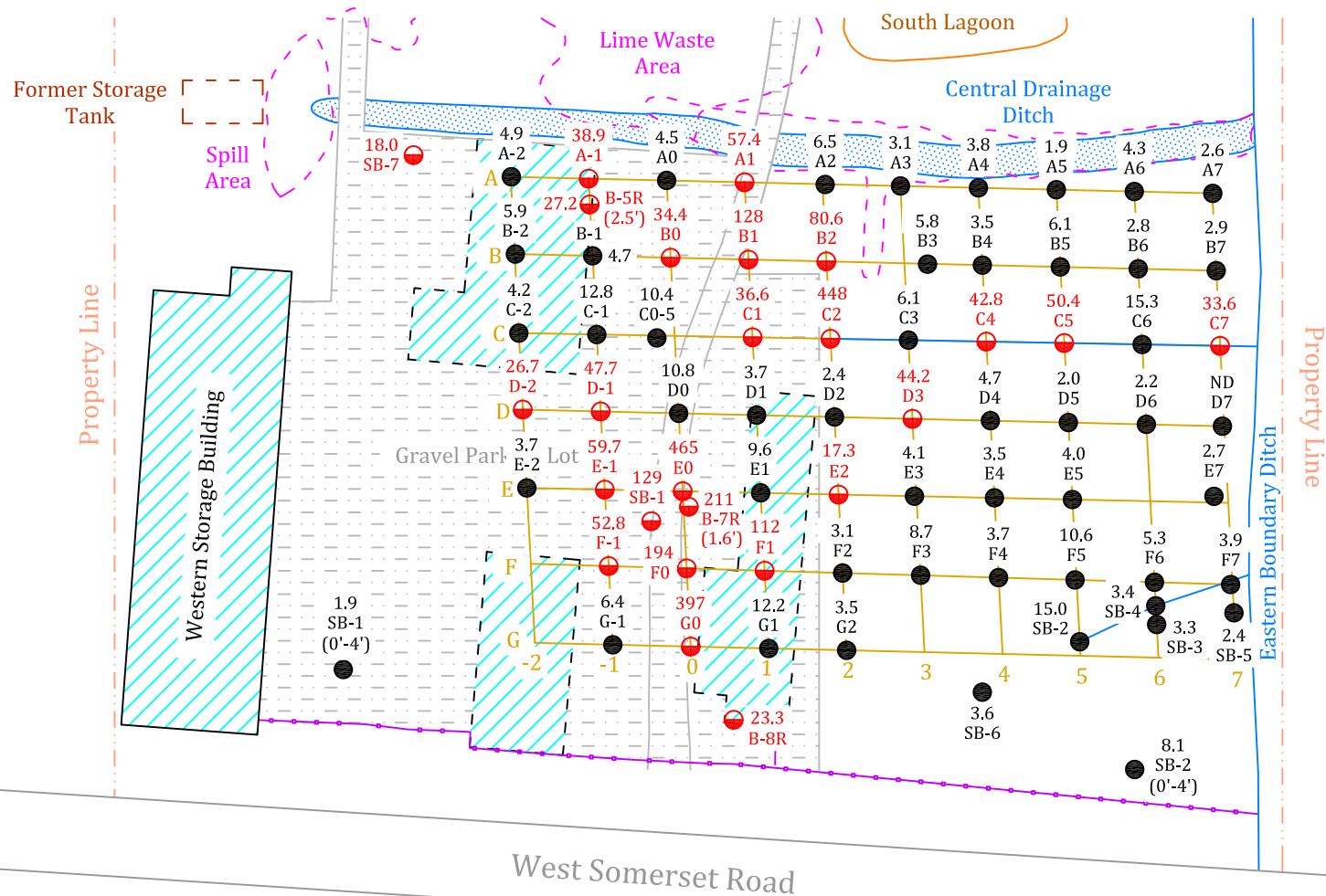
- Surface Soil/Sediment Sample with No Exceedance
- Surface Soil/Sediment Sample with Arsenic Exceedance

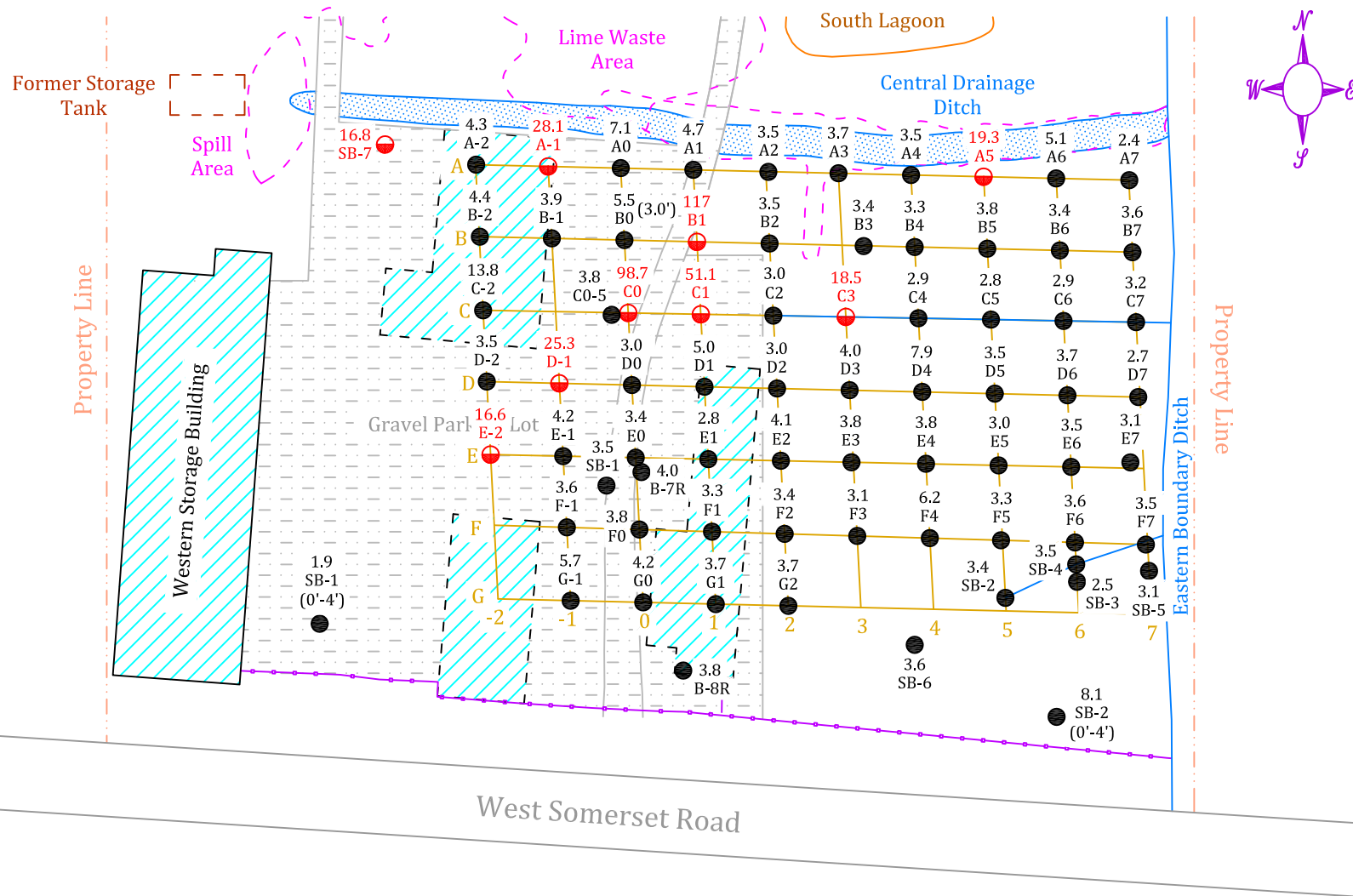
All concentrations are in ppm. Exceedances are for the commercial use SCO, which is 16 ppm.



ARSENIC CONCENTRATIONS IN SURFACE SOIL AND SEDIMENT		
DIVISION OF ENVIRONMENTAL REMEDIATION		
DATE: 03/27/15	DRAWING: Barker.dwg	
SITE NAME: BARKER CHEMICAL SITE		

FIGURE 3-1

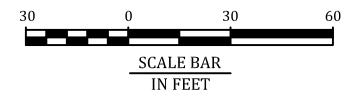




LEGEND:

- Subsurface Soil Sample with No Exceedance
- Subsurface Soil Sample with Arsenic Exceedance

All concentrations are in ppm. Exceedances are for the commercial use SCO, which is 16 ppm.



ARSENIC CONCENTRATIONS IN SUBSURFACE SOIL AT 4' DEPTH

DIVISION OF ENVIRONMENTAL REMEDIATION

DATE: 03/27/15 DRAWING: Barker.dwg

SITE NAME: BARKER CHEMICAL SITE

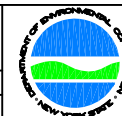
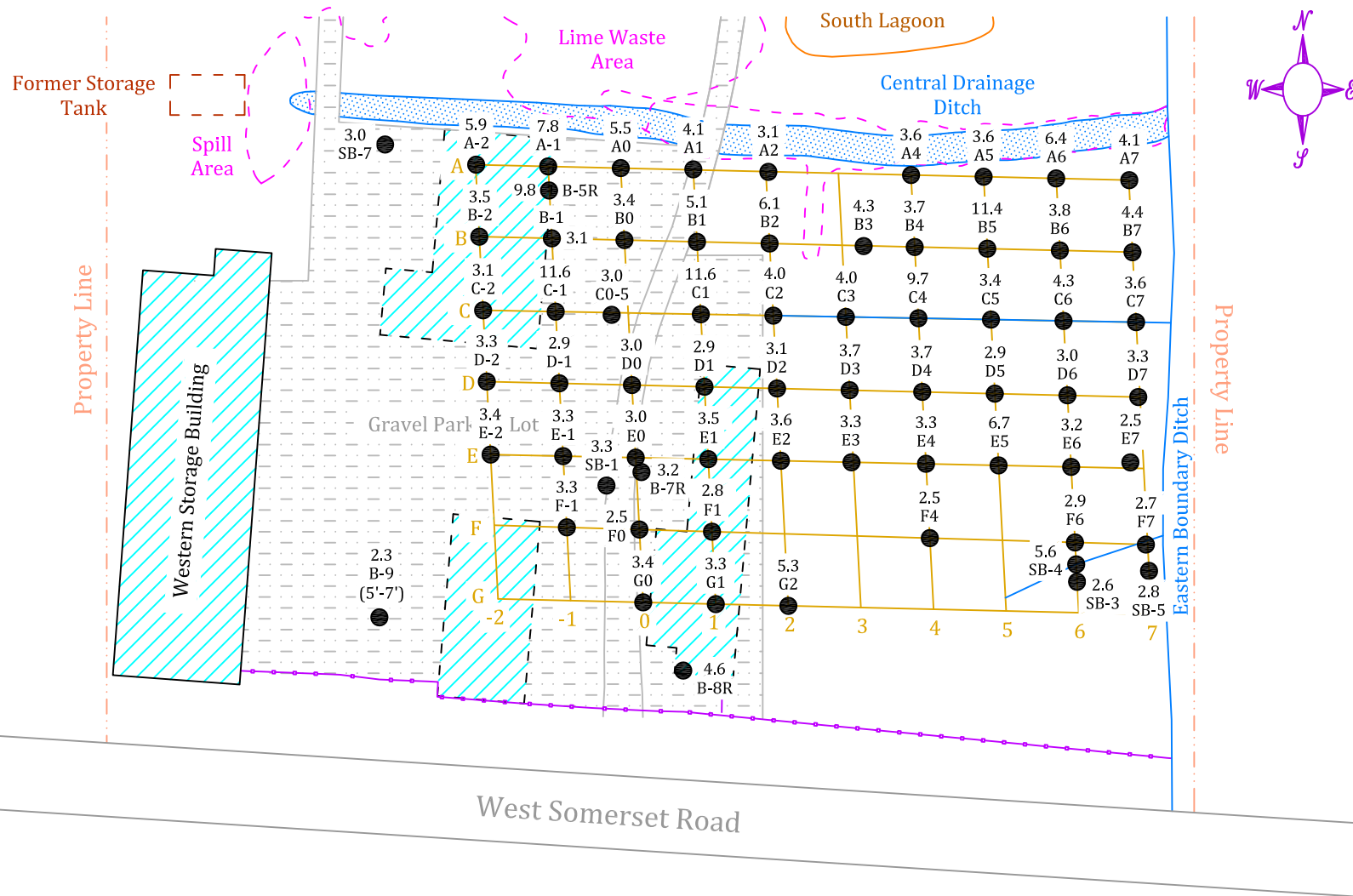
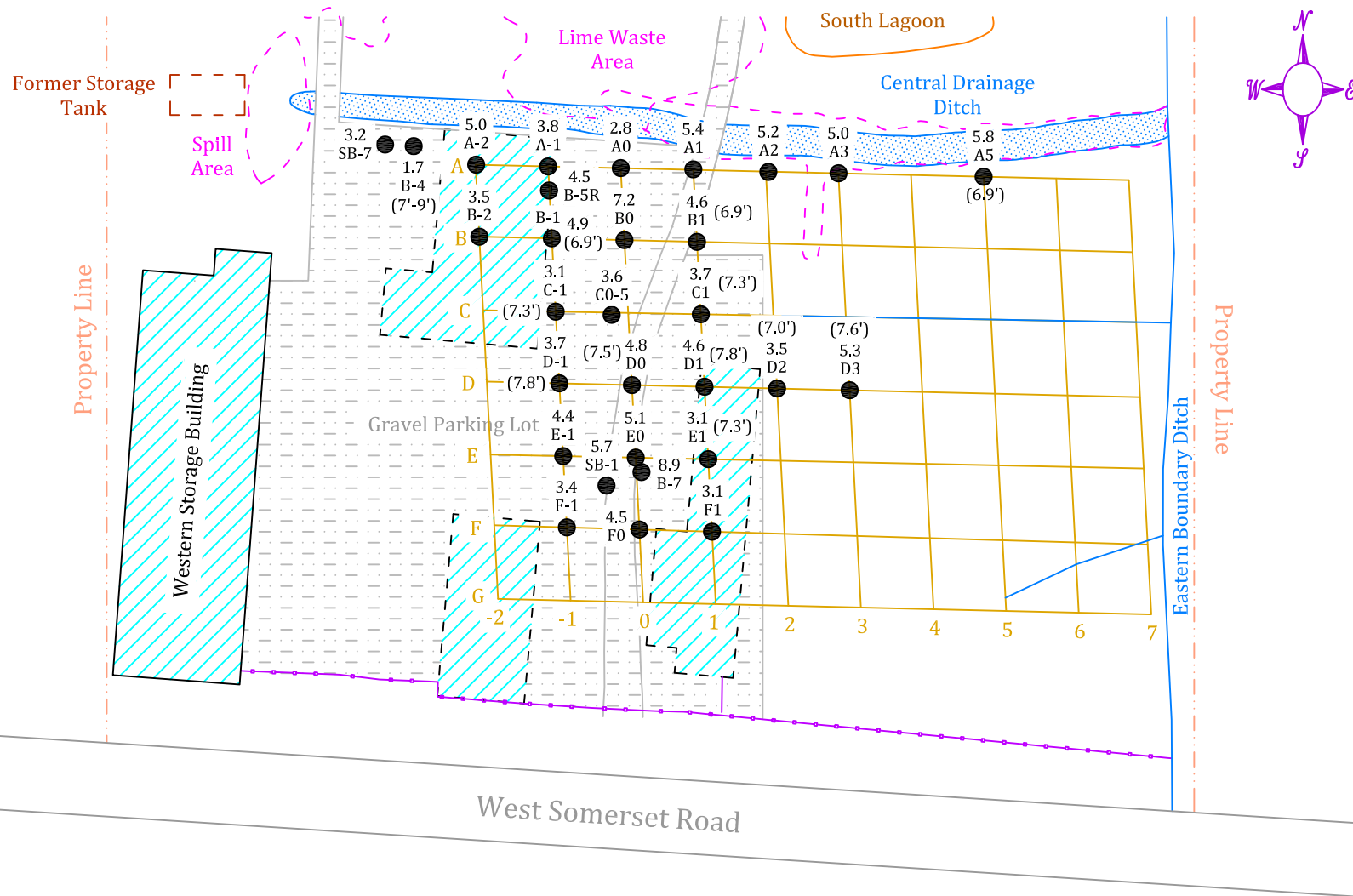


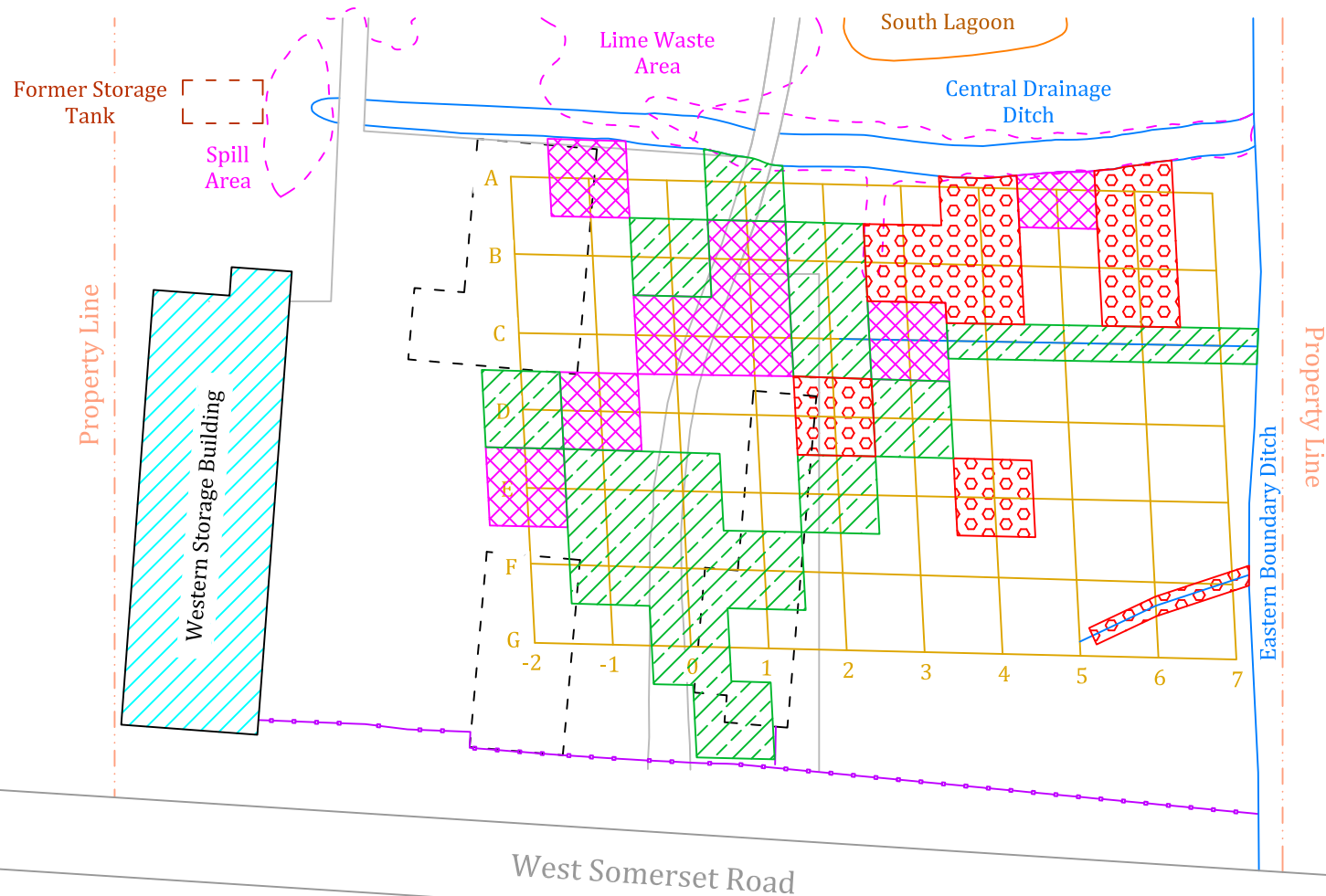
FIGURE 3-3



ARSENIC CONCENTRATIONS IN SUBSURFACE SOIL AT 6' DEPTH		
DIVISION OF ENVIRONMENTAL REMEDIATION		
DATE: 03/27/15	DRAWING: Barker.dwg	
SITE NAME: BARKER CHEMICAL SITE		

FIGURE 3-4





LEGEND:

-  Excavation to 2' Depth
-  Excavation to 3' Depth
-  Excavation to 5' Depth



PROPOSED EXCAVATION MAP

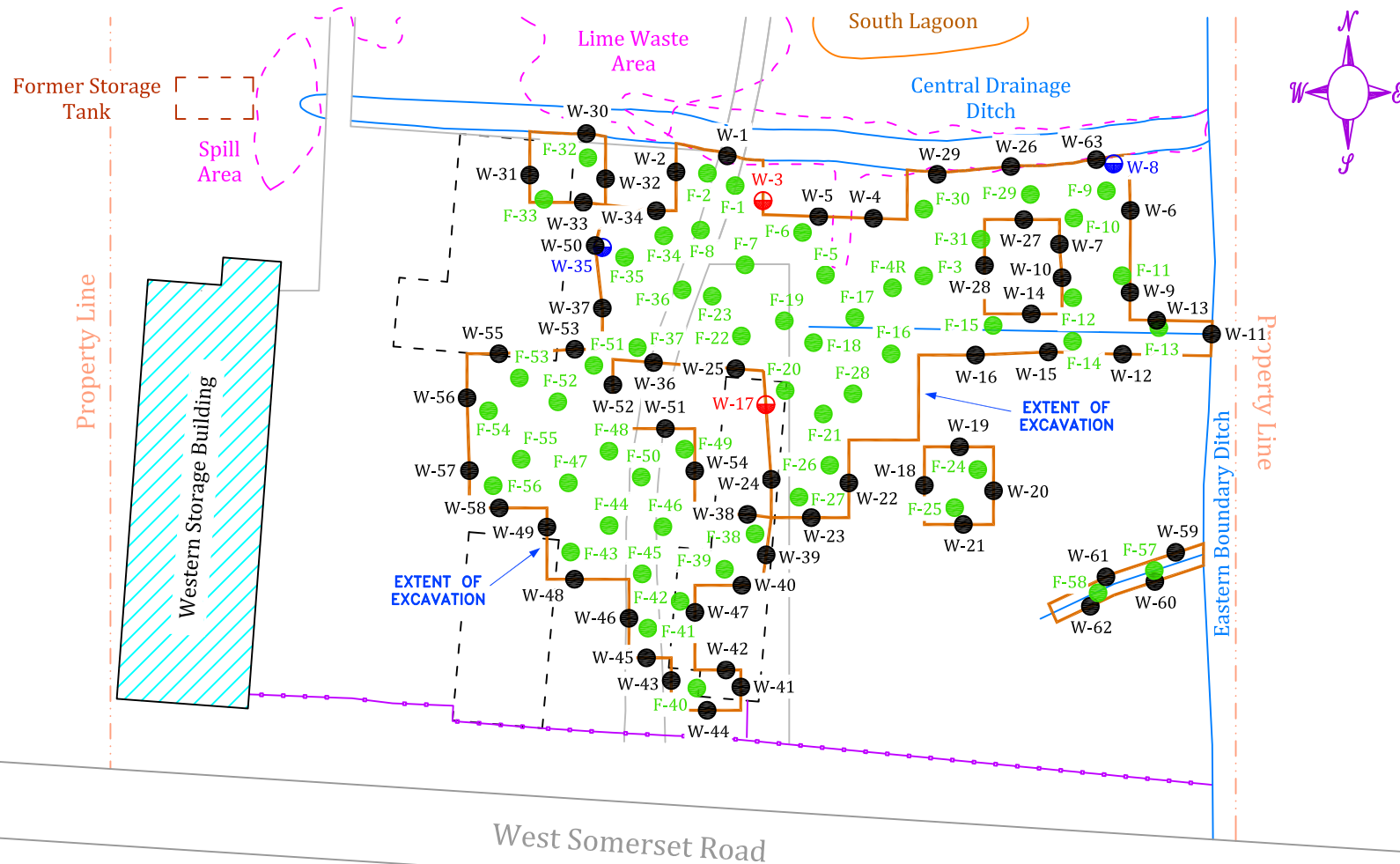
DIVISION OF ENVIRONMENTAL REMEDIATION

DATE: **03/27/15** DRAWING: **Barker.dwg**

SITE NAME: **BARKER CHEMICAL SITE**

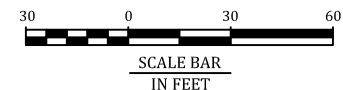
FIGURE 4-1





LEGEND:

- Confirmatory Wall Sample with No Exceedance
- Confirmatory Floor Sample with No Exceedance
- Confirmatory Sample with Arsenic Exceedance
- Confirmatory Sample where Additional Excavation Took Place



EXCAVATION & CONFIRMATORY SAMPLE LOCATION MAP

DIVISION OF ENVIRONMENTAL REMEDIATION

DATE: 03/27/15 DRAWING: Barker.dwg

SITE NAME: BARKER CHEMICAL SITE



FIGURE 4-2

TABLES

Table 2-1
Former Barker Chemical Site, Site No. 932119
Metal Results for Historic Surface Soil Samples Collected from the Southern Portion of the Site
Page 1 of 2

Sample Number Date Sampled Depth Interval (ft) Sample Type	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	SS-3 06/13/12 0.0' - 0.17' NR	SS-6 06/13/12 0.0' - 0.17' NR	SS-13 06/13/12 0.0' - 0.17' NR	SS-24 06/13/12 0.0' - 0.17' NR	SS-28 06/13/12 0.0' - 0.17' NR
Metals (mg/kg or ppm)							
Aluminum	NC	10,000 ●	1,530	1,630	2,330	6,150	8,330
Antimony ■	NC	12.0 ●	ND (0.35)	ND (0.25)	ND (0.34)	0.90 B	31.6
Arsenic ■	13.0	16.0	4.6	5.6	15.9	115	904
Barium	350	400	8.5 B	9.5	17.4	155	1,420
Beryllium ■	7.2	590	0.14 B	0.14 B	0.16 B	0.23 B	0.023 B
Cadmium ■	2.5	9.3	ND (0.014)	ND (0.0099)	ND (0.013)	0.43	7.2
Chromium ■	30.0	1,500	2.6	2.8	4.1	33.6	62.6
Cobalt	NC	30 **	1.6 B	1.7	1.4 B	5.3	5.6
Copper ■	50.0	270	5.5	5.4	27.2	234	51,800
Iron	NC	2,000 **	6,080	6,530	5,470	22,100	116,000
Lead ■	63.0	1,000	16.0	14.9	25.5	164	1,780
Manganese	1,600	10,000	498	486	385	480	385
Mercury ■	0.18	2.8	0.022 B	0.010 B	0.10	0.61	0.53
Nickel ■	30.0	310	2.8	2.9	3.0	15.7	69.8
Selenium ■	3.9	1,500	1.1 B	1.7	2.7	ND (0.66)	ND (0.95)
Silver ■	2.0	1,500	ND (0.060)	ND (0.042)	ND (0.057)	1.4 B	11.7
Thallium ■	NC	5.0 ●	2.6	2.7	1.7	0.47 B	ND (0.33)
Vanadium	NC	100 **	4.0	4.5	4.9	18.7	30.7
Zinc ■	109	10,000	29.2	25.6	56.6	191	62,800

Notes:

* = 6 NYCRR Part 375: Environmental Remediation Programs, Unrestricted and Commercial Soil Cleanup Objectives, NYSDEC, 2006.

** = Residential soil cleanup objective from Commissioner's Policy CP-51 entitled "Soil Cleanup Guidance", NYSDEC, 2010.

● = Protection of ecological resources soil cleanup objective from Commissioner's Policy CP-51 entitled "Soil Cleanup Guidance", NYSDEC, 2010.

■ = Environmental Protection Agency priority pollutant metal.

B = Value greater than or equal to the instrument detection limit, but less than the contract required detection limit.

NC = No criteria.

ND = Indicates that the compound was not detected at the method detection limit specified in parentheses.

Table 2-1
Former Barker Chemical Site, Site No. 932119
Metal Results for Historic Surface Soil Samples Collected from the Southern Portion of the Site
Page 2 of 2

Notes (continued):

NR = Not reported.

SCO = Soil cleanup objective.

Shaded = Result exceeds the 6 NYCRR Part 375 Unrestricted Use Objectives.

Shaded = Result exceeds the 6 NYCRR Part 375 Commercial Use Objectives.

Shaded = Result exceeds the Commissioner's Policy CP-51 Residential Use Objectives.

Shaded = Result exceeds the Commissioner's Policy CP-51 Protection of Ecological Resources Objectives.

Table 2-2
Former Barker Chemical Site, Site No. 932119
Metal Results for Historic Subsurface Samples Collected from the Southern Portion of the Site
Page 1 of 3

Sample Number Date Sampled Depth Interval (ft) Sample Type	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	SB-1 05/20/03 0.0' - 4.0' Native Soil	SB-2 05/20/03 0.0' - 4.0' Native Soil	SB-8 05/21/03 0.0' - 4.0' Lime Waste	B-4 06/15/12 7.0' - 9.0' Native Soil	B-5 06/15/12 6.0' - 8.0' Native Soil	B-6 06/15/12 6.5' - 8.5' Native Soil
Metals (mg/kg or ppm)								
Aluminum	NC	10,000 ●	NA	NA	NA	6,600	8,250	6,810
Antimony ■	NC	12.0 ●	0.75 BN	1.0 BN	ND (0.91)	ND (0.33)	ND (0.32)	ND (0.33)
Arsenic ■	13.0	16.0	1.9	8.1	11.6	1.7	26.3	132
Barium	350	400	88.0 E	125 E	1.7 BE	41.3	137	105
Beryllium ■	7.2	590	0.25 B	0.34 B	0.03 B	0.22	0.097 B	0.28
Cadmium ■	2.5	9.3	ND (0.03)	ND (0.04)	ND (0.05)	0.57	1.1	0.61
Chromium ■	30.0	1,500	8.2 E	11.0 E	2.2 E	7.7	62.4	10.1
Cobalt	NC	30 **	3.6 B	5.9 B	0.4 B	6.9	5.0	5.6
Copper ■	50.0	270	19.2 E	23.9 E	143 E	12.0	16.0	50.5
Iron	NC	2,000 **	NA	NA	NA	11,300	9,170	14,900
Lead ■	63.0	1,000	3.0	8.6	6.3	3.2	8.6	28.1
Manganese	1,600	10,000	NA	NA	NA	190	110	166
Mercury ■	0.18	2.8	0.060	0.046	ND (0.007)	0.0059 B	0.021 B	0.015 B
Nickel ■	30.0	310	9.5 E	16.7 E	1.8 BE	12.7	11.3	12.4
Selenium ■	3.9	1,500	ND (0.64)	0.97 B	ND (0.86)	ND (0.56)	ND (0.54)	ND (0.56)
Silver ■	2.0	1,500	ND (0.08)	ND (0.09)	ND (0.11)	ND (0.056)	ND (0.054)	ND (0.056)
Thallium ■	NC	5.0 ●	ND (0.61)	1.0 B	ND (0.83)	0.39 B	0.33 B	0.26 B
Vanadium	NC	100 **	14.3 E	16.7 E	1.3 BE	13.0	63.8	15.0
Zinc ■	109	10,000	21.5 E	32.1 E	4.1 E	74.4	61.4	71.8

Table 2-2
Former Barker Chemical Site, Site No. 932119
Metal Results for Historic Subsurface Samples Collected from the Southern Portion of the Site
Page 2 of 3

Sample Number Date Sampled Depth Interval (ft) Sample Type	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	B-7 06/15/12 6.5' - 8.5' Native Soil	B-8 06/15/12 5.0' - 7.0' Native Soil	B-9 06/15/12 5.0' - 7.0' Native Soil			
Metals (mg/kg or ppm)								
Aluminum	NC	10,000 ●	2,720	7,710	7,830			
Antimony ■	NC	12.0 ●	ND (0.44)	ND (0.32)	ND (0.39)			
Arsenic ■	13.0	16.0	21.7	4.0	2.3			
Barium	350	400	53.7	91.6	77.0			
Beryllium ■	7.2	590	0.13 B	0.25	0.28			
Cadmium ■	2.5	9.3	0.32	0.71	0.63			
Chromium ■	30.0	1,500	6.3	10.5	11.0			
Cobalt	NC	30 **	2.6 B	6.8	7.6			
Copper ■	50.0	270	26.1	31.9	10.9			
Iron	NC	2,000 **	11,300	16,500	15,700			
Lead ■	63.0	1,000	69.3	4.5	4.1			
Manganese	1,600	10,000	698	734	708			
Mercury ■	0.18	2.8	0.018 B	0.0086 B	0.0029 B			
Nickel ■	30.0	310	5.1	13.9	15.7			
Selenium ■	3.9	1,500	ND (0.73)	ND (0.54)	ND (0.66)			
Silver ■	2.0	1,500	ND (0.073)	ND (0.054)	ND (0.066)			
Thallium ■	NC	5.0 ●	3.6	1.1	0.94 B			
Vanadium	NC	100 **	7.0	16.5	15.1			
Zinc ■	109	10,000	47.1	34.0	33.8			

Notes:

* = 6 NYCRR Part 375: Environmental Remediation Programs, Unrestricted and Commercial Soil Cleanup Objectives, NYSDEC, 2006.

** = Residential soil cleanup objective from Commissioner's Policy CP-51 entitled "Soil Cleanup Guidance", NYSDEC, 2010.

● = Protection of ecological resources soil cleanup objective from Commissioner's Policy CP-51 entitled "Soil Cleanup Guidance", NYSDEC, 2010.

■ = Environmental Protection Agency priority pollutant metal.

B = Value greater than or equal to the instrument detection limit, but less than the contract required detection limit.

E = Estimated concentration due to the presence of interference.

N = Spike sample recovery is not within the quality control limits.

NA = Not analyzed.

Table 2-2
Former Barker Chemical Site, Site No. 932119
Metal Results for Historic Subsurface Samples Collected from the Southern Portion of the Site
Page 3 of 3

Notes (continued):

NC = No criteria.

ND = Indicates that the compound was not detected at the method detection limit specified in parentheses.

SCO = Soil cleanup objective.

Shaded = Result exceeds the 6 NYCRR Part 375 Unrestricted Use Objectives.

Shaded = Result exceeds the 6 NYCRR Part 375 Commercial Use Objectives.

Shaded = Result exceeds the Commissioner's Policy CP-51 Residential Use Objectives.

Shaded = Result exceeds the Commissioner's Policy CP-51 Protection of Ecological Resources Objectives.

Table 2-3
Former Barker Chemical Site, Site No. 932119
Metal Results for Confirmatory Samples Collected by the USEPA from the Southern Portion of the Site
Page 1 of 2

Sample Number Date Sampled Depth Interval (ft) Sample Type	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	CONF-5 12/14/00 NR Native Soil	CONF-6 12/14/00 NR Native Soil	CONF-7 05/14/01 NR Native Soil	CONF-8 05/14/01 2.0' Native Soil	CONF-9 05/14/01 2.0' Native Soil
Metals (mg/kg or ppm)							
Aluminum	NC	10,000 ●	3,700	2,800	6,800	3,400	1,300
Antimony ■	NC	12.0 ●	ND (0.5)	ND (0.5)	ND (5.0)	ND (5.0)	ND (5.0)
Arsenic ■	13.0	16.0	7.4	5.3	3.4	8.3	17.0
Barium	350	400	84.0	66.0	84.0	100	90.0
Beryllium ■	7.2	590	ND (0.2)	ND (0.2)	0.35	ND (0.2)	ND (0.2)
Cadmium ■	2.5	9.3	1.2	0.78	0.23	0.56	0.43
Chromium ■	30.0	1,500	6.3	4.5	9.3	20.0	2.0
Cobalt	NC	30 **	3.7	2.3	8.4	5.9	3.0
Copper ■	50.0	270	19.0	22.0	290	32.0	160
Iron	NC	2,000 **	5,500	3,300	17,000	12,000	5,200
Lead ■	63.0	1,000	9.8	12.0	12.0	21.0	15.0
Manganese	1,600	10,000	210	140	1,800	70.0	53.0
Mercury ■	0.18	2.8	0.18	0.64	ND (0.1)	ND (0.1)	ND (0.1)
Nickel ■	30.0	310	6.8	4.6	8.3	12.0	ND (2.5)
Selenium ■	3.9	1,500	ND (1.0)	ND (1.0)	10.0	11.0	3.4
Silver ■	2.0	1,500	ND (0.2)	ND (0.2)	ND (0.5)	ND (0.5)	ND (0.5)
Thallium ■	NC	5.0 ●	ND (0.8)	ND (0.8)	ND (13)	ND (13)	ND (13)
Vanadium	NC	100 **	7.7	4.9	12.0	43.0	3.6
Zinc ■	109	10,000	14.0	23.0	84.0	820	29.0

Notes:

* = 6 NYCRR Part 375: Environmental Remediation Programs, Unrestricted and Commercial Soil Cleanup Objectives, NYSDEC, 2006.

** = Residential soil cleanup objective from Commissioner's Policy CP-51 entitled "Soil Cleanup Guidance", NYSDEC, 2010.

● = Protection of ecological resources soil cleanup objective from Commissioner's Policy CP-51 entitled "Soil Cleanup Guidance", NYSDEC, 2010.

■ = Environmental Protection Agency priority pollutant metal.

NC = No criteria.

ND = Indicates that the compound was not detected at the method detection limit specified in parentheses.

NR = Not reported.

SCO = Soil cleanup objective.

Table 2-3
Former Barker Chemical Site, Site No. 932119
Metal Results for Confirmatory Samples Collected by the USEPA from the Southern Portion of the Site
Page 2 of 2

Notes (continued):

Shaded = Result exceeds the 6 NYCRR Part 375 Unrestricted Use Objectives.

Shaded = Result exceeds the 6 NYCRR Part 375 Commercial Use Objectives.

Shaded = Result exceeds the Commissioner's Policy CP-51 Residential Use Objectives.

Shaded = Result exceeds the Commissioner's Policy CP-51 Protection of Ecological Resources Objectives.

Table 2-4
Former Barker Chemical Site, Site No. 932119
Metal Results for Historic Sediment Samples Collected from the Southern Portion of the Site
Page 1 of 2

Sample Number Date Sampled Depth Interval (ft) Sample Type	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	SED-1 06/21/00 NR Sediment	SED-2 06/21/00 NR Sediment	SED-4 06/21/00 NR Sediment	SED-6 09/03/03 0.0' - 0.08' Sediment	SED-9 09/03/03 0.0' - 0.17' Sediment	SED-10 09/03/03 0.0' - 0.17' Sediment
Metals (mg/kg or ppm)								
Aluminum	NC	10,000 ●	6,340	6,160	8,780	11,300	19,800	9,010
Antimony ■	NC	12.0 ●	0.21 BN	2.1 N	1.4 N	1.0 BN	3.2 BN	1.5 BN
Arsenic ■	13.0	16.0	23.5 N	22.1 N	321 N	5.5	367	32.1
Barium	350	400	111 N	88.8 N	56.5 N	113	77.6	120
Beryllium ■	7.2	590	0.25 B	0.33 B	0.29 B	0.59 B	0.87 B	0.38 B
Cadmium ■	2.5	9.3	ND (0.032)	ND (0.034)	ND (0.062)	ND (0.04)	ND (0.06)	ND (0.04)
Chromium ■	30.0	1,500	11.2	69.6	17.0	13.7	22.9	9.8
Cobalt	NC	30 **	3.9	4.5	1.8	6.5 B	13.8	7.9
Copper ■	50.0	270	65.8 N	53.4 N	394 N	18.6 N	438 N	18.0 N
Iron	NC	2,000 **	14,900	15,300	26,900	15,500	53,100	17,900
Lead ■	63.0	1,000	15.5 N	314 N	68.5 N	48.9	131.0	20.1
Manganese	1,600	10,000	326 N	309 N	84.2 N	563	1,240	960
Mercury ■	0.18	2.8	0.27 N	0.19 N	0.13 N	0.025 B	0.165	0.049
Nickel ■	30.0	310	10.1	10.4	6.6	16.2	20.1	14.4
Selenium ■	3.9	1,500	0.22 B	0.48 B	1.7	1.6 B	4.7 B	2.2 B
Silver ■	2.0	1,500	ND (0.053)	0.17 B	0.94 B	0.12 B	1.2 B	ND (0.10)
Thallium ■	NC	5.0 ●	ND (0.24)	ND (0.24)	ND (0.45)	2.9	9.6	3.2
Vanadium	NC	100 **	17.7	17.2	22.2	19.2	29.5	15.1
Zinc ■	109	10,000	54.7	83.9	82.7	106 E	291 E	66.7 E

Notes:

* = 6 NYCRR Part 375: Environmental Remediation Programs, Unrestricted and Commercial Soil Cleanup Objectives, NYSDEC, 2006.

** = Residential soil cleanup objective from Commissioner's Policy CP-51 entitled "Soil Cleanup Guidance", NYSDEC, 2010.

● = Protection of ecological resources soil cleanup objective from Commissioner's Policy CP-51 entitled "Soil Cleanup Guidance", NYSDEC, 2010.

■ = Environmental Protection Agency priority pollutant metal.

B = Value greater than or equal to the instrument detection limit, but less than the contract required detection limit.

E = Estimated concentration due to the presence of interference.

N = Spike sample recovery is not within the quality control limits.

NC = No criteria.

Table 2-4
Former Barker Chemical Site, Site No. 932119
Metal Results for Historic Sediment Samples Collected from the Southern Portion of the Site
Page 2 of 2

Notes (continued):

ND = Indicates that the compound was not detected at the method detection limit specified in parentheses.

SCO = Soil cleanup objective.

Shaded = Result exceeds the 6 NYCRR Part 375 Unrestricted Use Objectives.

Shaded = Result exceeds the 6 NYCRR Part 375 Commercial Use Objectives.

Shaded = Result exceeds the Commissioner's Policy CP-51 Residential Use Objectives.

Shaded = Result exceeds the Commissioner's Policy CP-51 Protection of Ecological Resources Objectives.

Table 3-1A
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 1 of 3

Sample Number	NYSDEC	NYSDEC	A-2	A-2	A-2	A-2	A-2
Date Sampled	Part 375	Part 375	NA	08/07/13	08/07/13	08/07/13	08/07/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	NA	Reworked Soil	Sludge	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	4.9	4.3	5.9	5.0

Sample Number	NYSDEC	NYSDEC	A-1	A-1	A-1	A-1	A-1
Date Sampled	Part 375	Part 375	NA	08/05/13	08/05/13	08/05/13	08/05/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.8'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	NA	Sludge	Sludge	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	38.9	28.1	7.8	3.8

Sample Number	NYSDEC	NYSDEC	A0	A0	A0	A0	A0
Date Sampled	Part 375	Part 375	NA	08/05/13	08/05/13	08/05/13	08/05/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.3'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	NA	Granular Fill	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	4.5	7.1	5.5	2.8

Sample Number	NYSDEC	NYSDEC	A1	A1	A1	A1	A1
Date Sampled	Part 375	Part 375	NA	08/05/13	08/05/13	07/10/13	07/10/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	NA	Cinder Fill	Sludge	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	57.4	4.7	4.1	5.4

Table 3-1A
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 2 of 3

Sample Number	NYSDEC	NYSDEC	A2	A2	A2	A2	A2
Date Sampled	Part 375	Part 375	05/07/13	08/05/13	07/10/13	07/10/13	07/10/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	1.2'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	Native Soil	Cinder Fill	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	6.7	6.5	3.5	3.1	5.2

Sample Number	NYSDEC	NYSDEC	A3	A3	A3	A3	A3
Date Sampled	Part 375	Part 375	NA	08/05/13	07/10/13	NA	07/10/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	NA	Native Soil	Native Soil	NA	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	3.1	3.7 (3.2)	NS	5.0

Sample Number	NYSDEC	NYSDEC	A4	A4	A4	A4	
Date Sampled	Part 375	Part 375	05/07/13	07/10/13	07/10/13	07/10/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	5.6'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	20.5	3.8	3.5	3.6	

Sample Number	NYSDEC	NYSDEC	A5	A5	A5	A5	A5
Date Sampled	Part 375	Part 375	05/07/13	07/10/13	07/10/13	07/10/13	07/10/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	6.9'
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	6.8	1.9 J	19.3	3.6	5.8

Table 3-1A
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 3 of 3

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	A6 05/07/13 0.0' - 0.17' Native Soil	A6 07/10/13 2.0' Native Soil	A6 07/10/13 4.0' Native Soil	A6 07/10/13 6.4' Native Soil	
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	38.3	4.3	5.1	6.4	

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	A7 05/07/13 0.0' - 0.17' Native Soil	A7 07/10/13 2.0' Native Soil	A7 07/10/13 4.0' Native Soil	A7 07/10/13 5.4' Native Soil	
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	14.8	2.6	2.4	4.1	

Notes:

* = 6 NYCRR Part 375: Environmental Remediation Programs, Unrestricted and Commercial Soil Cleanup Objectives, NYSDEC, 2006.

■ = Environmental Protection Agency priority pollutant metal.

NA = Not applicable.

ND = Indicates that the compound was not detected at the method detection limit specified in parentheses.

NR = Not reported.

NS = Not sampled.

SCO = Soil cleanup objective.

(3.2) = Duplicate sample collected on August 5, 2013.

Shaded = Result exceeds the 6 NYCRR Part 375 Unrestricted Use Objectives.

Shaded = Result exceeds the 6 NYCRR Part 375 Commercial Use Objectives.

Table 3-1B
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 1 of 3

Sample Number	NYSDEC	NYSDEC	B-2	B-2	B-2	B-2	B-2
Date Sampled	Part 375	Part 375	NA	08/07/13	08/07/13	08/07/13	08/07/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	5.5'	8.0'
Sample Type	SCO *	SCO *	NA	Reworked Soil	Sludge	Granular Fill	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	5.9	4.4	3.5	3.5

Sample Number	NYSDEC	NYSDEC	B-1	B-1	B-1	B-1	B-1
Date Sampled	Part 375	Part 375	NA	08/06/13	08/06/13	08/06/13	08/06/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	6.9'
Sample Type	SCO *	SCO *	NA	Reworked Soil	Sludge	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	4.7	3.9	3.1	4.9

Sample Number	NYSDEC	NYSDEC	B0	B0	B0	B0	B0
Date Sampled	Part 375	Part 375	NA	08/05/13	08/05/13	08/05/13	08/05/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	1.8'	3.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	NA	Cinder Fill	Sludge	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	34.4	5.5	3.4	7.2

Sample Number	NYSDEC	NYSDEC	B1	B1	B1	B1	B1
Date Sampled	Part 375	Part 375	NA	07/12/13	07/12/13	07/12/13	07/12/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	6.9'
Sample Type	SCO *	SCO *	NA	Native Soil	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	128	117	5.1	4.6

Table 3-1B
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 2 of 3

Sample Number	NYSDEC	NYSDEC	B2	B2	B2	B2	
Date Sampled	Part 375	Part 375	NA	07/12/13	07/12/13	07/12/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	NA	Fill	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	80.6	3.5	6.1	

Sample Number	NYSDEC	NYSDEC	B3	B3	B3	B3	
Date Sampled	Part 375	Part 375	NA	07/12/13	07/12/13	07/12/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	NA	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	5.8	3.4	4.3	

Sample Number	NYSDEC	NYSDEC	B4	B4	B4	B4	
Date Sampled	Part 375	Part 375	05/07/13	07/12/13	07/12/13	07/12/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	5.8'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	22.0	3.5	3.3	3.7	

Sample Number	NYSDEC	NYSDEC	B5	B5	B5	B5	
Date Sampled	Part 375	Part 375	05/07/13	07/10/13	07/10/13	07/10/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.4'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	7.9	6.1	3.8	11.4	

Table 3-1B
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 3 of 3

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	B6 05/07/13 0.0' - 0.17' Native Soil	B6 07/10/13 2.0' Native Soil	B6 07/10/13 4.0' Native Soil	B6 07/10/13 6.0' Native Soil	
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	18.4	2.8	3.4	3.8	

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	B7 05/07/13 0.0' - 0.17' Native Soil	B7 07/10/13 2.0' Native Soil	B7 07/10/13 4.0' Native Soil	B7 07/10/13 5.8' Native Soil	
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	15.2	2.9	3.6	4.4	

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	SS1 07/12/13 0.0' - 0.17' Fill	SS2 07/12/13 0.0' - 0.17' Fill			
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	21.5	16.4			

Notes:

* = 6 NYCRR Part 375: Environmental Remediation Programs, Unrestricted and Commercial Soil Cleanup Objectives, NYSDEC, 2006.

■ = Environmental Protection Agency priority pollutant metal.

NA = Not applicable.

ND = Indicates that the compound was not detected at the method detection limit specified in parentheses.

NR = Not reported.

NS = Not sampled.

SCO = Soil cleanup objective.

Shaded = Result exceeds the 6 NYCRR Part 375 Unrestricted Use Objectives.

Shaded = Result exceeds the 6 NYCRR Part 375 Commercial Use Objectives.

Table 3-1C
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 1 of 3

Sample Number	NYSDEC	NYSDEC	C-2	C-2	C-2	C-2	
Date Sampled	Part 375	Part 375	NA	08/07/13	08/07/13	08/07/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	NA	Reworked Soil	Stained Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	4.2	13.8	3.1	

Sample Number	NYSDEC	NYSDEC	C-1	C-1	C-1	C-1	C-1
Date Sampled	Part 375	Part 375	NA	08/06/13	08/06/13	08/06/13	08/06/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	3.0'	4.0'	6.0'	7.3'
Sample Type	SCO *	SCO *	NA	Sludge	NA	Native Soil	Stained Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	12.8	NS	11.6	3.1

Sample Number	NYSDEC	NYSDEC	C0-5	C0-5	C0-5	C0-5	C0-5
Date Sampled	Part 375	Part 375	NA	07/12/13	07/12/13	07/12/13	07/12/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	NA	Native Soil	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	10.4	3.8	3.0	3.6

Sample Number	NYSDEC	NYSDEC	C0	C0	C0		
Date Sampled	Part 375	Part 375	NA	NA	07/12/13		
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.4'		
Sample Type	SCO *	SCO *	NA	NA	Fill		
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	NS	98.7		

Table 3-1C
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 2 of 3

Sample Number	NYSDEC	NYSDEC	C1	C1	C1	C1	C1
Date Sampled	Part 375	Part 375	NA	08/05/13	08/05/13	08/05/13	08/05/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	7.3'
Sample Type	SCO *	SCO *	NA	Native Soil	Native Soil	Native Soil	Stained Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	36.6	51.1	11.6	3.7

Sample Number	NYSDEC	NYSDEC	C2	C2	C2	C2	
Date Sampled	Part 375	Part 375	05/07/13	07/12/13	07/12/13	07/12/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	192	448	3.0	4.0	

Sample Number	NYSDEC	NYSDEC	C3	C3	C3	C3	
Date Sampled	Part 375	Part 375	05/07/13	07/12/13	07/12/13	07/12/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	3,870	6.1	18.5	4.0	

Sample Number	NYSDEC	NYSDEC	C4	C4	C4	C4	
Date Sampled	Part 375	Part 375	05/07/13	07/12/13	07/12/13	07/12/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	1,560	42.8	2.9	9.7	

Table 3-1C
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 3 of 3

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	C5 05/07/13 0.0' - 0.17' Native Soil	C5 07/12/13 2.0' Native Soil	C5 07/12/13 4.0' Native Soil	C5 07/12/13 5.6' Native Soil	
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	808	50.4	2.8	3.4	

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	C6 05/07/13 0.0' - 0.17' Native Soil	C6 07/12/13 2.0' Native Soil	C6 07/12/13 4.0' Native Soil	C6 07/12/13 5.0' Native Soil	
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	736	15.3	2.9	4.3	

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	C7 NA 0.0' - 0.17' NA	C7 07/12/13 2.0' Native Soil	C7 07/12/13 4.0' Native Soil	C7 07/12/13 5.0' Native Soil	
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	33.6	3.2	3.6	

Notes:

* = 6 NYCRR Part 375: Environmental Remediation Programs, Unrestricted and Commercial Soil Cleanup Objectives, NYSDEC, 2006.

■ = Environmental Protection Agency priority pollutant metal.

NA = Not applicable.

ND = Indicates that the compound was not detected at the method detection limit specified in parentheses.

NR = Not reported.

NS = Not sampled.

SCO = Soil cleanup objective.

Shaded = Result exceeds the 6 NYCRR Part 375 Unrestricted Use Objectives.

Shaded = Result exceeds the 6 NYCRR Part 375 Commercial Use Objectives.

Table 3-1D
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 1 of 3

Sample Number	NYSDEC	NYSDEC	D-2	D-2	D-2	D-2	
Date Sampled	Part 375	Part 375	NA	08/07/13	08/07/13	08/07/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	1.7'	4.0'	6.0'	
Sample Type	SCO *	SCO *	NA	Cinder Fill	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	26.7	3.5	3.3	

Sample Number	NYSDEC	NYSDEC	D-1	D-1	D-1	D-1	D-1
Date Sampled	Part 375	Part 375	NA	08/06/13	08/06/13	08/06/13	08/06/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	7.8'
Sample Type	SCO *	SCO *	NA	Cinder Fill	Fill	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	47.7	25.3	2.9	3.7

Sample Number	NYSDEC	NYSDEC	D0	D0	D0	D0	D0
Date Sampled	Part 375	Part 375	NA	07/15/13	07/15/13	07/15/13	07/15/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	7.5'
Sample Type	SCO *	SCO *	NA	Native Soil	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	10.8	3.0	3.0	4.8

Sample Number	NYSDEC	NYSDEC	D1	D1	D1	D1	D1
Date Sampled	Part 375	Part 375	NA	08/05/13	07/15/13	07/15/13	07/15/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	7.8'
Sample Type	SCO *	SCO *	NA	Native Soil	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	3.7	5.0	2.9	4.6

Table 3-1D
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 2 of 3

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	D2 05/07/13 0.0' - 0.17' Slag Fill	D2 08/05/13 2.0' Native Soil	D2 07/15/13 4.0' Native Soil	D2 07/15/13 6.0' Native Soil	D2 07/15/13 7.0' Native Soil
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	126	2.4	3.0	3.1	3.5

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	D3 05/07/13 0.0' - 0.17' Cinder Fill	D3 07/15/13 2.0' Misc. Fill	D3 07/15/13 4.0' Native Soil	D3 07/15/13 6.0' Native Soil	D3 07/15/13 7.6' Native Soil
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	775	44.2	4.0	3.7	5.3

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	D4 05/07/13 0.0' - 0.17' Native Soil	D4 07/15/13 2.0' Native Soil	D4 07/15/13 4.0' Native Soil	D4 07/15/13 6.0' Native Soil	
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	11.9	4.7	7.9	3.7	

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	D5 05/07/13 0.0' - 0.17' Native Soil	D5 07/15/13 2.0' Native Soil	D5 07/15/13 4.0' Native Soil	D5 07/15/13 6.0' Native Soil	
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	5.9	2.0 J	3.5	2.9	

Table 3-1D
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 3 of 3

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	D6 05/07/13 0.0' - 0.17' Native Soil	D6 07/15/13 2.0' Native Soil	D6 07/15/13 4.0' Native Soil	D6 07/15/13 6.0' Native Soil	
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	5.2	2.2 J	3.7	3.0	

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	D7 05/07/13 0.0' - 0.17' Native Soil	D7 07/15/13 2.0' Granular Fill	D7 07/15/13 4.0' Native Soil	D7 07/15/13 6.0' Native Soil	
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	5.4	ND (2.2)	2.7	3.3	

Notes:

* = 6 NYCRR Part 375: Environmental Remediation Programs, Unrestricted and Commercial Soil Cleanup Objectives, NYSDEC, 2006.

■ = Environmental Protection Agency priority pollutant metal.

NA = Not applicable.

ND = Indicates that the compound was not detected at the method detection limit specified in parentheses.

NR = Not reported.

NS = Not sampled.

SCO = Soil cleanup objective.

Shaded = Result exceeds the 6 NYCRR Part 375 Unrestricted Use Objectives.

Shaded = Result exceeds the 6 NYCRR Part 375 Commercial Use Objectives.

Table 3-1E
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 1 of 3

Sample Number	NYSDEC	NYSDEC	E-2	E-2	E-2	E-2	
Date Sampled	Part 375	Part 375	NA	08/07/13	08/07/13	08/07/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	NA	Cinder Fill	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	3.7	16.6	3.4	

Sample Number	NYSDEC	NYSDEC	E-1	E-1	E-1	E-1	E-1
Date Sampled	Part 375	Part 375	NA	08/06/13	08/06/13	08/06/13	08/06/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	NA	Coal Fill	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	59.7	4.2	3.3	4.4

Sample Number	NYSDEC	NYSDEC	E0	E0	E0	E0	E0
Date Sampled	Part 375	Part 375	07/16/13	07/16/13	07/16/13	07/16/13	07/16/13
Depth Interval (ft)	Unrestricted	Commercial	1.5'	2.0'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	Fill	Native Soil	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	465	6.0	3.4	3.0	5.1

Sample Number	NYSDEC	NYSDEC	E1	E1	E1	E1	E1
Date Sampled	Part 375	Part 375	NA	08/05/13	07/16/13	07/16/13	07/16/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.2'	4.0'	6.0'	7.3'
Sample Type	SCO *	SCO *	NA	Native Soil	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	9.6	2.8	3.5	3.1

Table 3-1E
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 2 of 3

Sample Number	NYSDEC	NYSDEC	E2	E2	E2	E2	
Date Sampled	Part 375	Part 375	05/14/13	07/16/13	07/16/13	07/16/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	5.6'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	73.6	17.3	4.1	3.6	

Sample Number	NYSDEC	NYSDEC	E3	E3	E3	E3	
Date Sampled	Part 375	Part 375	05/14/13	07/16/13	07/16/13	07/16/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	12.5	4.1	3.8	3.3	

Sample Number	NYSDEC	NYSDEC	E4	E4	E4	E4	
Date Sampled	Part 375	Part 375	05/14/13	07/15/13	07/15/13	07/15/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	5.8'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	27.7	3.5	3.8	3.3	

Sample Number	NYSDEC	NYSDEC	E5	E5	E5	E5	
Date Sampled	Part 375	Part 375	05/14/13	07/15/13	07/15/13	07/15/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	3.8	4.0	3.0	6.7	

Table 3-1E
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 3 of 3

Sample Number	NYSDEC	NYSDEC	E6	E6	E6	E6	
Date Sampled	Part 375	Part 375	05/14/13	NA	07/15/13	07/15/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	Native Soil	NA	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	4.0	NS	3.5	3.2	

Sample Number	NYSDEC	NYSDEC	E7	E7	E7	E7	
Date Sampled	Part 375	Part 375	05/14/13	07/15/13	07/15/13	07/15/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	4.5	2.7	3.1	2.5	

Notes:

* = 6 NYCRR Part 375: Environmental Remediation Programs, Unrestricted and Commercial Soil Cleanup Objectives, NYSDEC, 2006.

■ = Environmental Protection Agency priority pollutant metal.

NA = Not applicable.

ND = Indicates that the compound was not detected at the method detection limit specified in parentheses.

NR = Not reported.

NS = Not sampled.

SCO = Soil cleanup objective.

Shaded = Result exceeds the 6 NYCRR Part 375 Unrestricted Use Objectives.

Shaded = Result exceeds the 6 NYCRR Part 375 Commercial Use Objectives.

Table 3-1F
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 1 of 3

Sample Number	NYSDEC	NYSDEC	F-1	F-1	F-1	F-1	F-1
Date Sampled	Part 375	Part 375	NA	08/06/13	08/06/13	08/06/13	08/06/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	1.8'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	NA	Cinder Fill	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	52.8	3.6	3.3	3.4

Sample Number	NYSDEC	NYSDEC	F0	F0	F0	F0	F0
Date Sampled	Part 375	Part 375	NA	07/16/13	07/16/13	07/16/13	07/16/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	NA	Cinder Fill	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	194	3.8	2.5	4.5

Sample Number	NYSDEC	NYSDEC	F1	F1	F1	F1	F1
Date Sampled	Part 375	Part 375	NA	07/16/13	07/16/13	07/16/13	07/16/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.4'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	NA	Cinder Fill	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	112	3.3	2.8	3.1

Sample Number	NYSDEC	NYSDEC	F2	F2	F2		
Date Sampled	Part 375	Part 375	05/14/13	07/16/13	07/16/13		
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'		
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil		
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	15.0	3.1	3.4		

Table 3-1F
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 2 of 3

Sample Number	NYSDEC	NYSDEC	F3	F3	F3		
Date Sampled	Part 375	Part 375	05/14/13	07/16/13	07/16/13		
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'		
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil		
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	5.3	8.7	3.1		

Sample Number	NYSDEC	NYSDEC	F4	F4	F4	F4	
Date Sampled	Part 375	Part 375	05/14/13	07/16/13	07/16/13	07/16/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	5.7'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	4.9	3.7	6.2	2.5	

Sample Number	NYSDEC	NYSDEC	F5	F5	F5		
Date Sampled	Part 375	Part 375	05/14/13	07/16/13	07/16/13		
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'		
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil		
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	7.6	10.6	3.3		

Sample Number	NYSDEC	NYSDEC	F6	F6	F6	F6	
Date Sampled	Part 375	Part 375	05/14/13	07/16/13	07/16/13	07/16/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	3.4	5.3	3.6	2.9	

Table 3-1F
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 3 of 3

Sample Number	NYSDEC	NYSDEC	F7	F7	F7	F7	
Date Sampled	Part 375	Part 375	NA	07/17/13	07/17/13	07/17/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	5.0'	
Sample Type	SCO *	SCO *	NA	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	3.9	3.5	2.7	

Notes:

* = 6 NYCRR Part 375: Environmental Remediation Programs, Unrestricted and Commercial Soil Cleanup Objectives, NYSDEC, 2006.

■ = Environmental Protection Agency priority pollutant metal.

NA = Not applicable.

ND = Indicates that the compound was not detected at the method detection limit specified in parentheses.

NR = Not reported.

NS = Not sampled.

SCO = Soil cleanup objective.

Shaded = Result exceeds the 6 NYCRR Part 375 Unrestricted Use Objectives.

Shaded = Result exceeds the 6 NYCRR Part 375 Commercial Use Objectives.

Table 3-1G
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 1 of 2

Sample Number	NYSDEC	NYSDEC	G-1	G-1	G-1		
Date Sampled	Part 375	Part 375	NA	08/06/13	08/06/13		
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.2'	4.0'		
Sample Type	SCO *	SCO *	NA	Cinder Fill	Native Soil		
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	6.4	5.7		

Sample Number	NYSDEC	NYSDEC	G0	G0	G0	G0	
Date Sampled	Part 375	Part 375	NA	08/06/13	08/06/13	08/06/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	NA	Coal & Ash Fill	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	397	4.2	3.4	

Sample Number	NYSDEC	NYSDEC	G1	G1	G1	G1	
Date Sampled	Part 375	Part 375	NA	08/07/13	08/07/13	08/07/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	1.6'	4.0'	6.0'	
Sample Type	SCO *	SCO *	NA	Ash with Coal	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	12.2	3.7	3.3	

Sample Number	NYSDEC	NYSDEC	G2	G2	G2	G2	
Date Sampled	Part 375	Part 375	NA	08/07/13	08/07/13	08/07/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	5.8'	
Sample Type	SCO *	SCO *	NA	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	3.5	3.7	5.3	

Notes:

* = 6 NYCRR Part 375: Environmental Remediation Programs, Unrestricted and Commercial Soil Cleanup Objectives, NYSDEC, 2006.

■ = Environmental Protection Agency priority pollutant metal.

NA = Not applicable.

Table 3-1G
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 2 of 2

Notes (continued):

ND = Indicates that the compound was not detected at the method detection limit specified in parentheses.

NR = Not reported.

NS = Not sampled.

SCO = Soil cleanup objective.

Shaded = Result exceeds the 6 NYCRR Part 375 Unrestricted Use Objectives.

Shaded = Result exceeds the 6 NYCRR Part 375 Commercial Use Objectives.

Table 3-1H
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 1 of 3

Sample Number	NYSDEC	NYSDEC	SB-1	SB-1	SB-1	SB-1	SB-1
Date Sampled	Part 375	Part 375	NA	07/16/13	07/16/13	07/16/13	07/16/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	1.8'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	NA	Fill with Coal	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	129	3.5	3.3	5.7

Sample Number	NYSDEC	NYSDEC	SB-2	SB-2	SB-2		
Date Sampled	Part 375	Part 375	07/17/13	07/17/13	07/17/13		
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	1.9'	4.0'		
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil		
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	3.6	15.0	3.4		

Sample Number	NYSDEC	NYSDEC	SB-3	SB-3	SB-3	SB-3	
Date Sampled	Part 375	Part 375	07/17/13	07/17/13	07/17/13	07/17/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	4.5	3.3	2.5	2.6	

Sample Number	NYSDEC	NYSDEC	SB-4	SB-4	SB-4	SB-4	
Date Sampled	Part 375	Part 375	07/17/13	07/17/13	07/17/13	07/17/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	5.5'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	16.4	3.4	3.5	5.6	

Table 3-1H
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 2 of 3

Sample Number	NYSDEC	NYSDEC	SB-5	SB-5	SB-5	SB-5	
Date Sampled	Part 375	Part 375	07/17/13	07/17/13	07/17/13	07/17/13	
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil	Native Soil	
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	7.4	2.4	3.1	2.8	

Sample Number	NYSDEC	NYSDEC	SB-6	SB-6	SB-6		
Date Sampled	Part 375	Part 375	07/17/13	07/17/13	07/17/13		
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	3.1'	4.0'		
Sample Type	SCO *	SCO *	Native Soil	Native Soil	Native Soil		
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	4.4	3.6	3.6		

Sample Number	NYSDEC	NYSDEC	SB-7	SB-7	SB-7	SB-7	SB-7
Date Sampled	Part 375	Part 375	NA	07/17/13	07/17/13	07/17/13	07/17/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.0'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	NA	Native Soil	Native Soil	Native Soil	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	18.0	16.8	3.0	3.2

Sample Number	NYSDEC	NYSDEC	B-5R	B-5R	B-5R	B-5R	B-5R
Date Sampled	Part 375	Part 375	NA	08/06/13	08/06/13	08/06/13	08/06/13
Depth Interval (ft)	Unrestricted	Commercial	0.0' - 0.17'	2.5'	4.0'	6.0'	8.0'
Sample Type	SCO *	SCO *	NA	Coal Fill	NA	Fill	Native Soil
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	27.2	NS	9.8	4.5

Table 3-1H
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Surface and Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 3 of 3

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	B-7R 08/05/13 1.6' Cinder Fill	B-7R 08/05/13 2.0' Native Soil	B-7R 08/05/13 4.0' Native Soil	B-7R 08/05/13 6.0' Native Soil	B-7R 08/05/13 8.0' Native Soil
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	211	5.7	4.0	3.2	8.9

Sample Number	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	B-8R NA 0.0' - 0.17' NA	B-8R 08/07/13 2.6' Cinder Fill	B-8R 08/07/13 4.0' Native Soil	B-8R 08/07/13 6.0' Native Soil	
Date Sampled							
Depth Interval (ft)							
Sample Type							
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	NS	23.3	3.8	4.6	

Notes:

* = 6 NYCRR Part 375: Environmental Remediation Programs, Unrestricted and Commercial Soil Cleanup Objectives, NYSDEC, 2006.

■ = Environmental Protection Agency priority pollutant metal.

NA = Not applicable.

ND = Indicates that the compound was not detected at the method detection limit specified in parentheses.

NR = Not reported.

NS = Not sampled.

SCO = Soil cleanup objective.

Shaded = Result exceeds the 6 NYCRR Part 375 Unrestricted Use Objectives.

Shaded = Result exceeds the 6 NYCRR Part 375 Commercial Use Objectives.

Table 3-2
Former Barker Chemical Site, Site No. 932119
Metal Results for Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 1 of 5

Sample Number Date Sampled Depth Interval (ft) Sample Type	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	A-1 08/05/13 4.0' Sludge	B-5R 08/06/13 2.5' Coal Fill	B-5R 08/06/13 6.0' Fill	B-1 08/06/13 4.0' Sludge	C-1 08/06/13 3.0' Sludge	C-1 08/06/13 7.3' Stained Soil
Metals (mg/kg or ppm)								
Aluminum	NC	10,000 ●	1,090					
Antimony ■	NC	12.0 ●	ND (16.3)					
Arsenic ■	13.0	16.0	28.1	27.2	9.8	3.9	12.8	3.1
Barium	350	400	63.6	59.3	100	90.7	201	64.8
Beryllium ■	7.2	590	0.13 J					
Cadmium ■	2.5	9.3	0.071 J	0.21 J	0.59	0.18 J	0.94	0.072 J
Chromium ■	30.0	1,500	2.3	3.6	18.4	32.8	8.3	6.4
Cobalt	NC	30 **	ND (0.54)					
Copper ■	50.0	270	19.3					
Iron	NC	2,000 **	477 B					
Lead ■	63.0	1,000	24.5	54.9	8.4	2.5	90.0	2.7
Manganese	1,600	10,000	8.4 B					
Mercury ■	0.18	2.8	0.0095 J	0.028	ND (0.022)	ND (0.024)	0.12	ND (0.022)
Nickel ■	30.0	310	ND (5.4)					
Selenium ■	3.9	1,500	ND (4.4)	0.46 J	ND (4.1)	ND (4.4)	0.69 J	ND (4.9)
Silver ■	2.0	1,500	ND (0.54)	ND (0.57)	ND (0.52)	ND (0.56)	1.8	ND (0.61)
Thallium ■	NC	5.0 ●	ND (6.5)					
Vanadium	NC	100 **	2.3					
Zinc ■	109	10,000	2.3 B					

Table 3-2
Former Barker Chemical Site, Site No. 932119
Metal Results for Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 2 of 5

Sample Number Date Sampled Depth Interval (ft) Sample Type	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	D-1 08/06/13 2.0' Cinder Fill	D-1 08/06/13 4.0' Fill	E-1 08/06/13 2.0' Coal Fill	F-1 08/06/13 1.8' Cinder Fill	G-1 08/06/13 2.2' Cinder Fill	G0 08/06/13 2.0' Coal & Ash Fill
Metals (mg/kg or ppm)								
Aluminum	NC	10,000 ●						
Antimony ■	NC	12.0 ●						
Arsenic ■	13.0	16.0	47.7	25.3	59.7	52.8	6.4	397
Barium	350	400	248	230	112	58.5	74.6	144
Beryllium ■	7.2	590						
Cadmium ■	2.5	9.3	ND (0.24)	0.17 J	0.066 J	0.094 J	0.043 J	0.45
Chromium ■	30.0	1,500	10.6	12.9	8.0	4.7	5.4	7.9
Cobalt	NC	30 **						
Copper ■	50.0	270						
Iron	NC	2,000 **						
Lead ■	63.0	1,000	239	73.6	173	45.8	32.8	205
Manganese	1,600	10,000						
Mercury ■	0.18	2.8	0.057	0.040	0.062	0.034	0.045	0.055
Nickel ■	30.0	310						
Selenium ■	3.9	1,500	1.1 J	ND (4.3)	0.76 J	0.68 J	ND (5.0)	1.0 J
Silver ■	2.0	1,500	ND (0.61)	ND (0.54)	ND (0.50)	ND (0.59)	ND (0.63)	ND (0.62)
Thallium ■	NC	5.0 ●						
Vanadium	NC	100 **						
Zinc ■	109	10,000						

Table 3-2
Former Barker Chemical Site, Site No. 932119
Metal Results for Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 3 of 5

Sample Number Date Sampled Depth Interval (ft) Sample Type	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	A-2 08/07/13 4.0' Sludge	B-2 08/07/13 4.0' Sludge	B-2 08/07/13 5.5' Granular Fill	C-2 08/07/13 4.0' Stained Soil	D-2 08/07/13 1.7' Cinder Fill	E-2 08/07/13 2.0' Cinder Fill
Metals (mg/kg or ppm)								
Aluminum	NC	10,000 ●						
Antimony ■	NC	12.0 ●						
Arsenic ■	13.0	16.0	4.3	4.4	3.5	13.8	26.7	3.7
Barium	350	400	190	93.1	68.2	222	104	68.7
Beryllium ■	7.2	590						
Cadmium ■	2.5	9.3	0.11 J	0.27	0.056 J	0.37	0.089 J	0.069 J
Chromium ■	30.0	1,500	13.0	7.3	12.0	14.5	9.1	7.4
Cobalt	NC	30 **						
Copper ■	50.0	270						
Iron	NC	2,000 **						
Lead ■	63.0	1,000	5.4	3.8	3.1	41.4	144	3.1
Manganese	1,600	10,000						
Mercury ■	0.18	2.8	0.030	0.019 J	ND (0.023)	2.3	0.060	ND (0.020)
Nickel ■	30.0	310						
Selenium ■	3.9	1,500	ND (5.5)	ND (4.4)	ND (4.3)	0.52 J	ND (4.9)	0.68 J
Silver ■	2.0	1,500	ND (0.68)	ND (0.55)	ND (0.53)	ND (0.63)	ND (0.61)	ND (0.57)
Thallium ■	NC	5.0 ●						
Vanadium	NC	100 **						
Zinc ■	109	10,000						

Table 3-2
Former Barker Chemical Site, Site No. 932119
Metal Results for Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 4 of 5

Sample Number Date Sampled Depth Interval (ft) Sample Type	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	B-8R 08/07/13 2.6' Cinder Fill	G1 08/07/13 1.6' Ash with Coal				
Metals (mg/kg or ppm)								
Aluminum	NC	10,000 ●						
Antimony ■	NC	12.0 ●						
Arsenic ■	13.0	16.0	23.3	12.2				
Barium	350	400	139	122				
Beryllium ■	7.2	590						
Cadmium ■	2.5	9.3	0.84	0.33				
Chromium ■	30.0	1,500	11.3	7.8				
Cobalt	NC	30 **						
Copper ■	50.0	270						
Iron	NC	2,000 **						
Lead ■	63.0	1,000	119	34.4				
Manganese	1,600	10,000						
Mercury ■	0.18	2.8	0.031	0.039				
Nickel ■	30.0	310						
Selenium ■	3.9	1,500	ND (5.4)	1.2 J				
Silver ■	2.0	1,500	ND (0.67)	ND (0.66)				
Thallium ■	NC	5.0 ●						
Vanadium	NC	100 **						
Zinc ■	109	10,000						

Notes:

* = 6 NYCRR Part 375: Environmental Remediation Programs, Unrestricted and Commercial Soil Cleanup Objectives, NYSDEC, 2006.

** = Residential soil cleanup objective from Commissioner's Policy CP-51 entitled "Soil Cleanup Guidance", NYSDEC, 2010.

● = Protection of ecological resources soil cleanup objective from Commissioner's Policy CP-51 entitled "Soil Cleanup Guidance", NYSDEC, 2010.

■ = Environmental Protection Agency priority pollutant metal.

B = Compound was found in the blank and sample.

E = Estimated concentration due to the presence of interference.

N = Spike sample recovery is not within the quality control limits.

NC = No criteria.

Table 3-2
Former Barker Chemical Site, Site No. 932119
Metal Results for Subsurface Soil Samples Collected from the Southern Portion of the Site
Page 5 of 5

Notes (continued):

ND = Indicates that the compound was not detected at the method detection limit specified in parentheses.

SCO = Soil cleanup objective.

Blanks = Contaminant not analyzed.

Shaded = Result exceeds the 6 NYCRR Part 375 Unrestricted Use Objectives.

Shaded = Result exceeds the 6 NYCRR Part 375 Commercial Use Objectives.

Shaded = Result exceeds the Commissioner's Policy CP-51 Residential Use Objectives.

Shaded = Result exceeds the Commissioner's Policy CP-51 Protection of Ecological Resources Objectives.

Table 4-1
Former Barker Chemical Site, Site No. 932119
Summary of Non-Hazardous Waste Disposal From Excavation Activities at the Southern Portion of the Site
Page 1 of 6

Manifest Number	Date	Waste Type	Weight Ticket Number	Truck ID	Weight (tons)	Transporter	Landfill & Location
424524	02/26/14	Contaminated Soil	26548	85	21.11	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424525	02/26/14	Contaminated Soil	26549	101	21.35	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424526	02/26/14	Contaminated Soil	26550	87	24.43	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424527	02/26/14	Contaminated Soil	26551	103	23.17	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424528	02/26/14	Contaminated Soil	26552	86	21.56	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424529	02/26/14	Contaminated Soil	26553	88	26.54	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424530	02/26/14	Contaminated Soil	26554	85	21.79	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424531	02/26/14	Contaminated Soil	26555	101	20.74	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424532	02/26/14	Contaminated Soil	26556	87	22.58	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424533	02/26/14	Contaminated Soil	26557	103	17.53	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424534	02/26/14	Contaminated Soil	26558	88	19.71	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424535	02/26/14	Contaminated Soil	26559	86	15.16	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424536	02/26/14	Contaminated Soil	26560	85	22.85	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424537	02/28/14	Contaminated Soil	26564	85	18.36	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424538	02/28/14	Contaminated Soil	26565	86	18.22	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424539	02/28/14	Contaminated Soil	26566	101	21.76	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424540	02/28/14	Contaminated Soil	26567	81	20.45	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424541	02/28/14	Contaminated Soil	26570	108	18.35	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424542	02/28/14	Contaminated Soil	26568	88	21.14	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424543	02/28/14	Contaminated Soil	26569	56	13.85	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424544	02/28/14	Contaminated Soil	26571	85	24.10	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424545	02/28/14	Contaminated Soil	26572	86	21.36	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424546	02/28/14	Contaminated Soil	26573	101	19.30	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424547	02/28/14	Contaminated Soil	26574	88	22.63	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424548	02/28/14	Contaminated Soil	26575	81	23.84	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424549	02/28/14	Contaminated Soil	26576	108	22.20	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424550	02/28/14	Contaminated Soil	26578	85	23.53	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424551	02/28/14	Contaminated Soil	26579	86	19.13	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424552	03/03/14	Contaminated Soil	26580	85	18.19	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424553	03/03/14	Contaminated Soil	26581	86	14.22	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424554	03/03/14	Contaminated Soil	729870	101	15.99	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424555	03/03/14	Contaminated Soil	729866	81	21.00	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424556	03/03/14	Contaminated Soil	729869	108	19.61	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY

Table 4-1
Former Barker Chemical Site, Site No. 932119
Summary of Non-Hazardous Waste Disposal From Excavation Activities at the Southern Portion of the Site
Page 2 of 6

Manifest Number	Date	Waste Type	Weight Ticket Number	Truck ID	Weight (tons)	Transporter	Landfill & Location
424557	03/03/14	Contaminated Soil	311402	87	21.65	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424558	03/03/14	Contaminated Soil	311403	88	22.07	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424559	03/03/14	Contaminated Soil	311407	85	19.08	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424560	03/03/14	Contaminated Soil	311418	87	21.17	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424561	03/03/14	Contaminated Soil	311413	108	20.97	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424562	03/03/14	Contaminated Soil	311415	81	23.32	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424563	03/03/14	Contaminated Soil	39218	101	21.21	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424564	03/03/14	Contaminated Soil	729897	86	18.90	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424565	03/03/14	Contaminated Soil	311417	88	19.06	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424566	03/03/14	Contaminated Soil	39217	585	21.44	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424567	03/03/14	Contaminated Soil	22	56	16.26	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424568	03/03/14	Contaminated Soil	311426	108	30.04	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424569	03/03/14	Contaminated Soil	311427	81	27.96	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424570	03/04/14	Contaminated Soil	311447	88	28.30	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424571	03/04/14	Contaminated Soil	311446	88	28.38	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424572	03/04/14	Contaminated Soil	39216	85	20.90	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424573	03/04/14	Contaminated Soil	39215	101	22.11	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424574	03/04/14	Contaminated Soil	39214	86	22.14	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424575	03/04/14	Contaminated Soil	39213	87	23.79	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424576	03/04/14	Contaminated Soil	39212	108	20.66	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424577	03/04/14	Contaminated Soil	39211	81	20.82	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424578	03/04/14	Contaminated Soil	39210	88	20.03	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424579	03/04/14	Contaminated Soil	39209	85	19.36	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424580	03/04/14	Contaminated Soil	39208	101	19.86	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424581	03/04/14	Contaminated Soil	39207	86	17.68	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424582	03/04/14	Contaminated Soil	39206	87	21.69	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424583	03/04/14	Contaminated Soil	39205	108	22.40	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424584	03/04/14	Contaminated Soil	39204	81	22.85	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424585	03/04/14	Contaminated Soil	39203	88	23.35	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424586	03/04/14	Contaminated Soil	39202	85	23.68	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424587	03/04/14	Contaminated Soil	39201	101	23.48	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424588	03/04/14	Contaminated Soil	39199	86	23.36	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424589	03/04/14	Contaminated Soil	39200	87	26.03	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY

Table 4-1
Former Barker Chemical Site, Site No. 932119
Summary of Non-Hazardous Waste Disposal From Excavation Activities at the Southern Portion of the Site
Page 3 of 6

Manifest Number	Date	Waste Type	Weight Ticket Number	Truck ID	Weight (tons)	Transporter	Landfill & Location
424590	03/04/14	Contaminated Soil	39198	108	24.62	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424591	03/04/14	Contaminated Soil	39197	81	26.25	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424592	03/04/14	Contaminated Soil	311484	88	29.44	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424593	03/05/14	Contaminated Soil	39196	101	18.54	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424594	03/05/14	Contaminated Soil	39195	87	19.83	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424595	03/05/14	Contaminated Soil	39194	108	20.31	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424596	03/05/14	Contaminated Soil	39192	102	16.46	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424597	03/05/14	Contaminated Soil	39193	86	16.87	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424598	03/05/14	Contaminated Soil	39191	81	23.13	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424599	03/05/14	Contaminated Soil	39190	101	21.27	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424600	03/05/14	Contaminated Soil	39189	87	22.88	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424601	03/05/14	Contaminated Soil	39188	108	22.06	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424602	03/05/14	Contaminated Soil	39187	102	22.61	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424603	03/05/14	Contaminated Soil	39186	86	21.25	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424604	03/05/14	Contaminated Soil	39185	81	20.81	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424605	03/05/14	Contaminated Soil	39184	85	21.47	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424606	03/07/14	Contaminated Soil	39183	101	17.52	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424607	03/07/14	Contaminated Soil	39182	81	21.49	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424608	03/07/14	Contaminated Soil	39181	56	19.11	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424609	03/07/14	Contaminated Soil	39180	108	14.96	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424610	03/07/14	Contaminated Soil	39179	87	24.04	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424611	03/07/14	Contaminated Soil	39178	88	18.37	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424612	03/07/14	Contaminated Soil	39177	86	16.79	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424613	03/07/14	Contaminated Soil	39176	101	18.07	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424614	03/07/14	Contaminated Soil	39175	56	16.51	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424615	03/07/14	Contaminated Soil	39174	108	18.47	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424616	03/07/14	Contaminated Soil	39173	81	18.92	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424617	03/07/14	Contaminated Soil	39172	87	22.43	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424618	03/07/14	Contaminated Soil	26588	88	21.21	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424619	03/10/14	Contaminated Soil	39170	81	26.01	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424620	03/10/14	Contaminated Soil	39169	101	23.34	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424621	03/10/14	Contaminated Soil	39168	87	25.64	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424622	03/10/14	Contaminated Soil	39167	85	22.35	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY

Table 4-1
Former Barker Chemical Site, Site No. 932119
Summary of Non-Hazardous Waste Disposal From Excavation Activities at the Southern Portion of the Site
Page 4 of 6

Manifest Number	Date	Waste Type	Weight Ticket Number	Truck ID	Weight (tons)	Transporter	Landfill & Location
424623	03/10/14	Contaminated Soil	39166	56	19.65	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424624	03/10/14	Contaminated Soil	39165	86	21.18	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424625	03/10/14	Contaminated Soil	39164	88	24.46	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424626	03/10/14	Contaminated Soil	39163	81	22.23	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424627	03/10/14	Contaminated Soil	39162	87	21.47	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424628	03/10/14	Contaminated Soil	39161	101	19.38	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424629	03/10/14	Contaminated Soil	39160	85	19.32	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424630	03/10/14	Contaminated Soil	39159	56	15.75	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424631	03/10/14	Contaminated Soil	39158	86	17.68	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424632	03/10/14	Contaminated Soil	39157	88	24.41	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424633	03/10/14	Contaminated Soil	39155	81	23.50	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424634	03/10/14	Contaminated Soil	39154	101	21.89	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424635	03/10/14	Contaminated Soil	39156	85	23.63	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424636	03/10/14	Contaminated Soil	39153	87	24.04	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424637	03/10/14	Contaminated Soil	39152	56	17.77	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424638	03/10/14	Contaminated Soil	39151	86	21.39	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424639	03/10/14	Contaminated Soil	39150	88	24.31	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424640	03/11/14	Contaminated Soil	39149	81	22.65	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424641	03/11/14	Contaminated Soil	39148	87	23.14	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424642	03/11/14	Contaminated Soil	39147	108	20.91	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424643	03/11/14	Contaminated Soil	39146	101	22.24	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424644	03/11/14	Contaminated Soil	39145	85	24.47	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424645	03/11/14	Contaminated Soil	39144	86	21.24	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424646	03/11/14	Contaminated Soil	39143	88	22.70	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424647	03/11/14	Contaminated Soil	39142	81	24.56	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424648	03/11/14	Contaminated Soil	39141	87	24.07	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424649	03/11/14	Contaminated Soil	39140	108	23.33	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424650	03/11/14	Contaminated Soil	39139	85	23.48	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424651	03/11/14	Contaminated Soil	39138	101	21.92	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424652	03/11/14	Contaminated Soil	39137	86	19.27	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424653	03/11/14	Contaminated Soil	39136	88	21.54	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424654	03/14/14	Contaminated Soil	39135	81	23.19	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424655	03/14/14	Contaminated Soil	39134	87	23.77	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY

Table 4-1
Former Barker Chemical Site, Site No. 932119
Summary of Non-Hazardous Waste Disposal From Excavation Activities at the Southern Portion of the Site
Page 5 of 6

Manifest Number	Date	Waste Type	Weight Ticket Number	Truck ID	Weight (tons)	Transporter	Landfill & Location
424656	03/14/14	Contaminated Soil	39133	101	20.40	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424657	03/14/14	Contaminated Soil	39132	85	23.62	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424658	03/14/14	Contaminated Soil	39131	108	22.38	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424659	03/14/14	Contaminated Soil	39130	86	20.34	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424660	03/14/14	Contaminated Soil	39129	88	20.01	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424661	03/14/14	Contaminated Soil	39128	81	24.28	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424662	03/14/14	Contaminated Soil	39127	87	25.01	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424663	03/14/14	Contaminated Soil	39126	101	20.75	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424664	03/14/14	Contaminated Soil	39125	108	23.06	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424665	03/14/14	Contaminated Soil	39124	86	19.09	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424666	03/14/14	Contaminated Soil	blank	85	24.71	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424667	03/14/14	Contaminated Soil	1	88	23.46	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424668	03/14/14	Contaminated Soil	001	87	26.96	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424669	03/17/14	Contaminated Soil	39400	81	22.32	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424670	03/17/14	Contaminated Soil	39399	101	20.25	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424671	03/17/14	Contaminated Soil	39398	85	20.21	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
424672	03/17/14	Contaminated Soil	39397	102	20.79	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425457	03/17/14	Contaminated Soil	39396	86	19.76	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425458	03/17/14	Contaminated Soil	39394	56	17.45	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425459	03/17/14	Contaminated Soil	39395	108	21.88	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425460	03/17/14	Contaminated Soil	39393	81	22.05	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425461	03/17/14	Contaminated Soil	39391	85	22.35	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425462	03/17/14	Contaminated Soil	39392	101	22.49	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425463	03/17/14	Contaminated Soil	39390	108	22.92	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425464	03/17/14	Contaminated Soil	39389	102	20.28	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425465	03/17/14	Contaminated Soil	39388	86	18.11	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425466	03/17/14	Contaminated Soil	39387	56	16.38	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425467	03/18/14	Contaminated Soil	39385	81	22.50	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425468	03/18/14	Contaminated Soil	39384	102	20.19	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425469	03/18/14	Contaminated Soil	39383	101	20.37	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425470	03/18/14	Contaminated Soil	39382	27	24.48	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425471	03/18/14	Contaminated Soil	39381	85	22.41	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425472	03/18/14	Contaminated Soil	39380	56	17.61	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY

Table 4-1
Former Barker Chemical Site, Site No. 932119
Summary of Non-Hazardous Waste Disposal From Excavation Activities at the Southern Portion of the Site
Page 6 of 6

Manifest Number	Date	Waste Type	Weight Ticket Number	Truck ID	Weight (tons)	Transporter	Landfill & Location
425473	03/18/14	Contaminated Soil	39379	86	22.11	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425474	03/18/14	Contaminated Soil	39378	81	24.59	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425475	03/18/14	Contaminated Soil	39377	102	22.75	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425476	03/18/14	Contaminated Soil	39376	101	26.15	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425477	03/18/14	Contaminated Soil	39375	27	26.85	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425478	03/18/14	Contaminated Soil	39374	85	22.24	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425479	03/18/14	Contaminated Soil	39373	56	15.33	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425480	03/18/14	Contaminated Soil	39372	86	20.98	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425481	03/18/14	Contaminated Soil	39371	108	26.23	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
425482	03/18/14	Contaminated Soil	39370	85	25.64	Michael Serafini, Inc.	EnSol, Inc., Tonawanda, NY
Total Tonnage:					3,769.06		

Table 4-2
Former Barker Chemical Site, Site No. 932119
Summary of Weight Tickets for Backfill Used at the Southern Portion of the Site
Page 1 of 7

Ticket Number	Date	Backfill Type	Weight (tons)	Transporter	Supplier & Location
602679	02/26/14	2" Crusher Run	22.39	Michael Serafini, Inc.	Lafarge, Lockport, NY
602681	02/26/14	2" Crusher Run	19.37	Michael Serafini, Inc.	Lafarge, Lockport, NY
602682	02/26/14	2" Crusher Run	21.76	Michael Serafini, Inc.	Lafarge, Lockport, NY
602686	02/26/14	2" Crusher Run	18.96	Michael Serafini, Inc.	Lafarge, Lockport, NY
602688	02/26/14	2" Crusher Run	20.94	Michael Serafini, Inc.	Lafarge, Lockport, NY
602753	02/28/14	2" Crusher Run	22.36	Michael Serafini, Inc.	Lafarge, Lockport, NY
602825	03/03/14	2" Crusher Run	22.38	Michael Serafini, Inc.	Lafarge, Lockport, NY
602827	03/03/14	2" Crusher Run	20.75	Michael Serafini, Inc.	Lafarge, Lockport, NY
602958	03/05/14	2" Crusher Run	22.21	Michael Serafini, Inc.	Lafarge, Lockport, NY
602959	03/05/14	2" Crusher Run	22.61	Michael Serafini, Inc.	Lafarge, Lockport, NY
602964	03/05/14	2" Crusher Run	20.57	Michael Serafini, Inc.	Lafarge, Lockport, NY
602970	03/05/14	2" Crusher Run	20.94	Michael Serafini, Inc.	Lafarge, Lockport, NY
602971	03/05/14	2" Crusher Run	22.05	Michael Serafini, Inc.	Lafarge, Lockport, NY
602978	03/05/14	2" Crusher Run	21.80	Michael Serafini, Inc.	Lafarge, Lockport, NY
602981	03/05/14	2" Crusher Run	21.56	Michael Serafini, Inc.	Lafarge, Lockport, NY
602988	03/05/14	2" Crusher Run	22.33	Michael Serafini, Inc.	Lafarge, Lockport, NY
602989	03/05/14	2" Crusher Run	22.34	Michael Serafini, Inc.	Lafarge, Lockport, NY
602992	03/05/14	2" Crusher Run	19.56	Michael Serafini, Inc.	Lafarge, Lockport, NY
602994	03/06/14	2" Crusher Run	21.88	Michael Serafini, Inc.	Lafarge, Lockport, NY
602995	03/06/14	2" Crusher Run	22.06	Michael Serafini, Inc.	Lafarge, Lockport, NY
602996	03/06/14	2" Crusher Run	20.64	Michael Serafini, Inc.	Lafarge, Lockport, NY
602997	03/06/14	2" Crusher Run	21.70	Michael Serafini, Inc.	Lafarge, Lockport, NY
602998	03/06/14	2" Crusher Run	20.64	Michael Serafini, Inc.	Lafarge, Lockport, NY
603000	03/06/14	2" Crusher Run	22.09	Michael Serafini, Inc.	Lafarge, Lockport, NY
603014	03/06/14	2" Crusher Run	22.60	Michael Serafini, Inc.	Lafarge, Lockport, NY
603019	03/06/14	2" Crusher Run	22.12	Michael Serafini, Inc.	Lafarge, Lockport, NY
603020	03/06/14	2" Crusher Run	21.67	Michael Serafini, Inc.	Lafarge, Lockport, NY
603021	03/06/14	2" Crusher Run	21.61	Michael Serafini, Inc.	Lafarge, Lockport, NY
603023	03/06/14	2" Crusher Run	20.07	Michael Serafini, Inc.	Lafarge, Lockport, NY
603025	03/06/14	2" Crusher Run	22.03	Michael Serafini, Inc.	Lafarge, Lockport, NY
603039	03/06/14	2" Crusher Run	23.20	Michael Serafini, Inc.	Lafarge, Lockport, NY
603040	03/06/14	2" Crusher Run	20.70	Michael Serafini, Inc.	Lafarge, Lockport, NY
603041	03/06/14	2" Crusher Run	20.59	Michael Serafini, Inc.	Lafarge, Lockport, NY

Table 4-2
Former Barker Chemical Site, Site No. 932119
Summary of Weight Tickets for Backfill Used at the Southern Portion of the Site
Page 2 of 7

Ticket Number	Date	Backfill Type	Weight (tons)	Transporter	Supplier & Location
603051	03/06/14	2" Crusher Run	22.08	Michael Serafini, Inc.	Lafarge, Lockport, NY
603052	03/06/14	2" Crusher Run	22.62	Michael Serafini, Inc.	Lafarge, Lockport, NY
603069	03/06/14	2" Crusher Run	21.71	Michael Serafini, Inc.	Lafarge, Lockport, NY
603070	03/06/14	2" Crusher Run	20.95	Michael Serafini, Inc.	Lafarge, Lockport, NY
603071	03/06/14	2" Crusher Run	20.51	Michael Serafini, Inc.	Lafarge, Lockport, NY
603075	03/06/14	2" Crusher Run	23.25	Michael Serafini, Inc.	Lafarge, Lockport, NY
603079	03/06/14	2" Crusher Run	20.79	Michael Serafini, Inc.	Lafarge, Lockport, NY
603090	03/06/14	2" Crusher Run	22.42	Michael Serafini, Inc.	Lafarge, Lockport, NY
603091	03/06/14	2" Crusher Run	20.21	Michael Serafini, Inc.	Lafarge, Lockport, NY
603092	03/06/14	2" Crusher Run	21.57	Michael Serafini, Inc.	Lafarge, Lockport, NY
603093	03/06/14	2" Crusher Run	23.20	Michael Serafini, Inc.	Lafarge, Lockport, NY
603099	03/06/14	2" Crusher Run	21.55	Michael Serafini, Inc.	Lafarge, Lockport, NY
603112	03/06/14	2" Crusher Run	21.41	Michael Serafini, Inc.	Lafarge, Lockport, NY
603113	03/06/14	2" Crusher Run	21.69	Michael Serafini, Inc.	Lafarge, Lockport, NY
603114	03/06/14	2" Crusher Run	21.40	Michael Serafini, Inc.	Lafarge, Lockport, NY
603115	03/06/14	2" Crusher Run	19.61	Michael Serafini, Inc.	Lafarge, Lockport, NY
603172	03/07/14	2" Crusher Run	20.72	Michael Serafini, Inc.	Lafarge, Lockport, NY
603193	03/07/14	2" Crusher Run	21.71	Michael Serafini, Inc.	Lafarge, Lockport, NY
603197	03/07/14	2" Crusher Run	22.23	Michael Serafini, Inc.	Lafarge, Lockport, NY
603198	03/07/14	2" Crusher Run	20.22	Michael Serafini, Inc.	Lafarge, Lockport, NY
603204	03/07/14	2" Crusher Run	19.74	Michael Serafini, Inc.	Lafarge, Lockport, NY
603205	03/07/14	2" Crusher Run	21.58	Michael Serafini, Inc.	Lafarge, Lockport, NY
603210	03/07/14	2" Crusher Run	22.33	Michael Serafini, Inc.	Lafarge, Lockport, NY
603212	03/07/14	2" Crusher Run	20.21	Michael Serafini, Inc.	Lafarge, Lockport, NY
603218	03/07/14	2" Crusher Run	21.73	Michael Serafini, Inc.	Lafarge, Lockport, NY
603224	03/07/14	2" Crusher Run	22.23	Michael Serafini, Inc.	Lafarge, Lockport, NY
603226	03/07/14	2" Crusher Run	20.92	Michael Serafini, Inc.	Lafarge, Lockport, NY
603231	03/07/14	2" Crusher Run	21.60	Michael Serafini, Inc.	Lafarge, Lockport, NY
603233	03/07/14	2" Crusher Run	19.91	Michael Serafini, Inc.	Lafarge, Lockport, NY
603234	03/07/14	2" Crusher Run	22.48	Michael Serafini, Inc.	Lafarge, Lockport, NY
603235	03/07/14	2" Crusher Run	20.10	Michael Serafini, Inc.	Lafarge, Lockport, NY
603241	03/07/14	2" Crusher Run	22.16	Michael Serafini, Inc.	Lafarge, Lockport, NY
603391	03/11/14	2" Crusher Run	20.44	Michael Serafini, Inc.	Lafarge, Lockport, NY

Table 4-2
Former Barker Chemical Site, Site No. 932119
Summary of Weight Tickets for Backfill Used at the Southern Portion of the Site
Page 3 of 7

Ticket Number	Date	Backfill Type	Weight (tons)	Transporter	Supplier & Location
603421	03/11/14	2" Crusher Run	21.54	Michael Serafini, Inc.	Lafarge, Lockport, NY
603426	03/11/14	2" Crusher Run	22.63	Michael Serafini, Inc.	Lafarge, Lockport, NY
603427	03/11/14	2" Crusher Run	19.40	Michael Serafini, Inc.	Lafarge, Lockport, NY
603429	03/11/14	2" Crusher Run	21.88	Michael Serafini, Inc.	Lafarge, Lockport, NY
603434	03/11/14	2" Crusher Run	21.79	Michael Serafini, Inc.	Lafarge, Lockport, NY
603436	03/11/14	2" Crusher Run	20.88	Michael Serafini, Inc.	Lafarge, Lockport, NY
603437	03/11/14	2" Crusher Run	21.12	Michael Serafini, Inc.	Lafarge, Lockport, NY
603446	03/11/14	2" Crusher Run	19.53	Michael Serafini, Inc.	Lafarge, Lockport, NY
603449	03/11/14	2" Crusher Run	18.90	Michael Serafini, Inc.	Lafarge, Lockport, NY
603451	03/11/14	2" Crusher Run	21.74	Michael Serafini, Inc.	Lafarge, Lockport, NY
603453	03/11/14	2" Crusher Run	21.54	Michael Serafini, Inc.	Lafarge, Lockport, NY
603455	03/11/14	2" Crusher Run	21.02	Michael Serafini, Inc.	Lafarge, Lockport, NY
603457	03/11/14	2" Crusher Run	22.22	Michael Serafini, Inc.	Lafarge, Lockport, NY
603458	03/11/14	2" Crusher Run	20.18	Michael Serafini, Inc.	Lafarge, Lockport, NY
603462	03/12/14	2" Crusher Run	21.25	Michael Serafini, Inc.	Lafarge, Lockport, NY
603463	03/12/14	2" Crusher Run	19.48	Michael Serafini, Inc.	Lafarge, Lockport, NY
603472	03/12/14	2" Crusher Run	21.28	Michael Serafini, Inc.	Lafarge, Lockport, NY
603473	03/12/14	2" Crusher Run	19.52	Michael Serafini, Inc.	Lafarge, Lockport, NY
603491	03/13/14	2" Crusher Run	21.50	Michael Serafini, Inc.	Lafarge, Lockport, NY
603492	03/13/14	2" Crusher Run	19.21	Michael Serafini, Inc.	Lafarge, Lockport, NY
603493	03/13/14	2" Crusher Run	22.55	Michael Serafini, Inc.	Lafarge, Lockport, NY
603494	03/13/14	2" Crusher Run	22.30	Michael Serafini, Inc.	Lafarge, Lockport, NY
603495	03/13/14	2" Crusher Run	20.28	Michael Serafini, Inc.	Lafarge, Lockport, NY
603496	03/13/14	2" Crusher Run	22.88	Michael Serafini, Inc.	Lafarge, Lockport, NY
603505	03/13/14	2" Crusher Run	20.67	Michael Serafini, Inc.	Lafarge, Lockport, NY
603506	03/13/14	2" Crusher Run	18.62	Michael Serafini, Inc.	Lafarge, Lockport, NY
603507	03/13/14	2" Crusher Run	19.60	Michael Serafini, Inc.	Lafarge, Lockport, NY
603508	03/13/14	2" Crusher Run	21.56	Michael Serafini, Inc.	Lafarge, Lockport, NY
603509	03/13/14	2" Crusher Run	21.63	Michael Serafini, Inc.	Lafarge, Lockport, NY
603510	03/13/14	2" Crusher Run	20.09	Michael Serafini, Inc.	Lafarge, Lockport, NY
603512	03/13/14	2" Crusher Run	22.22	Michael Serafini, Inc.	Lafarge, Lockport, NY
603513	03/13/14	2" Crusher Run	20.01	Michael Serafini, Inc.	Lafarge, Lockport, NY
603514	03/13/14	2" Crusher Run	22.76	Michael Serafini, Inc.	Lafarge, Lockport, NY

Table 4-2
Former Barker Chemical Site, Site No. 932119
Summary of Weight Tickets for Backfill Used at the Southern Portion of the Site
Page 4 of 7

Ticket Number	Date	Backfill Type	Weight (tons)	Transporter	Supplier & Location
603515	03/13/14	2" Crusher Run	20.11	Michael Serafini, Inc.	Lafarge, Lockport, NY
603516	03/13/14	2" Crusher Run	21.22	Michael Serafini, Inc.	Lafarge, Lockport, NY
603520	03/13/14	2" Crusher Run	20.69	Michael Serafini, Inc.	Lafarge, Lockport, NY
603522	03/13/14	2" Crusher Run	22.70	Michael Serafini, Inc.	Lafarge, Lockport, NY
603524	03/13/14	2" Crusher Run	20.64	Michael Serafini, Inc.	Lafarge, Lockport, NY
603526	03/13/14	2" Crusher Run	23.37	Michael Serafini, Inc.	Lafarge, Lockport, NY
603527	03/13/14	2" Crusher Run	23.00	Michael Serafini, Inc.	Lafarge, Lockport, NY
603528	03/13/14	2" Crusher Run	22.15	Michael Serafini, Inc.	Lafarge, Lockport, NY
603529	03/13/14	2" Crusher Run	21.35	Michael Serafini, Inc.	Lafarge, Lockport, NY
603533	03/13/14	2" Crusher Run	22.12	Michael Serafini, Inc.	Lafarge, Lockport, NY
603534	03/13/14	2" Crusher Run	19.95	Michael Serafini, Inc.	Lafarge, Lockport, NY
603536	03/13/14	2" Crusher Run	22.99	Michael Serafini, Inc.	Lafarge, Lockport, NY
603537	03/13/14	2" Crusher Run	22.50	Michael Serafini, Inc.	Lafarge, Lockport, NY
603538	03/13/14	2" Crusher Run	22.85	Michael Serafini, Inc.	Lafarge, Lockport, NY
603539	03/13/14	2" Crusher Run	20.53	Michael Serafini, Inc.	Lafarge, Lockport, NY
603571	03/14/14	2" Crusher Run	21.07	Michael Serafini, Inc.	Lafarge, Lockport, NY
603579	03/14/14	2" Crusher Run	18.31	Michael Serafini, Inc.	Lafarge, Lockport, NY
603606	03/14/14	2" Crusher Run	22.09	Michael Serafini, Inc.	Lafarge, Lockport, NY
603610	03/14/14	2" Crusher Run	20.37	Michael Serafini, Inc.	Lafarge, Lockport, NY
603614	03/14/14	2" Crusher Run	21.08	Michael Serafini, Inc.	Lafarge, Lockport, NY
603616	03/14/14	2" Crusher Run	19.80	Michael Serafini, Inc.	Lafarge, Lockport, NY
603619	03/14/14	2" Crusher Run	19.73	Michael Serafini, Inc.	Lafarge, Lockport, NY
603623	03/14/14	2" Crusher Run	21.12	Michael Serafini, Inc.	Lafarge, Lockport, NY
603638	03/14/14	2" Crusher Run	19.71	Michael Serafini, Inc.	Lafarge, Lockport, NY
603640	03/14/14	2" Crusher Run	21.49	Michael Serafini, Inc.	Lafarge, Lockport, NY
603641	03/14/14	2" Crusher Run	20.36	Michael Serafini, Inc.	Lafarge, Lockport, NY
603642	03/14/14	2" Crusher Run	20.86	Michael Serafini, Inc.	Lafarge, Lockport, NY
603643	03/14/14	2" Crusher Run	22.80	Michael Serafini, Inc.	Lafarge, Lockport, NY
603650	03/14/14	2" Crusher Run	21.44	Michael Serafini, Inc.	Lafarge, Lockport, NY
603727	03/17/14	2" Crusher Run	20.89	Michael Serafini, Inc.	Lafarge, Lockport, NY
603731	03/17/14	2" Crusher Run	22.11	Michael Serafini, Inc.	Lafarge, Lockport, NY
603733	03/17/14	2" Crusher Run	21.61	Michael Serafini, Inc.	Lafarge, Lockport, NY
603735	03/17/14	2" Crusher Run	19.95	Michael Serafini, Inc.	Lafarge, Lockport, NY

Table 4-2
Former Barker Chemical Site, Site No. 932119
Summary of Weight Tickets for Backfill Used at the Southern Portion of the Site
Page 5 of 7

Ticket Number	Date	Backfill Type	Weight (tons)	Transporter	Supplier & Location
603744	03/17/14	2" Crusher Run	20.26	Michael Serafini, Inc.	Lafarge, Lockport, NY
603745	03/17/14	2" Crusher Run	20.11	Michael Serafini, Inc.	Lafarge, Lockport, NY
603746	03/17/14	2" Crusher Run	20.56	Michael Serafini, Inc.	Lafarge, Lockport, NY
603758	03/17/14	2" Crusher Run	20.57	Michael Serafini, Inc.	Lafarge, Lockport, NY
603763	03/17/14	2" Crusher Run	19.38	Michael Serafini, Inc.	Lafarge, Lockport, NY
603765	03/17/14	2" Crusher Run	20.74	Michael Serafini, Inc.	Lafarge, Lockport, NY
603766	03/17/14	2" Crusher Run	21.72	Michael Serafini, Inc.	Lafarge, Lockport, NY
603773	03/17/14	2" Crusher Run	21.77	Michael Serafini, Inc.	Lafarge, Lockport, NY
603774	03/17/14	2" Crusher Run	19.96	Michael Serafini, Inc.	Lafarge, Lockport, NY
603775	03/17/14	2" Crusher Run	20.68	Michael Serafini, Inc.	Lafarge, Lockport, NY
603849	03/18/14	2" Crusher Run	20.88	Michael Serafini, Inc.	Lafarge, Lockport, NY
603854	03/18/14	2" Crusher Run	21.62	Michael Serafini, Inc.	Lafarge, Lockport, NY
603855	03/18/14	2" Crusher Run	20.37	Michael Serafini, Inc.	Lafarge, Lockport, NY
603856	03/18/14	2" Crusher Run	20.64	Michael Serafini, Inc.	Lafarge, Lockport, NY
603857	03/18/14	2" Crusher Run	18.57	Michael Serafini, Inc.	Lafarge, Lockport, NY
603861	03/18/14	2" Crusher Run	20.69	Michael Serafini, Inc.	Lafarge, Lockport, NY
603870	03/18/14	2" Crusher Run	21.64	Michael Serafini, Inc.	Lafarge, Lockport, NY
603871	03/18/14	2" Crusher Run	19.18	Michael Serafini, Inc.	Lafarge, Lockport, NY
603872	03/18/14	2" Crusher Run	22.32	Michael Serafini, Inc.	Lafarge, Lockport, NY
603873	03/18/14	2" Crusher Run	19.52	Michael Serafini, Inc.	Lafarge, Lockport, NY
603882	03/18/14	2" Crusher Run	19.80	Michael Serafini, Inc.	Lafarge, Lockport, NY
603883	03/19/14	2" Crusher Run	20.71	Michael Serafini, Inc.	Lafarge, Lockport, NY
603884	03/19/14	2" Crusher Run	19.69	Michael Serafini, Inc.	Lafarge, Lockport, NY
603885	03/19/14	2" Crusher Run	22.13	Michael Serafini, Inc.	Lafarge, Lockport, NY
603888	03/19/14	2" Crusher Run	21.93	Michael Serafini, Inc.	Lafarge, Lockport, NY
603889	03/19/14	2" Crusher Run	20.10	Michael Serafini, Inc.	Lafarge, Lockport, NY
603903	03/19/14	2" Crusher Run	19.82	Michael Serafini, Inc.	Lafarge, Lockport, NY
603904	03/19/14	2" Crusher Run	22.01	Michael Serafini, Inc.	Lafarge, Lockport, NY
603905	03/19/14	2" Crusher Run	21.82	Michael Serafini, Inc.	Lafarge, Lockport, NY
603906	03/19/14	2" Crusher Run	21.21	Michael Serafini, Inc.	Lafarge, Lockport, NY
603909	03/19/14	2" Crusher Run	20.12	Michael Serafini, Inc.	Lafarge, Lockport, NY
603920	03/19/14	2" Crusher Run	20.41	Michael Serafini, Inc.	Lafarge, Lockport, NY
603927	03/19/14	2" Crusher Run	22.33	Michael Serafini, Inc.	Lafarge, Lockport, NY

Table 4-2
Former Barker Chemical Site, Site No. 932119
Summary of Weight Tickets for Backfill Used at the Southern Portion of the Site
Page 6 of 7

Ticket Number	Date	Backfill Type	Weight (tons)	Transporter	Supplier & Location
603928	03/19/14	2" Crusher Run	19.19	Michael Serafini, Inc.	Lafarge, Lockport, NY
603929	03/19/14	2" Crusher Run	21.94	Michael Serafini, Inc.	Lafarge, Lockport, NY
603930	03/19/14	2" Crusher Run	21.71	Michael Serafini, Inc.	Lafarge, Lockport, NY
603935	03/19/14	2" Crusher Run	19.52	Michael Serafini, Inc.	Lafarge, Lockport, NY
603947	03/19/14	2" Crusher Run	21.49	Michael Serafini, Inc.	Lafarge, Lockport, NY
603948	03/19/14	2" Crusher Run	21.18	Michael Serafini, Inc.	Lafarge, Lockport, NY
603949	03/19/14	2" Crusher Run	22.29	Michael Serafini, Inc.	Lafarge, Lockport, NY
603950	03/19/14	2" Crusher Run	20.32	Michael Serafini, Inc.	Lafarge, Lockport, NY
603957	03/19/14	2" Crusher Run	20.63	Michael Serafini, Inc.	Lafarge, Lockport, NY
603963	03/19/14	2" Crusher Run	20.94	Michael Serafini, Inc.	Lafarge, Lockport, NY
603967	03/19/14	2" Crusher Run	21.62	Michael Serafini, Inc.	Lafarge, Lockport, NY
603968	03/19/14	2" Crusher Run	22.84	Michael Serafini, Inc.	Lafarge, Lockport, NY
603970	03/19/14	2" Crusher Run	21.73	Michael Serafini, Inc.	Lafarge, Lockport, NY
603981	03/19/14	2" Crusher Run	19.33	Michael Serafini, Inc.	Lafarge, Lockport, NY
603983	03/19/14	2" Crusher Run	19.81	Michael Serafini, Inc.	Lafarge, Lockport, NY
603994	03/20/14	2" Crusher Run	21.53	Michael Serafini, Inc.	Lafarge, Lockport, NY
603995	03/20/14	2" Crusher Run	18.68	Michael Serafini, Inc.	Lafarge, Lockport, NY
603996	03/20/14	2" Crusher Run	22.41	Michael Serafini, Inc.	Lafarge, Lockport, NY
603999	03/20/14	2" Crusher Run	21.44	Michael Serafini, Inc.	Lafarge, Lockport, NY
604015	03/20/14	2" Crusher Run	20.41	Michael Serafini, Inc.	Lafarge, Lockport, NY
604016	03/20/14	2" Crusher Run	21.59	Michael Serafini, Inc.	Lafarge, Lockport, NY
604017	03/20/14	2" Crusher Run	22.52	Michael Serafini, Inc.	Lafarge, Lockport, NY
604018	03/20/14	2" Crusher Run	21.46	Michael Serafini, Inc.	Lafarge, Lockport, NY
604046	03/20/14	2" Crusher Run	21.58	Michael Serafini, Inc.	Lafarge, Lockport, NY
604047	03/20/14	2" Crusher Run	21.83	Michael Serafini, Inc.	Lafarge, Lockport, NY
604048	03/20/14	2" Crusher Run	22.24	Michael Serafini, Inc.	Lafarge, Lockport, NY
604049	03/20/14	2" Crusher Run	19.68	Michael Serafini, Inc.	Lafarge, Lockport, NY
604077	03/20/14	2" Crusher Run	20.02	Michael Serafini, Inc.	Lafarge, Lockport, NY
604078	03/20/14	2" Crusher Run	21.08	Michael Serafini, Inc.	Lafarge, Lockport, NY
604079	03/20/14	2" Crusher Run	22.20	Michael Serafini, Inc.	Lafarge, Lockport, NY
604080	03/20/14	2" Crusher Run	20.91	Michael Serafini, Inc.	Lafarge, Lockport, NY
604104	03/20/14	2" Crusher Run	19.24	Michael Serafini, Inc.	Lafarge, Lockport, NY
604105	03/20/14	2" Crusher Run	21.43	Michael Serafini, Inc.	Lafarge, Lockport, NY

Table 4-2
Former Barker Chemical Site, Site No. 932119
Summary of Weight Tickets for Backfill Used at the Southern Portion of the Site
Page 7 of 7

Ticket Number	Date	Backfill Type	Weight (tons)	Transporter	Supplier & Location
604106	03/20/14	2" Crusher Run	21.88	Michael Serafini, Inc.	Lafarge, Lockport, NY
604107	03/20/14	2" Crusher Run	21.79	Michael Serafini, Inc.	Lafarge, Lockport, NY
Total Tonnage: 4,228.22					

Table 5-1
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Confirmatory Samples Collected During Excavation Activities at the Southern Portion of the Site
Page 1 of 7

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	F-1 02/26/14	F-2 02/26/14	W-1 02/26/14	W-2 02/26/14	W-3 02/26/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	4.9	3.7	4.3	3.9	21.0

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	F-3 02/26/14	F-4 02/26/14	W-4 02/26/14	F-5 02/28/14	F-6 02/28/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	4.2	280.0	7.3	3.1	3.2

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	W-5 02/28/14	F-7 02/28/14	F-8 02/28/14	W-6 03/03/14	W-7 03/03/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	4.9	4.2	3.3	3.1	3.2

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	W-8 03/03/14	F-9 03/03/14	F-10 03/03/14	W-9 03/03/14	W-10 03/03/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	66.0	5.8	4.3	4.1	3.4

Table 5-1
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Confirmatory Samples Collected During Excavation Activities at the Southern Portion of the Site
Page 2 of 7

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	F-11 03/03/14	F-12 03/03/14	W-11 03/03/14	W-12 03/03/14	W-13 03/03/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	5.0	2.8	3.7	5.2	4.2

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	F-13 03/03/14	F-14 03/03/14	W-14 03/03/14	W-15 03/03/14	F-15 03/03/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	4.7	3.7	4.8	4.3	3.5

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	W-16 03/03/14	F-16 03/04/14	F-17 03/04/14	F-18 03/04/14	F-19 03/04/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	5.6	6.1	5.4	5.6	11.0

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	F-20 03/04/14	F-21 03/04/14	W-17 03/04/14	F-4R 03/04/14	F-22 03/04/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	6.2	6.6	21.0	5.2	5.7

Table 5-1
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Confirmatory Samples Collected During Excavation Activities at the Southern Portion of the Site
Page 3 of 7

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	F-23 03/04/14	F-24 03/05/14	F-25 03/05/14	F-26 03/05/14	F-27 03/05/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	7.0	6.7	5.4	7.7	5.2

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	W-18 03/05/14	W-19 03/05/14	W-20 03/05/14	W-21 03/05/14	W-22 03/05/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	4.1	3.2	3.3	4.8	4.0

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	W-23 03/05/14	W-24 03/05/14	F-28 03/05/14	W-25 03/05/14	F-29 03/07/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	4.1	3.0	4.1	3.4	6.7

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	W-26 03/07/14	W-27 03/07/14	W-28 03/07/14	F-30 03/07/14	F-31 03/07/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	5.0	8.9	5.0	5.6	5.1

Table 5-1
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Confirmatory Samples Collected During Excavation Activities at the Southern Portion of the Site
Page 4 of 7

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	W-29 03/07/14	F-32 03/10/14	F-33 03/10/14	W-30 03/10/14	W-31 03/10/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	5.8	8.1	7.5	9.3	4.2

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	W-32 03/10/14	W-33 03/10/14	F-34 03/10/14	F-35 03/10/14	W-34 03/10/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	8.9	7.7	6.6	10.0	7.9

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	W-35 03/10/14	F-36 03/10/14	F-37 03/10/14	W-36 03/10/14	W-37 03/10/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	34.0	5.4	5.8	4.4	4.8

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	F-38 03/11/14	F-39 03/11/14	W-38 03/11/14	W-39 03/11/14	W-40 03/11/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	9.2	5.7	5.5	5.4	6.2

Table 5-1
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Confirmatory Samples Collected During Excavation Activities at the Southern Portion of the Site
Page 5 of 7

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	F-40 03/11/14	W-41 03/11/14	W-42 03/11/14	W-43 03/11/14	W-44 03/11/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	6.2	6.0	5.8	5.9	5.7

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	F-41 03/11/14	F-42 03/11/14	W-45 03/11/14	W-46 03/11/14	W-47 03/11/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	6.2	5.5	6.4	5.2	5.5

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	F-43 03/14/14	F-44 03/14/14	W-48 03/14/14	W-49 03/14/14	W-50 03/14/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	5.9	6.4	9.8	6.2	6.8

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	F-45 03/14/14	F-46 03/14/14	F-47 03/14/14	F-48 03/14/14	F-49 03/17/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	7.3	7.2	7.1	6.0	3.7

Table 5-1
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Confirmatory Samples Collected During Excavation Activities at the Southern Portion of the Site
Page 6 of 7

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	F-50 03/17/14	W-51 03/17/14	F-51 03/17/14	F-52 03/17/14	W-52 03/17/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	4.0	4.9	3.8	3.9	4.4

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	W-53 03/17/14	W-54 03/17/14	F-53 03/18/14	F-54 03/18/14	W-55 03/18/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	5.5	2.5	3.9	3.5	4.7

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	W-56 03/18/14	F-55 03/18/14	F-56 03/18/14	W-57 03/18/14	W-58 03/18/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	3.5	3.4	4.0	3.9	3.4

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	F-57 03/18/14	F-58 03/18/14	W-59 03/18/14	W-60 03/18/14	W-61 03/18/14
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	5.0	3.5	4.9	2.9	4.1

Table 5-1
Former Barker Chemical Site, Site No. 932119
Arsenic Results for Confirmatory Samples Collected During Excavation Activities at the Southern Portion of the Site
Page 7 of 7

Sample Number Date Sampled	NYSDEC Part 375 Unrestricted SCO *	NYSDEC Part 375 Commercial SCO *	W-62 03/18/14	W-63 03/18/14			
Metals (mg/kg or ppm)							
Arsenic ■	13.0	16.0	4.2	3.7			

Notes:

* = 6 NYCRR Part 375: Environmental Remediation Programs, Unrestricted and Commercial Soil Cleanup Objectives, NYSDEC, 2006.

■ = Environmental Protection Agency priority pollutant metal.

NA = Not applicable.

ND = Indicates that the compound was not detected at the method detection limit specified in parentheses.

NR = Not reported.

NS = Not sampled.

SCO = Soil cleanup objective.

(3.2) = Duplicate sample collected on August 5, 2013.

Shaded = Result exceeds the 6 NYCRR Part 375 Unrestricted Use Objective for arsenic.

Shaded = Result exceeds the 6 NYCRR Part 375 Commercial Use Objective for arsenic.

Shaded = Additional soil was excavated and a follow-up confirmatory sample was collected.

W-35 = Preliminary confirmatory sample that exceeded the 6 NYCRR Part 375 Commercial Use Objective for arsenic. Additional soil was excavated from this area and a follow-up confirmatory sample was collected.