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September 27, 2011

Mr. Eugene Melnyk, P.E.
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

Subject: **Pre-Design Investigation and Final Design Report**
Former Buffalo Color Corporation Site – Area E
NYSDEC BCP Site #C915232
Buffalo, New York (Erie County)
MACTEC Project: 3410090701

Dear Mr. Melnyk:

MACTEC Engineering and Consulting, P.C. (MACTEC) has prepared the referenced report for Area E of the former Buffalo Color Corporation Site on behalf of South Buffalo Development LLC (SBD). Enclosed please find one (1) original and two (2) copies of the report. An electronic copy of this report has been posted on our FTP site for your use; instructions regarding how to access the FTP site were issued to you via email. This version of the report replaces any prior versions issued to you.

Please contact me at (412) 279-6661 or Mr. John Yensan of SBD at (716) 856-3333 ext. 302 should you have any questions regarding this submittal or require additional information.

Sincerely,

MACTEC Engineering and Consulting, P.C.

John M. Scrabis
Senior Principal Engineer

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PRE-DESIGN INVESTIGATION AND FINAL DESIGN REPORT

FORMER BUFFALO COLOR CORPORATION SITE - AREA E
NYSDEC BCP SITE #C915232
BUFFALO, NEW YORK

Prepared for:

SOUTH BUFFALO DEVELOPMENT LLC
Buffalo, New York

Prepared by:

Mactec Engineering and Consulting, P.C.
Pittsburgh, Pennsylvania

September 2011

PRE-INVESTIGATION AND FINAL DESIGN REPORT

FORMER BUFFALO COLOR CORPORATION SITE - AREA E
NYSDEC BCP SITE #C915232
BUFFALO, NEW YORK

Prepared for:

SOUTH BUFFALO DEVELOPMENT LLC
333 Ganson Street
Buffalo, New York

Prepared by:

Mactec Engineering and Consulting, P.C.
Mactec Project Number: 3410-09-0701

September 27, 2011

Nicole Weiler for

Eric Weiler
Project Engineer

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Principal Engineer

It is a violation of this law for any person to alter any document that bears the seal of a professional engineer, unless the person is acting under the direction of a licensed professional engineer.

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1.0 INTRODUCTION

Mactec Engineering and Consulting, P.C. (Mactec) has prepared this Pre-Design Investigation and Final Design Report (Report) on behalf of South Buffalo Development, LLC (SBD). This Report summarizes the results of the Pre-Design Investigation (PDI) work completed by Mactec in 2009-2011 and presents the final design information for remediation of Area E at the Former Buffalo Color Corporation (BCC) Site (Site). This Report replaces the Area E PDI/50% Design Report issued by Mactec in June 2010.

SBD has teamed with Honeywell to facilitate the demolition of the former BCC dye plant and remediate the property under a Brownfield Cleanup Agreement (BCA) executed between SBD and the New York State Department of Environmental Conservation (NYSDEC). The Site has been assigned NYSDEC Brownfield Cleanup Program (BCP) Site #C915232. The remediation and redevelopment approach for the Site utilizes the Track 4 cleanup track in accordance with the New York BCP regulations to transform the Site from an abandoned and blighted property into viable commercial/industrial property. The goal for this Site is to remediate and create new, environmentally sustainable commercial/industrial facilities that will support jobs and promote the economic stability of the region. A web site has been established by SBD that provides information about the project; the web site address is: http://www.buffalocolorredevelopment.com.

1.1 SITE HISTORY

Originally founded as the Schoellkopf Aniline and Dye Company in 1879, the plant produced dyes and organic chemicals based primarily on aniline and various aniline derivatives. The company was reorganized into the National Aniline Chemical Company in 1916. It became one of the five companies that merged to create Allied Chemical Corporation (Allied Chemical) in 1920. The existing dye-making facility and the right to produce certain dyes and intermediates were sold by Allied Chemical to BCC on July 1, 1977. At the time of the sale, the plant was divided into eight areas designated with the letters A, B, C, D, E, F, G, and H. BCC purchased the manufacturing areas A through E, while Allied Chemical retained the acid plant (which was sold to PVS Chemicals, Inc. [PVS] in 1981), the research and development facility on Area F, and the parking lots on Areas G (Elk Street) and H (Smith Street).

In 2005, BCC filed for bankruptcy. During the bankruptcy proceedings, some of the facility's production equipment was sold and removed from the site. In conjunction with the bankruptcy, the office building and former plant hospital located at 100 Lee Street on Area B and the warehouse building (Building 322) located near Elk Street on Area E, along with some of the land under and around those buildings, were sold to other parties. Agreements are in place to preserve access rights to the land for the purposes of any required environmental investigation and remediation activities. The remaining buildings and property on Areas A, B, C, D and E were purchased by SBD in 2008.

1.2 SUMMARY OF 2007 REMEDIAL INVESTIGATION

Numerous environmental investigations have been completed for the Buffalo Color property, including Area E, dating back to the 1980s. In 2007, Mactec completed a Remedial Investigation (RI) to build off of prior studies and characterize the nature and extent of contamination at the site. The results of prior studies and the 2007 RI are described in detail in the following reports:

- *Final Report on RCRA Facility Investigation*, *Buffalo Color Corporation*, Golder Associates, 1997.
- *Addendum to Final Report on RCRA Facility Investigation, Buffalo Color Corporation*, Golder Associates, 1998.
- *Remedial Investigation Report, Former Buffalo Color Corporation, Area ABCE Site*, Mactec, August 2008.

The RI determined that site soil contained concentrations of certain metals and organic substances that exceeded the NY Commercial Soil Cleanup Objectives (SCOs). Shallow soil and groundwater on the southwestern portion of Area E was found to contain concentrations of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) that exceeded applicable NY soil and groundwater standards. Petroleum (weathered No. 2 fuel oil) as a light non-aqueous phase liquid (LNAPL) present in the shallow soil and on the shallow water table was identified on the southeastern side of Area E.

Below is a summary of site conditions when the RI was performed in 2007, supplemented by PDI work completed by Mactec in 2009-2011:

1.2.1 Area E Soil

Metals (primarily arsenic and mercury) and polycyclic aromatic hydrocarbons (PAHs) were found across Area E, in both surface and subsurface soil, at concentrations that exceed the SCOs. For the direct contact pathway, surface soil samples are considered the most relevant data points. A background study completed by Mactec suggests that the majority of the soil samples collected during the RI contained metals and PAHs at concentrations that are within the calculated Site-specific background standards. The data suggests that the soil locations with concentrations of metals and PAHs that exceed the SCOs are not sources of groundwater contamination.

In the vicinity of former chemical aboveground storage tanks (ASTs) on the southwestern side of Area E, a source of groundwater contamination was identified within the unsaturated fill and upper till materials. The source area contained concentrations of VOCs (including chlorobenzene, dichlorobenzenes, trichlorobenzene, and other compounds) and SVOCs (including aniline) at levels that exceeded Commercial and Protection of Groundwater SCOs. The extent of unsaturated soils within the source area that were designated for removal was estimated in the Alternatives Analysis Report (AAR, Mactec, February 2009) to be 8,100 cubic yards (in place). Based on data from additional soil borings and laboratory testing conducted during the 2009-2011 PDI work, the estimated in-place amount of saturated and unsaturated fill/upper till proposed for removal has been revised to approximately 9,530 cubic yards, as further described in this Report.

Petroleum LNAPL was periodically detected in two monitoring wells (R-14 and ICM-PZ-04S) on the southeastern side of Area E with an apparent thickness that ranged from 0.14 feet (well R-14) to 1.47 feet (well ICM-PZ-04S). Based on test pits completed during the PDI work, it was determined that the LNAPL resided primarily in a seam of rounded gravel present at depths of 7 to 8.5 feet below ground surface (bgs). The in-place volume of soil included in the plume was estimated to be 20,000 cubic feet (approximately 750 cubic yards). A separate Pre-Design Investigation and Remedial Design Report (MACTEC, July 2010) was issued for the Area E LNAPL area and subsequently approved by NYSDEC.

1.2.2 Area E Groundwater

Shallow groundwater on the southwestern portion of Area E was found to contain concentrations of VOCs (principally chlorobenzene and dichlorobenzenes) and SVOCs (primarily aniline and nitrobenzene) at concentrations that exceed the NY Class GA standards. Maximum total VOC levels exceeded 100 milligrams per liter (mg/L) and total SVOCs exceeded 10 mg/L at certain monitoring points on Area E, as described in detail in Section 3.0 of this Report. The source of the groundwater contamination was determined to be the former ASTs and contaminated soils (described above) located in the plume area. The RI and PDI data indicate that the Area E VOC groundwater plume has not migrated off-Site.

1.2.3 Area E Site-Related Soil Vapor Intrusion

Soil vapor intrusion sampling was not performed on the SBD-owned portion of Area E. Concentrations of VOCs in shallow groundwater indicate that the vapor intrusion (VI) pathway may exist and, therefore, will be addressed for future structures on-site. Requirements for evaluation and mitigation of the VI pathway are presented in the

Engineering and Institutional Control Plan (Chapter 2) of the Area E Site Management Plan.

1.2.4 Area E Sewers

The former site process sewers are connected to the nearby Buffalo Sewer Authority (BSA) sewer lines. The RI sampling completed in 2007 identified the presence of residual contaminants in solids within the former facility process sewers (including sediments or sludge). Shallow groundwater may infiltrate portions of facility storm and/or process sewers. A combination of abandonment/plugging of unused process and storm sewers and rehabilitation of remaining storm sewers was selected to fulfill the AAR requirements; this work is described in this design submittal.

1.3 PROPOSED REMEDY FOR AREA E

The site will be remediated in accordance with both the NYSDEC-approved Remedial Action Work Plan, specifically remedial alternatives presented in Section 9.0 of the Alternatives Analysis Report (AAR) (Mactec, 2009), as well as the NYSDEC- approved remedial design documents. Specific details regarding the remedial construction activities will be documented in the Area E Final Engineering Report (FER).

The following is a summary of the Remedial Actions that will be performed at the Site:

- Excavation and off-site disposal of VOC-contaminated and SVOC-contaminated vadose zone soils to the top of the shallow saturated unit (base of fill/top of upper till unit) on the southwestern side of Area E and between former buildings 316 and 320 to accomplish mass removal of the source material;
- Limited deeper excavations of VOC-contaminated soil, on the southwestern side of Area E around the location of the former main chemical AST farm,

- below the fill layer/top of shallow groundwater through the upper till unit to the top of the glaciolacustrine clay unit (aquitard).
- The addition of a biostimulant (Regenesis product ORC-A) to remedial excavation backfill as an added measure to reduce residual VOCs/SVOCs in groundwater
- Utilization of an integrated site-wide cover system consisting of either a minimum of one foot of clean soil (seeded with native grasses) or clean gravel and existing/new pavement (asphalt or concrete). The cover system will limit human exposure to remaining contamination at the site, consistent with the presumptive remedy as identified in 6 New York Codes Rules, and Regulations Part 375;
- Abandonment/plugging of unused process and storm sewers and rehabilitation of the existing storm sewer system as appropriate;
- Execution and recording of an Environmental Easement in favor of NYSDEC to restrict land use and limit future exposure to remaining contamination at the Site. Elements of the Environmental Easement include prohibiting groundwater use, providing protocols for disturbance of Site and, soils and/or groundwater, limiting future land use to commercial or industrial use, and requiring that occupied structures associated with future development at the Site address the VI pathway (either through construction methods or through additional characterization to ensure that the area over which the structure will reside does not present a potential VI concern); and
- Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance, and (4) reporting.

2.0 EXISTING CONDITIONS

2.1 DESCRIPTION OF AREA E

The former Buffalo Color Site, consisting of Areas A, B, C and E, is located on the south side of the City of Buffalo, Erie County, New York, in an area of heavy industrial development that dates to the mid-1800s. The Site occupies approximately 47 acres near and adjacent to the Buffalo River (Figure 1). The former BCC Site is subject to three separate BCAs that cover Areas A&B, Area C, and Area E.

Area E, the focus of this report, is the largest of the four areas and is located on the northeastern side of the former BCC site (Figure 2 and Illustration 1). It is fenced and accessible by vehicle from gated entrances along Lee Street and Elk Street. In 2010, SBD completed the demolition of all former BCC structures (including tanks and piping) on the portion of Area E that it controls. Thus, the portion of Area E owned by SBD is presently vacant. Previously, it was the location of production buildings, maintenance sheds, a former wastewater treatment plant (including surface impoundments), and several AST farms. Area E is bounded by Elk Street to the north, Orlando Street to the east (across which is a bulk petroleum terminal), Prenatt Street to the south (a paper street that includes a rail spur and across which is the PVS facility), and Lee Street to the west (across which is Area C).

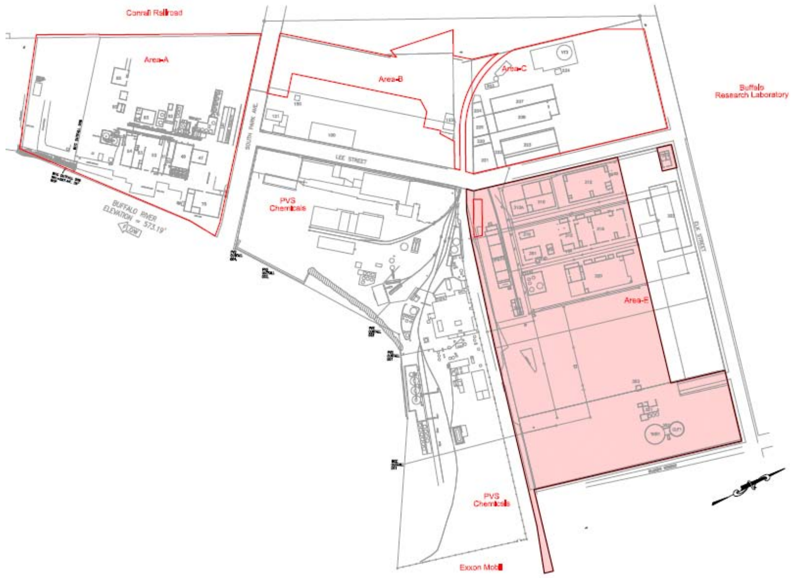

Illustration 1: Area E at BCC Site

2.2 SITE-SPECIFIC GEOLOGIC CONDITIONS

2.2.1 Site-Specific Lithology

The RI report (Mactec, August 2008) identifies a number of subsurface zones at the site with contrasting hydrogeologic properties. In order of increasing depth, these zones include:

Fill: This unconsolidated material is found over the majority of the surface of the site. It typically consists of clay, silt, crushed stone, gravel, bricks, and miscellaneous building demolition debris. Concrete pads and foundations associated with former structures are known to exist within the fill layer on Area E. The fill thickness generally ranges from 4 feet to less than 10 feet.

Clay and Silt Tills (Upper Tills): This unit is unconsolidated fine-grained clay and silt tills, with varying amounts of sand and sand seams. The thickness of this material on Area E generally ranges from 5 to 10 feet.

Glaciolacustrine Clay: This unit is primarily soft clay, with limited occurrence of fine sands. This unit underlies the entire site and has a thickness that ranges from 24 to 36 feet. Grain size analysis shows that this unit is comprised almost entirely of clay sized particles. These materials have a relatively low hydraulic conductivity and the unit is considered an aquitard that separates the shallow and underlying confined water-bearing units.

Basal Till: This unit is a mixture of sand, silt, gravel, and a minor amount of clay. This unit was encountered beneath the glaciolacustrine clay in all deep borings advanced at the former Buffalo Color property, and was encountered immediately above the bedrock. Thickness of this unit ranges from 2 to 5 feet.

Onondaga Limestone: This bedrock unit was described as fractured and weathered, dark gray limestone. Only the upper few feet of this unit were penetrated during site investigation activities. The bedrock surface slopes gently to the south, at a rate of approximately 1.2 feet per 100 feet.

2.2.2 Site-Specific Hydrogeology

Two aquifers have been identified at the site. The first aquifer encountered, the shallow aquifer, is a saturated unconfined system within the fill and sediments above the glaciolacustrine clay unit. The second aquifer, the confined aquifer, occurs within the basal till and weathered upper surface of the bedrock. The RCRA Facility Investigation (RFI) report (Golder, 1997) concluded that the thick, low conductivity glaciolacustrine clay unit acts as an aquitard, separating these aquifers and providing a confining layer for the deeper aquifer. Although both are part of the shallow aquifer, variability in groundwater conductivity and flow direction has been found in the saturated portion of the fill unit compared to the saturated portion of the underlying upper till unit. Thus, groundwater contours were mapped separately for wells screened in the fill unit during the 1997 RFI and the 2007 RI.

Groundwater flow in the shallow aquifer at the site is generally towards the Buffalo River. However, it was concluded that subsurface utilities and other manmade features influence local flow conditions. Sewer lines and associated backfill are below the water table at various locations and were found to act as groundwater discharge points because depressions in the water table surface at the site coincided with the location of utilities. At Area E, shallow groundwater is typically first encountered within 10 feet of the ground surface, and less than 5 feet at many locations, at the interface of the fill/upper till and varies seasonally.

EXISTING CONDITIONS

During the 1997 RFI (Golder), the water levels for the confined aquifer were measured in 12 monitoring wells located across the Buffalo Color facility that were screened within the basal till unit (four of which were installed during the RFI, and eight of which were installed prior to the RFI). The groundwater in the confined aquifer exists under apparent confined conditions within the basal till unit and upper portion of the Onondoga Limestone beneath the base of the glaciolacustrine clay. During the RFI, the confined aquifer contours were interpreted by Golder to indicate a groundwater divide on the eastern side of Area E. Groundwater flow is shown within the confined aquifer as to the east and west of the divide area, parallel to the Buffalo River. Golder reported that gradient in the confined aquifer ranged from 0 feet to 0.008 feet on two separate occasions in 1997.

3.0 PRE-DESIGN INVESTIGATION

Subsequent to the 2007 RI, quarterly groundwater monitoring was completed during 2008 for the entire BCC Site, including Area E in accordance with the ICM Operations, Maintenance & Monitoring Plan (Mactec, March 2006). In 2009 and 2010, PDI work was conducted to support design of the remedy for Area E, consistent with the AAR (Mactec, February 2009), Pre-Design Investigation Work Plan Buffalo Color Site – Area A, B, C, & E (Mactec, August 2009), Area C&E In-Situ Treatment Pre-Design Investigation Work Plan (Mactec, December 2009), Storm Sewer Study Work Plan (Mactec, February, 2010), and supplemental soil borings advanced to obtain chemical and geotechnical information. The scope of work and results associated with these activities are described in the sections below.

3.1 2008 GROUNDWATER MONITORING WELL SAMPLING AND ANALYSIS

During 2008, four rounds of groundwater sampling were completed at monitoring wells located on the BCC property, including Area E. During each sampling event, a water level survey of the Site wells was also completed. The water level survey data is summarized in Table 1. The 2008 quarterly groundwater elevation data and associated groundwater contours for selected 2008 groundwater monitoring events are provided for the fill unit, shallow aquifer, and confined aquifer for Area E in Figures 3.1 through 3.8.

3.1.1 Methods

During 2008, groundwater sampling was completed at monitoring wells located in Area E (Figure 2) and the surrounding area including: R-01, -04, -14, RFI-17, -29, -32, -33, -36, -43, -51, ICM-PZ-04S, RFI-PZ-17, -18, and -19. Wells R-01 and R-04 are confined aquifer wells, while the remaining wells are screened in the shallow aquifer. Wells R-01, -04, -14, RFI-17, -29, -32, and -33 are located inside the property boundaries. The remaining wells are located either in the Prenatt Street right-of-way or on PVS property. RFI-43 was located to the east of Orlando Street on the bulk petroleum terminal property, and was destroyed during activities in that area in early 2009. Groundwater samples were collected using low flow techniques described in Section 3.4. In addition to the groundwater sampling, water levels were measured in all of the wells that were sampled along with numerous additional wells located at Area E. Groundwater elevation data is presented in Table 1.

The groundwater analytical methods used are summarized below with the 2008 sampling round(s) indicated in parentheses:

- Target Compound List (TCL) VOCs by SW-846 Method 8260B (Q1, Q2, Q3, Q4);
- TCL SVOCs, including aniline, by SW-846 Method 8270C (Q1, Q2, Q3, Q4);
- Target Analyte List (TAL) Metals (except mercury) by SW-846 Method 6010B (Q1, Q2, Q3, Q4);
- Mercury by SW-846 Methods 7470A (Q1, Q2, Q3, Q4);
- Total Cyanide by SW-846 Method 9012A (Q1, Q2, Q3, Q4);
- Sulfide by United States Environmental Protection Agency (USEPA) Water/Wastewater Method 376.1 (Q1, Q2);
- Sulfide by USEPA Water/Wastewater Method 4500-S F (Q1, Q2, Q3);
- Sulfide by USEPA SW-846 Method 9030B/9034 (Q4);
- Sulfate by American Society for Testing and Materials (ASTM) Method 375.4 (Q1, Q2, Q3);
- Sulfate by ASTM Method D-516-90 (Q1, Q2, Q3);
- Sulfate by USEPA Water/Wastewater Method 300.0 (Q4);
- Chloride by USEPA Water/Wastewater Method 300.0 (Q1, Q2, Q3, Q4);
- Nitrate/Nitrite by NYSDEC Method 353.2 (Q1, Q2, Q3, Q4);
- Ferrous Iron by USEPA Water/Wastewater 3500D (Q1, Q2); and
- Total Recoverable Phenolics by USEPA Water/Wastewater Method 420.4 (Q1, Q2).

Container size and type, preservative, and holding time requirements for groundwater samples are determined for each analytical group by their respective analytical method. The laboratory provided the appropriate sample containers to Mactec.

Sample analyses for the First through Third Quarters of 2008 were completed by TestAmerica Laboratories in Amherst, New York. Sample analyses for the Fourth Quarter of 2008 were completed by TestAmerica Laboratories in Pittsburgh, Pennsylvania. TestAmerica's Pittsburgh and Amherst laboratories are certified by the State of New York and the National Environmental Laboratory Accreditation Program (NELAP).

3.1.2 2008 Groundwater Monitoring Results

The results of the 2008 groundwater sampling at wells in Area E are presented in Table 2. The laboratory reports for the 2008 groundwater monitoring episodes are presented in Appendix A. Groundwater results were compared to the NYSDEC Class GA (fresh groundwater) water quality standards.

Data from the 2008 groundwater sampling were compared to data presented in the RI Report (Mactec, August 2008). The 2008 groundwater analytical data for Area E were similar to the 2007 RI results and indicated the continued presence of VOC contamination (chlorobenzene, dichlorobenzenes, and other compounds) in shallow groundwater on the southwestern side of Area E.

Groundwater contours for the 2008 quarterly groundwater monitoring events are presented in Figures 3.1 through 3.8. Groundwater flow directly within the fill unit and shallow aquifer on Area E is generally to the south, toward the Buffalo River. Groundwater flow direction in the confined aquifer is to the northwest. These flow directions are consistent with the 2007 RI and 1997 RFI.

3.2 DIRECT PUSH SOIL AND GROUNDWATER SAMPLING – SEPTEMBER 2009

Based upon the RI data, the chlorobenzene plume at Area E was previously estimated to be approximately 135 feet by 340 feet (45,900 square feet [SF]). In September 2009, direct-push drilling equipment was used to collect shallow soil and groundwater samples across the plume area using an approximate 50-foot-on-center grid configuration as guidance (refer to Figure 4). Twenty-four borings, designated PDI-E01 through PDI-E24, were advanced via direct-push equipment during the September 2009 investigation. The work was performed in accordance with the PDI Work Plan (Mactec, August 2009).

The 2009 Area E PDI direct push soil boring logs are presented in Appendix B. The boring logs indicate the sampled depth interval, Photoionization Detector (PID) readings, Unified Soil Classification System (USCS) soil description and classification, and observations relative to potential contamination.

The soil boring logs for Area E indicate that the surface soils consist of fill material to between a depth of one (PDI-E21) and seven (PDI-E13) feet, which generally overlies the upper till material. The majority of the Area E PDI borings were advanced to eight feet bgs. Borings PDI-E03, PDI-E13, and PDI-E14 were advanced to a depth of 12 feet bgs.

Laboratory data for the September 2009 direct push sampling event is compiled in Appendix C for the direct push soil and groundwater samples.

3.2.1 Direct Push Groundwater Sampling

A shallow groundwater sample was collected from the majority of the PDI borings advanced on Area E from the upper zone of saturation for off-site laboratory analysis of TCL VOCs by Method 8260B and TCL SVOCs, including aniline, by Method 8270C, with a subset of the samples (25%) also analyzed for biochemical oxygen demand (BOD), chemical oxygen demand (COD), diesel range organics, and gasoline range organics (Table 3). Groundwater samples were not collected from borings PDI-E16, PDI-E20, PDI-E21, and PDI-E24. At PDI-E16 and PDI-E20, an insufficient amount of groundwater was encountered to collect a sample. At PDI-E21 and PDI-E24, the borings collapsed above the saturated zone.

At the remaining locations, groundwater samples were collected directly from the open bore hole using a peristaltic pump and tubing. During sampling, attempts were made to collect SVOCs, inorganics, and metals samples with turbidity measuring below 50 Nephelometric Turbidity Units (NTUs). If the field turbidity measurements could not be reduced below 50 NTUs at a particular boring, filtered samples were collected through a 0.45 micron filter for SVOCs in addition to the unfiltered fraction.

The analytical results for the September 2009 Area E direct push groundwater samples are presented in Table 3 and exceedances of the applicable NY Class GA standards are shown on Figure 5. The total concentration of VOCs and SVOCs were used to develop isoconcentration lines for total VOC/SVOC levels of 1 mg/L and 10 mg/L, as shown on Figure 5. At Area E, locations where groundwater concentrations for contaminants of concern (COCs) exceeded 10 mg/L appear to be related to the former chemical ASTs, as shown on Figure 5.

3.2.2 Direct Push Soil Sampling

Mactec collected soil samples above the first zone of saturation from the September 2009 direct push borings on Area E for the purposes of refining the extent of Area E source area soil requiring removal and to obtain data for evaluating potential off-site treatment and/or disposal options. During drilling activities, Mactec visually inspected the samples for evidence of contamination such as odor, discoloration, staining, or liquid-phase contaminants. A PID was used to screen the borings for organic vapors. Soil samples were shipped to TestAmerica Laboratories of Amherst, NY for analysis of TCL VOCs by Method 8260B, TCL SVOCs, including aniline, by Method 8270C, and Resource Conservation and Recovery Act (RCRA) metals by Method 6010B including mercury by Methods 7470A and 7471A. Eight soil samples were also submitted for hazardous waste characteristics testing, including toxicity characteristic leaching procedure (TCLP) VOCs, TCLP SVOCs, polychlorinated biphenyls, and TCLP metals, pH, ignitability, and H_2S/HCN release. This resulted in roughly one hazardous waste characteristics sample for every 1,000 cubic yards of in-place material based on the 8,100 cubic yard volume estimate provided in the AAR (Mactec, February 2009).

The laboratory results for the September 2009 Area E direct push soil samples are presented in Table 4. The table includes the NY Commercial Use and Protection of Groundwater SCOs for comparison. The concentrations of VOCs and SVOCs that exceeded these SCOs are shown on Figure 6.

The September 2009 direct push soil sample results, along with test results from the depth-discrete soil samples (Section 3.6) and in-situ confirmatory soil samples (Section 3.7), were used to define the limits of proposed excavation discussed in Section 4.0.

3.3 INSTALLATION OF GROUNDWATER MONITORING WELLS

Based on the results of the Area E direct push boring investigation described above, Mactec installed three additional monitoring wells (MW-E01 through MW-E03) within the Area E VOC plume area. Another well (MW-E04) was installed in the central portion of Area E to investigate shallow groundwater conditions in the vicinity of RI test borings TB-E15, TB-E16, and TB-E30, as specified in the AAR (Mactec, February 2009).

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In August 2010, six additional monitoring wells, designated MW-E05 through MW-E10, were installed at or near the downgradient (southern) property boundary of Area E (Figure 2) to serve as monitoring points for the post-remedial groundwater monitoring specified in the Site Management Plan (SMP) (Mactec, October 2010). Monitoring wells MW-E05, MW-E06, and MW-E07 are located downgradient of the proposed VOC excavation areas on southwestern side of Area E. Monitoring wells MW-E08, MW-E09 and MW-E10 are located downgradient of the former wastewater lagoons and LNAPL excavation area on the southeastern side of Area E.

The locations of the new monitoring wells are shown on Figure 2. Boring logs and well construction details are provided in Appendix D.

The borings for the monitoring wells were advanced using hallow-stem augers. The monitoring wells consist of two-inch diameter Schedule 40 polyvinyl chloride (PVC) riser pipe and 10-foot well screens with a 0.02-inch slot size. The well screens were installed with the bottom of screen at approximately 11.5 to 13 feet bgs. The annular space around the well screen was filled with a sand pack with grain size suitable for retention by the screen. The top of the sandpack was placed one to two feet above the top of the screen. The remainder of the annular space to the ground surface was filled with a bentonite/cement mixture. A protective steel cover was placed over the well and anchored in a cement collar. A locking compression cap was placed on the top of the well riser.

During drilling activities, split-barrel samples were collected in 2-foot intervals until the water table was encountered and then the boring was augered to the bottom depth of the monitoring well. Mactec visually inspected the soil samples for evidence of contamination such as odor, discoloration, staining, or liquid-phase contaminants. A PID was used to screen the borings for organic vapors. Mactec classified the soil using the USCS.

Boring logs were prepared for each monitoring well location and include USCS descriptions and other pertinent information (refer to Appendix D). The boring logs indicate the sampled depth interval, PID readings, USCS soil description and classification, and observations relative to potential contamination.

Each well was developed in accordance with standard well installation procedures to remove sediment. Mactec collected groundwater samples from selected Area E monitoring wells as described in Section 3.4.

3.4 NOVEMBER 2009 GROUNDWATER MONITORING WELL SAMPLING AND ANALYSIS

As part of the PDI activities, the following wells/piezometers on and adjacent to Area E were sampled in November 2009: RFI-17, RFI-18, RFI-29, RFI-32, RFI-33, RFI-36, RFI-51, RFI-PZ-17, RFI-PZ-18, RFI-PZ-19, PS-01, PS-10, PS-12, R-08, R-09, R-11, R-13, R-14, MW-E01, MW-E02, MW-E03 and MW-E04.

The following wells that were scheduled for groundwater sampling or water level measurement as part of the Area E PDI work could not be located and are believed to have been destroyed or covered over. These wells include: PS-02, PS-03, PS-11, PS-13, RFI-39, RFI-42, and RFI-43.

3.4.1 Sampling Methods

Each well was gauged using a water level meter to determine water levels prior to sampling (Table 1). Low-flow groundwater sampling techniques were employed during sampling following USEPA guidance. The wells were sampled using peristaltic pumps with dedicated tubing. The tubing was securely fastened to the well casing or cap during sampling to prevent disturbance of sediment in the well. Pumps were operated at less than 200 milliliters per minute during purging and sampling. Well purging/sampling logs for the November 2009 groundwater monitoring event are provided in Appendix E.

Groundwater samples were submitted for analytical testing in accordance with USEPA SW-846 analytical procedures, as specified in the PDI Work Plan (Mactec, August 2009). Groundwater analytical methods and parameters are summarized below:

- VOCs by Method 8260B with reporting of Tentatively Identified Compounds (TICs) per Contract Laboratory Program (CLP) guidelines
- SVOCs by Method 8270C, to include aniline, with reporting of TICs per CLP guidelines
- RCRA Metals by Method 6010B including mercury by Methods 7470A and 7471A

Investigation-derived wastes were managed consistent with the methods presented in the PDI Work Plan (Mactec, August 2009).

3.4.2 November 2009 Groundwater Monitoring Well Sampling Results

The results of the November 2009 Area E groundwater monitoring well sampling are summarized in Table 5, with the NY Class GA groundwater criteria provided for comparison. The laboratory report is provided in Appendix F. The highest VOC concentrations in Area E groundwater samples collected from monitoring wells were found in samples collected from monitoring wells RFI-32 and MW-E01, as shown on Figure 7.

3.5 AREA E DNAPL INVESTIGATION

The VOC concentrations identified in soil and groundwater on the southwestern side of Area E indicated that potential separate-phase liquids may exist. Because chlorobenzene and other Site-related compounds, in their pure state, are denser than water, Mactec inspected monitoring wells with the highest VOC concentrations for the presence of dense non-aqueous phase liquids (DNAPL). A field investigation was conducted by Mactec on March 8, 2010. First, an oil/water interface probe was lowered to the bottom of shallow wells RFI-32, MW-E01, and IW-E01. The probe did not detect DNAPL in the wells. Next, a disposable bailer was slowly lowered into wells RFI-32 and MW-E01, the bailer was then retrieved for visual inspection. The groundwater was a dark almost black color and had a noticeable chemical odor, however no DNAPL was observed on the bailer.

3.6 DEPTH DISCRETE SOIL SAMPLING

3.6.1 Sampling methods

To better define the vertical distribution of VOCs within the upper till layer (below the first zone of saturation encountered at the base of the fill layer), six additional direct push borings (DDE-01 through DDE-06) were advanced at Area E in the areas of highest VOC groundwater concentrations on March 19, 2010. Two additional borings (DDE-07 and DDE-08) were advanced on August 6, 2010. The locations of the "DDE" borings are shown on Figure 4. Soil samples were collected into the upper zone of saturation and were analyzed for TCL VOCs, TCL SVOCs, and Total Organic Carbon.

The soil boring logs for the depth-discrete sample borings are presented in Appendix G. The boring logs indicate the PID readings, USCS soil descriptions and classifications, and observations relative to potential contamination.

The borings were completed to a depth of 12 feet bgs, with the exception of DDE-04, which was completed to a total depth of 16 feet. At each boring, soil samples were collected from selected intervals within the upper till unit (below the first zone of saturation) for laboratory testing to help define the vertical distribution of VOC contamination.

3.6.2 Depth Discrete Borings Results

Consistent with the prior results, the soil boring logs indicate that surface soil consists of fill material to between a depth of 4 and 5 feet, and the fill overlies the upper till layer.

Analytical results from the depth-discrete soil samples are summarized in Table 6. Cross section lines are shown in plan view on Figure 8, and cross sections that include the depth discrete soil sample analytical results for individual compounds of greater than 1 milligram per kilogram (mg/kg) are provided as Figure 9 (Cross Section D-D'), Figure 10 (Cross Section E-E'), Figure 11 (Cross Section F-F'), Figure 12 (Cross Section J-J').

The samples results indicate that in the area of the plume located around the former tank farm, concentrations of chlorobenzene and other VOCs greater than 1 mg/kg are present below the water table around the former large AST farm within the upper till unit.

3.7 CONFIRMATORY SOIL SAMPLES

To better define the extent of shallow excavation required in Area E, 27 confirmatory soil borings (CS-01 to CS-27) were advanced using a direct push drilling rig on March 23 and 24, 2010. The purpose of the confirmatory sampling program was to obtain soil data that, where possible, will be used to supplement the record soil samples that will be collected from the remedial excavation sidewalls and bottoms to document soil conditions remaining after remediation. The borings were located around the two former AST farm areas in the southwest corner of Area E, and between buildings 316 and 320 (Figure 13). The confirmatory sample borings were completed to the first zone of saturation and a soil sample was collected from each boring from an interval above the water table. Where possible, the samples were biased by collecting from the interval that exhibited highest field PID screening result and/or other evidence of contamination. The work was completed in accordance with the scope of work described in an email from Mactec to NYSDEC dated March 11, 2010.

Confirmatory soil borings CS-01 through CS-27 were advanced to 8 feet bgs, except for CS-01 which had refusal at 7 feet bgs and CS-08 which was advanced to 12 feet. Boring logs are attached in Appendix G.

An additional 12 confirmatory soil borings, designated CS-28 through CS-39, were advanced on May 13, 2010 to supplement the previous confirmatory sampling event and further characterize the areas of shallow soil contamination. Boring locations are shown on Figure 13. The work was completed in accordance with the scope of work presented in an email from Mactec to NYSDEC dated May 7, 2010. Soil samples were collected from the borings following similar sampling protocols, with the samples collected above the first zone of saturation. Several of the borings were advanced to 16 feet in order to determine the contact between the upper till and the clay layer in this area, which varied between 10 and 14.5 feet bgs. The remainder of the borings were completed to 8 feet bgs, with the exception of CS-41, which encountered an obstruction at 14 feet bgs (boring logs are attached in Appendix G).

While probing at CS-37, evidence of non-aqueous phase liquid was encountered at that water table, and a saturated soil sample was collected and analyzed from that boring.

On June 16, 2010, eight additional direct push borings (borings CS-40 through CS-47) were advanced on Area E to further define the limits of excavation for the source removal effort. Boring locations are shown on Figure 13. The borings were completed to 8 feet bgs except for CS-42, which encountered an obstruction at 5.5 feet bgs, and CS-43, which was advanced to 12 feet bgs (boring logs attached in Appendix G). Soil samples were collected above the water table for laboratory testing using the same sampling and testing protocol as described above. The scope of this work was described in a June 15, 2010 email from Mactec to NYSDEC.

On August 6, 2010, four additional direct push borings (borings CS-48 through CS-51) were advanced between the locations of former BCC buildings 316 and 320 to further define the extent of shallow VOC-contaminated soils in that area (see Figure 13). Borings CS-48 and CS-49 were advanced to 12 feet bgs and borings CS-50 and CS-51 were advanced to 8 feet bgs (boring logs attached in Appendix G). Soil samples were collected above the water table for laboratory testing using the same sampling and testing protocol as described above.

Analytical results from the "CS" boring soil samples are summarized on Table 7. The laboratory reports for the sampling events are provided on CDs in Appendix H.

Results from the "CS" soil boring samples, along with prior 2007 RI and 2009 PDI soil sample data, were used to identify locations that exceed the excavation criteria for shallow (vadose zone) soil specified in the AAR (10 mg/kg of total VOCs or SVOCs) and define the limits of excavation for the source removal effort. The proposed excavation limits are shown on Figure 13. Boring results that fall below the source area criteria are considered the limit of excavation in that area. It is SBD's intent to use the available data, supplemented where necessary by excavation sidewall samples as described in Section 4.0, to determine the final limits of shallow remedial excavations at Area E.

3.8 TEST PITS

On August 4, 2010, two test pits (TP-E1 and TP-E2) were excavated within the Area E VOC plume/source area. The purpose of the work was to evaluate the stability of the soils in an open-cut scenario, as well as to collect soil samples for analytical and chemical oxidation bench testing, as described in a Mactec email to NYSDEC dated August 2, 2010.

Ontario Specialty Contracting (OSC) used a trackhoe to excavate the test pits under Mactec's direction. Mactec personnel were on Site to collect samples and evaluate geotechnical issues. Mactec prepared logs for each test pit, copies of which are provided in Appendix I.

The test pits were excavated until the soft glaciolacustrine clay unit was encountered. The following samples were collected from the test pits:

- Samples were collected from each test pit from discrete depth intervals for TCL VOCs and TCL SVOCs testing at TestAmerica's Amherst, NY laboratory. Samples were collected from depths of 5'-7', 7'-9', and 9'-10' at test pit TP-E1 and from depths of 5'-7', 7'-9', and 9'-11' at test pit TP-E2. The analytical results for these samples are summarized on Table 8. The analytical report for these samples is provided in Appendix J.
- Composite soil samples were collected at each test pit from the till unit and provided to OSC for waste characterization testing (TCLP and other analyses). The samples were submitted by OSC to Paradigm Environmental Services, Inc. (Paradigm) of Rochester, NY. The analytical results for these samples are summarized on Table 8 and copies of the Paradigm analytical reports are provided in Appendix K.

The test pits were excavated with near-vertical sidewalls, with no significant caving or sloughing observed. Only minimal quantities of groundwater were encountered, although it should be noted that the work occurred during a dry period of the summer. Based on the results of the test pit activities and geotechnical evaluations

(Appendix L), it was determined that open-cut methods could be utilized for remedial excavations on Area E to the top of the glaciolacustrine clay layer, which was encountered at an approximate depth of 10 feet bgs on Area E.

3.9 AREA E IN-SITU TREATMENT TREATABILITY STUDY

The AAR identified in-situ enhanced bioremediation of the shallow VOC plume at Area E as the preferred remedy for groundwater. The AAR:

- recommended a pre-design investigation, including a treatability study, be conducted to collect site-specific data related to geochemical and biological processes at the Site in order to determine the appropriate amendments for enhanced bioremediation;
- recommended that a pilot-scale test be conducted on-Site based upon the results of the treatability study to determine the injection locations, spacing, and effectiveness; and
- indicated that full-scale implementation would be based upon the results of the treatability and pilot-scale tests.

A treatability study was conducted as part of the PDI to support the design and implementation of in-situ treatment for Area E groundwater. The treatability study was conducted consistent with the scope of work presented in the AAR and the Area C&E In-Situ Treatment Pre-Design Investigation Work Plan (Mactec, 2009). The treatability study consisted of both a field pilot-study and a bench-scale laboratory study for Area E. Mactec subcontracted GHR Consulting Services (GHR) to conduct a treatability study to evaluate the site-specific in-situ groundwater treatment approach under the field oversight of Mactec.

Additional treatability studies were conducted on Area C, as documented in the Area C PDI/50% Design Report (Mactec, June 2010), which provided data useful for developing the remedy for Area E.

The objectives of the field pilot-study and a bench-scale laboratory study efforts on Area C and Area E were to:

1. Collect site-specific data related to geochemical and biological processes at the Site through laboratory and/or bench-scale testing in order to determine the appropriate amendments for enhanced bioremediation approach; and

2. Evaluate the injection of such amendments into the contaminated aquifer through implementation of a pilot-scale test (Field Pilot-Study Test).

3.9.1 *In-situ Treatment Field Pilot-Study*

At Area E, the field pilot-study consisted of a bioremediation field pilot study.

Mactec subcontracted GHR to conduct a field pilot-study to evaluate the in-situ oxygen curtain (iSOC®) technology at Area E. A copy of the report is included as Appendix M. The objective of the Area E field pilot-study was to evaluate the radius of influence of the iSOC® technology under site-specific conditions for the purpose of determining appropriate spacing requirements for full-scale implementation. The objective of the field pilot-study was to operate the iSOC® at the infusion well until equilibrium was achieved, as defined by achieving dissolved oxygen (DO) concentrations that do not exhibit a further measurable increase, and/or until the concentration in the performance well reached that in the infusion well.

The Area E field pilot-study included the following activities:

- Installation of a 2-inch diameter infusion well (IW-E01) screened from 3 to approximately 10 feet bgs, approximately 5 feet upgradient of existing monitoring well RFI-32.

- Collection of a composite soil sample during installation of IW-E01 for purposes of conducting the bench-scale study, with a portion of the soil sample sent for laboratory analysis of chlorobenzene.

- Collection of a groundwater samples from RFI-32, IW-E01, and MW-E01 for purposes of conducting the bench-scale study, and from IW-E01 for laboratory analysis of chlorobenzene.

- Field measurement of groundwater from IW-E01 and RFI-32 for ferrous iron, nitrate and phosphate by colorimetric test kits. The sample from MW-E01 could not be analyzed by colorimetric test kits due to the dark grey to black color of the water.

- A 55 day field pilot-test involving monitoring the infusion of oxygen at an average rate of 35 grams per day at IW-E01 by measuring DO at IW-01 and RFI-32. Each monitoring event lasted approximately 15 minutes. During day one, DO was measured using an YSI 600XL multi-parameter water quality monitor and low-flow cell, and recorded in the field log book every hour. Subsequently, the frequency of monitoring was decreased (refer to Appendix M).

A total of approximately 2 kilograms of oxygen was injected during the field pilot over 55 days. The concentrations of DO in IW-E01 ranged from 9.9 to 75.3 mg/L, and did not appear to reach equilibrium. The DO at the performance well, RFI-32, was never measured at a concentration greater than 3.1 mg/L.

3.9.2 Biodegradation Rate Testing and Screening Analysis

To evaluate the application of a bioremediation technology, Mactec subcontracted GHR to conduct a bioremediation rate (respirometric) test and screening analysis to further evaluate the in-situ oxygen curtain (iSOC®) technology implemented during the Area E field pilot-study described in Subsection 3.9.1.

The bioremediation rate test utilized groundwater samples from RFI-32 and IW-E01 collected during the field pilot-study as described in Subsection 3.9.1. The objective of the bioremediation rate test was to evaluate the effect of nutrients (phosphorus, nitrogen, and trace elements including boron, copper, iron, magnesium, manganese, molybdenum, sulfur and zinc) and inoculants (consortium of microbes – proprietary culture) on aerobic biodegradation of chlorobenzene in site groundwater.

The two groundwater samples were used to setup four 1-liter reactors (killed control, unamended groundwater, nutrient and trace element amended groundwater, and nutrient, trace element, and inoculant amended groundwater) per sample (eight reactors total). One additional reactor was setup with the soil from IW-E01, amended with nutrients and inoculum to provide data necessary to estimate the maximum oxygen consumption that could be expected in the field.

Oxygen consumption within each reactor containing groundwater was monitored continuously over a period of approximately 600 hours. The oxygen consumption with the reactor containing soil was monitored continuously over a period of approximately 500 hours. Plots of oxygen consumption over time for each of the setups are presented in Appendix M.

The screening analysis consisted of several rounds of sampling and analysis of groundwater from RFI-32 and IW-E01 prior and during the course of the pilot-test for COD and plate counts (total and chlorobenzene degraders), as well as final analysis of each of the eight reactor setups for COD and chlorobenzene.

Chlorobenzene concentrations were reduced during the test to non-detect concentrations in both the amended and unamended samples obtained from RFI-32 and IW-E01. The final COD concentrations for both the unamended and nutrient amended reactors for RFI-32 and IW-E01 groundwater were approximately 30 to 50 percent of the initial concentration of COD, which has been identified as an indication that COD is recalcitrant under the test conditions. Results for both unamended and amended tests resulted in final concentrations of chlorobenzene below laboratory detection limits.

GHR prepared a report summarizing the results of the testing and screening (refer to Appendix M).

3.9.3 Additional Bench Testing – August 2010

During the August 2010 test pit work, bulk samples for chemical oxidation bench testing were collected by Mactec from test pits excavated with the VOC plume location on Area C (see Area C Final Design Report). The samples were composited from the upper till material (in large glass containers) and shipped to Regenesis in San Clemente, California for chemical oxidation bench testing.

Regenesis used the samples to conduct experiments to determine the effect, if any, of RegenOxon the amount of Priority Pollutant Metals (PPM) and hexavalent chromium present in the bulk samples. The results of this type of laboratory study provide a proof-of-concept for use of in-situ chemical oxidation (ISCO) reagents like RegenOx to degrade a significant fraction of the subject contaminants. Although bench scale tests alone are not accurate means of determining optimal loadings for field-scale applications of ISCO agents, the results are taken into consideration as the field-scale loadings are determined in the Regenesis design software, which considered crucial factors including, for example, contaminant concentrations, hydrogeology, and oxidation stoichiometries.

The bench testing completed by Regenesis in August 2010 involved testing of the Site soil samples (with appropriate control samples) to evaluate the effects of RegenOx on Site metals and VOC concentrations. The scope of work, and interpretation of results, is provided in the report issued by Regenesis dated September 27, 2010, a copy of which is provided in Appendix N.

Bench-scale testing was conducted to evaluate the potential effectiveness of in-situ chemical oxidation of chlorobenzenes using RegenOx. In addition, the potential for mobilization of Priority Pollutant Metals (PPMet) and hexavalent chromium in site groundwater as a result of in-situ chemical oxidation using RegenOx was assessed.

Six amber glass jars with Teflon®-lined lids containing site soil were provided by Mactec to Regenesis in San Clemente, CA for the bench-scale laboratory testing. Two areas were sampled to obtain the minimum 20 pound requirement for soil material. Upon receipt by Regenesis, the soil was homogenized in a plastic-lined 5 gallon bucket and repacked into the original containers. When manipulating the soil, it was noted by Regenesis that soils contained rocks and some pieces of debris (wood chips, twigs). The consistency of the soil was very dense clay that was naturally formed into large chunks making the soil difficult to homogenize. This is consistent with previously logged site conditions. The soil was kept in sealed containers at 4^{o}C prior to initiating the testing.

The chlorobenzene treatment test setups consisted of duplicate, air-tight, 250 mL glass containers with Teflon®-lined lids. Duplicate soil samples were analyzed at the beginning of the experiment to establish baseline concentrations of chlorobenzenes, and again at 7 days and 14 days. Chlorobenzenes concentrations were determined by EPA method 8260B for volatile organic compounds. Each experimental sample was prepared with 250 g of contaminated soil and 125 mL of purified laboratory water. The RegenOx-amended test setups received a 125 mL solution of RegenOx Part A (oxidant) and RegenOx Part B (activator) in the purified laboratory water. The RegenOx loading of the test setup was 0.74% on a per weight basis (RegenOx to soil); a 1:1 ratio of part A to part B was used. In addition to the RegenOx, each treated reaction vessel was also dosed with 0.33% hydrogen peroxide on a per weight basis (hydrogen peroxide to soil).

The metals mobilization test setups consisted of duplicate, air-tight, 2 L plastic containers with Teflon®-lined lids. Duplicate soil samples were analyzed at the beginning of the experiment to establish baseline metals concentrations in the soil samples. Each test setup was prepared with 1000 g of contaminated soil and 1500 mL of purified laboratory water. For the control tests, 1500 mL of purified lab water was the only additive in the reaction vessel. For the amended test setups, a single RegenOx loading of 0.74% w/w versus soil of total RegenOx were used with a 1:1 ratio of part A to part B. In addition to the RegenOx, each treated reaction vessel was also dosed with 0.33% w/w versus soil of hydrogen peroxide. The supernatant water samples were collected and filtered through a 0.45µm syringe filter prior to submittal for analysis. All laboratory equipment used was composed of plastic in order to avoid metals contamination from laboratory borosilicate glass. Metals levels in soil were determined by EPA method 6010B and EPA method 7471A for mercury. Dissolved metals levels in water were quantified using EPA method 6020 and EPA method 7470A for mercury.

The chlorobenzene treatment test results provide evidence that the RegenOx ISCO technology has the potential for oxidative degradation of monochlorobenzene and dichlorobenzene at the site, though persistence of trichlorobenzene was observed. The metals mobilization test results indicate the potential for RegenOx treatment to result in mobilization of priority pollutant metals and the generation of hexavalent chromium. It should be noted, however, that available literature suggests that post-ISCO chromium levels begin to approach pre-ISCO concentrations at 6 to 12 months and are back to pre-ISCO concentrations by 12 to 24 months (Moore, 2008).

A copy of the complete Regenesis Laboratory Report dated September 27, 2010 is provided in Appendix N.

3.10 AREA E STORM SEWER EVALUATION

At Area E, underground storm sewer lines at the Site discharge stormwater (including water from existing storm sewer inlets) via a 42-inch diameter pipe that runs through the adjacent PVS property to the Buffalo River at Outfall 011. The outfall is a former State Pollutant Discharge Elimination System (SPDES)-permitted outfall previously owned and operated by Buffalo Color Corporation. The outfall previously also received significant volumes of non-contact cooling water when the Buffalo Color plant was in operation. SBD believes that its right to operate and maintain the outfall and associated sewer line on the PVS property are preserved via an easement. During the RI, sampling at Outfall 011 indicated that groundwater likely infiltrates the existing storm sewer lines in areas where the lines are below the water table.

Mactec conducted an evaluation of the Area E storm sewer system in accordance with a work plan transmitted to the NYSDEC via email on February 16, 2010. Selected storm sewer manholes in Area E were visually inspected by Mactec personnel on February 18 and 19, 2010. Mactec observed the general condition of the manholes, focusing on the presence of standing water and sediment as well as signs of structural deterioration and inflow/infiltration. Mactec measured the depth from ground surface to standing water/ice (if present), manhole inverts or top of sediment, and pipe inverts (whenever visible and accessible). Field observations and measurements concluded that Area E storm sewer manhole inverts range from approximately four feet to 11 feet bgs. Minor amounts of sediment (≤2") and/or flowing water (≤ 4") were observed in the manholes at the time of Mactec's inspection. All of the manholes inspected were constructed of brick and appeared to be in good general condition with negligible structural deterioration and minimal evidence of inflow/infiltration.

A series of closed circuit television (CCTV) inspections of select storm sewer reaches in Area E were performed by National Vacuum in 2010. Copies of the reports issued by National Vacuum are provided as Appendix O. In summary, review of the March 2010 CCTV inspection video revealed the following:

- Storm sewer pipes are constructed of vitrified clay, which is consistent with historical information shown on Site plans.
- Pipe segments appear to be 3 feet in length (i.e., joint spacing is approximately 3 feet).
- A number of the joints showed encrustations due to groundwater infiltration. Encrustations are considered minor as they did not appear to cause significant restriction of flow.
- Several leaking secondary laterals, at "break-in" laterals in particular, were observed.
- Minor longitudinal cracking was noted along the crown of a few pipe segments. The observed cracks did not appear to present a structural stability issue for the pipe segments.

- Overall, relatively little sediment and debris was detected in the reaches that were inspected, although there were some areas with more significant sediment and/or debris. The debris appeared to consist of primarily masonry or concrete chunks that presumably entered the storm drain system via storm inlets.

During the original CCTV inspection work completed in March 2010, the 42-inch pipe from DMH-E31 in Area E to Outfall 011 could not be completed due to the presence of a pump in the line. In May 2010, the pump was removed by National Vacuum and the CCTV inspection of the outfall sewer line was completed. Additional CCTV inspection was completed for several north-south sewer laterals located on the western side of Area E.

Sampling and analysis of water in Area E storm sewers was completed during dry weather on April 24, 2010 and again on January 7. 2011. Samples were collected at the following manholes: DMH-E7, DMH-E15, DMH-E18, DMH-E20, and DMH-E30. The analytical results for these samples are summarized in Table 9, and the associated TestAmerica analytical reports are provided in Appendix P. The results are consistent with sampling completed during the 2007 RI and indicate the continued presence of Site-related compounds within the sewers during dry periods, suggesting that infiltration of groundwater occurs.

In summary, the Area E storm sewer system appears to be in good condition, particularly considering the age of the system and Site use. Based on the information available to date, it is possible to rehabilitate and re-use the storm sewer system in Area E.

3.11 AREA E GEOTECHNICAL INVESTIGATION

To support analysis of the remedial excavation design, Mactec completed a geotechnical investigation of soils at the Area E VOC plume area on May 20, 2010 through June 2, 2010. The work was completed in accordance with the scope of work presented in an email from Mactec to NYSDEC dated May 18, 2010. Drilling activities were completed by SJB Drilling using a CME 550 drilling rig. During this investigation, four borings (GB-E01 through GB-E04) were advanced to sampler refusal on apparent bedrock. The boring locations are shown on Figure 8 and Figure 13.

The borings were advanced using a combination of hollow stem auger, rotary wash with driven casing (drive and wash), and rotary wash without casing (open-hole mud rotary drilling) techniques. Hollow stem augering techniques were completed in the upper 5 feet of drilling through the fill unit. Drive and wash drilling was then performed from 5 feet and extended into the underlying glaciolacustrine clay layer. Drive and wash drilling was completed until a thin-wall undisturbed sample was collected at each boring location. Open-hole mud rotary drilling was then performed until boring completion by sampler refusal between 42.8 and 44.5 feet bgs.

During drilling activities, Standard Penetration Testing (SPT) was performed using a split-barrel sampler at a frequency of approximately one SPT per every 5 feet. Soils from the split-barrel sampler were collected and placed in 8 ounce jars for geotechnical laboratory testing as determined by Mactec's Geotechnical Engineer. At each boring location, one thin-walled tube sampler (Shelby Tube) was used to collect an undisturbed soil samples for geotechnical laboratory testing. Also, field vane shear tests were performed approximately every 10 feet after encountering the glaciolacustine clay layer.

Boring logs for the geotechnical borings are provided in Appendix B and the geotechnical laboratory test reports are provided in Appendix Q.

3.12 DATA VALIDATION

Data validation for the chemical analyses for the soil and groundwater samples collected during the 2009-2011 PDI work was completed by Mactec chemists in accordance with the Honeywell Remediation program Level II and III data validation procedures described in the RI Quality Assurance Project Plan (QAPP) (Mactec, 2006) and the NYSDEC Data Usability Summary Report (DUSR) guidelines (NYSDEC, 2002). Ten percent of samples for each matrix were also validated using Level IV procedures (full EPA Guideline validation). Validation levels are documented for each set of investigation data in validation reports, copies of which are provided in Appendix R. Project Quality Control (QC) criteria and summary of validation actions and observations are also documented in the data validation reports in Appendix R.

During the Level II data validation the following data quality indicators were reviewed:

- Case Narrative
- Sample Collection and Holding Times
- QC Blanks
- Laboratory Control Samples
- Matrix Spike/Matrix Spike Duplicates
- Laboratory and Field Duplicates
- Surrogate Spikes
- TICs
- Reporting Limits
- Data Completeness
- Electronic Data Verification

The following additional checks were added to the Level II review based on data review procedures included in the NYSDEC DUSR guidance:

- Initial Calibrations
- Continuing Calibrations
- Instrument Performance Checks (Tune)
- Internal standards
- Calculation and transcription checks
- Raw data verification
- Analyte concentration quantization

During the Level IV review the following data quality indicators were also reviewed:

- Calculation checks specified in USEPA Guidelines
- Raw data verification
- Analyte concentration quantization

Data quality reviews for the items listed above were completed using professional judgment and general data validation procedures described in USEPA validation guidelines (USEPA, 1999; USEPA, 2004; USEPA, 2005; USEPA, 2006a; USEPA, 2006b). Data qualifications were completed if necessary in accordance with the validation guidelines and professional judgment using the following qualifiers:

U = The target compound was not detected at concentrations greater than the associated quantization limit

J = The reported concentration is considered an estimated value

N = The reported concentration is considered to be presumptive

R = Data is rejected and is not usable

4.0 REMEDIAL DESIGN – AREA E

The data obtained from the 2009-2011 PDI work, as well as prior data obtained during the 2007 RI and earlier studies, has been used to develop the basis and final remedial design for Area E, as presented in the following sections.

4.1 AREA E SOURCE REMOVAL

Using the results of the PDI work, the limits of proposed excavation for the VOC source removal at three locations on Area E have been identified (Figure 13 and Illustration 2). Design drawings for the excavation work are included in Appendix S. The proposed excavation areas are identified as Areas E1, E2, and E3. As specified in the AAR, the excavation program targets unsaturated soil samples with greater than 10 mg/kg of site-related VOCs or SVOCs. In addition, portions the E1 and E2 excavations will extend to the top of the soft, gray glacial clay unit (encountered at an approximate depth of 10 feet below existing grade on Area E). The third location, E3, will extend to a depth of approximately 5 feet. The work will be completed as open cut excavations (i.e., without sheeting, shoring or bracing). Sidewalls will be sloped back as determined necessary by the Contractor to maintain excavation stability and protect adjacent structures/utilities. Mactec's geotechnical evaluation of an open cut excavation with sloped sidewalls is included in Appendix L; however, ultimate responsibility for excavation stability will remain with the Contractor. The work will be completed in segments, as determined appropriate by the Contractor, to minimize water handling and prevent sidewall sloughing.

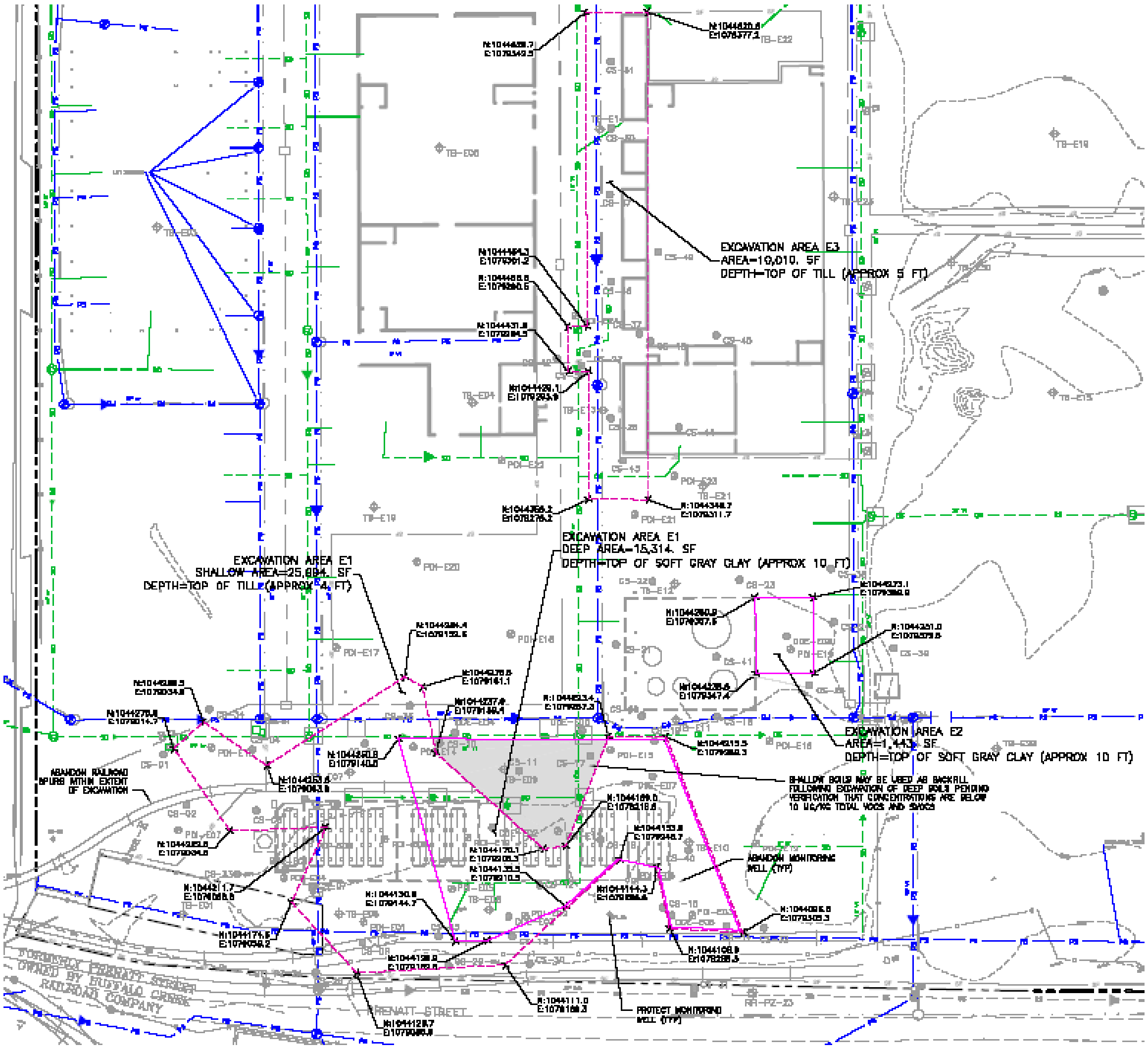

Illustration 2: Area E Proposed Excavation Areas

Excavations on Area E can be further described as follows (all quantities are approximate):

Area E1

As shown on Figure 13 and in the design drawings (Appendix S), this excavation area will include removal of shallow (i.e., 4 feet average depth) contaminated fill material, as well as an area of deeper excavation (average depth of 10 feet) to remove contaminated glacial till material.

- Removal of rail spurs and concrete dike/foundations associated with the former tank farm will be required.
- Removal of surface concrete/pavement associated with the former tank farm will be completed prior to excavation at this location.
- Shallow excavation surface area (0-4 ft) = ~25,996 SF, total in-place volume = ~3,850 cubic yards (CY).
- Deep excavation surface area (4-10 ft) = ~15,314 SF, total in-place volume = ~3,400 CY
- Shallow (0-4 ft) soil located between the shallow and deep excavation limits on northern side of Area E1 (shown as the gray hatched area) will be stockpiled separately and tested for comparison to onsite reuse criteria. Depending on test results, this material will either be reused on site as fill or will require offsite disposal (most likely as non-hazardous waste). The surface area of this material is ~3,850 SF and the in-place volume (0-4 ft) is estimated to be 570 CY.
- Waste characterization testing indicates that the vast majority of the soil to be removed passes TCLP and can be disposed off site as non-hazardous waste. Additional waste characterization testing will be completed as necessary to meet disposal facility requirements.
- Any exposed sections of the process sewer will be removed and disposed along with excavated soils, with remaining open ends plugged with concrete. Also, a portion of the storm line will be removed that is located inside the extents of excavation. Clay backfill will be used where appropriate along exposed segments of sewer pipe to minimize the potential for the backfill to act as a preferential contaminant pathway.

Area E2

The area depicted on Figure 13 and the design drawings (Appendix S) will be removed to an average depth of 10 feet.

- The surface area of excavation = ~1,443 SF; total in-place volume = ~534 CY.
- Based on existing analytical data, it is assumed that all of the excavated material from this location can be disposed as non-hazardous waste, pending additional characterization testing.

Area E3

The area depicted on Figure 13 and the design drawings (Appendix S) will be removed to an average depth of 5 feet.

- The surface area of excavation = ~10,010 SF; total in-place volume = ~1,850 CY.
- The western side of this excavation will encroach upon an abandoned process sewer line and active storm sewer. Any exposed sections of the process sewer will be removed and disposed along with excavated soils, with remaining open ends plugged with concrete. Removal of the storm line may be required if backfill is grossly contaminated, in which case the line will be replaced with a new section of piping. Clay backfill will be used where appropriate along exposed segments of sewer pipe to minimize the potential for the backfill to act as a preferential contaminant pathway.
- It is assumed that the vast majority of the material excavated from this location can be disposed off site as non-hazardous waste. Additional waste characterization testing will be completed as necessary to meet disposal facility requirements.
- Some removal of surface concrete/pavement may be necessary prior to excavation at this location.

General – Area E Excavations

- Caution must be exercised where excavations are near the Prenatt Street property line and railroad spur used by PVS Chemicals, active storm/process sewers, and other structures.
- Prior to excavation, Contractor will remove surface concrete (including former tank farm dike floor and foundations) that are present within the limits of excavation. Contractor will segregate concrete (crush/reuse if appropriate).
- Contractor will remove any abandoned utilities, including process or storm sewer laterals, which may be encountered within the excavations. Contractor will plug any open ends with concrete or via other appropriate methods.
- Contractor will stockpile or direct load material designated for off-site disposal as necessary.
- Frost walls/concrete foundations may be present within the excavation limits and will require removal.
- Contractor will control excavation water as needed. It is assumed that water will be treated/filtered onsite and discharged to the BSA sewer under permit held by the Contractor.
- Contractor will provide odor and dust control equipment/material on-site for use as needed
- Contractor will provide air monitoring as necessary during excavation activities to monitor the worker breathing zone and determine required PPE levels in accordance with the Contractor's site-specific Health and Safety Plan.
- Backfill will be placed in 12-inch lifts with approved crushed demolition brick/concrete and/or borrow material.
- A reagent (Regenesis ORC-A), supplemented by a nitrogen-based fertilizer, will be added to the backfill material as it is placed, as specified on the design drawings and specifications (Appendix S). Supporting calculations for the

quantities of ORC-A and fertilizer to be added to each excavation are provided in Appendix T.

- The excavated areas will receive final cover (12-inch layer of clean soil/topsoil or new pavement), as directed by SBD.
- A NY-licensed surveyor will survey the final excavation limits; the survey data will be used to prepare the record drawings.

The final excavation areas and volumes may vary based on field conditions and the analytical results of record samples collected from the excavation sidewalls and bottoms. Detailed specifications for the Area E source removal effort, including requirements for record sampling, are provided in Appendix S.

4.2 AREA E GROUNDWATER

Based upon results of the PDI soil and groundwater sampling, the identified location and magnitude of contamination, and the results of the PDI treatability studies, the proposed remedial action for VOC-contaminated groundwater located on the southwestern side of Area E is source removal combined with the addition of a biostimulant (Regenesis ORC-A) to the backfill material for residual cleanup of groundwater, as described in Section 4.1.

The selected remedy in the AAR report (Mactec, February 2009) included enhanced in-situ biological treatment of the shallow aquifer to reduce contaminant mass. During the treatability study, biological tests demonstrated that biodegradation of chlorobenzene is possible and that oxygen and nutrient addition improved biodegradation over existing conditions. However, treatability studies conducted on the VOC plume at Area E suggested that the contaminant load in source areas may represent a higher oxygen demand than can be reasonably delivered. For this reason, biological approaches, including natural attenuation, are recommended to address residual contamination subsequent to removal of the existing source areas. Therefore, the selected remedy involves source removal via excavation of contaminated soils as described in Section 4.1.

4.3 AREA E SEWERS

Unused laterals, pits/sumps, and other structures associated with the former Area E process sewer system have been abandoned during the demolition process. Additional abandonment/removal will occur when process sewer lines and structures are encountered within the designated soil removal areas. The main process sewer lines located on Area E, which discharge to the BSA, will be preserved for reuse during future redevelopment of the site.

Based on existing PDI data, rehabilitation of the existing Area E storm sewer system is the preferred remedial alternative. The request for proposal (RFP) document, which includes the scope of work for the rehabilitation of storm sewers in Area E, is presented in Appendix U. The objective of the selected alternative is to prevent the potential infiltration of contaminated Site groundwater to the storm sewer system, which will continue to discharge to the Buffalo River via Outfall 011.

The selected remedial alternative to prevent groundwater infiltration of the Area E storm sewer system consists of the following:

- Former roof drains associated with the demolished structures, as well as other unused storm sewer laterals, will be removed or permanently plugged.
- Essential storm sewer laterals and structures that are exposed during remedial excavation will be replaced by new HDPE piping and new concrete structures, sealed against groundwater infiltration.
- The main storm sewer pipes and structures on Area E will be sealed against groundwater infiltration. Cured-in place pipe (CIPP) will be installed in the storm sewer pipe, and manholes/structures will be sealed with spray-on Quadex Alumaliner (a calcium aluminate mortar specifically designed for sewers). Manufacturer's literature for the CIPP procedure and materials to be installed in the existing pipes, as well as the Quadex Alumaliner material and the spray application equipment that will be used to seal manholes/structures, is provided in Appendix U.

Pre- and post-application CCTV surveys will be completed to document the work. Post-remediation samples of storm water will be collected from the same manholes sampled previously, with results used to demonstrate the effectiveness of the remedy This information, along with record drawing of the post-remedy Area E process and storm sewers, will be included in the FER.

4.3.1 CIPP Specifications

The CIPP thicknesses are for full structural, stand-alone, H 20 load bearing capability without reliance on the existing host pipe. The manufacturer reviewed Site-specific chemical data (soil and groundwater) and determined that the levels of chlorobenzene, aniline, and other constituents identified on site are not present in adequate concentration or at adequate temperature to affect the structural, chemical, or life span expectancy of the CIPP material (iso-Polyester) or adhesive selected for this project. The anticipated lifespan of the CIPP material is 50 years. The manufacturer is warranting the CIPP materials and workmanship for a ten (10) year period for this job.

Calculations sheets were provided by the manufacturer for the various diameters of CIPP that will be used on Area E are provided in Appendix U. The calculations utilized parameters from ASTM F 1216 - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube, AASHTO Standard Specifications for Highway Bridges, and Concrete Pipe Handbook. Mactec reviewed the calculations and determined that conservative and/or appropriate assumptions were utilized in the calculations (i.e. existing pipes are all fully deteriorated; soil cover to top of pipe of 10 feet for all pipes sizes [actual depths are 9 feet for 36" and 42"; 6 feet for 30"; and 5 feet for less for smaller pipes]; soil modulus and unit weight of soil; non-pressure pipe; pipe roughness coefficients). Parameters included loading (H20 traffic); Safety Factor of 2; and CIPP strength parameters (ASTM F 1216). Mactec found the calculations to be reasonable and appropriate.

4.3.2 Procedure for Sealing of Manholes/Structures

Manholes and structures associated with the Area E storm sewer system will be sealed to prevent leakage and groundwater infiltration using the following procedures:

- The manhole will be inspected visually for points of leakage/infiltration;
- Loose bricks will be replaced/repointed and areas of missing/deteriorated mortar will be sealed with Quadplug (quick-setting hydraulic cement); and
- The entire manhole will receive a coating of sprayed-on Quadex Alumaliner; the minimum anticipated thickness of the applied coating is ½-inch.

As noted above, manufacturer specifications for the Quadplug and Quadex Alumaliner products, as well as the spray apparatus, are provided in Appendix U.

4.4 AREA E COVER SYSTEM

The final remedy specified in the AAR requires that the Site be provided with a cover system that consists of a combination of 12 inches of clean soil or clean gravel (with underlying demarcation layer), pavement, concrete slabs from former structures and new or existing buildings. This cover system, once installed, will be maintained for the life of the property in accordance with the Area E SMP (Mactec, October 2010) as required under the BCA. The following sections provide design requirements for the soil cover system, which will be placed in all areas of the Site not covered by pavement or buildings.

4.4.1 Soil Cover System Materials

Appendix V includes drawings, specifications and other details regarding the components of the soil cover system. Proposed locations of the soil cover for the entire BCC plant site, including Area E, are shown on the figure titled "Proposed Final Cover" in Appendix V. The intent of the cover system is to provide a physical barrier between potential receptors and the existing site soils.

For areas that will not be covered by pavement, concrete or buildings, the cover system will consist of not less than 12-inches of clean soil, or in some instances as described in Section 4.4.4, clean gravel. Where soil will be placed, the Owner will place not less than 10-inches of clean borrow material and not less than 2-inches of topsoil. The borrow material is from a local source identified and tested by the owner and approved by the NYSDEC. Copies of the gradation and chemical test results for the borrow material are provided in Appendix V.

The overall thickness of the soil layer will not be less than 12-inches, although it may be greater than 12-inches in some areas to achieve final grades. The cover system will be underlain by a demarcation layer. The intent of the demarcation layer is to create a visible separation between the cap materials and the existing site soils. The demarcation layer will consist of a woven geotextile that was selected by the Owner and has been approved by the Engineer and the NYSDEC. The specification sheet for the selected material is included Appendix V.

4.4.2 Placement of Soil Cover System Materials

The Contractor will clear the existing surface of snow, ice and deleterious materials prior to the placement of the cover system. Rough grading of the existing ground surface will be conducted to minimize high and low points such that a more uniform cover system thickness may be placed. The demarcation layer will be placed by hand directly on top of the rough graded surface. The demarcation fabric will be overlapped by 1-foot at the joints and staples placed at a minimum of every 20 feet along the outer edges and at overlaps/joints. Prior to placement of cover soils, the demarcation layer will be visually inspected by the Contractor for tears. All tears, holes or damaged geotextile will be repaired by placing a patch with a minimum of one-foot overlap or by replacing the entire panel if damage is excessive.

Clean borrow material will be placed over the demarcation layer by bulldozer or front end loader. Care will be taken such that the equipment will not tear or otherwise damage the demarcation layer during installation of cover soils. If the demarcation layer is damaged it will be repaired as described above. Clean borrow will be placed to a post-compaction thickness of at least 10-inches. Compaction of the clay cover material will be achieved via 2 to 3 passes made by a 12,000-lb. vibratory roller, with additional compaction achieved via passes by the dozer/front end loader. No quantitative compaction requirements (i.e. moisture-density tests) are required for the cover system soils. The final thickness of the topsoil layer will be at least 2-inches. Additional topsoil may be required in some areas to reach design grades for surficial drainage. After placement of the topsoil layer, the cover system will be seeded in accordance with the SWPPP (Mactec, March 2010).

Existing manholes and storm sewer structures within the soil cover areas will be raised by 12-inches, using materials and methods approved by the BSA, to accommodate the cover system. Drawings and specifications associated with manhole extensions are included in Appendix V.

Construction and post-construction soil erosion and sedimentation control measures will be implemented as described in the SWPPPs.

4.4.3 Transition Zone Requirements

Edges of the cover system must transition to meet existing pavement, buildings, or property boundaries, without increasing potential for erosion and such that the required 12-inch thickness of the soil cover is carried to the edges of the cover. To ensure that these requirements are met, edges and transition zones will be constructed with a 5:1 slope over a 5-foot wide edge, as depicted on the Cover Details drawing included in Appendix V. This approach was reviewed with and approved by the NYSDEC.

4.4.4 Concrete Slabs and Special Areas

A variance was issued to SBD via letter dated July 18, 2010 by the City of Buffalo that allows certain concrete slabs associated with former Site buildings (and associated foundations) to remain for reuse. The concrete slabs will undergo the following to leave them in a condition suitable for future reuse:

- Floor drains will be disconnected or sealed up.;
- Sumps, and pits will be inspected and cleaned per the Interim Site Management Plan (Mactec, October 2009). Sumps and pits will then be filled with recycled hardfill material (shown through sampling/testing to meet on-Site reuse criteria as specified in the Interim Site Management Plan) and topped-off with a final lift of clean stone.
- Demolition debris will be removed from the slabs and a skid steer with broom attachment will be used for final cleaning via wet and dry sweeps;
- Areas of concrete with significant damage will be excavated and leveled with clean gravel; and
- Low spots will be leveled by placing a layer of stone to eliminate trip hazards.

Any other modifications or repairs needed to make the slabs ready for reuse will be completed as part of site redevelopment.

Several areas located on Area E, due to location and conditions, will require special cover requirements. These locations are as follows:

Area 1: This area is a narrow strip of land located on the extreme southeastern corner of Area E, as shown on the location map provided in Appendix V. The area extends beyond the Area E fence line, across Orlando Street, and continues to the east onto land utilized by an adjacent business for equipment/material storage. The area is approximately 300 feet long and varies between 27.5 and 33 feet wide. Existing soil on SBD property will be removed to a minimum depth of 12 inches, a demarcation layer will be placed, and the area will be backfilled to grade with clean gravel as described on the drawing provided in Appendix T.

Area 2: This area is a currently a paved entrance drive off of Elk Street along a paper street known as Maurice Street. The area is roughly 200 feet long by 55 feet wide. Chain link fence borders the eastern and western sides of the paved drive. Existing soil located in the areas between the pavement and fences will be removed to a minimum depth of 12 inches, a demarcation layer will be placed, and the area will be backfilled to grade with clay borrow material and topsoil as described in Section 4.4.2. The existing asphalt pavement will be kept as is and rehabilitated as necessary. Drawings depicting the location and cover placement requirements for this area are included in Appendix V.

Area 3: The area is located on the southwestern side of Area E, a portion of which includes area to be excavated to remediate VOC-contaminated soil as described in Section 4.1. Three railroad spurs are located within this area, as depicted on the figure provided in Appendix V. The two northernmost spurs will be removed. The southern spur will be preserved as it is an active spur currently used by an adjacent business (PVS Chemicals).

The tracks and railroad ties associated with the two northernmost spurs will be removed and existing ballast/soil will be removed to a minimum depth of 12 inches to a width of 4 feet on either side of the existing tracks/ties.

The southern spur, as well as the western edges of the northernmost spurs, will remain in place. At these locations, the existing ballast and soil will be removed to a minimum depth of 12 inches to a distance of 4 feet beyond the edges of the railroad tracks/ties, or the property boundary, whichever is closest.

A demarcation layer will be placed at the base of the excavated areas, and the areas will be backfilled to grade with clean clay borrow material and topsoil, or clean gravel, as specified on the drawing in Appendix V.

The existing chain link fence will be removed as necessary to facilitate the work, as shown on the drawing in Appendix V. The fence will be replaced along an alignment determined by SBD once the cover system is in place.

5.0 QUALITY ASSURANCE/QUALITY CONTROL

Quality Assurance (QA)/QC procedures will be utilized throughout the project and will be consistent with the latest version of DER-10.

5.1 INSPECTION AND DOCUMENTATION

Remedial construction activities will undergo inspection by the Engineer, as well as the Honeywell site representative. Completion of the work will be documented via the following:

- Field log books and daily construction reports;
- Photographs of each task;
- CCTV surveys to document the storm sewer remedy;
- Instrument calibration records and equipment logs;
- Shipping manifests, disposal facility receipts, and other waste disposal records;
- Laboratory analytical reports for waste characterization and confirmation samples;
- Field sketches and construction drawing markups; and
- Other records as appropriate.

These documents will be used to prepare the Final Engineering Report and record drawings that will be submitted upon completion of the project.

5.2 COVER SYSTEM CONSTRUCTION QA/QC

A copy of the QA/QC plan (Mactec, March 2010) for placement of the soil cover is included as Appendix V.

5.3 GENERAL REMEDIAL CONSTRUCTION QA/QC

Standard specifications for general remedial construction activities are provided in Appendix W for the following:

- Submittal Procedures;
- Contractor Quality Control;
- Field Engineering and Surveying;
- Waste Removal and Handling; and
- Off-Site Transportation and Disposal.

These specifications, or similar ones provided by the Contractor and approved by the Engineer, will be implemented for the project.

5.4 FIELD SAMPLING AND LABORATORY ANALYSES QA/QC

A QAPP for field sampling and laboratory analyses is provided as Appendix X. This QAPP, or similar QAPP approved by NYSDEC, will be utilized for all sampling and laboratory testing required during remedial construction.

6.0 LIST OF ACRONYMS

AAR	Alternatives Analysis Report
Allied Chemical	Allied Chemical Corporation
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
BCA	Brownfield Cleanup Agreement
BCC	Buffalo Color Corporation
BCP	Brownfield Cleanup Program
bgs	Below Ground Surface
BSA	Buffalo Sewer Authority
CCTV	Closed Circuit Television
CLP	Contract Laboratory Program
COD	Chemical Oxygen Demand
DNAPL	Dense Non-Aqueous Phase Liquids
DO	Dissolved Oxygen
DUSR	Data Usability Summary Report
FER	Final Engineering Report
GHR	GHR Consulting Services
iSOC®	In-Situ Oxygen Curtain
LNAPL	Light Non-Aqueous Phase Liquid
Mactec	Mactec Engineering and Consulting, Inc.
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
MSDS	Material Safety Data Sheet
NELAP	National Environmental Laboratory Accreditation Program
NTU	Nephelometric Turbidity Unit
NYSDEC	New York State Department of Environmental Conservation
PAH	Polycyclic Aromatic Hydrocarbon
PDI	Pre-Design Investigation
PID	Photoionization Detector
PVC	Polyvinyl Chloride
PVS	PVS Chemicals, Inc.
QA	Quality Assurance
QC	Quality Control
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RI	Remedial Investigation
SBD	South Buffalo Development LLC
SCOs	Soil Cleanup Objectives
SF	Square Feet
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SPT	Standard Penetration Testing
SVOCs	Semi-Volatile Organic Compounds

LIST OF ACRONYMS

SWPPP	Storm Water Pollution Protection Plan
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TIC	Tentatively Identified Compound
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
VI	Vapor Intrusion
VOCs	Volatile Organic Compounds

7.0 REFERENCES

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TABLES

Table 1
Pre-Design Investigation and FInal Design
2008-2009 Groundwater Elevation Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Measuring Point Location	Area	Measuring Point Elevation (ft)	DTW (ft)	Elevation (ft)	DTW (ft)	Elevation (ft)	DTW (ft)	Elevation (ft)	DTW (ft)	Elevation (ft)	DTW (ft)	Elevation (ft)
			1/21 - 1/22/2008		4/21/2008		7/23/2008		10/13/2008		11/16/2009	
EW-1	A	582.49	11.23	571.26	10.45	572.04	10.94	571.55	12.33	570.16		NO DTW
EW-2	A	582.64	10.94	571.70	10.60	572.04	12.78	569.86	16.05	566.59		NO DTW
EW-3	A	583.84	15.32	568.52	11.85	571.99	14.34	569.50	16.17	567.67		NO DTW
EW-4	A	583.28	12.80	570.48	11.24	572.04	11.86	571.42	13.19	570.09		NO DTW
EW-5	A	585.50	19.89	565.61	13.56	571.94	15.09	570.41	22.98	562.52		NO DTW
ICM-101	A	586.37	13.28	573.09	12.98	573.39	13.03	573.34	14.15	572.22	13.91	572.46
ICM-102	A	583.24	11.46	571.78	11.10	572.14	11.28	571.96	12.58	570.66	12.38	570.86
ICM-103	A	586.88	15.09	571.79	15.18	571.70	14.77	572.11	15.88	571.00	15.96	570.92
ICM-104	A	586.84	15.36	571.48	14.90	571.94	14.93	571.91	16.19	570.65	16.03	570.81
ICM-105	A	586.84	15.74	571.10	15.45	571.39	15.60	571.24	16.69	570.15	16.55	570.29
PS-14	A	585.49	6.07	579.42	6.33	579.16	6.36	579.13	6.37	579.12	6.32	579.17
PS-15	A	587.25	8.05	579.20	6.97	580.28	8.09	579.16	8.15	579.10	8.27	578.98
PZ-101	A	585.51	13.71	571.80	13.29	572.22	13.65	571.86	14.85	570.66	14.45	571.06
PZ-102	A	584.09	12.29	571.80	12.03	572.06	12.21	571.88	13.57	570.52		NO DTW
PZ-103	A	583.46	11.73	571.73	11.37	572.09	11.56	571.90	12.91	570.55		NO DTW
PZ-104	A	583.48	11.71	571.77	10.95	572.53	11.34	572.14	12.62	570.86		NO DTW
PZ-105	A	583.38	11.61	571.77	11.37	572.01	11.67	571.71	13.02	570.36		NO DTW
PZ-106	A	583.40	11.30	572.10	11.34	572.06	11.27	572.13	12.45	570.95		NO DTW
PZ-107	A	583.94	12.29	571.65	11.87	572.07	11.85	572.09	12.98	570.96		NO DTW
PZ-108	A	583.91	12.40	571.51	12.02	571.89	12.10	571.81	13.50	570.41		NO DTW
PZ-109	A	583.99	9.69	574.30	9.87	574.12	12.21	571.78	10.73	573.26		NO DTW
PZ-110	A	584.74	13.00	571.74	12.18	572.56	12.36	572.38	13.54	571.20	13.31	571.43
PZ-111	A	584.31	13.44	570.87	12.24	572.07	12.56	571.75	13.84	570.47		NO DTW
PZ-112	A	584.41	12.22	572.19	11.36	573.05	11.94	572.47	13.14	571.27		NO DTW
PZ-113	A	585.13	9.58	575.55	9.28	575.85	9.26	575.87	9.93	575.20		NO DTW
PZ-114	A	585.89	14.87	571.02	13.90	571.99	13.81	572.08	15.11	570.78		NO DTW
PZ-115	A	585.50	8.76	576.74	8.77	576.73	8.69	576.81	9.13	576.37		NO DTW
PZ-116	A	583.54	11.32	572.22	11.04	572.50	11.33	572.21	12.54	571.00	12.18	571.36
PZ-117	A	586.25	14.56	571.69	14.48	571.77	14.17	572.08	15.43	570.82	15.52	570.73
PZ-118	A	587.50	15.42	572.08	15.47	572.03	15.38	572.12	16.47	571.03	16.31	571.19
RFI-16	A	585.83	13.85	571.98	13.42	572.41	13.27	572.56	12.99	572.84		NO DTW
RFI-22	A	590.11	18.34	571.77	18.09	572.02	18.02	572.09	19.18	570.93	19.15	570.96
RFI-23D	A	590.37	18.50	571.87	18.20	572.17	18.08	572.29	18.96	571.41		NO DTW
RFI-24	A	583.60	12.12	571.48	11.60	572.00	11.74	571.86	12.98	570.62	12.81	570.79
RFI-25	A	586.25	14.66	571.59	14.27	571.98	14.44	571.81	15.78	570.47		NO DTW
RFI-26	A	587.33	15.58	571.75	15.15	572.18	14.22	573.11	16.39	570.94		NO DTW
River Gage	A	569.69	1.61	571.30	2.58	572.27	2.40	572.09	0.95	570.64		NO DTW
W6-R-R	A	588.53	15.90	572.63	15.61	572.92	16.02	572.51	17.17	571.36		NO DTW
PS-07	B	586.96	4.54	582.42	4.60	582.36	5.10	581.86	4.88	582.08	4.84	582.12
PS-08	B	587.76	5.18	582.58	5.26	582.50	6.81	580.95		NO DTW	5.8	581.96
PS-09	B	587.82	4.49	583.33	4.84	582.98	6.07	581.75		NO DTW	4.95	582.87
RFI-18	B	588.13	8.05	580.08	7.94	580.19	7.89	580.24	8.27	579.86	8.35	579.78
RFI-19D	B	588.27	15.12	573.15	15.02	573.25	14.83	573.44	15.61	572.66		NO DTW
RFI-27	B	587.01	5.11	581.90	5.08	581.93	5.48	581.53	5.24	581.77	5.27	581.74
RFI-28	B	588.09	7.33	580.76	7.61	580.48	8.38	579.71	8.44	579.65	7.58	580.51
RFI-34	B (PVS)	585.66	13.59	572.07	13.33	572.33		NO DTW		NO DTW		NO DTW
RFI-35	B (PVS)	584.26	3.94	580.32	8.88	575.38	4.35	579.91	4.36	579.90		NO DTW
RFI-37	B (PVS)	583.33	1.48	581.85	1.38	581.95		NO DTW		NO DTW		NO DTW
RFI-38	B (PVS)	582.25	9.48	572.77	10.98	571.27		NO DTW		NO DTW		NO DTW
RFI-39	B (PVS)	584.78		NO DTW	8.57	576.21		NO DTW	8.94	575.84		NO DTW
RFI-40	B (PVS)	585.27		NO DTW	12.67	572.60		NO DTW		NO DTW		NO DTW
RFI-41	B (PVS)	584.89		NO DTW		NO DTW		NO DTW		NO DTW		NO DTW
RFI-44	B (PVS)	582.76	10.74	572.02	10.67	572.09		NO DTW		NO DTW		NO DTW
RFI-45	B (PVS)	582.67	10.82	571.85	10.53	572.14		NO DTW	11.34	571.33		NO DTW
RFI-46	B (PVS)	582.21		NO DTW	11.69	570.52		NO DTW		NO DTW		NO DTW
RFI-47	B (PVS)	582.37		NO DTW		NO DTW		NO DTW		NO DTW		NO DTW
RFI-48	B (PVS)	582.49		NO DTW	9.44	573.05		NO DTW		NO DTW		NO DTW
RFI-50	B (PVS)	581.31		NO DTW		NO DTW		NO DTW		NO DTW		NO DTW
RFI-PZ-19	B (PVS)	585.79		NO DTW	11.85	573.94		NO DTW	12.25	573.54		NO DTW
RFI-PZ-20	B (PVS)	585.63		NO DTW	11.65	573.98		NO DTW		NO DTW		NO DTW
PS-04	C	587.70	5.25	582.45	5.31	582.39	6.07	581.63	5.41	582.29	5.41	582.29
PS-05	C	587.35	4.16	583.19	4.11	583.24	4.25	583.10	4.30	583.05	5.32	582.03
PS-06	C	587.67	5.40	582.27	5.58	582.09	6.36	581.31	5.98	581.69	5.97	581.70
RFI-20	C	587.52	5.73	581.79	5.67	581.85	5.75	581.77	5.75	581.77	5.81	581.71
RFI-21D	C	587.83	15.26	572.57	15.14	572.69	15.09	572.74	16.08	571.75		NO DTW
RFI-30	C	587.53	8.83	578.70	7.87	579.66	7.93	579.60	8.06	579.47	Destroyed	NO DTW
RFI-31	C	587.86	7.35	580.51	7.23	580.63	7.29	580.57	7.30	580.56	7.41	580.45

See notes at end of table

Table 1
Pre-Design Investigation and FInal Design
2008-2009 Groundwater Elevation Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Measuring Point Location	Area	Measuring Point Elevation (ft)	DTW (ft)	Elevation (ft)	DTW (ft)	Elevation (ft)	DTW (ft)	Elevation (ft)	DTW (ft)	Elevation (ft)	DTW (ft)	Elevation (ft)
			1/21 - 1/22/2008		4/21/2008		7/23/2008		10/13/2008		11/16/2009	
ICM-PZ-02N	E	586.26		NO DTW	8.46	577.80		NO DTW	13.27	572.99	8.69	577.57
ICM-PZ-02S	E	586.03		NO DTW	11.12	574.91		NO DTW	11.28	574.75	11.3	574.73
ICM-PZ-03N	E	586.35		NO DTW	9.49	576.86	9.62	576.73	12.70	573.65	9.26	577.09
ICM-PZ-03S	E	586.24		NO DTW	11.66	574.58	12.14	574.10	12.24	574.00	11.81	574.43
ICM-PZ-04S	E	586.24		NO DTW	13.33	572.91	13.39	572.85	12.60	573.64	13.12	573.12
PD-01	E	586.58		NO DTW	13.29	573.29	13.17	573.41		NO DTW		NO DTW
PD-02	E	587.60		NO DTW	14.23	573.37	14.54	573.06		NO DTW		NO DTW
PD-03	E	587.07		NO DTW	12.98	574.09		NO DTW		NO DTW		NO DTW
PS-01	E	587.27		NO DTW	11.34	575.93	12.51	574.76		NO DTW	11.09	576.18
PS-02	E	587.41		NO DTW	10.62	576.79	11.81	575.60		NO DTW	Destroyed	NO DTW
PS-03	E	587.26		NO DTW	11.61	575.65	13.34	573.92		NO DTW	Destroyed	NO DTW
PS-10	E	585.05	3.52	581.53	3.85	581.20	7.17	577.88		NO DTW	4.58	580.47
PS-11	E	585.66		NO DTW	4.05	581.61	3.31	582.35		NO DTW		NO DTW
PS-12	E	586.12	5.16	580.96	5.27	580.85	5.83	580.29		NO DTW		NO DTW
R-01	E	584.59	9.01	575.58	8.56	576.03	8.58	576.01	8.49	576.10		NO DTW
R-02	E	585.85	9.03	576.82	9.55	576.30	8.92	576.93		NO DTW		NO DTW
R-03	E	586.93		NO DTW	10.67	576.26	9.12	577.81		NO DTW		NO DTW
R-04	E	586.70	12.19	574.51	12.10	574.60	11.87	574.83	12.17	574.53		NO DTW
R-05	E	587.05	13.25	573.80	12.15	574.90	11.94	575.11		NO DTW		NO DTW
R-06	E	586.24	11.42	574.82	11.46	574.78	6.98	579.26		NO DTW		NO DTW
R-07	E	587.97	10.99	576.98	10.84	577.13	10.87	577.10		NO DTW	10.82	577.15
R-08	E	589.46		NO DTW	7.13	582.33	6.96	582.50		NO DTW	6.9	582.56
R-09	E	588.88		NO DTW	12.30	576.58	12.34	576.54		NO DTW	12.31	576.57
R-10	E	588.75	6.36	582.39	6.46	582.29	6.42	582.33		NO DTW	6.55	582.20
R-11	E	586.31		NO DTW	5.23	581.08	5.84	580.47		NO DTW	5.3	581.01
R-12	E	586.33		NO DTW	11.58	574.75	12.60	573.73		NO DTW		NO DTW
R-13	E	587.03		NO DTW	11.25	575.78	11.65	575.38		NO DTW	11.13	575.90
R-14	E	588.89		NO DTW	14.73	574.16	15.02	573.87	14.89	574.00	15.19	573.70
R-15	E	588.36	6.13	582.23	6.20	582.16	6.18	582.18	6.18	582.18	6.29	582.07
RFI-17	E	585.73	6.08	579.65	6.22	579.51	8.50	577.23	6.68	579.05	6.51	579.22
RFI-29	E	585.82	4.23	581.59	4.49	581.33	4.18	581.64	5.08	580.74	5.29	580.53
RFI-32	E	586.44	4.78	581.66	4.91	581.53	5.29	581.15	4.69	581.75	5.46	580.98
RFI-33	E	582.53		NO DTW	1.53	581.00	0.80	581.73	1.48	581.05		NO DTW
RFI-36	E	587.39	5.06	582.33	5.16	582.23	5.16	582.23	5.14	582.25	5.81	581.58
RFI-43	E	586.50	4.77	581.73	5.00	581.50	4.31	582.19	4.54	581.96	Destroyed	NO DTW
RFI-51	E	586.90	4.36	582.54	4.29	582.61	4.64	582.26	4.57	582.33	4.55	582.35
RFI-PZ-16	E	586.71	5.45	581.26	5.95	580.76		NO DTW		NO DTW	7.08	579.63
RFI-PZ-17	E	585.97		NO DTW	12.09	573.88	12.51	573.46	12.31	573.66	12.02	573.95
RFI-PZ-18	E	587.32		NO DTW	9.51	577.81	12.58	574.74	12.21	575.11	10.19	577.13
RFI-PZ-21	E	586.5		NO DTW		NO DTW		NO DTW		NO DTW		NO DTW
RFI-PZ-22	E	586.85		NO DTW		NO DTW		NO DTW		NO DTW	Destroyed	NO DTW
RFI-PZ-23	E	586.78		NO DTW		NO DTW		NO DTW		NO DTW		NO DTW
RFI-PZ-24	E	584.34		NO DTW		NO DTW		NO DTW		NO DTW		NO DTW

Notes:
DTW = Depth to Water
NO DTW = No DTW measurement collected

Table 2
Pre-Design Investigation and Final Design
Area E 2008 Groundwater Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

		Sample ID:	R-01-0108	R-01-0408	R-04-0208	R-14-0708	RFI-17-0108	RFI-17-0408	RFI-17-0708	RFI-17-1008	RFI-29-0108	RFI-29-0408	RFI-29-0708	RFI-29-1008	RFI-32-0108	RFI-32-0408	RFI-32-0708	RFI-32-1008	RFI-33-0108	RFI-33-0708	RFI-33-1008	RFI-36-0208	RFI-36-0408	RFI-36-0708	RFI-36-1008
		Location:	R-01	R-01	R-04	R-14	RFI-17	RFI-17	RFI-17	RFI-17	RFI-29	RFI-29	RFI-29	RFI-29	RFI-32	RFI-32	RFI-32	RFI-32	RFI-33	RFI-33	RFI-33	RFI-36	RFI-36	RFI-36	RFI-36
		Date:	02/05/08	04/24/08	02/06/08	07/29/08	02/05/08	04/25/08	07/29/08	10/16/08	02/04/08	04/24/08	07/29/08	10/16/08	02/04/08	04/24/08	07/29/08	10/16/08	02/04/08	07/29/08	10/16/08	02/06/08	04/24/08	07/29/08	10/16/08
Parameter	Units (4)	NYSDEC Values (5)																							
VOCs																									
1,1,1-TRICHLOROETHANE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	ug/L	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	**6.8**	**17**	**5.3**	3
1,1-DICHLOROETHANE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHENE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-TRICHLOROBENZENE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	0.04	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DIBROMOETHANE	ug/L	0.0006	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROBENZENE	ug/L	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.9	1.4	3	2.7	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	ug/L	0.6	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROPROPANE	ug/L	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-DICHLOROBENZENE	ug/L	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.91 J	0.54 J	1 U	0.8 J	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	ug/L	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**4.6**	**3.8**	**5.3**	**4**	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-BUTANONE	ug/L	50	5 U	5 U	5 U	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2000 U	2000 U	5 U	1000 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-HEXANONE	ug/L	50	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2000 U	2000 U	5 U	1000 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-METHYL-2-PENTANONE	ug/L		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2000 U	2000 U	5 U	1000 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ACETONE	ug/L	50	5 U	5 U	5 U	8.1	5 U	3.8 J	5 U	5 UJ	5 U	5 U	5 U	5 UJ	2000 U	2000 U	5 U	1000 UJ	5 U	5 U	5 UJ	5 U	5 U	5 U	5 UJ
BENZENE	ug/L	1	1 U	1 U	1 U	0.5 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**600**	**670**	1	**140** J	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMODICHLOROMETHANE	ug/L	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOFORM	ug/L	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	ug/L	60	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.25 J	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON TETRACHLORIDE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBENZENE	ug/L	5	1 U	0.65 J	1 U	0.52 J	1 U	1 U	1 U	1 U	**12**	**8.9**	**14**	**13**	**29000**	**33000**	**48** J	**7900**	1 U	1 U	1 U	1 U	1 U	1 U	0.27 J
CHLORODIBROMOMETHANE	ug/L	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	ug/L	5	1 U	1 U	1 U	**8.7**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	ug/L	7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROMETHANE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CIS-1,2-DICHLOROETHENE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CIS-1,3-DICHLOROPROPENE (1)	ug/L	0.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	ug/L		1 U	1 U	1 U	2.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
DICHLORODIFLUOROMETHANE	ug/L	5	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	400 U	400 UJ	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ETHYLBENZENE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ISOPROPYLBENZENE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	ug/L		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U
METHYL TERT-BUTYL ETHER	ug/L	10	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYLCYCLOHEXANE	ug/L		1 U	1 U	1 U	3.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYLENE CHLORIDE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
STYRENE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRANS-1,2-DICHLOROETHENE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRANS-1,3-DICHLOROPROPENE (1)	ug/L	0.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHENE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROFLUOROMETHANE	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VINYL CHLORIDE	ug/L	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	400 U	400 U	1 U	200 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
XYLENES, TOTAL	ug/L	5	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	1200 U	1200 U	3 U	600 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U

See notes at end of table

Table 2
Pre-Design Investigation and Final Design
Area E 2008 Groundwater Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units [4]	Sample ID: / Location: / Date: / NYSDEC Values [5]	R-01-0108 R-01 02/05/08	R-01-0408 R-01 04/24/08	R-04-0208 R-04 02/06/08	R-14-0708 R-14 07/29/08	RFI-17-0108 RFI-17 02/05/08	RFI-17-0408 RFI-17 04/25/08	RFI-17-0708 RFI-17 07/29/08	RFI-17-1008 RFI-17 10/16/08	RFI-29-0108 RFI-29 02/04/08	RFI-29-0408 RFI-29 04/24/08	RFI-29-0708 RFI-29 07/29/08	RFI-29-1008 RFI-29 10/16/08	RFI-32-0108 RFI-32 02/04/08	RFI-32-0408 RFI-32 04/24/08	RFI-32-0708 RFI-32 07/29/08	RFI-32-1008 RFI-32 10/16/08	RFI-33-0108 RFI-33 02/04/08	RFI-33-0708 RFI-33 07/29/08	RFI-33-1008 RFI-33 10/16/08	RFI-36-0208 RFI-36 02/06/08	RFI-36-0408 RFI-36 04/24/08	RFI-36-0708 RFI-36 07/29/08	RFI-36-1008 RFI-36 10/16/08
SVOCs																									
1,1'-BIPHENYL	ug/L	5	5 U	5 U	5 U	R	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.98 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U
2,2'-OXYBIS(1-CHLOROPROPANE)	ug/L	5	5 UJ	5 U	5 UJ	R	5 UJ	5 U	5 U	0.2 U	5 UJ	5 U	5 U	0.2 U	5 UJ	5 U	5 U	0.2 U	5 UJ	5 U	0.2 U	5 UJ	5 U	5 U	0.2 U
2,4,5-TRICHLOROPHENOL	ug/L		5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 UJ	5 U	0.98 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U
2,4,6-TRICHLOROPHENOL	ug/L		5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 UJ	5 U	0.98 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U
2,4-DICHLOROPHENOL	ug/L	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 UJ	5 U	2.1	5 U	5 U	0.2	5 U	5 U	5 U	0.061 J
2,4-DIMETHYLPHENOL	ug/L	1	5 UJ	5 U	5 U	5 U	5 UJ	5 U	5 U	1 U	5 UJ	5 U	5 U	0.99 U	5 UJ	5 UJ	5 U	0.98 U	5 UJ	5 U	0.058 J	5 U	5 U	5 U	1 U
2,4-DINITROPHENOL	ug/L	1	10 U	10 U	10 U	10 U	10 U	10 U	9 U	5 U	10 U	9 U	10 U	5 U	10 U	10 UJ	10 U	4.9 U	10 U	10 U	5 U	10 U	9 U	10 U	5 U
2,4-DINITROTOLUENE	ug/L	5	5 U	5 U	5 U	R	5 U	1 J	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.98 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U
2,6-DINITROTOLUENE	ug/L	5	5 U	5 U	5 U	R	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.98 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U
2-CHLORONAPHTHALENE	ug/L	10	5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U
2-CHLOROPHENOL	ug/L		5 UJ	5 U	5 UJ	5 U	5 UJ	5 U	5 U	1 U	5 UJ	5 U	5 U	0.99 U	4 J	11 J	15	8.2	5 UJ	5 U	1 U	5 UJ	5 U	5 U	1 U
2-METHYLNAPHTHALENE	ug/L		5 U	5 U	5 U	1 J	5 U	5 U	5 UJ	0.2 U	5 U	5 U	5 UJ	0.2 U	5 U	5 U	5 UJ	0.2 U	5 U	5 UJ	0.056 J	5 U	5 U	5 UJ	0.2 U
2-METHYLPHENOL	ug/L		5 UJ	5 U	5 UJ	5 U	5 UJ	5 U	5 U	1 U	5 UJ	5 U	5 U	0.99 U	5 UJ	5 UJ	5 U	0.98 U	5 UJ	5 U	1 U	5 UJ	5 U	5 U	1 U
2-NITROANILINE	ug/L	5	10 U	10 U	10 U	R	10 U	2 J	9 U	5 U	10 U	9 U	10 U	5 U	10 U	10 U	10 U	4.9 U	10 U	10 U	5 U	10 U	9 U	10 U	5 U
2-NITROPHENOL	ug/L		5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 UJ	5 U	0.98 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U
3,3'-DICHLOROBENZIDINE	ug/L	5	5 U	5 U	5 U	R	5 U	5 UJ	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.98 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U
3-NITROANILINE	ug/L	5	10 U	10 U	10 U	R	10 U	10 U	9 U	5 U	10 U	9 U	10 U	5 U	10 U	10 U	10 U	4.9 U	10 U	10 U	5 U	10 U	9 U	10 U	5 U
4,6-DINITRO-2-METHYLPHENOL	ug/L		10 U	10 U	10 U	10 U	10 U	10 U	9 U	5 U	10 U	9 U	10 U	5 U	10 U	10 UJ	10 U	4.9 U	10 U	10 U	5 U	10 U	9 U	10 U	5 U
4-BROMOPHENYL PHENYL ETHER	ug/L		5 U	5 U	5 U	R	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.98 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U
4-CHLORO-3-METHYLPHENOL	ug/L		5 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 UJ	5 U	0.98 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U
4-CHLOROANILINE	ug/L	5	5 U	5 U	5 U	R	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.98 U	5 U	5 U	0.2 J	5 U	5 U	5 U	1 U
4-CHLOROPHENYL PHENYL ETHER	ug/L		5 U	5 U	5 U	R	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.98 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U
4-METHYLPHENOL	ug/L		5 UJ	5 U	5 UJ	5 U	5 UJ	5 U	5 U	1 U	5 UJ	5 U	5 U	0.99 U	5 UJ	5 UJ	5 U	0.98 U	5 UJ	5 U	1 U	5 UJ	5 U	5 U	1 U
4-NITROANILINE	ug/L	5	10 U	10 U	10 U	R	10 U	10 U	9 U	5 U	10 U	9 U	10 U	5 U	10 U	10 U	10 U	4.9 U	10 U	10 U	5 U	10 U	9 U	10 U	5 U
4-NITROPHENOL	ug/L		10 UJ	10 U	10 UJ	10 U	10 UJ	10 U	9 U	5 U	10 UJ	9 U	10 U	5 U	10 UJ	10 UJ	10 U	4.9 U	10 UJ	10 U	5 U	10 UJ	9 U	10 U	5 U
ACENAPHTHENE	ug/L	20	5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.071 J	0.9 J	0.9 J	2 J	0.95
ACENAPHTHYLENE	ug/L		5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.061 J
ACETOPHENONE	ug/L		5 U	5 U	5 U	R	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.98 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U
ANILINE	ug/L	5	10 UJ	10 U	10 UJ	R	10 UJ	10 U	9 U	1 U	10 UJ	9 U	10 U	0.99 U	10 UJ	10 U	10 U	0.98 U	10 UJ	10 U	1 U	10 UJ	9 U	10 U	1 U
ANTHRACENE	ug/L	50	5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.3 J	0.2 U	5 U	5 U	0.12 J	5 U	0.2 J	5 U	0.11 J
ATRAZINE	ug/L	7.5	5 U	5 U	5 U	R	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.98 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U
BENZALDEHYDE	ug/L		R	5 U	R	0.5 J	R	5 UJ	5 U	1 U	R	5 U	5 U	0.99 U	R	5 U	5 U	0.98 U	R	5 U	1 U	R	5 U	5 U	1 U
BENZO(A)ANTHRACENE	ug/L	0.002	5 U	5 U	5 U	R	5 U	**0.4** J	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	**0.12** J	5 U	5 U	**0.2** J	**0.073** J
BENZO(A)PYRENE [2]	ug/L	0	5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U
BENZO(B)FLUORANTHENE	ug/L	0.002	5 U	5 U	5 U	R	5 U	5 UJ	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U
BENZO(G,H,I)PERYLENE	ug/L		5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U
BENZO(K)FLUORANTHENE	ug/L	0.002	5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U
BIS(2-CHLOROETHOXY)METHANE	ug/L	5	5 UJ	5 U	5 U	R	5 UJ	5 U	5 U	1 U	5 UJ	5 U	5 U	0.99 U	5 UJ	5 U	5 U	0.98 U	5 UJ	5 U	1 U	5 U	5 U	5 U	1 U
BIS(2-CHLOROETHYL)ETHER	ug/L	1	5 UJ	5 U	5 UJ	R	5 UJ	5 U	5 U	0.2 U	5 UJ	5 U	5 U	0.2 U	5 UJ	5 U	5 U	0.2 U	5 UJ	5 U	0.2 U	5 UJ	5 U	5 U	0.2 U
BIS(2-ETHYLHEXYL)PHTHALATE	ug/L	5	5 U	5 U	5 U	R	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.98 U	5 U	5 U	0.44 J	5 U	5 U	5 U	1 U
BUTYLBENZYL PHTHALATE	ug/L	50	5 U	5 U	5 U	R	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.15 J	5 U	5 U	0.39 J	5 U	5 U	5 U	1 U
CAPROLACTAM	ug/L		5 UJ	5 UJ	5 UJ	R	5 UJ	5 UJ	5 UJ	5 U	5 UJ	5 UJ	5 UJ	5 U	5 UJ	5 UJ	5 UJ	4.9 U	5 UJ	5 UJ	0.65 J	5 UJ	5 UJ	5 UJ	0.41 J
CARBAZOLE	ug/L		5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.14 J	5 U	5 U	5 U	0.2 U
CHRYSENE	ug/L	0.002	5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	**0.11** J	5 U	5 U	5 U	**0.079** J
DI-N-BUTYL PHTHALATE	ug/L	50	5 U	5 U	5 U	R	5 U	0.4 J	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.067 J	5 U	5 U	0.2 J	5 U	5 U	5 U	0.05 J
DI-N-OCTYL PHTHALATE	ug/L	50	5 U	5 U	5 U	R	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.98 U	5 U	5 U	0.057 J	5 U	5 U	5 U	1 U
DIBENZO(A,H)ANTHRACENE	ug/L		5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U
DIBENZOFURAN	ug/L		5 U	5 U	5 U	R	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.98 U	5 U	5 U	0.13 J	5 U	5 U	5 U	0.059 J
DIETHYL PHTHALATE	ug/L	50	5 U	5 U	5 U	R	5 U	0.5 J	5 U	1 U	5 U	5 U	5 U	0.99 U	0.7 J	5 U	0.3 J	0.98 U	5 U	5 U	0.25 J	5 U	5 U	5 U	1 U
DIMETHYL PHTHALATE	ug/L	50	5 U	5 U	5 U	R	5 U	5 U	5 U	1 U	5 U	5 U	5 U	0.99 U	5 U	5 U	5 U	0.98 U	5 U	5 U	1 U	5 U	5 U	5 U	1 U
FLUORANTHENE	ug/L	50	5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.17 J	0.8 J	2 J	2 J	1
FLUORENE	ug/L	50	5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.13 J	0.8 J	1 J	1 J	0.47
HEXACHLOROBENZENE	ug/L	0.04	5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U
HEXACHLOROBUTADIENE	ug/L	0.5	5 U	5 U	5 U	R	5 U	5 U	5 UJ	0.2 U	5 U	5 U	5 UJ	0.2 U	5 U	5 U	5 UJ	0.2 U	5 U	5 UJ	0.2 U	5 U	5 U	5 UJ	0.2 U
HEXACHLOROCYCLOPENTADIENE	ug/L	5	5 UJ	5 U	5 UJ	R	5 UJ	5 U	5 UJ	1 U	5 UJ	5 U	5 UJ	0.99 U	5 UJ	5 U	5 UJ	0.98 U	5 UJ	5 UJ	1 U	5 UJ	5 U	5 UJ	1 U
HEXACHLOROETHANE	ug/L	5	5 UJ	5 U	5 UJ	R	5 UJ	5 U	5 UJ	1 U	5 UJ	5 U	5 UJ	0.99 U	5 UJ	5 U	5 UJ	0.98 U	5 UJ	5 UJ	1 U	5 UJ	5 U	5 UJ	1 U
INDENO(1,2,3-CD)PYRENE	ug/L	0.002	5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U
ISOPHORONE	ug/L	50	5 UJ	5 U	5 U	R	5 UJ	5 U	5 U	1 U	5 UJ	5 U	5 U	0.99 U	5 UJ	5 U	5 U	0.98 U	5 UJ	5 U	1 U	5 U	5 U	5 U	1 U
N-NITROSO-DI-N-PROPYLAMINE	ug/L		5 UJ	5 U	5 U	14 J	5 UJ	5 U	5 U	0.2 U	5 UJ	5 U	5 U	0.2 U	5 UJ	5 U	5 U	0.2 U	5 UJ	5 U	0.2 U	5 U	5 U	5 U	0.2 U
N-NITROSODIPHENYLAMINE	ug/L	50	5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.095 J	5 U	5 U	5 U	0.2 U
NAPHTHALENE	ug/L	10	5 U	5 U	5 U	R	5 U	5 U	5 UJ	0.2 U	5 U	5 U	5 UJ	0.2 U	0.4 J	0.4 J	0.3 J	0.2 U	5 U	5 UJ	0.052 J	5 U	5 U	5 UJ	0.2 U
NITROBENZENE	ug/L	0.4	5 UJ	5 U	5 U	R	5 UJ	5 U	5 U	0.2 U	5 UJ	5 U	5 U	0.2 U	5 UJ	5 U	5 U	0.2 U	5 UJ	5 U	0.2 U	5 U	5 U	5 U	0.2 U
PENTACHLOROPHENOL [3]	ug/L	1	10 U	10 U	10 U	10 U	10 U	10 U	9 U	1 U	10 U	9 U	10 U	0.99 U	10 U	10 UJ	10 U	0.98 U	10 U	10 U	**1.1**	10 U	9 U	10 U	1 U
PHENANTHRENE	ug/L	50	5 U	5 U	5 U	1 J	5 U	5 U	5 U	0.06 J	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.37	5 U	5 U	5 U	0.12 J
PHENOL [3]	ug/L	1	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U	5 U	0.2 U	5 UJ	5 U	5 U	0.2 U	5 UJ	5 UJ	5 U	0.2 U	5 UJ	5 U	0.2 U	5 UJ	5 U	5 U	0.2 U
PYRENE	ug/L	50	5 U	5 U	5 U	R	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.13 J	0.6 J	1 J	1 J	0.74

See notes at end of table

Table 2
Pre-Design Investigation and Final Design
Area E 2008 Groundwater Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

		Sample ID:	R-01-0108	R-01-0408	R-04-0208	R-14-0708	RFI-17-0108	RFI-17-0408	RFI-17-0708	RFI-17-1008	RFI-29-0108	RFI-29-0408	RFI-29-0708	RFI-29-1008	RFI-32-0108	RFI-32-0408	RFI-32-0708	RFI-32-1008	RFI-33-0108	RFI-33-0708	RFI-33-1008	RFI-36-0208	RFI-36-0408	RFI-36-0708	RFI-36-1008
		Location:	R-01	R-01	R-04	R-14	RFI-17	RFI-17	RFI-17	RFI-17	RFI-29	RFI-29	RFI-29	RFI-29	RFI-32	RFI-32	RFI-32	RFI-32	RFI-33	RFI-33	RFI-33	RFI-36	RFI-36	RFI-36	RFI-36
		Date:	02/05/08	04/24/08	02/06/08	07/29/08	02/05/08	04/25/08	07/29/08	10/16/08	02/04/08	04/24/08	07/29/08	10/16/08	02/04/08	04/24/08	07/29/08	10/16/08	02/04/08	07/29/08	10/16/08	02/06/08	04/24/08	07/29/08	10/16/08
Parameter	Units [4]	NYSDEC Values [5]																							
Metals																									
ALUMINUM	ug/L		200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
ANTIMONY	ug/L	3	20 U	20 U	20 U	20 U	20 U	20 U	20 U	10 U	20 U	20 U	20 U	10 U	20 U	20 U	20 U	10 U	20 U	20 U	10 U	20 U	20 U	20 U	10 U
ARSENIC	ug/L	25	10 U	10 U	10 U	**33**	10 U	10 U	10 U	10 U	14	15	20	12.2	10 U	10 U	16	6.2 J	10 U	10 U	10 U	10 U	10 U	10 U	7 J
BARIUM	ug/L	1000	11	9.1	210	440	29	110	36	41.8 J	98	89	120	91.1 J	48	51	66	61.2 J	66	63	31.8 J	15	15	24	22.4 J
BERYLLIUM	ug/L	3	2 U	2 U	2 U	2 U	2 U	2 U	2 U	4 U	2 U	2 U	2 U	4 U	2 U	2 U	2 U	4 U	2 U	2 U	4 U	2 U	2 U	2 U	4 U
CADMIUM	ug/L	5	1 U	1 U	1 U	1.1	1 U	1 U	1 U	5 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	5 U	**7.9**	2.2	**13.4**	1 U	1 U	1 U	5 U
CALCIUM	ug/L		1300	1300	17600	257000	107000	440000	135000	115000	44200	52800	57700	40100	182000	180000	145000	142000	155000	148000	67200	496000	574000	632000	569000
CHROMIUM	ug/L	50	4 U	4 U	4 U	4 U	12	4 U	4 U	2.4 J	4 U	4 U	4 U	5 U	4 U	4 U	4 U	1.9 J	17	4 U	27.4	4 U	4 U	4 U	1.3 J
COBALT	ug/L		4 U	4 U	4 U	4 U	4 U	4 U	4 U	50 U	4 U	4 U	4 U	50 U	4 U	4 U	4 U	50 U	4 U	4 U	50 U	4 U	4 U	4 U	50 U
COPPER	ug/L	200	10 U	10 U	10 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	10 U	25 U	10 U	10 U	10 U	25 U	10 U	10 U	25 U	10 U	10 U	10 U	25 U
IRON	ug/L	300	**450**	240 J	**920**	**62300**	77	**5400** J	81	100 U	97	**340** J	50 U	31.8 J	**1500**	**2500** J	**3700**	**1360**	**680**	**600**	**1140**	**26600**	**29900** J	**18300**	**35900**
LEAD	ug/L	25	**31**	**26**	5 U	5 U	5 U	5 U	5 U	3 U	5 U	5 U	5 U	3 U	5 U	5 U	5 U	3 U	5 U	5 U	2.8 J	5 U	5 U	5 U	3 U
MAGNESIUM	ug/L	35000	740	760	23200	**98700**	31000	**102000**	**45800**	28100	6900	8400	8800	5800	**73400**	**76100**	**67100**	**65800**	**52600**	**52100**	20300	**68400**	**72800**	**51600**	**47700**
MANGANESE	ug/L	300	3 U	3 U	13	**2200**	3.5	**330** J	140	4.1 J	65	85 J	65	49.9	**1100**	**970** J	**700**	**613**	**680**	**610**	260	**650**	**730** J	**600**	**588**
MERCURY	ug/L	0.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	ug/L	100	10 U	10 U	10 U	10 U	10 U	10 U	12	40 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U	40 U	73	57	28.8 J	10 U	11	10 U	7.6 J
POTASSIUM	ug/L		2100	2200	5600	63200	1200	3600	1200	1480 J	2800	2800	4100	3310 J	1200	1100	1300	1270 J	850	1000	1110 J	9000	10600	14500	16700
SELENIUM	ug/L	10	15 U	15 U	15 U	15 U	**19**	15 U	15 U	2.9 J	15 U	15 U	15 U	5 U	15 U	15 U	15 U	5 U	15 U	15 U	5 U	15 U	15 U	15 U	5 U
SILVER	ug/L	50	3 U	3 U	3 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	3 U	5 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	3 U	3 U	3 U	5 U
SODIUM	ug/L	20000	**186000**	**188000**	**82100**	**475000**	**85600**	12500	**54900**	**87700**	**165000**	**121000**	**204000**	**202000**	**71000**	**70100**	**52000**	**49300**	**256000**	**292000**	**125000**	**36600**	**34500**	**31500**	**34600**
THALLIUM	ug/L	0.5	20 U	20 U	20 U	20 U	20 U	20 U	20 U	10 U	20 U	20 U	20 U	10 U	20 U	20 U	20 U	10 U	20 U	20 U	10 U	20 U	20 U	20 U	10 U
VANADIUM	ug/L		5 U	5 U	5 U	5 U	5 U	5 U	5 U	4.5 J	5 U	5 U	5 U	4 J	5 U	5 U	5 U	6.4 J	5 U	5 U	50 U	5 U	5 U	5 U	50 U
ZINC	ug/L	2000	1400	980	370	10 U	31	10 U	10 U	20 U	10 U	10 U	10 U	20 U	10 U	10 U	16	20 U	10 U	10 U	20 U	10 U	10 U	10 U	20 U
Additional Analyses																									
CHLORIDE	ug/L	250000	153000	164000	63400		12400	8400	13500 J	9000	136000	95400	160000 J	169000	86500	81600	61200 J	70600	**465000**	**619000** J	179000	25000	43400	30600 J	27600
CYANIDE	ug/L	200	10 U	10 U	10 U		10 U	10 U	10 U	2.4 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2.2 J	10 U	10 U	10 U	1.9 J
FERROUS IRON	ug/L		100 UJ	100 UJ	100 UJ		100 UJ	100 UJ			100 UJ	100 UJ			400 J	720 J			100 UJ			24800 J	27900 J		
NITROGEN, NITRATE-NITRITE	ug/L	10000		50 U				50 U	250			50 U	3500			50 U	50 U			1000			50 U	940	
NITROGEN, NITRATE-NITRITE	ug/L	10000	50 U		50 U		50 U			100 U	50 U			100 U	50 U			100 U	50 U		530	50 U			100 U
SULFATE	ug/L	250000		5000 UJ	5000 U			131000	217000			114000	138000			242000	127000			124000		**1660000**	**1160000**	**1550000**	
SULFATE	ug/L	250000								104000				55400				115000			38300				**1560000**
SULFATE	ug/L	250000	5000 U				236000				150000				**340000**				134000						
SULFIDE	ug/L	50								3000 U				**6400**				**2400** J			**4800**				**3200**
SULFIDE	ug/L	50	1000 U				1000 U				1000 U				1000 U				1000 U						
SULFIDE	ug/L	50		1000 U	1000 U			1000 U	1000 U			1000 U	1000 U			1000 U	1000 U			1000 U		1000 U	1000 U	1000 U	
TOTAL RECOVERABLE PHENOLICS	ug/L	1																							
TOTAL RECOVERABLE PHENOLICS	ug/L	1	10 U	10 U	10 U		10 U	**17**			10 U	10 U			10 U	**22**			10 U			10 U	10 U		

See notes at end of table

Table 2
Pre-Design Investigation and Final Design
Area E 2008 Groundwater Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units [4]	NYSDEC Values [5]	RFI-43-0208	RFI-43-0408	RFI-43R-0408	RFI-43-0708	MW-43-1008	RFI-51-0208	RFI-51R-0208	RFI-51-0408	RFI-51-0708	RFI-51-1008	RFI-PZ04S-0708	RFI-PZ-17-0708	RFI-PZ-17-1008	RFI-PZ-18-0208	RFI-PZ-18-0408	RFI-PZ-18-0708	RFI-PZ-18-1008	RFI-PZ-19-0408	RFI-PZ-19-0708	RFI-PZ-19-1008
Location:			RFI-43	RFI-43	RFI-43	RFI-43	RFI-43	RFI-51	RFI-51	RFI-51	RFI-51	RFI-51	ICM-PZ-04S	RFI-PZ-17	RFI-PZ-17	RFI-PZ-18	RFI-PZ-18	RFI-PZ-18	RFI-PZ-18	RFI-PZ-19	RFI-PZ-19	RFI-PZ-19
Date:			02/06/08	04/25/08	04/25/08	07/29/08	10/16/08	02/06/08	02/06/08	04/24/08	07/29/08	10/16/08	07/30/08	07/29/08	10/16/08	02/06/08	04/24/08	07/29/08	10/16/08	04/23/08	07/29/08	10/16/08
VOCs																						
1,1,1-TRICHLOROETHANE	ug/L	5	4 UJ	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	ug/L	5	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
1,1,2-TRICHLOROETHANE	ug/L	1	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	ug/L	5	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
1,1-DICHLOROETHANE	ug/L	5	4 UJ	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
1,1-DICHLOROETHENE	ug/L	5	4 UJ	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
1,2,4-TRICHLOROBENZENE	ug/L	5	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	0.04	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
1,2-DIBROMOETHANE	ug/L	0.0006	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
1,2-DICHLOROBENZENE	ug/L	3	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
1,2-DICHLOROETHANE	ug/L	0.6	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
1,2-DICHLOROPROPANE	ug/L	1	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
1,3-DICHLOROBENZENE	ug/L	3	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
1,4-DICHLOROBENZENE	ug/L	3	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
2-BUTANONE	ug/L	50	20 U	20 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U	5 U	5 U	10 U	5 U	5 U
2-HEXANONE	ug/L	50	20 U	20 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U	5 U	5 U	10 U	5 U	5 U
4-METHYL-2-PENTANONE	ug/L		20 U	20 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U	10 U	5 U	5 U	10 U	5 U	5 U
ACETONE	ug/L	50	20 U	20 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 UJ	3.1 J	5 U	3.5 J	10 U	10 U	5 U	5 UJ	10 U	5 U	5 UJ
BENZENE	ug/L	1	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
BROMODICHLOROMETHANE	ug/L	50	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
BROMOFORM	ug/L	50	4 UJ	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
BROMOMETHANE	ug/L	5	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
CARBON DISULFIDE	ug/L	60	4 UJ	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
CARBON TETRACHLORIDE	ug/L	5	4 UJ	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
CHLOROBENZENE	ug/L	5	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.24 J	2 U	2 U	1 U	1 U	2 U	1 U	1 U
CHLORODIBROMOMETHANE	ug/L	50	4	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
CHLOROETHANE	ug/L	5	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
CHLOROFORM	ug/L	7	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
CHLOROMETHANE	ug/L	5	4 UJ	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
CIS-1,2-DICHLOROETHENE	ug/L	5	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
CIS-1,3-DICHLOROPROPENE [1]	ug/L	0.4	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
CYCLOHEXANE	ug/L		4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
DICHLORODIFLUOROMETHANE	ug/L	5	4 UJ	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
ETHYLBENZENE	ug/L	5	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
ISOPROPYLBENZENE	ug/L	5	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
METHYL ACETATE	ug/L		4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	2 U	2 UJ	1 U	1 U	2 UJ	1 U	1 U
METHYL TERT-BUTYL ETHER	ug/L	10	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
METHYLCYCLOHEXANE	ug/L		4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
METHYLENE CHLORIDE	ug/L	5	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.3 J	2 U	1 U	1 U	2 U	1 U	1 U
STYRENE	ug/L	5	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
TETRACHLOROETHENE	ug/L	5	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
TOLUENE	ug/L	5	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
TRANS-1,2-DICHLOROETHENE	ug/L	5	4 UJ	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
TRANS-1,3-DICHLOROPROPENE [1]	ug/L	0.4	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
TRICHLOROETHENE	ug/L	5	4 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
TRICHLOROFLUOROMETHANE	ug/L	5	4 UJ	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
VINYL CHLORIDE	ug/L	2	4 UJ	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	2 U	1 U	1 U
XYLENES, TOTAL	ug/L	5	12 U	12 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	6 U	6 U	3 U	3 U	6 U	3 U	3 U

See notes at end of table

Table 2
Pre-Design Investigation and Final Design
Area E 2008 Groundwater Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units (4)	Sample ID: / Location: / Date: / NYSDEC Values (5)	RFI-43-0208	RFI-43-0408	RFI-43R-0408	RFI-43-0708	MW-43-1008	RFI-51-0208	RFI-51R-0208	RFI-51-0408	RFI-51-0708	RFI-51-1008	RFI-PZ04S-0708	RFI-PZ-17-0708	RFI-PZ-17-1008	RFI-PZ-18-0208	RFI-PZ-18-0408	RFI-PZ-18-0708	RFI-PZ-18-1008	RFI-PZ-19-0408	RFI-PZ-19-0708	RFI-PZ-19-1008
		Location:	RFI-43	RFI-43	RFI-43	RFI-43	RFI-43	RFI-51	RFI-51	RFI-51	RFI-51	RFI-51	ICM-PZ-04S	RFI-PZ-17	RFI-PZ-17	RFI-PZ-18	RFI-PZ-18	RFI-PZ-18	RFI-PZ-18	RFI-PZ-19	RFI-PZ-19	RFI-PZ-19
		Date:	02/06/08	04/25/08	04/25/08	07/29/08	10/16/08	02/06/08	02/06/08	04/24/08	07/29/08	10/16/08	07/30/08	07/29/08	10/16/08	02/06/08	04/24/08	07/29/08	10/16/08	04/23/08	07/29/08	10/16/08
SVOCs																						
1,1'-BIPHENYL	ug/L	5	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	0.4 J	0.99 U	5 U	0.2 J	5 U	1 U	5 U	5 U	0.99 U
2,2'-OXYBIS(1-CHLOROPROPANE)	ug/L	5	5 UJ	5 U	5 U	5 U	0.21 U	5 UJ	5 UJ	5 U	5 U	0.2 U	5 UJ	5 U	0.2 U	5 UJ	5 U	5 U	0.21 U	5 U	5 U	0.2 U
2,4,5-TRICHLOROPHENOL	ug/L		5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
2,4,6-TRICHLOROPHENOL	ug/L		5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
2,4-DICHLOROPHENOL	ug/L	5	5 U	5 U	5 U	5 U	0.21 U	5 U	5 U	5 U	5 U	0.16 J	5 U	5 U	1.9	5 U	5 U	5 U	0.21 U	0.9 J	2 J	0.23
2,4-DIMETHYLPHENOL	ug/L	1	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
2,4-DINITROPHENOL	ug/L	1	10 U	10 U	10 U	10 U	5.2 U	9 U	9 U	10 U	10 U	5 U	11 U	10 U	5 U	10 U	10 U	11 U	5.2 U	9 U	10 U	5 U
2,4-DINITROTOLUENE	ug/L	5	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	0.9 J	5 U	0.7 J	1 U	5 U	5 U	0.99 U
2,6-DINITROTOLUENE	ug/L	5	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
2-CHLORONAPHTHALENE	ug/L	10	5 U	5 U	5 U	5 U	0.21 U	5 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.21 U	5 U	5 U	0.2 U
2-CHLOROPHENOL	ug/L		5 UJ	5 U	5 U	5 U	1 U	5 UJ	5 UJ	5 U	5 U	1 U	5 U	5 U	0.99 U	5 UJ	5 U	5 U	1 U	5 U	5 U	0.99 U
2-METHYLNAPHTHALENE	ug/L		5 U	5 U	5 U	5 UJ	0.21 U	5 U	5 U	5 U	5 UJ	0.2 U	5 U	5 UJ	0.2 U	5 U	5 U	5 UJ	0.21 U	5 U	5 UJ	0.2 U
2-METHYLPHENOL	ug/L		5 UJ	5 U	5 U	5 U	1 U	5 UJ	5 UJ	5 U	5 U	1 U	5 U	5 U	0.99 U	5 UJ	5 U	5 U	1 U	5 U	5 U	0.99 U
2-NITROANILINE	ug/L	5	10 U	10 U	10 U	10 U	5.2 U	9 U	9 U	10 U	10 U	5 U	11 U	10 U	5 U	10 U	10 U	11 U	5.2 U	9 U	10 U	5 U
2-NITROPHENOL	ug/L		5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
3,3'-DICHLOROBENZIDINE	ug/L	5	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
3-NITROANILINE	ug/L	5	10 U	10 U	10 U	10 U	5.2 U	9 U	9 U	10 U	10 U	5 U	11 U	10 U	5 U	10 U	10 U	11 U	5.2 U	9 U	10 U	5 U
4,6-DINITRO-2-METHYLPHENOL	ug/L		10 U	10 U	10 U	10 U	5.2 U	9 U	9 U	10 U	10 U	5 U	11 U	10 U	5 U	10 U	10 U	11 U	5.2 U	9 U	10 U	5 U
4-BROMOPHENYL PHENYL ETHER	ug/L		5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
4-CHLORO-3-METHYLPHENOL	ug/L		5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
4-CHLOROANILINE	ug/L	5	5 U	5 U	5 U	5 U	0.099 J	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.16 J
4-CHLOROPHENYL PHENYL ETHER	ug/L		5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
4-METHYLPHENOL	ug/L		5 UJ	5 U	5 U	5 U	1 U	5 UJ	5 UJ	5 U	5 U	1 U	5 U	5 U	0.99 U	5 UJ	5 U	5 U	1 U	5 U	5 U	0.99 U
4-NITROANILINE	ug/L	5	10 U	10 U	10 U	10 U	5.2 U	9 U	9 U	10 U	10 U	5 U	11 U	10 U	5 U	10 U	10 U	11 U	5.2 U	9 U	10 U	5 U
4-NITROPHENOL	ug/L		10 UJ	10 U	10 U	10 U	5.2 U	9 UJ	9 UJ	10 U	10 U	5 U	11 U	10 U	5 U	10 UJ	10 U	11 U	5.2 U	9 U	10 U	5 U
ACENAPHTHENE	ug/L	20	5 U	5 U	5 U	5 U	0.21 U	5 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	0.3 J	5 U	0.13 J	5 U	5 U	0.16 J
ACENAPHTHYLENE	ug/L		5 U	5 U	5 U	5 U	0.21 U	5 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.21 U	5 U	5 U	0.2 U
ACETOPHENONE	ug/L		5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
ANILINE	ug/L	5	10 UJ	10 U	10 U	10 U	1 U	9 UJ	9 UJ	10 U	10 U	1 U	11 U	10 U	0.99 U	10 UJ	10 U	11 U	1 U	9 U	10 U	0.99 U
ANTHRACENE	ug/L	50	5 U	5 U	5 U	5 U	0.21 U	5 U	5 U	5 U	5 U	0.072 J	5 U	5 U	0.2 U	5 U	5 U	5 U	0.21 U	5 U	5 U	0.2 U
ATRAZINE	ug/L	7.5	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
BENZALDEHYDE	ug/L		R	5 U	5 U	5 U	1 U	R	R	5 U	5 U	1 U	5 U	5 U	0.99 U	R	5 U	5 U	1 U	5 U	5 U	0.99 U
BENZO(A)ANTHRACENE	ug/L	0.002	5 U	5 U	5 U	5 U	0.21 U	5 U	**0.3** J	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	**0.3** J	5 U	0.21 U	5 U	5 U	0.2 U
BENZO(A)PYRENE (2)	ug/L	0	5 U	5 U	5 U	5 U	0.21 U	5 U	**0.2** J	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	**0.057** J	5 U	5 U	0.2 U
BENZO(B)FLUORANTHENE	ug/L	0.002	5 U	5 U	5 U	5 U	0.21 U	5 U	**0.4** J	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.21 U	5 U	5 U	0.2 U
BENZO(G,H,I)PERYLENE	ug/L		5 U	5 U	5 U	5 U	0.21 U	5 U	0.4 J	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.068 J	5 U	5 U	0.2 U
BENZO(K)FLUORANTHENE	ug/L	0.002	5 U	5 U	5 U	5 U	0.21 U	5 U	**0.2** J	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.21 U	5 U	5 U	0.2 U
BIS(2-CHLOROETHOXY)METHANE	ug/L	5	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
BIS(2-CHLOROETHYL)ETHER	ug/L	1	5 UJ	5 U	5 U	5 U	0.21 U	5 UJ	5 UJ	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 UJ	5 U	5 U	0.21 U	5 U	5 U	0.2 U
BIS(2-ETHYLHEXYL)PHTHALATE	ug/L	5	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
BUTYLBENZYL PHTHALATE	ug/L	50	5 U	5 U	5 U	5 U	0.14 J	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.45 J	5 U	5 U	5 U	0.2 J	5 U	5 U	0.48 J
CAPROLACTAM	ug/L		5 UJ	5 UJ	5 UJ	5 UJ	0.23 J	5 UJ	5 UJ	5 UJ	5 UJ	0.3 J	5 UJ	5 UJ	5 U	5 UJ	5 UJ	5 UJ	5.2 U	5 UJ	5 UJ	5 U
CARBAZOLE	ug/L		5 U	5 U	5 U	5 U	0.21 U	5 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.21 U	5 U	5 U	0.069 J
CHRYSENE	ug/L	0.002	5 U	5 U	5 U	5 U	0.21 U	5 U	**0.3** J	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.21 U	5 U	5 U	0.2 U
DI-N-BUTYL PHTHALATE	ug/L	50	5 U	5 U	5 U	5 U	0.086 J	5 U	5 U	5 U	5 U	0.07 J	5 U	5 U	0.99 U	0.3 J	0.5 J	5 U	0.16 J	5 U	5 U	0.077 J
DI-N-OCTYL PHTHALATE	ug/L	50	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	2 J	5 U	1 U	5 U	5 U	0.99 U
DIBENZO(A,H)ANTHRACENE	ug/L		5 U	5 U	5 U	5 U	0.21 U	5 U	0.3 J	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.061 J	5 U	5 U	0.2 U
DIBENZOFURAN	ug/L		5 U	5 U	5 U	5 U	0.065 J	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.053 J
DIETHYL PHTHALATE	ug/L	50	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
DIMETHYL PHTHALATE	ug/L	50	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
FLUORANTHENE	ug/L	50	5 U	5 U	5 U	5 U	0.21 U	5 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.098 J	5 U	5 U	0.2 U
FLUORENE	ug/L	50	5 U	5 U	5 U	5 U	0.069 J	5 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.1 J	5 U	5 U	5 U	0.21 U	5 U	5 U	0.058 J
HEXACHLOROBENZENE	ug/L	0.04	5 U	5 U	5 U	5 U	0.21 U	5 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.21 U	5 U	5 U	0.2 U
HEXACHLOROBUTADIENE	ug/L	0.5	5 U	5 U	5 U	5 UJ	0.21 U	5 U	5 U	5 U	5 UJ	0.2 U	5 UJ	5 UJ	0.2 U	5 U	5 U	5 UJ	0.21 U	5 U	5 UJ	0.2 U
HEXACHLOROCYCLOPENTADIENE	ug/L	5	5 UJ	5 U	5 U	5 UJ	1 U	5 UJ	5 UJ	5 U	5 UJ	1 U	5 UJ	5 UJ	0.99 U	5 UJ	5 U	5 UJ	1 U	5 UJ	5 UJ	0.99 U
HEXACHLOROETHANE	ug/L	5	5 UJ	5 U	5 U	5 UJ	1 U	5 UJ	5 UJ	5 U	5 UJ	1 U	5 UJ	5 UJ	0.99 U	5 UJ	5 U	5 UJ	1 U	5 U	5 UJ	0.99 U
INDENO(1,2,3-CD)PYRENE	ug/L	0.002	5 U	5 U	5 U	5 U	0.21 U	5 U	**0.3** J	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	**0.069** J	5 U	5 U	0.2 U
ISOPHORONE	ug/L	50	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U	5 U	5 U	5 U	1 U	5 U	5 U	0.99 U
N-NITROSO-DI-N-PROPYLAMINE	ug/L		5 U	5 U	5 U	5 U	0.21 U	5 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.21 U	5 U	5 U	0.2 U
N-NITROSODIPHENYLAMINE	ug/L	50	5 U	5 U	5 U	5 U	0.21 U	5 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.21 U	5 U	5 U	0.2 U
NAPHTHALENE	ug/L	10	5 U	5 U	5 U	5 UJ	0.21 U	5 U	5 U	5 U	5 UJ	0.2 U	5 U	5 UJ	0.2 U	5 U	5 U	5 UJ	0.21 U	5 U	5 UJ	0.25
NITROBENZENE	ug/L	0.4	5 U	5 U	5 U	5 U	0.21 U	5 U	5 U	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 U	5 U	5 U	0.21 U	5 U	5 U	0.2 U
PENTACHLOROPHENOL (3)	ug/L	1	10 U	10 U	10 U	10 U	1 U	9 U	9 U	10 U	10 U	1 U	11 U	10 U	0.99 U	10 U	10 U	11 U	1 U	9 U	10 U	0.99 U
PHENANTHRENE	ug/L	50	5 U	5 U	5 U	5 U	0.15 J	5 U	5 U	5 U	5 U	0.087 J	5 U	5 U	0.2 U	5 U	5 U	5 U	0.21 U	5 U	5 U	0.14 J
PHENOL (3)	ug/L	1	5 UJ	5 U	5 U	5 U	0.21 U	5 UJ	5 UJ	5 U	5 U	0.2 U	5 U	5 U	0.2 U	5 UJ	5 U	5 U	0.21 U	5 U	5 U	0.2 U
PYRENE	ug/L	50	5 U	5 U	5 U	5 U	0.21 U	5 U	5 U	5 U	5 U	0.2 U	0.2 J	5 U	0.2 U	5 U	5 U	5 U	0.072 J	5 U	5 U	0.2 U

See notes at end of table

Table 2
Pre-Design Investigation and Final Design
Area E 2008 Groundwater Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units [4]	Sample ID: / Location: / Date: NYSDEC Values [5]	RFI-43-0208 RFI-43 02/06/08	RFI-43-0408 RFI-43 04/25/08	RFI-43R-0408 RFI-43 04/25/08	RFI-43-0708 RFI-43 07/29/08	MW-43-1008 RFI-43 10/16/08	RFI-51-0208 RFI-51 02/06/08	RFI-51R-0208 RFI-51 02/06/08	RFI-51-0408 RFI-51 04/24/08	RFI-51-0708 RFI-51 07/29/08	RFI-51-1008 RFI-51 10/16/08	RFI-PZ04S-0708 ICM-PZ-04S 07/30/08	RFI-PZ-17-0708 RFI-PZ-17 07/29/08	RFI-PZ-17-1008 RFI-PZ-17 10/16/08	RFI-PZ-18-0208 RFI-PZ-18 02/06/08	RFI-PZ-18-0408 RFI-PZ-18 04/24/08	RFI-PZ-18-0708 RFI-PZ-18 07/29/08	RFI-PZ-18-1008 RFI-PZ-18 10/16/08	RFI-PZ-19-0408 RFI-PZ-19 04/23/08	RFI-PZ-19-0708 RFI-PZ-19 07/29/08	RFI-PZ-19-1008 RFI-PZ-19 10/16/08
Metals																						
ALUMINUM	ug/L		200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	870	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
ANTIMONY	ug/L	3	20 U	20 U	20 U	20 U	10 U	20 U	20 U	20 U	20 U	10 U	20 U	20 U	10 U	20 U	20 U	20 U	10 U	20 U	20 U	50 U
ARSENIC	ug/L	25	10 U	10 U	10 U	10 U	10 U	**570**	**580**	**1000**	**670**	**940**	10 U	10 U	3 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BARIUM	ug/L	1000	12	12	11	11	12 J	14	14	16	19	20.8 J	230	130	142 J	240	170	180	204	46	61	43.3 J
BERYLLIUM	ug/L	3	2 U	2 U	2 U	2 U	4 U	2 U	2 U	2 U	2 U	4 U	2 U	2 U	4 U	2 U	2 U	2 U	4 U	2 U	2 U	4 U
CADMIUM	ug/L	5	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	5 U	1 U	**18**	**13** J
CALCIUM	ug/L		396000	536000	514000	406000	384000	443000	436000	487000	533000	533000	444000	396000	344000	280000	233000	210000	198000	608000	644000	499000
CHROMIUM	ug/L	50	4 U	4 U	4 U	4 U	5 U	4 U	4 U	4 U	4 U	5 U	4 U	4 U	5 U	4 U	4 U	4 U	1.2 J	4 U	4 U	25 U
COBALT	ug/L		4 U	4 U	4 U	4 U	50 U	4 U	4 U	4 U	4 U	50 U	4 U	4 U	50 U	4 U	4 U	4 U	50 U	4 U	4 U	50 U
COPPER	ug/L	200	10 U	10 U	10 U	10 U	25 U	10 U	10 U	10 U	10 U	25 U	10 U	10 U	25 U	66	120	46	25 U	10 U	16	25 U
IRON	ug/L	300	**1500**	**640** J	**470** J	250	197	**41700**	**40300**	**50600** J	**28000**	**34300**	**48500**	**6100**	**7160**	**11200**	**5200** J	**320**	143	**928000** J	**730000**	**971000**
LEAD	ug/L	25	5 U	5 U	5 U	5 U	3 U	5 U	5 U	5 U	5 U	3 U	5 U	5 U	3 U	8.3	9.4	5 U	3 U	5 U	7.4	15 U
MAGNESIUM	ug/L	35000	**126000**	**161000**	**154000**	**125000**	**121000**	**57000**	**56900**	**63200**	**99700**	**78100**	**106000**	**90000**	**67200**	**38500**	32600	28300	26000	**336000**	**415000**	**357000**
MANGANESE	ug/L	300	**3100**	**3300** J	**3200** J	**2600**	**1620**	**1300**	**1300**	**1400** J	**1500**	**1390**	**2600**	**440**	**306**	**1700**	**1900** J	**990**	**789**	**25800** J	**22800**	**25800**
MERCURY	ug/L	0.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	ug/L	100	10 U	10 U	10 U	10 U	4.5 J	10 U	10 U	10 U	10 U	40 U	10 U	10 U	40 U	10 U	10 U	10 U	40 U	10 U	10 U	40 U
POTASSIUM	ug/L		960	1000	1000	900	1070 J	20700	20900	20000	31300	29900	7000	4100	3660 J	6500	5100	6300	6300	28200	27800	28600
SELENIUM	ug/L	10	15 U	15 U	15 U	15 U	5 U	15 U	15 U	15 U	15 U	5 U	15 U	15 U	5 U	15 U	15 U	15 U	5 U	15 U	15 U	25 U
SILVER	ug/L	50	3 U	3 U	3 U	3 U	5 U	3 U	3 U	3 U	3 U	5 U	3 U	3 U	5 U	3 U	3 U	3 U	5 U	3 U	3 U	7.9
SODIUM	ug/L	20000	**27600**	**28200**	**27200**	**30900**	**32500**	**122000**	**121000**	**116000**	**149000**	**141000**	13300	11400	10700	17800	14600	**20800**	**21700**	**152000**	**140000**	**156000**
THALLIUM	ug/L	0.5	20 U	20 U	20 U	20 U	10 U	20 U	20 U	20 U	20 U	10 U	20 U	20 U	10 U	20 U	20 U	20 U	10 U	200 U	20 U	50 U
VANADIUM	ug/L		5 U	5 U	5 U	5 U	6.8 J	5 U	5 U	5 U	5 U	50 U	5 U	5 U	4 J	5 U	5 U	5 U	4.5 J	5 U	5 U	250 U
ZINC	ug/L	2000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	20 U	10 U	43	16	20 U	10 U	10 U	100 U
Additional Analyses																						
CHLORIDE	ug/L	250000	18200	14800	15400	24700 J	24700	29100	27800	27900	22900 J	22900		10000 J	9600	8000	6000	9500 J	10100	104000	92300 J	112000
CYANIDE	ug/L	200	10 U	10 U	10 U	10 U	1.8 J	10 U	10 U	10 U	10 U	1.8 J		10 U	4.4 J	10 U	10 U	10 U	4.2 J	10 U	10 U	6.5 J
FERROUS IRON	ug/L		100 UJ	260 J	280 J			24600 J	27100 J	37500 J						13600 J	2400 J			1650000 J		
NITROGEN, NITRATE-NITRITE	ug/L	10000		50 U	50 U	50 U				50 U	50 U			2800			50 U	62		50 U	50 U	
NITROGEN, NITRATE-NITRITE	ug/L	10000	50 U				100 U	50 U	50 U			100 U			100 U	50 U			100 U			480 J
SULFATE	ug/L	250000	**1480000**	**1240000**	**1250000**	**1080000**		**1670000**	**1680000**	**1190000**	**1750000**			124000		**503000**	**317000**	171000		**3360000**	**3820000**	
SULFATE	ug/L	250000					**1180000**					**1770000**			54700				12700			**4130000**
SULFATE	ug/L	250000																				
SULFIDE	ug/L	50					**4800**					3000 U			3000 U				**6400**			**3200**
SULFIDE	ug/L	50																				
SULFIDE	ug/L	50	1000 U	1000 U	1000 U	1000 U		1000 U	1000 U	1000 U	1000 U			1000 U		1000 U	1000 U	1000 U		1000 U	**1600** J	
TOTAL RECOVERABLE PHENOLICS	ug/L	1																				
TOTAL RECOVERABLE PHENOLICS	ug/L	1	10 U	**10**	**12**			10 U	10 U	10 U						10 U	10 U			10 U		

Notes:
(1) NYSDEC value of 0.4 ug/L is the standard for the sum of these substances
(2) The NYSDEC standard for benzo(a)pyrene is actually "ND" (non-detect), 0 is used for table compatibility
(3) NYSDEC value of 1 ug/L is the standard for the sum of these substances
(4) Units: ug/L = micrograms per liter
(5) New York State Department of Environmental Conservation, Technical and Operational Guidance Series
Ambient Water Quality Standards, Class GA, Table 1
Ambient Water Quality Guidance Values, Class GA, Table 1
Qualifiers: U = not detected; J = estimated value; UJ = non-detect reported, reporting limit qualified as estimated; R = data rejected during validation
Shaded value = exceedance of standard or guidance value

Table 3
Pre-Design Investigation and Final Design
Area E PDI Groundwater Analytical Data - September 2009
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units [4]	Sample ID: Location: Date: NYSDEC Values [5]	PDI-E01-0909 PDI-E01 09/16/09	PDI-E02-0909 PDI-E02 09/16/09	PDI-E03-0909 PDI-E03 09/16/09	PDI-E04-0909 PDI-E04 09/16/09	PDI-E05-0909 PDI-E05 09/16/09	PDI-E06-0909 PDI-E06 09/16/09	PDI-E07-0909 PDI-E07 09/20/09	PDI-E08-0909 PDI-E08 09/17/09	PDI-E09-0909 PDI-E09 09/17/09	PDI-E10-0909 PDI-E10 09/17/09	PDI-E11-0909 PDI-E11 09/17/09	PDI-E12-0909 PDI-E12 09/21/09	PDI-E13-0909 PDI-E13 09/17/09	PDI-E14-0909 PDI-E14 09/18/09	PDI-E15-0909 PDI-E15 09/20/09	PDI-E17-0909 PDI-E17 09/17/09	PDI-E18-0909 PDI-E18 09/21/09	PDI-E19-0909 PDI-E19 09/18/09	PDI-E22-0909 PDI-E22 09/21/09	PDI-E23-0909 PDI-E23 09/18/09
VOCs																						
1,1,1-Trichloroethane	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
1,1,2,2-Tetrachloroethane	ug/L	5	20 U	4000 U	2000 U	5 UJ	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	20 U	4000 U	2000 U	5 UJ	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
1,1,2-Trichloroethane	ug/L	1	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
1,1-Dichloroethane	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	0.65 J	1 U	5 U	1 U	
1,1-Dichloroethene	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
1,2,4-Trichlorobenzene	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	3 J	1 U	
1,2-Dibromo-3-chloropropane	ug/L	0.04	20 U	4000 U	2000 U	5 U	5 U	10 U	5 UJ	5 UJ	5 UJ	25 UJ	5 UJ	5 UJ	1 UJ	200 U	10 UJ	1 UJ	1 U	5 UJ	1 UJ	
1,2-Dibromoethane	ug/L	0.0006	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
1,2-Dichlorobenzene	ug/L	3	20 U	4000 U	2000 U	5 U	5 U	9 J	5.9	5 U	8.8	25 UJ	3.8 J	15	1 U	7800	8900	1 U	1 U	33	0.6 J	
1,2-Dichloroethane	ug/L	0.6	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
1,2-Dichloroethene, Total	ug/L	5																				
1,2-Dichloropropane	ug/L	1	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
1,3-Dichlorobenzene	ug/L	3	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	2.5 J	25 UJ	5 U	5 U	1 U	80 J	59	1 U	1 U	67	1 U	
1,4-Dichlorobenzene	ug/L	3	20 U	4000 U	2000 U	5 U	5 U	43	5 U	5 U	75	25 UJ	5 U	2.4 J	1 U	1300	1600	1 U	1 U	16	1 U	
2-Butanone	ug/L	50	100 U	20000 U	10000 U	25 U	25 U	50 U	25 U	25 U	25 U	120 UJ	25 U	25 U	5 U	1000 U	50 U	5 U	5 U	12 J	5 U	
2-Hexanone	ug/L	50	100 U	20000 U	10000 U	25 U	25 U	50 U	25 U	25 U	25 U	120 UJ	25 U	25 U	5 U	1000 U	50 U	5 U	5 U	25 U	5 U	
4-Methyl-2-pentanone	ug/L		100 U	20000 U	10000 U	25 U	25 U	50 U	25 U	25 U	25 U	120 UJ	25 U	25 U	5 U	1000 U	50 U	5 U	5 U	25 U	5 U	
Acetone	ug/L	50	100 U	20000 U	10000 U	20 J	28	50 U	22 J	25 U	18 J	53 J	25 U	16 J	10	1000 U	48 J	2.1 J	3.6 J	16 J	5 U	
Benzene	ug/L	1	20 U	4000 U	2000 U	97	6.6	140	5 U	2.5 J	24	270 J	85	130	1 U	190 J	1600	1 U	1 U	15	1 U	
Bromodichloromethane	ug/L	50	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Bromoform	ug/L	50	20 U	4000 U	2000 U	5 U	5 U	10 U	5 UJ	5 UJ	5 UJ	25 UJ	5 UJ	5 UJ	1 UJ	200 U	10 UJ	1 UJ	1 U	5 UJ	1 UJ	
Bromomethane	ug/L	5	20 U	4000 U	2000 U	5 UJ	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Carbon disulfide	ug/L	60	20 U	4000 U	2000 U	5 UJ	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Carbon Tetrachloride	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Chlorobenzene	ug/L	5	20 U	390000	190000	20000	2700	4800	3.9 J	4.1 J	4700	31000	1700	330	0.83 J	15000	97000 J	1 U	0.46 J	5600	4.4	
Chloroethane	ug/L	5	20 UJ	4000 UJ	2000 UJ	5 U	5 UJ	10 UJ	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Chloroform	ug/L	7	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Chloromethane	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
cis-1,2-Dichloroethene	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
cis-1,3-Dichloropropene [1]	ug/L	0.4	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Cyclohexane	ug/L		20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Dibromochloromethane	ug/L	50	20 U	4000 U	2000 U	5 U	5 U	10 U	5 UJ	5 UJ	5 UJ	25 UJ	5 UJ	5 UJ	1 UJ	200 U	10 UJ	1 UJ	1 U	5 UJ	1 UJ	
Dichlorodifluoromethane	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Ethylbenzene	ug/L	5	20 U	4000 U	2000 U	21	5 U	10 U	5 U	5 U	5 U	160 J	400	5 U	1 U	120 J	24	1 U	1 U	5 U	1 U	
Isopropylbenzene	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Methyl Acetate	ug/L		20 UJ	4000 UJ	2000 UJ	5 U	5 UJ	10 UJ	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 UJ	1 U	1 U	5 U	1 U	
Methyl-t-Butyl Ether (MTBE)	ug/L	10	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Methylcyclohexane	ug/L		20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	0.55 J	
Methylene Chloride	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	180 J	10 U	1 U	1 U	5 U	1 U	
Styrene	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Tetrachloroethene	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	4.2 J	1 U	1 U	5 U	1 U	
Toluene	ug/L	5	20 U	4000 U	2000 U	6.6	5 U	10 U	1700	17	17	25 UJ	13	8.9	33	470	100	75	58	340	60	
trans-1,2-Dichloroethene	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
trans-1,3-Dichloropropene [1]	ug/L	0.4	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Trichloroethene	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Trichlorofluoromethane	ug/L	5	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Vinyl acetate	ug/L																					
Vinyl chloride	ug/L	2	20 U	4000 U	2000 U	5 U	5 U	10 U	5 U	5 U	5 U	25 UJ	5 U	5 U	1 U	200 U	10 U	1 U	1 U	5 U	1 U	
Xylenes, total	ug/L	5	40 U	8000 U	4000 U	3.4 J	10 U	20 U	10 U	10 U	10 U	50 UJ	10 U	10 U	2 U	400 U	20 U	2 U	2 U	10 U	2 U	
Additional Analyses																						
Chemical Oxygen Demand	mg/L											39.3	144			130					10 U	
Biochemical Oxygen Demand	mg/L											16.7	55.1			8.8					2 U	
Diesel range organics	mg/L											9.6	3.4			8.7					0.26 J	
Oil Range Organics [C28-C40]	mg/L											0.5 U	0.48 U			0.48 U					0.56 U	
Gasoline Range Organics	ug/L											55000	3200			45000					1500	

See notes at end of table

Produced by: WCG 11/20/09
Checked by: TLC 11/23/09

Table 3
Pre-Design Investigation and Final Design
Area E PDI Groundwater Analytical Data - September 2009
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units (4)	Sample ID: Location: Date: NYSDEC Values (5)	PDI-E01-0909 PDI-E01 09/16/09	PDI-E02-0909 PDI-E02 09/16/09	PDI-E03-0909 PDI-E03 09/16/09	PDI-E04-0909 PDI-E04 09/16/09	PDI-E05-0909 PDI-E05 09/16/09	PDI-E06-0909 PDI-E06 09/16/09	PDI-E07-0909 PDI-E07 09/20/09	PDI-E08-0909 PDI-E08 09/17/09	PDI-E09-0909 PDI-E09 09/17/09	PDI-E10-0909 PDI-E10 09/17/09	PDI-E11-0909 PDI-E11 09/17/09	PDI-E12-0909 PDI-E12 09/21/09	PDI-E13-0909 PDI-E13 09/17/09	PDI-E14-0909 PDI-E14 09/18/09	PDI-E15-0909 PDI-E15 09/20/09	PDI-E17-0909 PDI-E17 09/17/09	PDI-E18-0909 PDI-E18 09/21/09	PDI-E19-0909 PDI-E19 09/18/09	PDI-E22-0909 PDI-E22 09/21/09	PDI-E23-0909 PDI-E23 09/18/09
SVOCs																						
2,2'-Oxybis(1-Chloropropane)	ug/L	5	4 UJ	220 UJ	20 UJ	4.4 UJ	20 UJ	4 UJ	3.8 UJ	4 UJ	4 UJ	3.9 UJ	4 UJ	4 UJ	4 UJ	44 UJ	40 UJ	4.2 UJ	4.4 UJ	38 UJ	4 UJ	40 UJ
2,4,5-Trichlorophenol	ug/L		5 U	280 U	25 U	5.5 U	25 U	5 U	4.8 U	R	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
2,4,6-Trichlorophenol	ug/L		5 U	280 U	25 U	5.5 U	25 U	5 U	4.8 U	R	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
2,4-Dichlorophenol	ug/L	5	5 U	280 U	25 U	5.5 U	25 U	5 U	4.8 U	R	5 U	4.9 U	5 U	5 U	5 U	56 U	10 J	5.3 U	5.6 U	48 U	5 U	50 U
2,4-Dimethylphenol	ug/L	1	5 U	280 U	25 U	5.5 U	25 U	5 U	4.8 U	R	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
2,4-Dinitrophenol	ug/L	1	9.9 U	560 U	50 U	11 U	50 U	9.9 U	9.5 U	R	10 U	9.7 U	9.9 U	9.9 U	9.9 U	110 U	99 U	11 U	11 U	96 U	10 U	99 U
2,4-Dinitrotoluene	ug/L	5	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
2,6-Dinitrotoluene	ug/L	5	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
2-Chloronaphthalene	ug/L	10	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
2-Chlorophenol	ug/L		5 U	250 J	140	130	9.2 J	9.1	4.8 U	R	4.1 J	33	0.92 J	5 U	5 U	37 J	310	5.3 U	5.6 U	22 J	5 U	50 U
2-Methylnaphthalene	ug/L		5 U	17 J	2.4 J	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
2-Methylphenol	ug/L		5 U	280 U	25 U	5.5 U	25 U	5 U	2.9 J	R	5 U	4.9 U	5 U	5 U	5 U	56 U	36 J	5.3 U	5.6 U	48 U	5 U	50 U
2-Nitroaniline	ug/L	5	9.9 U	560 UJ	50 U	11 U	50 U	9.9 U	9.5 U	10 U	10 U	9.7 U	9.9 U	9.9 U	9.9 U	110 U	99 U	11 U	11 U	96 U	10 U	99 U
2-Nitrophenol	ug/L		5 U	280 U	25 U	5.5 U	25 U	5 U	4.8 U	R	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
3,3'-Dichlorobenzidine	ug/L	5	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
3-Nitroaniline	ug/L	5	9.9 U	560 UJ	50 U	11 U	50 U	9.9 U	9.5 U	10 U	10 U	9.7 U	9.9 U	9.9 U	9.9 U	110 U	99 U	11 U	11 U	96 U	10 U	99 U
4,6-Dinitro-2-methylphenol	ug/L		9.9 U	560 U	50 U	11 U	50 U	9.9 U	9.5 U	R	10 U	9.7 U	9.9 U	9.9 U	9.9 U	110 U	99 U	11 U	11 U	96 U	10 U	99 U
4-Bromophenyl phenyl ether	ug/L		5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
4-Chloro-3-methylphenol	ug/L		5 U	280 U	25 U	5.5 U	25 U	2.8 J	4.8 U	R	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
4-Chloroaniline	ug/L	5	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	2.6 J	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	0.63 J	5.6 U	19000	5 U	10 J
4-Chlorophenyl phenyl ether	ug/L		5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
4-Methylphenol	ug/L		9.9 U	89 J	8.1 J	11 U	50 U	9.9 U	1.5 J	R	10 U	9.7 U	9.9 U	9.9 U	9.9 U	110 U	99 U	11 U	1.2 J	96 U	10 U	99 U
4-Nitroaniline	ug/L	5	9.9 U	560 UJ	50 U	11 U	50 U	9.9 U	9.5 U	10 U	10 U	9.7 U	9.9 U	9.9 U	9.9 U	110 U	99 U	11 U	11 U	96 U	10 U	99 U
4-Nitrophenol	ug/L		9.9 U	560 U	50 U	11 U	50 U	9.9 U	9.5 U	R	10 U	9.7 U	9.9 U	9.9 U	9.9 U	110 U	99 U	11 U	11 U	96 U	10 U	99 U
Acenaphthene	ug/L	20	5 U	21 J	4.4 J	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Acenaphthylene	ug/L		5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Acetophenone	ug/L		5 U	280 UJ	25 U	5.5 U	25 U	5 U	2.3 J	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Aniline	ug/L	5	9.9 U	560 UJ	15 J	11 U	50 U	9.9 U	8.9 J	25000	11	13	380	14000	54	3000	4300	11 U	11 U	1200	5 J	620
Anthracene	ug/L	50	5 U	46 J	25 U	5.5 U	2.3 J	0.21 J	4.8 U	5 U	5 U	4.9 U	5 U	5 U	0.24 J	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Atrazine	ug/L	7.5	5 UJ	280 UJ	25 UJ	5.5 UJ	25 UJ	5 UJ	4.8 UJ	5 UJ	5 UJ	4.9 UJ	5 UJ	5 UJ	5 UJ	56 UJ	50 UJ	5.3 UJ	5.6 UJ	48 UJ	5 UJ	50 UJ
Benzaldehyde	ug/L		0.42 J	280 UJ	25 U	5.5 U	25 U	0.83 J	4.8 U	5 U	5 U	4.9 U	0.94 J	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Benzo(a)anthracene	ug/L	0.002	5 U	89 J	25 U	0.59 J	11 J	0.62 J	4.8 U	5 U	5 U	4.9 U	5 U	5 U	0.5 J	56 U	50 U	5.3 U	5.6 U	48 U	5 U	7.2 J
Benzo(a)pyrene (2)	ug/L	0	5 U	71 J	25 U	0.56 J	11 J	0.71 J	4.8 U	5 U	5 U	4.9 U	5 U	5 U	0.32 J	56 U	50 U	5.3 U	5.6 U	48 U	5 U	6 J
Benzo(b)fluoranthene	ug/L	0.002	5 U	94 J	25 U	0.62 J	13 J	0.99 J	4.8 U	5 U	5 U	4.9 U	5 U	5 U	1.2 J	56 U	50 U	5.3 U	5.6 U	48 U	5 U	12 J
Benzo(ghi)perylene	ug/L		5 U	39 J	25 U	5.5 U	6.4 J	0.58 J	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	3 J
Benzo(k)fluoranthene	ug/L	0.002	5 U	37 J	25 U	0.44 J	4.8 J	0.48 J	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Biphenyl	ug/L	5	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Bis(2-chloroethoxy)methane	ug/L	5	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Bis(2-chloroethyl)ether	ug/L	1	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Bis(2-ethylhexyl) phthalate	ug/L	5	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Butyl benzyl phthalate	ug/L	50	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Caprolactam	ug/L		5 UJ	280 UJ	25 UJ	5.5 UJ	25 UJ	5 UJ	4.8 UJ	5 UJ	5 UJ	4.9 UJ	5 UJ	5 UJ	5 UJ	56 UJ	50 UJ	5.3 UJ	5.6 UJ	48 UJ	5 UJ	50 UJ
Carbazole	ug/L		5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	0.46 J	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Chrysene	ug/L	0.002	5 U	72 J	25 U	0.5 J	9.9 J	0.78 J	4.8 U	5 U	5 U	4.9 U	5 U	5 U	0.38 J	56 U	50 U	5.3 U	5.6 U	48 U	5 U	6.6 J
Di-n-butyl phthalate	ug/L	50	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	0.32 J	0.78 J	0.67 J	0.31 J	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Di-n-octyl phthalate	ug/L	50	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Dibenzo(a,h)anthracene	ug/L		5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Dibenzofuran	ug/L		9.9 U	560 UJ	50 U	11 U	50 U	9.9 U	9.5 U	10 U	10 U	9.7 U	9.9 U	9.9 U	9.9 U	110 U	99 U	11 U	11 U	96 U	10 U	99 U
Diethyl phthalate	ug/L	50	0.5 U	18 UJ	25 U	8.1 U	2.4 U	5 U	1.2 J	5 U	5 U	4.2 J	3.3 J	4.9 J	5 U	56 U	50 U	0.4 J	0.61 J	3.6 J	2.8 J	50 U
Dimethyl phthalate	ug/L	50	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Fluoranthene	ug/L	50	5 U	230 J	2.2 J	0.84 J	25	1.1 J	4.8 U	5 U	5 U	0.42 J	5 U	5 U	1.2 J	56 U	50 U	5.3 U	5.6 U	48 U	5 U	17 J
Fluorene	ug/L	50	5 U	47 J	1.2 J	5.5 U	1.4 J	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	3.9 J
Hexachlorobenzene	ug/L	0.04	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Hexachlorobutadiene	ug/L	0.5	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Hexachlorocyclopentadiene	ug/L	5	5 UJ	280 UJ	25 UJ	5.5 UJ	25 UJ	5 UJ	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Hexachloroethane	ug/L	5	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Indeno(1,2,3-cd)pyrene	ug/L	0.002	5 U	34 J	25 U	0.35 J	5.6 J	0.53 J	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Isophorone	ug/L	50	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
N-Nitrosodi-n-propylamine	ug/L		5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
N-Nitrosodiphenylamine	ug/L	50	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	0.96 J	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Naphthalene	ug/L	10	5 U	50 J	72	81	6 J	5 U	4.8 U	0.31 J	3.3 J	15	0.5 J	5 U	0.29 J	15 J	81	5.3 U	5.6 U	48 U	5 U	14 J
Nitrobenzene	ug/L	0.4	5 U	280 UJ	25 U	5.5 U	25 U	5 U	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	19000	50 U	5.3 U	5.6 U	2100	5 U	760
Pentachlorophenol (3)	ug/L	1	9.9 U	560 U	50 U	11 U	50 U	9.9 U	9.5 U	R	10 U	9.7 U	9.9 U	9.9 U	9.9 U	110 U	99 U	11 U	11 U	96 U	10 U	99 U
Phenanthrene	ug/L	50	5 U	230 J	1.8 J	0.56 J	9.6 J	0.62 J	4.8 U	5 U	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	5.6 U	48 U	5 U	50 U
Phenol (3)	ug/L	1	5 U	25	11	2.7	25 U	5 U	45	R	5 U	4.9 U	5 U	5 U	5 U	56 U	50 U	5.3 U	6	48 U	2	50 U
Pyrene	ug/L	50	5 U	180 J	1.6 J	0.84 J	21 J	1.1 J	4.8 U	5 U	5 U	4.9 U	5 U	5 U	0.8 J	56 U	50 U	5.3 U	5.6 U	48 U	5 U	12 J

Notes:
(1) NYSDEC value of 0.4 ug/L is the standard for the sum of these substances
(2) The NYSDEC standard for benzo(a)pyrene is actually "ND" (non-detect), 0 is used for table compatibility
(3) NYSDEC value of 1 ug/L is the standard for the sum of these substances
(4) Units: ug/L = micrograms per liter; mg/L = milligrams per liter
(5) New York State Department of Environmental Conservation, Technical and Operational Guidance Series
Ambient Water Quality Standards, Class GA, Table 1, Ambient Water Quality Guidance Values, Class GA, Table 1
Qualifiers: U = not detected; J = estimated value; UJ = non-detect reported, reporting limit qualified as estimated; R = data rejected during validation
Shaded value = exceedance of standard or guidance value

Table 4
Pre-Design Investigation and Final Design
Area E PDI Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

			Sample ID:	PDI-E01-0305	PDI-E02-0405	PDI-E03-0304	PDI-E04-0204	PDI-E05-0406	PDI-E06-0304	PDI-E07-0204	PDI-E08-0304	PDI-E09-0406	PDI-E10-0204	PDI-E11-0204	PDI-E12-0204	PDI-E13-0608	PDI-E14-0507	PDI-E15-0305	PDI-E16-0204	PDI-E17-0204	PDI-E18-0204	PDI-E19-0204
			Date:	09/16/09	09/16/09	09/16/09	09/16/09	09/16/09	09/16/09	09/16/09	09/16/09	09/16/09	09/17/09	09/17/09	09/17/09	09/17/09	09/17/09	09/17/09	09/17/09	09/17/09	09/18/09	09/17/09
			Depth:	3-5'	4-5'	3-4'	2-4'	4-6'	3-4'	2-4'	3-4'	4-6'	2-4'	2-4'	2-4'	6-8'	5-7'	3-5'	2-4'	2-4'	2-4'	2-4'
		NYSDEC Values (2)																				
Parameter	Units (1)	Commercial Use	Protection of GW																			
VOCs																						
1,1,1-Trichloroethane	ug/kg	500000	680	240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
1,1,2,2-Tetrachloroethane	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
1,1,2-Trichloroethane	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
1,1,2-Trichlorotrifluoroethane	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
1,1-Dichloroethane	ug/kg	240000	270	240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
1,1-Dichloroethene	ug/kg	500000	330	240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
1,2,4-Trichlorobenzene	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	43 J	5 U	4.3 U	5.2 U	52 U	3100
1,2-Dibromo-3-chloropropane	ug/kg			240 UJ	190 UJ	3000 UJ	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
1,2-Dibromoethane (EDB)	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
1,2-Dichlorobenzene	ug/kg	500000	1100	240 U	190 U	3000 U	5.5 U	4.8 U	2.9 J	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	33 J	55000	5 U	4.3 U	5.2 U	52 U	13000
1,2-Dichloroethane	ug/kg	30000	20	240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
1,2-Dichloropropane	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
1,3-Dichlorobenzene	ug/kg	280000	2400	240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	660	5 U	4.3 U	5.2 U	52 U	26000
1,4-Dichlorobenzene	ug/kg	130000	1800	240 U	190 U	3000 U	5.5 U	4.8 U	4.3 J	6.2 U	7.3 U	12	570 U	4.3 U	6.3 U	52 U	10000	1.6 J	4.3 U	5.2 U	52 U	4300
2-Butanone (MEK)	ug/kg	500000	120	1200 U	960 U	15000 U	12 J	24 U	23 U	18 J	25 J	21 U	2900 U	22 U	17 J	260 U	280 U	9.5 J	22 U	26 U	260 U	290 U
2-Hexanone	ug/kg			1200 U	960 U	15000 U	28 U	24 U	23 U	31 U	36 U	21 U	2900 U	22 U	32 U	260 UJ	280 U	25 U	22 U	26 U	260 UJ	290 UJ
4-Methyl-2-pentanone (MIBK)	ug/kg			1200 U	960 U	15000 U	28 U	24 U	23 U	31 U	36 U	21 U	2900 U	22 U	32 U	260 U	280 U	25 U	22 U	26 U	260 U	290 U
Acetone	ug/kg	500000	50	1200 UJ	960 UJ	15000 UJ	62	24	30	93	110	34	2900 U	13 J	76	260 U	280 U	55 J	42	31	260 U	290 U
Benzene	ug/kg	44000	60	940	190 U	3000 U	5.5 U	4.8 U	8.3	6.2 U	7.3 U	29	640	6.2	40	55	95	2700 EJ	7	5.2 U	52 U	350
Bromodichloromethane	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Bromoform	ug/kg			240 UJ	190 UJ	3000 UJ	5.5 UJ	4.8 UJ	4.6 UJ	6.2 UJ	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Bromomethane	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Carbon disulfide	ug/kg			240 U	83 J	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Carbon Tetrachloride	ug/kg	22000	760	240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Chlorobenzene	ug/kg	500000	1100	1000000	150000	1300000	3.6 U	42	1200	3.1 U	5 J	4300	290000	200	23	52 U	38000	100000	6.1	5.2 U	52 U	230000
Chlorodibromomethane	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Chloroethane	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 UJ	4.3 U	6.3 U	52 U	55 UJ	5 U	4.3 U	5.2 U	52 U	58 U
Chloroform	ug/kg	350000	370	240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Chloromethane	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
cis-1,2-Dichloroethene	ug/kg	500000	250	240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
cis-1,3-Dichloropropene	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Cyclohexane	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	4.6 J	4.3 U	5.2 U	52 U	58 U
Dichlorodifluoromethane	ug/kg			240 UJ	190 UJ	3000 UJ	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Ethylbenzene	ug/kg	390000	1000	1600	180 J	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	1.5 J	420 J	19	6.3 U	52 U	75	92 J	4.3 U	5.2 U	52 U	58 U
Isopropylbenzene	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	1.5 J	4.3 U	5.2 U	52 U	58 U
Methyl Acetate	ug/kg			170 J	83 J	3000 UJ	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	27 J	5 U	4.3 U	5.2 UJ	31 J	120
Methyl tert-Butyl Ether	ug/kg	500000	930	240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Methylcyclohexane	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	1.1 J	570 U	4.3 U	6.3 U	52 U	55 U	5.4 J	4.3 U	5.2 U	52 U	58 U
Methylene Chloride	ug/kg	500000	50	240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	1.7 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Styrene	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Tetrachloroethene	ug/kg	150000	1300	240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Toluene	ug/kg	500000	700	240 U	490	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	1 J	570 U	1.2 J	6.3 U	68	55 U	20 J	4.3 U	5.2 U	52 U	3600
trans-1,2-Dichloroethene	ug/kg	500000	190	240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
trans-1,3-Dichloropropene	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Trichloroethene	ug/kg	200000	470	240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Trichlorofluoromethane	ug/kg			240 U	190 U	3000 U	5.5 U	4.8 U	4.6 U	6.2 U	7.3 U	4.2 U	570 U	4.3 U	6.3 U	52 U	55 U	5 U	4.3 U	5.2 U	52 U	58 U
Vinyl chloride	ug/kg	13000	20	470 U	390 U	6000 U	11 U	9.6 U	9.1 U	12 U	15 U	8.5 U	1100 U	8.6 U	13 U	100 U	110 U	10 U	8.7 U	10 U	100 U	120 U
Xylenes, total	ug/kg	500000	1600	97 J	390 U	6000 U	11 U	9.6 U	9.1 U	12 U	15 U	1 J	1100 U	8.6 U	13 U	100 U	110 U	23 J	8.7 U	10 U	100 U	110 J

See notes at end of table

Table 4
Pre-Design Investigation and Final Design
Area E PDI Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

			Sample ID:	PDI-E01-0305	PDI-E02-0405	PDI-E03-0304	PDI-E04-0204	PDI-E05-0406	PDI-E06-0304	PDI-E07-0204	PDI-E08-0304	PDI-E09-0406	PDI-E10-0204	PDI-E11-0204	PDI-E12-0204	PDI-E13-0608	PDI-E14-0507	PDI-E15-0305	PDI-E16-0204	PDI-E17-0204	PDI-E18-0204	PDI-E19-0204
			Date:	09/16/09	09/16/09	09/16/09	09/16/09	09/16/09	09/16/09	09/16/09	09/16/09	09/16/09	09/17/09	09/17/09	09/17/09	09/17/09	09/17/09	09/17/09	09/17/09	09/17/09	09/18/09	09/17/09
			Depth:	3-5'	4-5'	3-4'	2-4'	4-6'	3-4'	2-4'	3-4'	4-6'	2-4'	2-4'	2-4'	6-8'	5-7'	3-5'	2-4'	2-4'	2-4'	2-4'
		NYSDEC Values [2]																				
Parameter	Units [1]	Commercial Use	Protection of GW																			
SVOCs																						
2,2'-Oxybis(1-Chloropropane)	ug/kg			2200 UJ	2100 UJ	230 UJ	250 UJ	2100 UJ	210 UJ	220 UJ	290 U	200 U	920 U	190 U	230 U	1100 UJ	200 U	210 U	200 U	200 UJ	2100 UJ	210 UJ
2,4,5-Trichlorophenol	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
2,4,6-Trichlorophenol	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
2,4-Dichlorophenol	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
2,4-Dimethylphenol	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
2,4-Dinitrophenol	ug/kg			4300 U	4100 U	450 U	480 U	4000 U	410 U	440 U	560 U	390 U	1800 U	370 U	450 U	2100 U	390 U	400 U	380 U	390 U	4000 U	400 U
2,4-Dinitrotoluene	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
2,6-Dinitrotoluene	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
2-Chloronaphthalene	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
2-Chlorophenol	ug/kg			2200 U	2100 U	610	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	190 J	370	200 U	200 U	2100 U	33 J
2-Methylnaphthalene	ug/kg			2200 U	200 J	230 U	250 U	2100 U	210 U	8.8 J	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
2-Methylphenol	ug/kg	500000	330	2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
2-Nitroaniline	ug/kg			4300 U	4100 U	450 U	480 U	4000 U	410 U	440 U	560 U	390 U	1800 U	370 U	450 U	2100 U	390 U	400 U	380 U	390 U	4000 U	400 U
2-Nitrophenol	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
3,3'-Dichlorobenzidine	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
3-Nitroaniline	ug/kg			4300 U	4100 U	450 U	480 U	4000 U	410 U	440 U	560 U	390 U	1800 U	370 U	450 U	2100 U	390 U	400 U	380 U	390 U	4000 U	400 U
4,6-Dinitro-2-methylphenol	ug/kg			4300 U	4100 U	450 U	480 U	4000 U	410 U	440 U	560 U	390 U	1800 U	370 U	450 U	2100 U	390 U	400 U	380 U	390 U	4000 U	400 U
4-Bromophenyl phenyl ether	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
4-Chloro-3-methylphenol	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
4-Chloroaniline	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	1700
4-Chlorophenyl phenyl ether	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
4-Methylphenol	ug/kg	500000	330	4300 U	4100 U	59 J	480 U	4000 U	410 U	440 U	560 U	390 U	1800 U	370 U	450 U	2100 U	390 U	400 U	380 U	390 U	4000 U	400 U
4-Nitroaniline	ug/kg			4300 U	4100 U	450 U	480 U	4000 U	410 U	440 U	560 U	390 U	1800 U	370 U	450 U	2100 U	390 U	400 U	380 U	390 U	4000 U	400 U
4-Nitrophenol	ug/kg			4300 U	4100 U	450 U	480 U	4000 U	410 U	440 U	560 U	390 U	1800 U	370 U	450 U	2100 U	390 U	400 U	380 U	390 U	4000 U	400 U
Acenaphthene	ug/kg	500000	98000	2200 U	330 J	230 U	15 J	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Acenaphthylene	ug/kg	500000	107000	2200 U	140 J	230 U	12 J	150 J	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Acetophenone	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Aniline	ug/kg			4300 U	4100 U	450 U	480 U	4000 U	410 U	440 U	1200	390 U	1800 U	370 U	450 U	2700	390 U	400 U	380 U	390 U	4000 U	400 U
Anthracene	ug/kg	500000	1000000	130 J	960 J	230 U	58 J	680 J	210 U	8.8 J	290 U	25 J	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Atrazine	ug/kg			2200 UJ	2100 UJ	230 UJ	250 UJ	2100 UJ	210 UJ	220 UJ	290 UJ	200 UJ	920 UJ	190 UJ	230 UJ	1100 UJ	200 UJ	210 UJ	200 UJ	200 UJ	2100 UJ	210 UJ
Benzaldehyde	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Benzo(a)anthracene	ug/kg	5600	1000	360 J	1800 J	9.5 J	93 J	1700 J	210 U	38 J	41 J	50 J	920 U	190 U	230 U	1100 U	200 U	210 U	18 J	200 U	190 J	210 U
Benzo(a)pyrene	ug/kg	1000	22000	220 J	1600 J	230 U	89 J	1500 J	210 U	37 J	40	44	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	170 J	210 U
Benzo(b)fluoranthene	ug/kg	5600	1700	410 J	1800 J	230 U	96 J	1700 J	210 U	44 J	46 J	57 J	63 J	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	400 J	210 U
Benzo(ghi)perylene	ug/kg	500000	1000000	170 J	770 J	230 U	50 J	800 J	210 U	26 J	290 U	30 J	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Benzo(k)fluoranthene	ug/kg	56000	1700	110 J	820 J	230 U	41 J	710 J	210 U	15 J	20 J	22 J	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Biphenyl	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Bis(2-chloroethoxy)methane	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Bis(2-chloroethyl)ether	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Bis(2-ethylhexyl) phthalate	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	140 J	190 J	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Butyl benzyl phthalate	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Caprolactam	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Carbazole	ug/kg			2200 U	2100 U	230 U	18 J	110 J	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	28 J	200 U	2100 U	210 U
Chrysene	ug/kg	56000	1000	360 J	1700 J	230 U	96 J	1500 J	210 U	34 J	34 J	64 J	79 J	20 J	230 U	1100 U	200 U	210 U	200 U	200 U	170 J	210 U
Di-n-butyl phthalate	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Di-n-octyl phthalate	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Dibenzo(a,h)anthracene	ug/kg	560	1000000	2200 U	270 J	230 U	15 J	250 J	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Dibenzofuran	ug/kg	350000	210000	2200 U	410 J	230 U	18 J	250 J	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Diethyl phthalate	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Dimethyl phthalate	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Fluoranthene	ug/kg	500000	1000000	1100 J	5000	21 J	240 J	4800	210 U	69 J	69 J	140 J	76 J	190 U	230 U	1100 U	200 U	210 U	38 J	200 U	280 J	210 U
Fluorene	ug/kg	500000	386000	110 J	810 J	230 U	29 J	540 J	210 U	220 U	290 U	9.4 J	920 U	190 U	230 U	1100 U	200 U	210 U	13 J	200 U	2100 U	210 U
Hexachlorobenzene	ug/kg	6000	3200	2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Hexachlorobutadiene	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Hexachlorocyclopentadiene	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Hexachloroethane	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Indeno(1,2,3-cd)pyrene	ug/kg	5600	8200	150 J	730 J	230 U	42 J	700 J	210 U	21 J	24 J	25 J	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	140 J	210 U
Isophorone	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
N-Nitrosodi-n-propylamine	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
N-Nitrosodiphenylamine	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	34	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Naphthalene	ug/kg	500000	12000	2200 U	420 J	230 U	14 J	2100 U	210 U	14 J	290 U	200 U	920 U	190 U	230 U	1100 U	200 J	270	200 U	200 U	2100 U	210 U
Nitrobenzene	ug/kg			2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	37000	200 U	210 U	200 U	200 U	2100 U	210 U
Pentachlorophenol	ug/kg	6700	800	4300 U	4100 U	450 U	480 U	4000 U	410 U	440 U	560 U	390 U	1800 U	370 U	450 U	2100 U	390 U	400 U	380 U	390 U	4000 U	400 U
Phenanthrene	ug/kg	500000	1000000	340 J	4700	18 J	250	3500	210 U	55 J	59 J	60 J	920 U	17 J	230 U	1100 U	200 U	210 U	55 J	200 U	120 J	210 U
Phenol	ug/kg	500000	330	2200 U	2100 U	230 U	250 U	2100 U	210 U	220 U	290 U	200 U	920 U	190 U	230 U	1100 U	200 U	210 U	200 U	200 U	2100 U	210 U
Pyrene	ug/kg	500000	1000000	770 J	3900	15 J	200 J	3600	210 U	58 J	56 J	110 J	920 U	190 U	230 U	1100 U	200 U	210 U	28 J	200 U	240 J	210 U

See notes at end of table

Table 4
Pre-Design Investigation and Final Design
Area E PDI Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units (1)	NYSDEC Values (2) Commercial Use	NYSDEC Values (2) Protection of GW	PDI-E01-0305 09/16/09 3-5'	PDI-E02-0405 09/16/09 4-5'	PDI-E03-0304 09/16/09 3-4'	PDI-E04-0204 09/16/09 2-4'	PDI-E05-0406 09/16/09 4-6'	PDI-E06-0304 09/16/09 3-4'	PDI-E07-0204 09/16/09 2-4'	PDI-E08-0304 09/16/09 3-4'	PDI-E09-0406 09/16/09 4-6'	PDI-E10-0204 09/17/09 2-4'	PDI-E11-0204 09/17/09 2-4'	PDI-E12-0204 09/17/09 2-4'	PDI-E13-0608 09/17/09 6-8'	PDI-E14-0507 09/17/09 5-7'	PDI-E15-0305 09/17/09 3-5'	PDI-E16-0204 09/17/09 2-4'	PDI-E17-0204 09/17/09 2-4'	PDI-E18-0204 09/18/09 2-4'	PDI-E19-0204 09/17/09 2-4'
Metals																						
Arsenic	mg/kg	16	16	215 J	5 J	5.8 J	22.7 J	13.8 J	3.5 J	11.5 J	62.4 J	8.5 J	6.6 J	6.2 J	2.9 UJ	13.9	3.2 J	4.9 J	3.6 J	8.5	8.9	5.7
Barium	mg/kg	400	820	104 J	65.7 J	72.1 J	101 J	97.1 J	62.2 J	86.2 J	808 J	20.1 J	24.8 J	41.9 J	87 J	109	78.9 J	101 J	33.6 J	72.4	89.5	99
Cadmium	mg/kg	9.3	7.5	1.59	0.242 U	0.28 U	12.9	0.641	0.265 U	2.13	28.5	0.368	0.251	0.343	0.286 U	0.305	0.234 U	0.3	0.244 U	0.229 U	0.326	0.258 U
Chromium (3)	mg/kg	400	19	5.72	10.9	12	12.5	16.1	10.1	13.5	32.4	9.89	13.3	14.8	10.4	20.5	20.1	21.4	7.28	14.7	18.2	17.9
Lead	mg/kg	1000	450	90.2	11	17	475	93	11.8	45.8	1750	17	13.3	15.7	15.3	16.8	7.2	10.3	8.1	13.7	12.3	12.1
Selenium	mg/kg	1500	4	5 UJ	4.8 UJ	5.6 UJ	5.6 UJ	4.9 UJ	5.3 UJ	5.5 UJ	7.1 UJ	4.3 UJ	4.8 UJ	4.5 UJ	5.7 UJ	5 U	4.7 UJ	4.9 UJ	4.9 UJ	4.6 U	4.7 U	5.2 U
Silver	mg/kg	1500	8.3	0.63 U	0.605 U	0.701 U	3.47	0.608 U	0.662 U	0.683 U	2.65	0.536 U	0.599 U	0.562 U	0.716 U	0.625 U	0.585 U	0.612 U	0.611 U	0.572 U	0.587 U	0.645 U
Mercury	mg/kg	2.8	0.73	0.0776	0.0826	0.0662	0.29	0.0753	0.0484	0.0388	0.159	0.0492	0.0896	0.0275	0.229	0.129	0.0242	0.0269 U	0.0256	0.0237 U	0.0254 U	0.0528
PCBs																						
Aroclor 1016	ug/kg	1000	3200		20 U					22 UJ					23 UJ	21 UJ		20 UJ			20 UJ	20 UJ
Aroclor 1221	ug/kg	1000	3200		20 U					22 UJ					23 U	21 U		20 U			20 UJ	20 UJ
Aroclor 1232	ug/kg	1000	3200		20 U					22 UJ					23 U	21 U		20 U			20 UJ	20 UJ
Aroclor 1242	ug/kg	1000	3200		20 U					22 UJ					23 U	21 U		20 U			20 UJ	20 UJ
Aroclor 1248	ug/kg	1000	3200		29 J					22 UJ					23 U	21 U		20 U			20 UJ	20 UJ
Aroclor 1254	ug/kg	1000	3200		20 U					22 UJ					23 U	21 U		20 U			20 UJ	20 UJ
Aroclor 1260	ug/kg	1000	3200		20 U					22 UJ					23 UJ	21 UJ		20 UJ			20 UJ	20 UJ
Aroclor 1262	ug/kg	1000	3200		20 U					22 UJ					23 U	21 U		20 U			20 UJ	20 UJ
Aroclor 1268	ug/kg	1000	3200		20 U					22 UJ					23 U	21 U		20 U			20 UJ	20 UJ
Additional Analyses																						
H2S Released From Waste	mg/kg				10					10					10	10 U		10			20.1	10 U
HCN Released From Waste	mg/kg				10 U					10 U					10 U	10 U		10 U			10 U	10 U
Ignitability	mm/sec				negative					negative					negative	negative		negative			negative	negative
pH	s.u.				7.67					7.68					7.59	7.76		8.05			7.63	7.03
TCLP VOCs and SVOCs																						
1,1-Dichloroethene	ug/L				50 U					10 U					10 U	10 U		10 U			10 U	10 U
1,2-Dichloroethane	ug/L				50 U					10 U					10 U	10 U		10 U			10 U	10 U
2-Butanone (MEK)	ug/L				250 U					50 U					50 U	50 U		50 U			50 U	50 U
Benzene	ug/L				50 U					10 U					10 U	10 U		85			10 U	10 U
Carbon Tetrachloride	ug/L				50 U					10 U					10 U	10 U		10 U			10 U	10 U
Chlorobenzene	ug/L				2600					10 U					17	10 U		1900			10 U	570
Chloroform	ug/L				50 U					10 U					10 U	10 U		10 U			10 U	10 U
Tetrachloroethene	ug/L				50 U					10 U					10 U	10 U		10 U			10 U	10 U
Trichloroethene	ug/L				50 U					10 U					10 U	10 U		10 U			10 U	10 U
Vinyl chloride	ug/L				50 U					10 U					10 U	10 U		10 U			10 U	10 U
1,4-Dichlorobenzene	ug/L				40 U					40 U					40 U	40 U		16 J			40 U	18 J
2,4,5-Trichlorophenol	ug/L				20 U					20 U					20 U	20 U		20 U			20 U	20 U
2,4,6-Trichlorophenol	ug/L				20 U					20 U					20 U	20 U		20 U			20 U	20 U
2,4-Dinitrotoluene	ug/L				20 U					20 U					20 U	20 U		20 U			20 U	20 U
2-Methylphenol	ug/L				20 U					20 U					20 U	20 U		20 U			20 U	20 U
3 & 4 Methylphenol	ug/L				17 J					40 U					40 U	40 U		40 U			40 U	40 U
Hexachlorobenzene	ug/L				20 U					20 U					20 U	20 U		20 U			20 U	20 U
Hexachlorobutadiene	ug/L				20 U					20 U					20 U	20 U		20 U			20 U	20 U
Hexachloroethane	ug/L				20 U					20 U					20 U	20 U		20 U			20 U	20 U
Nitrobenzene	ug/L				20 U					20 U					20 U	33000		20 U			20 U	630
Pentachlorophenol	ug/L				40 U					40 U					40 U	40 U		40 U			40 U	40 U
Pyridine	ug/L				100 U					100 U					100 U	100 U		100 U			100 U	100 U
TCLP Metals																						
Arsenic	mg/L				0.05 U					0.05 U					0.05 U	0.05 U		0.0561			0.05 U	0.05 U
Barium	mg/L				0.695					1.08					1.01	1.22		1.83 J			0.781	0.62
Cadmium	mg/L				0.0023					0.001 U					0.001 U	0.0058		0.0035			0.0781	0.0178
Chromium	mg/L				0.004 U					0.0061					0.0537	0.0085		0.106			0.0052	0.0116
Lead	mg/L				0.0335					0.0159					0.0581	0.0566		0.271			0.0241	0.0177
Selenium	mg/L				0.015 U					0.015 U					0.015 U	0.015 U		0.015 U			0.015 U	0.015 U
Silver	mg/L				0.003 U					0.003 U					0.003 U	0.003 U		0.003 UJ			0.003 U	0.003 U
Mercury	mg/L				0.0002 U					0.0002 U					0.0002	0.0002 U		0.0006			0.0002 U	0.0002 U

See notes at end of table

Table 4
Pre-Design Investigation and Final Design
Area E PDI Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

			Sample ID:	PDI-E20-0204	PDI-E21-0204	PDI-E22-0406	PDI-E22R-0406	PDI-E23-0204	PDI-E24-0204
			Date:	09/18/09	09/18/09	09/18/09	09/18/09	09/17/09	09/18/09
			Depth:	2-4'	2-4'	4-6'	4-6'	2-4'	2-4'
		NYSDEC Values (2)							
Parameter	Units (1)	Commercial Use	Protection of GW						
VOCs									
1,1,1-Trichloroethane	ug/kg	500000	680	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
1,1,2,2-Tetrachloroethane	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
1,1,2-Trichloroethane	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
1,1,2-Trichlorotrifluoroethane	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
1,1-Dichloroethane	ug/kg	240000	270	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
1,1-Dichloroethene	ug/kg	500000	330	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
1,2,4-Trichlorobenzene	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
1,2-Dibromo-3-chloropropane	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
1,2-Dibromoethane (EDB)	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
1,2-Dichlorobenzene	ug/kg	500000	1100	5.7 U	44 U	4.9 U	4.8 U	4.5 U	210
1,2-Dichloroethane	ug/kg	30000	20	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
1,2-Dichloropropane	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
1,3-Dichlorobenzene	ug/kg	280000	2400	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
1,4-Dichlorobenzene	ug/kg	130000	1800	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
2-Butanone (MEK)	ug/kg	500000	120	15 J	220 U	25 U	24 U	23 U	220 U
2-Hexanone	ug/kg			29 U	220 UJ	25 U	24 U	23 U	220 UJ
4-Methyl-2-pentanone (MIBK)	ug/kg			29 U	220 U	25 U	24 U	23 U	220 U
Acetone	ug/kg	500000	50	73	220 U	14 J	24 U	8.8 J	220 U
Benzene	ug/kg	44000	60	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Bromodichloromethane	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Bromoform	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Bromomethane	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Carbon disulfide	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Carbon Tetrachloride	ug/kg	22000	760	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Chlorobenzene	ug/kg	500000	1100	5.7 U	1100	4.9 U	4.8 U	4.5 U	300
Chlorodibromomethane	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Chloroethane	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Chloroform	ug/kg	350000	370	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Chloromethane	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
cis-1,2-Dichloroethene	ug/kg	500000	250	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
cis-1,3-Dichloropropene	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Cyclohexane	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Dichlorodifluoromethane	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Ethylbenzene	ug/kg	390000	1000	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Isopropylbenzene	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Methyl Acetate	ug/kg			5.7 UJ	44 U	4.9 UJ	4.8 UJ	4.5 UJ	44 U
Methyl tert-Butyl Ether	ug/kg	500000	930	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Methylcyclohexane	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	78
Methylene Chloride	ug/kg	500000	50	5.7 U	44 U	1.5 U	4.8 U	4.5 U	44 U
Styrene	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Tetrachloroethene	ug/kg	150000	1300	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Toluene	ug/kg	500000	700	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
trans-1,2-Dichloroethene	ug/kg	500000	190	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
trans-1,3-Dichloropropene	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Trichloroethene	ug/kg	200000	470	5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Trichlorofluoromethane	ug/kg			5.7 U	44 U	4.9 U	4.8 U	4.5 U	44 U
Vinyl chloride	ug/kg	13000	20	11 U	87 U	9.9 U	9.7 U	9 U	88 U
Xylenes, total	ug/kg	500000	1600	11 U	87 U	9.9 U	9.7 U	9 U	88 U

See notes at end of table

Produced by: WCG 11/20/09
Checked by: TLC 11/23/09

Table 4
Pre-Design Investigation and Final Design
Area E PDI Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units [1]	NYSDEC Values [2] Commercial Use	NYSDEC Values [2] Protection of GW	PDI-E20-0204	PDI-E21-0204	PDI-E22-0406	PDI-E22R-0406	PDI-E23-0204	PDI-E24-0204
			Date:	09/18/09	09/18/09	09/18/09	09/18/09	09/17/09	09/18/09
			Depth:	2-4'	2-4'	4-6'	4-6'	2-4'	2-4'
SVOCs									
2,2'-Oxybis(1-Chloropropane)	ug/kg			2200 UJ	200 UJ	210 UJ	200 UJ	200 UJ	200 UJ
2,4,5-Trichlorophenol	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
2,4,6-Trichlorophenol	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
2,4-Dichlorophenol	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
2,4-Dimethylphenol	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
2,4-Dinitrophenol	ug/kg			4200 U	380 U	400 U	400 U	390 U	400 U
2,4-Dinitrotoluene	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
2,6-Dinitrotoluene	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
2-Chloronaphthalene	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
2-Chlorophenol	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
2-Methylnaphthalene	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
2-Methylphenol	ug/kg	500000	330	2200 U	200 U	210 U	200 U	200 U	200 U
2-Nitroaniline	ug/kg			4200 U	380 U	400 U	400 U	390 U	400 U
2-Nitrophenol	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
3,3'-Dichlorobenzidine	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
3-Nitroaniline	ug/kg			4200 U	380 U	400 U	400 U	390 U	400 U
4,6-Dinitro-2-methylphenol	ug/kg			4200 U	380 U	400 U	400 U	390 U	400 U
4-Bromophenyl phenyl ether	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
4-Chloro-3-methylphenol	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
4-Chloroaniline	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
4-Chlorophenyl phenyl ether	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
4-Methylphenol	ug/kg	500000	330	4200 U	380 U	400 U	400 U	390 U	400 U
4-Nitroaniline	ug/kg			4200 U	380 U	400 U	400 U	390 U	400 U
4-Nitrophenol	ug/kg			4200 U	380 U	400 U	400 U	390 U	400 U
Acenaphthene	ug/kg	500000	98000	2200 U	200 U	210 U	200 U	200 U	200 U
Acenaphthylene	ug/kg	500000	107000	2200 U	200 U	210 U	200 U	200 U	200 U
Acetophenone	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Aniline	ug/kg			4200 U	380 U	400 U	400 U	390 U	400 U
Anthracene	ug/kg	500000	1000000	2200 U	200 U	210 U	200 U	200 U	200 U
Atrazine	ug/kg			2200 UJ	200 UJ	210 UJ	200 UJ	200 UJ	200 UJ
Benzaldehyde	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Benzo(a)anthracene	ug/kg	5600	1000	230 J	200 U	210 U	200 U	200 U	200 U
Benzo(a)pyrene	ug/kg	1000	22000	190 J	200 U	210 U	200 U	200 U	200 U
Benzo(b)fluoranthene	ug/kg	5600	1700	220 J	200 U	210 U	200 U	200 U	200 U
Benzo(ghi)perylene	ug/kg	500000	1000000	2200 U	200 U	210 U	200 U	200 U	200 U
Benzo(k)fluoranthene	ug/kg	56000	1700	120 J	200 U	210 U	200 U	200 U	200 U
Biphenyl	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Bis(2-chloroethoxy)methane	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Bis(2-chloroethyl)ether	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Bis(2-ethylhexyl) phthalate	ug/kg			2200 U	200 U	78 J	200 U	200 U	200 U
Butyl benzyl phthalate	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Caprolactam	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Carbazole	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Chrysene	ug/kg	56000	1000	210 J	200 U	210 U	200 U	200 U	200 U
Di-n-butyl phthalate	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Di-n-octyl phthalate	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Dibenzo(a,h)anthracene	ug/kg	560	1000000	2200 U	200 U	210 U	200 U	200 U	200 U
Dibenzofuran	ug/kg	350000	210000	2200 U	200 U	210 U	200 U	200 U	200 U
Diethyl phthalate	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Dimethyl phthalate	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Fluoranthene	ug/kg	500000	1000000	370 J	200 U	210 U	200 U	200 U	200 U
Fluorene	ug/kg	500000	386000	2200 U	200 U	210 U	200 U	200 U	200 U
Hexachlorobenzene	ug/kg	6000	3200	2200 U	200 U	210 U	200 U	200 U	200 U
Hexachlorobutadiene	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Hexachlorocyclopentadiene	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Hexachloroethane	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Indeno(1,2,3-cd)pyrene	ug/kg	5600	8200	2200 U	200 U	210 U	200 U	200 U	200 U
Isophorone	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
N-Nitrosodi-n-propylamine	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
N-Nitrosodiphenylamine	ug/kg			2200 U	200 U	210 U	200 U	200 U	200 U
Naphthalene	ug/kg	500000	12000	2200 U	200 U	210 U	200 U	200 U	200 U
Nitrobenzene	ug/kg			2200 U	200 U	210 U	190 J	40 J	200 U
Pentachlorophenol	ug/kg	6700	800	4200 U	380 U	400 U	400 U	390 U	400 U
Phenanthrene	ug/kg	500000	1000000	280 J	200 U	210 U	200 U	200 U	8.4 J
Phenol	ug/kg	500000	330	2200 U	200 U	210 U	200 U	200 U	200 U
Pyrene	ug/kg	500000	1000000	280 J	200 U	210 U	200 U	200 U	200 U

See notes at end of table

Table 4
Pre-Design Investigation and Final Design
Area E PDI Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units (1)	NYSDEC Values (2) Commercial Use	NYSDEC Values (2) Protection of GW	PDI-E20-0204	PDI-E21-0204	PDI-E22-0406	PDI-E22R-0406	PDI-E23-0204	PDI-E24-0204
			Date:	09/18/09	09/18/09	09/18/09	09/18/09	09/17/09	09/18/09
			Depth:	2-4'	2-4'	4-6'	4-6'	2-4'	2-4'
Metals									
Arsenic	mg/kg	16	16	10.1	3.9	10	7.3	11.2	2.5
Barium	mg/kg	400	820	99.3	50.1	107	64.4	80.1	38.3
Cadmium	mg/kg	9.3	7.5	0.295	0.779	0.278	0.285	0.437	0.233 U
Chromium (1)	mg/kg	400	19	17.8	12.7	19.6	17.6	16.6	6.42
Lead	mg/kg	1000	450	134	8.4	13.2	13.2	14.8	5
Selenium	mg/kg	1500	4	5.3 U	4.5 U	5.2 U	4.6 U	4.9 U	4.7 U
Silver	mg/kg	1500	8.3	0.658 U	0.568 U	0.646 U	0.579 U	0.612 U	0.582 U
Mercury	mg/kg	2.8	0.73	0.407	0.022 U	0.0247 U	0.0256 U	0.039	0.0241 U
PCBs									
Aroclor 1016	ug/kg	1000	3200						20 UJ
Aroclor 1221	ug/kg	1000	3200						20 U
Aroclor 1232	ug/kg	1000	3200						20 U
Aroclor 1242	ug/kg	1000	3200						20 U
Aroclor 1248	ug/kg	1000	3200						20 U
Aroclor 1254	ug/kg	1000	3200						20 U
Aroclor 1260	ug/kg	1000	3200						20 UJ
Aroclor 1262	ug/kg	1000	3200						20 U
Aroclor 1268	ug/kg	1000	3200						20 U
Additional Analyses									
H2S Released From Waste	mg/kg								10 U
HCN Released From Waste	mg/kg								10 U
Ignitability	mm/sec								negative
pH	s.u.								7.8
TCLP VOCs and SVOCs									
1,1-Dichloroethene	ug/L								10 U
1,2-Dichloroethane	ug/L								10 U
2-Butanone (MEK)	ug/L								50 U
Benzene	ug/L								10 U
Carbon Tetrachloride	ug/L								10 U
Chlorobenzene	ug/L								10 U
Chloroform	ug/L								10 U
Tetrachloroethene	ug/L								10 U
Trichloroethene	ug/L								10 U
Vinyl chloride	ug/L								10 U
1,4-Dichlorobenzene	ug/L								40 U
2,4,5-Trichlorophenol	ug/L								20 U
2,4,6-Trichlorophenol	ug/L								20 U
2,4-Dinitrotoluene	ug/L								20 U
2-Methylphenol	ug/L								20 U
3 & 4 Methylphenol	ug/L								40 U
Hexachlorobenzene	ug/L								20 U
Hexachlorobutadiene	ug/L								20 U
Hexachloroethane	ug/L								20 U
Nitrobenzene	ug/L								4.1 J
Pentachlorophenol	ug/L								40 U
Pyridine	ug/L								100 U
TCLP Metals									
Arsenic	mg/L								0.05 U
Barium	mg/L								1.08
Cadmium	mg/L								0.0025
Chromium	mg/L								0.0219
Lead	mg/L								0.014
Selenium	mg/L								0.015 U
Silver	mg/L								0.003 U
Mercury	mg/L								0.0002 U

Notes:
(1) Units: ug/L = micrograms per liter; mg/L = milligrams per liter; ug/kg = micrograms per kilogram; mg/kg = milligrams per kilogram; mm/sec = millimeters per second; s.u. = standard units
(2) New York State Department of Environmental Conservation, Restricted Use Soil Cleanup Objectives, Commercial Use and Protection of Groundwater, Table 375-6.8(b)
(3) Standards used for comparison are for Hexavalent Chromium
Qualifiers: U = not detected; J = estimated value; E = exceeded instrument calibration range, estimated value
Shaded value = exceedance of Restricted Use Soil Cleanup Objective

Table 5
Pre-Design Investigation and Final Design
Area E MW Groundwater Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units [4]	NYSDEC Values [5]	PS-01-1109	PS-10-1109	PS-12-1109	R-08-1109	R-09-1109	R-11-1109	R-13-1109	R-14-1109	RFI-17-1109	RFI-29-1109	RFI-32-1109	RFI-33-1109	RFI-36-1109	RFI-51-1109
		Location:	PS-01-N	PS-10	PS-12	R-08	R-09	R-11	R-13	R-14	RFI-17	RFI-29	RFI-32	RFI-33	RFI-36	RFI-51
		Date:	11/20/2009	11/17/2009	11/20/2009	11/18/2009	11/17/2009	11/18/2009	11/17/2009	11/18/2009	11/17/2009	11/17/2009	11/20/2009	11/18/2009	11/20/2009	11/19/2009
VOCs																
1,1,1-TRICHLOROETHANE	ug/L	5	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	ug/L	5	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	ug/L	1	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	ug/L	5	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	**22**	1 U
1,1-DICHLOROETHANE	ug/L	5	5 U	1 U	1 U	**77**	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
1,1-DICHLOROETHENE	ug/L	5	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
1,2,4-TRICHLOROBENZENE	ug/L	5	5 U	1 U	1 U	**13**	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	0.04	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
1,2-DIBROMOETHANE	ug/L	0.0006	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
1,2-DICHLOROBENZENE	ug/L	3	5 U	1 U	1 U	**2300**	0.43 J	5 U	1.3	1 U	1.1	3	100 U	1 U	1 U	0.56 J
1,2-DICHLOROETHANE	ug/L	0.6	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
1,2-DICHLOROPROPANE	ug/L	1	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
1,3-DICHLOROBENZENE	ug/L	3	5 U	1 U	1 U	**24**	1 U	5 U	1 U	1 U	1 U	1.1	100 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	ug/L	3	5 U	1 U	1 U	**300**	0.57 J	5 U	1 U	1 U	1 U	**5.2**	**49** J	1 U	1 U	1 U
2-BUTANONE	ug/L	50	25 U	5 U	5 U	16 J	5 U	25 U	5 U	6.3	5 U	5 U	500 U	5 U	5 U	5 U
2-HEXANONE	ug/L	50	25 U	5 U	5 U	20 U	5 U	25 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U
4-METHYL-2-PENTANONE	ug/L		25 U	5 U	5 U	20 U	5 U	25 U	5 U	5 U	5 U	5 U	500 U	5 U	5 U	5 U
ACETONE	ug/L	50	25 U	5 U	5 U	**59**	2.2 J	20 J	2.1 J	36	5 U	5 U	500 U	5 U	5 U	5 U
BENZENE	ug/L	1	5 U	1 U	1 U	**24**	0.48 J	5 U	1 U	0.57 J	1 U	1 U	**420**	1 U	1 U	1 U
BROMODICHLOROMETHANE	ug/L	50	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
BROMOFORM	ug/L	50	5 UJ	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 UJ	1 U	1 UJ	1 UJ
BROMOMETHANE	ug/L	5	5 UJ	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 UJ	1 U	1 UJ	1 UJ
CARBON DISULFIDE	ug/L	60	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
CARBON TETRACHLORIDE	ug/L	5	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
CHLOROBENZENE	ug/L	5	2.2 J	1 U	0.87 J	**72**	**190**	5 U	1 U	0.77 J	1.3	**14**	**28000**	1 U	1 U	1.7
CHLORODIBROMOMETHANE	ug/L	50	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
CHLOROETHANE	ug/L	5	5 U	1 U	1 U	4 U	1 U	5 U	0.76 J	2.5	1 U	1 U	100 U	1 U	1 U	1 U
CHLOROFORM	ug/L	7	5 U	1 U	1 U	**30**	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
CHLOROMETHANE	ug/L	5	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
CIS-1,2-DICHLOROETHENE	ug/L	5	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
CIS-1,3-DICHLOROPROPENE [1]	ug/L	0.4	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
CYCLOHEXANE	ug/L		5 U	1 U	1 U	4 U	1 U	5 U	1 U	3.5	1 U	1 U	100 U	1 U	1 U	1 U
DICHLORODIFLUOROMETHANE	ug/L	5	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
ETHYLBENZENE	ug/L	5	5 U	1 U	1 U	**7.4**	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
ISOPROPYLBENZENE	ug/L	5	5 U	1 U	1 U	4 U	1 U	5 U	1 U	0.44 J	1 U	1 U	100 U	1 U	1 U	1 U
METHYL ACETATE	ug/L		5 UJ	1 U	1 UJ	4 U	1 U	5 UJ	1 U	1 U	1 U	1 U	100 UJ	1 U	1 UJ	1 UJ
METHYL TERT-BUTYL ETHER	ug/L	10	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
METHYLCYCLOHEXANE	ug/L		5 U	1 U	1 U	4 U	1 U	5 U	1 U	7.2	1 U	1 U	100 U	1 U	1 U	1 U
METHYLENE CHLORIDE	ug/L	5	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
STYRENE	ug/L	5	5 U	1 U	1 U	**27**	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
TETRACHLOROETHENE	ug/l	5	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
TOLUENE	ug/L	5	5 U	1 U	1 U	**43**	0.93 J	5 U	1.9	1 U	1 U	1 U	100 U	1 U	1 U	1 U
TRANS-1,2-DICHLOROETHENE	ug/L	5	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
TRANS-1,3-DICHLOROPROPENE [1]	ug/L	0.4	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
TRICHLOROETHENE	ug/L	5	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
TRICHLOROFLUOROMETHANE	ug/L	5	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
VINYL CHLORIDE	ug/L	2	5 U	1 U	1 U	4 U	1 U	5 U	1 U	1 U	1 U	1 U	100 U	1 U	1 U	1 U
XYLENES, TOTAL	ug/L	5	10 U	2 U	2 U	**18**	2 U	10 U	2 U	2 U	2 U	2 U	200 U	2 U	2 U	2 U

See notes at end of table

Table 5
Pre-Design Investigation and Final Design
Area E MW Groundwater Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units [4]	Sample ID: Location: Date: NYSDEC Values [5]	PS-01-1109 PS-01-N 11/20/2009	PS-10-1109 PS-10 11/17/2009	PS-12-1109 PS-12 11/20/2009	R-08-1109 R-08 11/18/2009	R-09-1109 R-09 11/17/2009	R-11-1109 R-11 11/18/2009	R-13-1109 R-13 11/17/2009	R-14-1109 R-14 11/18/2009	RFI-17-1109 RFI-17 11/17/2009	RFI-29-1109 RFI-29 11/17/2009	RFI-32-1109 RFI-32 11/20/2009	RFI-33-1109 RFI-33 11/18/2009	RFI-36-1109 RFI-36 11/20/2009	RFI-51-1109 RFI-51 11/19/2009
SVOCs																
1,1'-BIPHENYL	ug/L	5	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
2,2'-OXYBIS(1-CHLOROPROPANE)	ug/L	5	4 UJ	3.9 U	3.9 UJ	390 U	3.8 U	3.9 U	4 U	3.9 U	3.9 U	3.9 U	4 UJ	3.8 U	3.9 UJ	3.9 UJ
2,4,5-TRICHLOROPHENOL	ug/L		5 UJ	4.9 UJ	4.9 UJ	490 U	4.8 UJ	4.9 U	5 U	4.9 U	4.9 UJ	4.9 UJ	5 UJ	4.8 U	4.9 UJ	4.9 UJ
2,4,6-TRICHLOROPHENOL	ug/L		5 UJ	4.9 UJ	4.9 UJ	490 U	4.8 UJ	4.9 U	5 U	4.9 U	4.9 UJ	4.9 UJ	5 UJ	4.8 U	4.9 UJ	4.9 UJ
2,4-DICHLOROPHENOL	ug/L	5	5 UJ	4.9 UJ	4.9 U	490 U	4.8 UJ	4.9 U	5 U	4.9 U	4.9 UJ	4.9 UJ	5 UJ	4.8 U	4.9 UJ	4.9 UJ
2,4-DIMETHYLPHENOL	ug/L	1	5 UJ	4.9 UJ	4.9 U	**59** J	4.8 UJ	4.9 U	5 U	4.9 U	4.9 UJ	4.9 UJ	5 UJ	4.8 U	4.9 UJ	4.9 UJ
2,4-DINITROPHENOL	ug/L	1	9.9 UJ	9.8 UJ	9.7 UJ	980 U	9.6 UJ	9.7 U	10 U	9.8 U	9.7 UJ	9.8 UJ	9.9 UJ	9.5 U	9.8 UJ	9.7 UJ
2,4-DINITROTOLUENE	ug/L	5	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
2,6-DINITROTOLUENE	ug/L	5	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
2-CHLORONAPHTHALENE	ug/L	10	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
2-CHLOROPHENOL	ug/L		5 U	4.9 UJ	4.9 U	490 U	4.8 UJ	4.9 U	5 U	4.9 U	4.9 UJ	4.9 UJ	24 J	4.8 U	4.9 UJ	4.9 U
2-METHYLNAPHTHALENE	ug/L		5 UJ	4.9 U	4.9 U	490 U	4.8 U	4.9 U	5 U	1.6 J	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
2-METHYLPHENOL	ug/L		5 UJ	4.9 UJ	4.9 U	490 U	4.8 UJ	4.9 U	5 U	4.9 U	4.9 UJ	4.9 UJ	5 UJ	4.8 U	4.9 UJ	4.9 U
2-NITROANILINE	ug/L	5	9.9 UJ	9.8 U	9.7 UJ	980 U	9.6 U	9.7 U	10 U	9.8 U	9.7 U	9.8 U	9.9 UJ	9.5 U	9.8 UJ	9.7 UJ
2-NITROPHENOL	ug/L		5 UJ	4.9 UJ	4.9 U	490 U	4.8 UJ	4.9 U	5 U	4.9 U	4.9 UJ	4.9 UJ	5 UJ	4.8 U	4.9 UJ	4.9 UJ
3,3'-DICHLOROBENZIDINE	ug/L	5	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
3-NITROANILINE	ug/L	5	9.9 UJ	9.8 U	9.7 UJ	980 U	9.6 U	9.7 U	10 U	9.8 U	9.7 U	9.8 U	9.9 UJ	9.5 U	9.8 UJ	9.7 UJ
4,6-DINITRO-2-METHYLPHENOL	ug/L		9.9 UJ	9.8 UJ	9.7 UJ	980 U	9.6 UJ	9.7 UJ	10 U	9.8 U	9.7 UJ	9.8 UJ	9.9 UJ	9.5 U	9.8 UJ	9.7 UJ
4-BROMOPHENYL PHENYL ETHER	ug/L		5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
4-CHLORO-3-METHYLPHENOL	ug/L		5 UJ	4.9 UJ	4.9 U	490 U	4.8 UJ	4.9 U	5 U	4.9 U	4.9 UJ	4.9 UJ	5 UJ	4.8 U	4.9 UJ	4.9 UJ
4-CHLOROANILINE	ug/L	5	5 UJ	4.9 U	4.9 U	**140** J	3.1 J	4.9 U	5 U	3.1 J	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
4-CHLOROPHENYL PHENYL ETHER	ug/L		5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
4-METHYLPHENOL	ug/L		9.9 UJ	9.8 UJ	9.7 UJ	980 UJ	9.6 UJ	9.7 UJ	10 UJ	9.8 UJ	9.7 UJ	9.8 UJ	9.9 UJ	9.5 UJ	9.8 UJ	9.7 UJ
4-NITROANILINE	ug/L	5	9.9 UJ	9.8 U	9.7 UJ	980 U	4.6 J	9.7 U	10 U	9.8 U	9.7 U	9.8 U	9.9 UJ	9.5 U	9.8 UJ	9.7 UJ
4-NITROPHENOL	ug/L		9.9 UJ	9.8 UJ	9.7 UJ	980 UJ	9.6 UJ	9.7 UJ	10 UJ	9.8 UJ	9.7 UJ	9.8 UJ	9.9 UJ	9.5 UJ	9.8 UJ	9.7 UJ
ACENAPHTHENE	ug/L	20	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	0.93 J	4.9 UJ
ACENAPHTHYLENE	ug/L		5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
ACETOPHENONE	ug/L		5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	1.4 J	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
ANILINE	ug/L	5	9.9 UJ	9.8 U	9.7 U	**4800**	9.6 U	9.7 U	10 U	9.8 U	9.7 U	9.8 U	9.9 UJ	9.5 U	9.8 UJ	9.7 U
ANTHRACENE	ug/L	50	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
ATRAZINE	ug/L	7.5	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
BENZO(A)ANTHRACENE	ug/L	0.002	5 UJ	4.9 U	**0.37** J	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
BENZO(A)PYRENE [2]	ug/L	0	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
BENZO(B)FLUORANTHENE	ug/L	0.002	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
BENZO(G,H,I)PERYLENE	ug/L		5 UJ	4.9 U	4.9 UJ	490 UJ	4.8 U	4.9 U	5 UJ	4.9 UJ	4.9 UJ	4.9 UJ	5 UJ	4.8 UJ	4.9 UJ	4.9 UJ
BENZO(K)FLUORANTHENE	ug/L	0.002	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
BIS(2-CHLOROETHOXY)METHANE	ug/L	5	5 UJ	4.9 U	4.9 U	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
BIS(2-CHLOROETHYL)ETHER	ug/L	1	5 UJ	4.9 U	4.9 U	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 U
BIS(2-ETHYLHEXYL)PHTHALATE	ug/L	5	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	**7.4**	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 U
BUTYLBENZYL PHTHALATE	ug/L	50	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
CAPROLACTAM	ug/L		5 UJ	4.9 UJ	4.9 UJ	490 UJ	4.8 UJ	4.9 UJ	5 UJ	4.9 UJ	4.9 UJ	4.9 UJ	5 UJ	4.8 UJ	4.9 UJ	4.9 UJ
CARBAZOLE	ug/L		5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
CHRYSENE	ug/L	0.002	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
DI-N-BUTYL PHTHALATE	ug/L	50	0.37 J	0.55 J	4.9 UJ	490 U	0.41 J	0.41 J	5 U	4.9 U	4.9 U	0.42 J	5 UJ	4.8 U	4.9 UJ	4.9 UJ
DI-N-OCTYL PHTHALATE	ug/L	50	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
DIBENZO(A,H)ANTHRACENE	ug/L		5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
DIBENZOFURAN	ug/L		9.9 UJ	9.8 U	9.7 UJ	980 U	9.6 U	9.7 U	10 U	9.8 U	9.7 U	9.8 U	9.9 UJ	9.5 U	9.8 UJ	9.7 UJ
DIETHYL PHTHALATE	ug/L	50	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
DIMETHYL PHTHALATE	ug/L	50	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
ENDRIN ALDEHYDE	ug/L	5	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	0.43 J	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
FLUORANTHENE	ug/L	50	5 UJ	4.9 U	0.41 J	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	0.53 J	1.2 J	4.9 UJ
FLUORENE	ug/L	50	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
HEXACHLOROBENZENE	ug/L	0.04	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
HEXACHLOROBUTADIENE	ug/L	0.5	5 UJ	4.9 UJ	4.9 U	490 UJ	4.8 UJ	4.9 U	5 UJ	4.9 UJ	4.9 UJ	4.9 UJ	5 UJ	4.8 UJ	4.9 UJ	4.9 UJ
HEXACHLOROCYCLOPENTADIENE	ug/L	5	5 UJ	4.9 UJ	4.9 UJ	490 UJ	4.8 UJ	4.9 U	5 UJ	4.9 UJ	4.9 UJ	4.9 UJ	5 UJ	4.8 UJ	4.9 UJ	4.9 UJ
HEXACHLOROETHANE	ug/L	5	5 UJ	4.9 UJ	4.9 U	490 UJ	4.8 UJ	4.9 U	5 UJ	4.9 UJ	4.9 UJ	4.9 UJ	5 UJ	4.8 UJ	4.9 UJ	4.9 U
INDENO(1,2,3-CD)PYRENE	ug/L	0.002	5 UJ	4.9 U	4.9 UJ	490 UJ	4.8 U	4.9 U	5 UJ	4.9 UJ	4.9 UJ	4.9 UJ	5 UJ	4.8 UJ	4.9 UJ	4.9 UJ
ISOPHORONE	ug/L	50	5 UJ	4.9 U	4.9 U	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
N-NITROSO-DI-N-PROPYLAMINE	ug/L		5 UJ	4.9 U	4.9 U	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 U
N-NITROSODIPHENYLAMINE	ug/L	50	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
NAPHTHALENE	ug/L	10	5 UJ	4.9 U	4.9 U	490 U	4.8 U	4.9 U	5 U	**1.6** J	4.9 U	4.9 U	**13** J	4.8 U	4.9 UJ	4.9 UJ
NITROBENZENE	ug/L	0.4	5 UJ	4.9 U	4.9 U	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
PENTACHLOROPHENOL	ug/L	1	9.9 UJ	9.8 UJ	9.7 UJ	980 U	9.6 UJ	9.7 U	10 U	9.8 U	9.7 UJ	9.8 UJ	9.9 UJ	9.5 U	9.8 UJ	9.7 UJ
PHENANTHRENE [3]	ug/L	50	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	**2.5** J	4.9 U	4.9 U	5 UJ	4.8 U	4.9 UJ	4.9 UJ
PHENOL	ug/L	1	5 UJ	4.9 UJ	4.9 UJ	490 UJ	4.8 UJ	4.9 UJ	5 UJ	4.9 UJ	4.9 UJ	4.9 UJ	0.95 J	4.8 UJ	4.9 UJ	4.9 UJ
PYRENE [3]	ug/L	50	5 UJ	4.9 U	4.9 UJ	490 U	4.8 U	4.9 U	5 U	4.9 U	4.9 U	4.9 U	5 UJ	4.8 U	1 J	4.9 UJ

See notes at end of table

Produced by: KJC 02/15/10
Checked by: CSR 02/17/10

Table 5
Pre-Design Investigation and Final Design
Area E MW Groundwater Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

		Sample ID:	PS-01-1109	PS-10-1109	PS-12-1109	R-08-1109	R-09-1109	R-11-1109	R-13-1109	R-14-1109	RFI-17-1109	RFI-29-1109	RFI-32-1109	RFI-33-1109	RFI-36-1109	RFI-51-1109
		Location:	PS-01-N	PS-10	PS-12	R-08	R-09	R-11	R-13	R-14	RFI-17	RFI-29	RFI-32	RFI-33	RFI-36	RFI-51
		Date:	11/20/2009	11/17/2009	11/20/2009	11/18/2009	11/17/2009	11/18/2009	11/17/2009	11/18/2009	11/17/2009	11/17/2009	11/20/2009	11/18/2009	11/20/2009	11/19/2009
Parameter	Units (4)	NYSDEC Values (5)														
Total Metals																
ARSENIC	ug/L	25	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**25.6**	10 U	17.7	17.9	10 U	10 U	**776**
BARIUM	ug/l	1000	108	47	26.1	30.8	102	145	110	371	41.3	107	32.4	71	17	18
CADMIUM	ug/L	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.7	1 U	1 U
CHROMIUM	ug/L	50	4 U	4 U	4 U	5.8	4 U	4 U	4 U	4 U	4.2	4 U	4 U	**65.5**	4 U	4 U
LEAD	ug/L	25	5 U	5 U	13	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
MERCURY	ug/l	0.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
SELENIUM	ug/l	10	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
SILVER	ug/l	50	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Dissolved Metals																
ARSENIC	ug/L									22					10.1	
BARIUM	ug/l									309					16.5	
CADMIUM	ug/L									1 U					1 U	
CHROMIUM	ug/L									4 U					4 U	
LEAD	ug/L									5 U					5 U	
MERCURY	ug/l									0.2 U					0.2 U	
SELENIUM	ug/l									15 U					15 U	
SILVER	ug/l									3 U					3 U	
Additional Analyses																
AMMONIA	mg/L	2			0.02 U								0.037			
DISSOLVED OXYGEN	mg/L												6.85 J			
NITRATE	mg/L	10			0.05 U								0.05 U			
NITROGEN, KJELDAHL, TOTAL	mg/L				0.28								0.35			
pH	S.U.												7.77 J			
PHOSPHORUS	mg/L				0.0293								0.01 U			
TOTAL ALKALINITY	mg/L				286 J								593 J			

See notes at end of table

Produced by: KJC 02/15/10
Checked by: CSR 02/17/10

Table 5
Pre-Design Investigation and Final Design
Area E MW Groundwater Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units [4]	NYSDEC Values [5]	RFI-PZ-17-1109_2	RFI-PZ-17R-1109	RFI-PZ-18-1109	RFI-PZ-19-1109	MW-E01-1109	MW-E02-1109	MW-E03-1109	MW-E04-1109
		Location:	RFI-PZ-17	RFI-PZ-17	RFI-PZ-18	RFI-PZ-19	TB-E01	TB-E02	TB-E03	TB-E04
		Date:	11/20/2009	11/20/2009	11/20/2009	11/18/2009	11/20/2009	11/20/2009	11/20/2009	11/20/2009
VOCs										
1,1,1-TRICHLOROETHANE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	ug/L	1	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	ug/L	5	5 U	5 U	5 U	1 U	200 U	0.44 J	1 U	1 U
1,1-DICHLOROETHENE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
1,2,4-TRICHLOROBENZENE	ug/L	5	5 U	5 U	5 U	1 U	200 U	0.45 J	1 U	0.48 J
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	0.04	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
1,2-DIBROMOETHANE	ug/L	0.0006	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
1,2-DICHLOROBENZENE	ug/L	3	5 U	5 U	5 U	1 U	200 U	**7.2**	1 U	0.55 J
1,2-DICHLOROETHANE	ug/L	0.6	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
1,2-DICHLOROPROPANE	ug/L	1	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
1,3-DICHLOROBENZENE	ug/L	3	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	ug/L	3	5 U	5 U	5 U	1 U	200 U	1.1	1 U	1 U
2-BUTANONE	ug/L	50	25 U	25 U	25 U	5 U	1000 U	5 U	5 U	5 U
2-HEXANONE	ug/L	50	25 U	25 U	25 U	5 U	1000 U	5 U	5 U	5 U
4-METHYL-2-PENTANONE	ug/L		25 U	25 U	25 U	5 U	1000 U	5 U	5 U	5 U
ACETONE	ug/L	50	25 U	25 U	25 U	3.1 J	1000 U	7.1	5 U	5 U
BENZENE	ug/L	1	5 U	5 U	5 U	1 U	**110** J	1 U	1 U	1 U
BROMODICHLOROMETHANE	ug/L	50	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
BROMOFORM	ug/L	50	5 UJ	5 UJ	5 UJ	1 U	200 UJ	1 U	1 U	1 UJ
BROMOMETHANE	ug/L	5	5 U	5 U	5 UJ	1 U	200 UJ	1 U	1 U	1 UJ
CARBON DISULFIDE	ug/L	60	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
CARBON TETRACHLORIDE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
CHLOROBENZENE	ug/L	5	5 U	5 U	5 U	1 U	**130000**	**11**	1.4	0.8 J
CHLORODIBROMOMETHANE	ug/L	50	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
CHLOROETHANE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
CHLOROFORM	ug/L	7	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
CHLOROMETHANE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
CIS-1,2-DICHLOROETHENE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
CIS-1,3-DICHLOROPROPENE [1]	ug/L	0.4	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
CYCLOHEXANE	ug/L		5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
DICHLORODIFLUOROMETHANE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
ETHYLBENZENE	ug/L	5	5 U	5 U	5 U	1 U	**430**	1 U	1 U	1 U
ISOPROPYLBENZENE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
METHYL ACETATE	ug/L		5 UJ	5 UJ	5 UJ	1 U	200 UJ	1 UJ	1 UJ	1 UJ
METHYL TERT-BUTYL ETHER	ug/L	10	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
METHYLCYCLOHEXANE	ug/L		5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
METHYLENE CHLORIDE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
STYRENE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
TETRACHLOROETHENE	ug/l	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
TOLUENE	ug/L	5	5 U	5 U	5 U	1 U	**350**	1 U	1 U	1 U
TRANS-1,2-DICHLOROETHENE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
TRANS-1,3-DICHLOROPROPENE [1]	ug/L	0.4	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
TRICHLOROETHENE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
TRICHLOROFLUOROMETHANE	ug/L	5	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
VINYL CHLORIDE	ug/L	2	5 U	5 U	5 U	1 U	200 U	1 U	1 U	1 U
XYLENES, TOTAL	ug/L	5	10 U	10 U	10 U	2 U	400 U	2 U	2 U	2 U

See notes at end of table

Table 5
Pre-Design Investigation and Final Design
Area E MW Groundwater Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units (4)	NYSDEC Values (5)	RFI-PZ-17-1109_2	RFI-PZ-17R-1109	RFI-PZ-18-1109	RFI-PZ-19-1109	MW-E01-1109	MW-E02-1109	MW-E03-1109	MW-E04-1109
		Location:	RFI-PZ-17	RFI-PZ-17	RFI-PZ-18	RFI-PZ-19	TB-E01	TB-E02	TB-E03	TB-E04
		Date:	11/20/2009	11/20/2009	11/20/2009	11/18/2009	11/20/2009	11/20/2009	11/20/2009	11/20/2009
SVOCs										
1,1'-BIPHENYL	ug/L	5	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
2,2'-OXYBIS(1-CHLOROPROPANE)	ug/L	5	4.3 UJ	4 UJ	4 UJ	3.9 U	42 U	3.8 UJ	4 UJ	44 U
2,4,5-TRICHLOROPHENOL	ug/L		5.4 UJ	5 UJ	5 UJ	4.9 UJ	53 U	4.8 UJ	5 UJ	55 U
2,4,6-TRICHLOROPHENOL	ug/L		5.4 UJ	5 UJ	5 UJ	4.9 UJ	53 U	4.8 UJ	5 UJ	55 U
2,4-DICHLOROPHENOL	ug/L	5	1.9 J	1.8 J	5 U	4.9 UJ	53 U	4.8 UJ	5 UJ	55 U
2,4-DIMETHYLPHENOL	ug/L	1	5.4 U	5 UJ	5 UJ	4.9 UJ	53 U	4.8 UJ	5 UJ	55 U
2,4-DINITROPHENOL	ug/L	1	11 UJ	10 UJ	10 U	9.7 UJ	110 U	9.5 UJ	10 UJ	110 U
2,4-DINITROTOLUENE	ug/L	5	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	**150**
2,6-DINITROTOLUENE	ug/L	5	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	**290**
2-CHLORONAPHTHALENE	ug/L	10	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
2-CHLOROPHENOL	ug/L		5.4 U	5 UJ	5 U	4.9 UJ	280	4.8 UJ	5 U	55 U
2-METHYLNAPHTHALENE	ug/L		5.4 U	5 UJ	5 U	4.9 U	53 U	4.8 UJ	5 UJ	55 U
2-METHYLPHENOL	ug/L		5.4 U	5 UJ	5 U	4.9 UJ	53 U	4.8 UJ	5 U	55 U
2-NITROANILINE	ug/L	5	11 UJ	10 UJ	10 UJ	9.7 U	110 U	9.5 UJ	10 UJ	110 U
2-NITROPHENOL	ug/L		5.4 U	5 UJ	5 UJ	4.9 UJ	53 U	4.8 UJ	5 UJ	55 U
3,3'-DICHLOROBENZIDINE	ug/L	5	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
3-NITROANILINE	ug/L	5	11 UJ	10 UJ	10 UJ	9.7 U	110 U	9.5 UJ	10 UJ	110 U
4,6-DINITRO-2-METHYLPHENOL	ug/L		11 UJ	10 UJ	10 UJ	9.7 UJ	110 U	9.5 UJ	10 UJ	110 U
4-BROMOPHENYL PHENYL ETHER	ug/L		5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
4-CHLORO-3-METHYLPHENOL	ug/L		5.4 U	5 UJ	5 U	4.9 UJ	53 U	4.8 UJ	5 UJ	55 U
4-CHLOROANILINE	ug/L	5	5.4 U	5 UJ	5 U	4.9 U	53 U	4.8 UJ	5 UJ	55 U
4-CHLOROPHENYL PHENYL ETHER	ug/L		5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
4-METHYLPHENOL	ug/L		11 UJ	10 UJ	10 UJ	9.7 UJ	15 J	9.5 UJ	10 UJ	110 UJ
4-NITROANILINE	ug/L	5	11 UJ	10 UJ	10 UJ	9.7 U	110 U	9.5 UJ	10 UJ	110 U
4-NITROPHENOL	ug/L		11 UJ	10 UJ	10 UJ	9.7 UJ	110 UJ	9.5 UJ	10 UJ	110 UJ
ACENAPHTHENE	ug/L	20	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
ACENAPHTHYLENE	ug/L		5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
ACETOPHENONE	ug/L		5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
ANILINE	ug/L	5	11 U	10 UJ	10 U	9.7 U	**440**	2.5 J	10 U	110 U
ANTHRACENE	ug/L	50	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
ATRAZINE	ug/L	7.5	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
BENZO(A)ANTHRACENE	ug/L	0.002	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
BENZO(A)PYRENE (2)	ug/L	0	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
BENZO(B)FLUORANTHENE	ug/L	0.002	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
BENZO(G,H,I)PERYLENE	ug/L		5.4 UJ	5 UJ	5 UJ	4.9 UJ	53 U	4.8 UJ	5 UJ	55 U
BENZO(K)FLUORANTHENE	ug/L	0.002	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
BIS(2-CHLOROETHOXY)METHANE	ug/L	5	5.4 U	5 UJ	5 U	4.9 U	53 U	4.8 UJ	5 U	55 U
BIS(2-CHLOROETHYL)ETHER	ug/L	1	5.4 U	5 UJ	5 U	4.9 U	53 U	4.8 UJ	5 U	55 U
BIS(2-ETHYLHEXYL)PHTHALATE	ug/L	5	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
BUTYLBENZYL PHTHALATE	ug/L	50	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
CAPROLACTAM	ug/L		5.4 UJ	5 UJ	5 UJ	4.9 UJ	53 UJ	4.8 UJ	5 UJ	55 UJ
CARBAZOLE	ug/L		5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
CHRYSENE	ug/L	0.002	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
DI-N-BUTYL PHTHALATE	ug/L	50	0.34 J	5 UJ	0.48 J	4.9 U	53 U	4.8 UJ	5 UJ	55 U
DI-N-OCTYL PHTHALATE	ug/L	50	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
DIBENZO(A,H)ANTHRACENE	ug/L		5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
DIBENZOFURAN	ug/L		11 UJ	10 UJ	10 UJ	9.7 U	110 U	9.5 UJ	10 UJ	110 U
DIETHYL PHTHALATE	ug/L	50	0.56 J	5 UJ	5 UJ	4.9 U	53 U	0.4 J	5 UJ	55 U
DIMETHYL PHTHALATE	ug/L	50	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
ENDRIN ALDEHYDE	ug/L	5	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
FLUORANTHENE	ug/L	50	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
FLUORENE	ug/L	50	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
HEXACHLOROBENZENE	ug/L	0.04	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
HEXACHLOROBUTADIENE	ug/L	0.5	5.4 U	5 UJ	5 U	4.9 UJ	53 U	4.8 UJ	5 UJ	55 U
HEXACHLOROCYCLOPENTADIENE	ug/L	5	5.4 UJ	5 UJ	5 UJ	4.9 UJ	53 U	4.8 UJ	5 UJ	55 U
HEXACHLOROETHANE	ug/L	5	5.4 U	5 UJ	5 U	4.9 UJ	53 U	4.8 UJ	5 U	55 U
INDENO(1,2,3-CD)PYRENE	ug/L	0.002	5.4 UJ	5 UJ	5 UJ	4.9 UJ	53 U	4.8 UJ	5 UJ	55 U
ISOPHORONE	ug/L	50	5.4 U	5 UJ	5 U	4.9 U	53 U	4.8 UJ	5 UJ	55 U
N-NITROSO-DI-N-PROPYLAMINE	ug/L		5.4 U	5 UJ	5 U	4.9 U	53 U	4.8 UJ	5 U	55 U
N-NITROSODIPHENYLAMINE	ug/L	50	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
NAPHTHALENE	ug/L	10	5.4 U	5 UJ	5 U	4.9 U	**50** J	4.8 UJ	5 UJ	55 U
NITROBENZENE	ug/L	0.4	5.4 U	5 UJ	5 U	4.9 U	53 U	4.8 UJ	5 UJ	55 U
PENTACHLOROPHENOL	ug/L	1	11 UJ	10 UJ	10 UJ	9.7 UJ	110 U	9.5 UJ	10 UJ	110 U
PHENANTHRENE (3)	ug/L	50	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U
PHENOL	ug/L	1	5.4 U	5 UJ	5 UJ	4.9 UJ	53 UJ	4.8 UJ	0.44 J	55 UJ
PYRENE (3)	ug/L	50	5.4 UJ	5 UJ	5 UJ	4.9 U	53 U	4.8 UJ	5 UJ	55 U

See notes at end of table

Produced by: KJC 02/15/10
Checked by: CSR 02/17/10

Table 5
Pre-Design Investigation and Final Design
Area E MW Groundwater Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units [4]	NYSDEC Values [5]	Sample ID: RFI-PZ-17-1109_2 Location: RFI-PZ-17 Date: 11/20/2009	RFI-PZ-17R-1109 RFI-PZ-17 11/20/2009	RFI-PZ-18-1109 RFI-PZ-18 11/20/2009	RFI-PZ-19-1109 RFI-PZ-19 11/18/2009	MW-E01-1109 TB-E01 11/20/2009	MW-E02-1109 TB-E02 11/20/2009	MW-E03-1109 TB-E03 11/20/2009	MW-E04-1109 TB-E04 11/20/2009
Total Metals										
ARSENIC	ug/L	25	10 U	10 U	10 U	10 U	19.9	10 U	10 U	10 U
BARIUM	ug/l	1000	152	178	228	21.3	79.5	31.2	83.4	43
CADMIUM	ug/L	5	1 U	1 U	1 U	3.1	1 U	1 U	1 U	1.9
CHROMIUM	ug/L	50	4 U	4 U	4 U	20 U	20.5	4.7	4 U	4 U
LEAD	ug/L	25	5 U	5 U	**72**	25 U	**66.8**	9.9	5 U	5 U
MERCURY	ug/l	0.7	0.2 U	0.2 U	0.2 U	0.2 U	**0.8**	0.2 U	0.2 U	0.2 U
SELENIUM	ug/l	10	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
SILVER	ug/l	50	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Dissolved Metals										
ARSENIC	ug/L									
BARIUM	ug/l									
CADMIUM	ug/L									
CHROMIUM	ug/L									
LEAD	ug/L									
MERCURY	ug/l									
SELENIUM	ug/l									
SILVER	ug/l									
Additional Analyses										
AMMONIA	mg/L	2					0.871	0.026	1.17	
DISSOLVED OXYGEN	mg/L						5.51 J	8.28 J	6.71 J	
NITRATE	mg/L	10					0.05 U	0.02 J	0.05 U	
NITROGEN, KJELDAHL, TOTAL	mg/L						8.1	0.25	1.7	
pH	S.U.						8.56 J	7.88 J	7.65 J	
PHOSPHORUS	mg/L						1.26	0.01 U	0.01 U	
TOTAL ALKALINITY	mg/L						473 J	286 J	319 J	

Notes:

(1) NYSDEC value of 0.4 ug/L is the standard for the sum of these substances
(2) The NYSDEC standard for benzo(a)pyrene is actually "ND" (non-detect), 0 is used for table compatibility
(3) NYSDEC value of 1 ug/L is the standard for the sum of these substances
(4) Units: ug/L = micrograms per liter; mg/L = milligrams per liter; S.U. = standard units
(5) New York State Department of Environmental Conservation, Technical and Operational Guidance Series
Ambient Water Quality Standards, Class GA, Table 1
Ambient Water Quality Guidance Values, Class GA, Table 1
Qualifiers: U = not detected; J = estimated value; UJ = non-detect reported, reporting limit qualified as estimated
Shaded value = exceedance of standard or guidance value

Table 6
Pre-Design Investigation and Final Design
Area E Depth Discrete Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

			Sample ID	DDE-01-0204	DDE-01-0406	DDE-01-0608	DDE-02-0204	DDE-02-0406	DDE-02-0810	DDE-03-0204	DDE-03-0406	DDE-03-0608	DDE-04-0204	DDE-04-0507	DDE-04-0810	DDE-05-0204	DDE-05-0406	DDE-05-1012	DDE-06-0204	DDE-06-0406	DDE-06-0608	DDE-07-0810	DDE-08-0810
			Date	03/19/10	03/19/10	03/19/10	03/19/10	03/19/10	03/19/10	03/19/10	03/19/10	03/19/10	03/19/10	03/19/10	03/19/10	03/19/10	03/19/10	03/19/10	03/19/10	03/19/10	03/19/10	08/06/10	08/06/10
			Depth	2-4'	4-6'	6-8'	2-4'	4-6'	8-10'	2-4'	4-6'	6-8'	2-4'	5-7'	8-10'	2-4'	4-6'	10-12'	2-4'	4-6'	6-8'	8-10'	8-10'
		NYSDEC Values (2)																					
Parameter	Units (1)	Commercial Use	Protection of GW																				
VOCs																							
1,1,1-TRICHLOROETHANE	ug/kg	500,000	680	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
1,1,2,2-TETRACHLOROETHANE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
1,1,2-TRICHLOROETHANE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
1,1,2-TRICHLOROTRIFLUOROETHANE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
1,1-DICHLOROETHANE	ug/kg	240,000	270	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
1,1-DICHLOROETHENE	ug/kg	500,000	330	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
1,2,4-TRICHLOROBENZENE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	3800	4.2 U	5.9 U	53 U	300 J	420 U	520 U	3700 J	13000
1,2-DIBROMO-3-CHLOROPROPANE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
1,2-DIBROMOETHANE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
1,2-DICHLOROBENZENE	ug/kg	500,000	1,100	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	3300	370000	130000	4.2 U	5.9 U	37 J	590 U	420 U	520 U	140000	8700
1,2-DICHLOROETHANE	ug/kg	30,000	20	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
1,2-DICHLOROPROPANE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
1,3-DICHLOROBENZENE	ug/kg	280,000	2,400	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	51000	3400	4.2 U	5.9 U	53 U	590 U	420 U	520 U	3500 J	17000
1,4-DICHLOROBENZENE	ug/kg	130,000	1,800	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	2600	110000	19000	4.2 U	5.9 U	53 U	310 J	420 U	520 U	30000 J	2400
2-BUTANONE	ug/kg	500,000	120	8.6 J	25 U	23 U	4400 U	4500 U	240 U	76 J	23000 U	270 U	5000 U	29000 U	14000 U	21 U	30 U	270 U	3000 U	2100 U	2600 U	440 U	240 U
2-HEXANONE	ug/kg			30 U	25 U	23 U	4400 U	4500 U	240 U	35 U	23000 U	270 U	5000 U	29000 U	14000 U	21 U	30 U	270 U	3000 U	2100 U	2600 U	440 U	240 U
4-METHYL-2-PENTANONE	ug/kg			30 U	25 U	23 U	4400 U	4500 U	240 U	140 J	23000 U	270 U	5000 U	29000 U	14000 U	21 U	30 U	270 U	3000 U	2100 U	2600 U	440 U	240 U
ACETONE	ug/kg	500,000	50	56	36	7.3 J	4400 U	4500 U	240 U	150 J	23000 U	270 U	5000 U	29000 U	14000 U	21 U	5.8 J	270 U	3000 U	2100 U	2600 U	440 U	240 U
BENZENE	ug/kg	44,000	60	6 U	5.1 U	4.6 U	1300	910 U	49 U	45 J	4600 U	57	1000 U	5900 U	2800 U	4.2 U	5.9 U	34 J	590 U	420 U	520 U	410 J	49 U
BROMODICHLOROMETHANE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
BROMOFORM	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
BROMOMETHANE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
CARBON DISULFIDE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	6.1 J	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
CARBON TETRACHLORIDE	ug/kg	22,000	760	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
CHLOROBENZENE	ug/kg	500,000	1,100	6 U	5.1 U	4.6 U	870000	390000	32000	480000	280000	55000	49000	460000	66000	80	970	47000	1800000	90000	340000	840000	12000
CHLORODIBROMOMETHANE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
CHLOROETHANE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
CHLOROFORM	ug/kg	350,000	370	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
CHLOROMETHANE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
CIS-1,2-DICHLOROETHENE	ug/kg	500,000	250	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
CIS-1,3-DICHLOROPROPENE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
CYCLOHEXANE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	4.1 J	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
DICHLORODIFLUOROMETHANE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
ETHYLBENZENE	ug/kg	390,000	1,000	6 U	5.1 U	4.6 U	240000	4400	3400	20 J	4600 U	53 U	1000 U	5900 U	2800 U	2.2 J	7.4	53 U	330 J	420 U	520 U	88 U	49 U
ISOPROPYLBENZENE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
METHYL ACETATE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
METHYL TERT-BUTYL ETHER	ug/kg	500,000	930	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
METHYLCYCLOHEXANE	ug/kg			6 U	5.1 U	4.6 U	1600	910 U	49 U	7.2 J	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	63 J	25 J
METHYLENE CHLORIDE	ug/kg	500,000	50	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
STYRENE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
TETRACHLOROETHENE	ug/kg	150,000	1,300	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	310 J	49 U
TOLUENE	ug/kg	500,000	700	6 U	5.1 U	4.6 U	990	940	69	390 J	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	1900	420 U	520 U	47 J	4100
TRANS-1,2-DICHLOROETHENE	ug/kg	500,000	190	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
TRANS-1,3-DICHLOROPROPENE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
TRICHLOROETHENE	ug/kg	200,000	470	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
TRICHLOROFLUOROMETHANE	ug/kg			6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
VINYL CHLORIDE	ug/kg	13,000	20	6 U	5.1 U	4.6 U	890 U	910 U	49 U	7 U	4600 U	53 U	1000 U	5900 U	2800 U	4.2 U	5.9 U	53 U	590 U	420 U	520 U	88 U	49 U
XYLENES, TOTAL	ug/kg	500,000	1,600	12 U	10 U	9.3 U	900 J	1800 U	98 U	95 J	9200 U	110 U	2000 U	12000 U	5600 U	8.4 U	12 U	110 U	600 J	840 U	1000 U	180 U	43 J
Additional Analyses																							
TOTAL ORGANIC CARBON	mg/kg			89600	10300	8880	5420	24200	13600	14100	15000	18500	42000	6770	6800	4630	4070	4740	20000	1940	4040		

Notes:
(1) Units: ug/kg = micrograms per kilogram; mg/kg = milligrams per kilogram
(2) New York State Department of Environmental Conservation, Restricted Use Soil Cleanup Objectives, Commercial Use and Protection of Groundwater, Table 375-6.8(b)
Qualifiers: U = not detected; J = estimated value; B = Analye detected in the associated Method Blank
Shaded value = exceedance of Restricted Use Soil Cleanup Objective

Table 7
Pre-Design Investigation and Final Design
Area E Confirmatory Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units (1)	NYSDEC Values (2) Commercial Use	NYSDEC Values (2) Protection of GW	Sample ID: CS-01-0102 Date: 03/23/10 Depth: 1-2'	CS-02-0203 03/23/10 2-3'	CS-03-0203 03/23/10 2-3'	CS-04-0102 03/23/10 1-2'	CS-05-0203 03/23/10 2-3'	CS-06-0203 03/23/10 2-3'	CS-07-0204 03/23/10 2-4'	CS-08-0103 03/23/10 1-3'	CS-09-0103 03/23/10 1-3'	CS-10-0102 03/23/10 1-2'	CS-11-0102 03/23/10 1-2'	CS-12-0203 03/23/10 2-3'	CS-13-0203 03/23/10 2-3'	CS-14-0203 03/23/10 2-3'	CS-15-0203 03/23/10 2-3'	CS-16-0203 03/24/10 2-3'	CS-17-0204 03/23/10 2-4'	CS-18-0102 03/24/10 1-2'
VOCs																					
1,1,1-Trichloroethane	ug/kg	500,000	680	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
1,1,2,2-Tetrachloroethane	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
1,1,2-Trichloroethane	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
1,1-Dichloroethane	ug/kg	240,000	270	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
1,1-Dichloroethene	ug/kg	500,000	330	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
1,2,4-Trichlorobenzene	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	45 J	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	88
1,2-Dibromo-3-chloropropane	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
1,2-Dibromoethane	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
1,2-Dichlorobenzene	ug/kg	500,000	1,100	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	860	**4400**	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	110
1,2-Dichloroethane	ug/kg	30,000	20	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
1,2-Dichloropropane	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
1,3-Dichlorobenzene	ug/kg	280,000	2,400	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1000 J	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	28 J
1,4-Dichlorobenzene	ug/kg	130,000	1,800	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	310	**9300**	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1500	4.8 U	85
2-Butanone (MEK)	ug/kg	500,000	120	30 U	31	2.9 J	25 U	51000 U	14000 U	320 U	58 J	5800 U	230 U	26 U	27000 U	32000 U	1500 U	81 J	5600 U	24 U	260 U
2-Hexanone	ug/kg			30 U	29 U	28 U	25 U	51000 U	14000 U	320 U	270 U	5800 U	230 U	26 U	27000 U	32000 U	1500 U	290 U	5600 U	24 U	260 U
4-Methyl-2-pentanone (MIBK)	ug/kg			30 U	29 U	28 U	25 U	51000 U	14000 U	320 U	270 U	5800 U	230 U	26 U	27000 U	32000 U	1500 U	290 U	5600 U	24 U	260 U
Acetone	ug/kg	500,000	50	8.6 J	**150**	18 J	13 J	51000 U	14000 U	320 U	**99** J	5800 U	230 U	26 U	27000 U	32000 U	1500 U	**200** J	5600 U	24 U	260 U
Benzene	ug/kg	44,000	60	6.1 U	5.8 U	5.6 U	5 U	10000 U	**1700** J	64 U	54 U	1200 U	46 U	5.2 U	**13000**	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Bromodichloromethane	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Bromoform	ug/kg			6.1 UJ	5.8 UJ	5.6 UJ	5 UJ	10000 UJ	2900 UJ	64 UJ	54 UJ	1200 UJ	46 UJ	5.2 UJ	5400 UJ	6500 UJ	300 UJ	58 UJ	1100 UJ	4.8 UJ	51 U
Bromomethane	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Carbon disulfide	ug/kg			6.1 U	5.8 U	6.1	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	91
Carbon Tetrachloride	ug/kg	22,000	760	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Chlorobenzene	ug/kg	500,000	1,100	6.1 U	5.8 U	5.6 U	5 U	**990000**	**220000**	360	71	**77000**	46 U	36	**770000**	**1400000**	**24000**	**3400**	**55000**	2.5 J	51 U
Chloroethane	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Chloroform	ug/kg	350,000	370	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Chloromethane	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
cis-1,2-Dichloroethene	ug/kg	500,000	250	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
cis-1,3-Dichloropropene	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Cyclohexane	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	95	18	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	30 J
Dibromochloromethane	ug/kg			6.1 U	5.8 U	5.6 UJ	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Dichlorodifluoromethane	ug/kg			6.1 U	5.8 U	5.6 UJ	5 U	10000 U	2900 U	64 UJ	54 UJ	1200 UJ	46 UJ	5.2 U	5400 UJ	6500 UJ	300 UJ	58 UJ	1100 U	4.8 U	51 U
Ethylbenzene	ug/kg	390,000	1,000	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	170	1200 U	46 U	5.2 U	**150000**	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Isopropylbenzene	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Methyl Acetate	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 UJ	2900 U	110 J	99 J	1200 UJ	46 UJ	5.2 U	5400 UJ	6500 UJ	300 UJ	250 J	1100 U	4.8 U	340
Methyl tert-Butyl Ether (MTBE)	ug/kg	500,000	930	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Methylcyclohexane	ug/kg			2.5 J	5.8 U	5.6 U	2.8 J	10000 U	2900 U	64 U	54 U	1200 U	340	18	5400 U	6500 U	190 J	58 U	1100 U	4.8 U	78
Methylene Chloride	ug/kg	500,000	50	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Styrene	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Tetrachloroethene	ug/kg	150,000	1,300	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Toluene	ug/kg	500,000	700	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	2.7 J	5400 U	**3200** J	300 U	40 J	1100 U	4.8 U	51 U
trans-1,2-Dichloroethene	ug/kg	500,000	190	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
trans-1,3-Dichloropropene	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Trichloroethene	ug/kg	200,000	470	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Trichlorofluoromethane	ug/kg			6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Vinyl chloride	ug/kg	13,000	20	6.1 U	5.8 U	5.6 U	5 U	10000 U	2900 U	64 U	54 U	1200 U	46 U	5.2 U	5400 U	6500 U	300 U	58 U	1100 U	4.8 U	51 U
Xylenes, total	ug/kg	500,000	1,600	12 U	12 U	11 U	10 U	20000 U	5700 U	130 U	110 U	2300 U	32 J	4.8 J	11000 U	13000 U	590 U	120 U	2200 U	9.5 U	34 J

See notes at end of table

Table 7
Pre-Design Investigation and Final Design
Area E Confirmatory Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units (1)	NYSDEC Values (2) Commercial Use	NYSDEC Values (2) Protection of GW	CS-19-0203	CS-20-0102	CS-21-0204	CS-22-0203	CS-23-0204	CS-23R-0204	CS-24-0204	CS-25-0102	CS-26-0102	CS-27-0203	CS-28-0203	CS-29-0506	CS-30-0506	CS-31-5565	CS-32-0203	CS-33-0102	CS-34-0304	CS-35-0203
			Date:	03/23/10	03/24/10	03/24/10	03/24/10	03/24/10	03/24/10	03/24/10	03/24/10	03/24/10	03/24/10	05/13/10	05/13/10	05/13/10	05/13/10	05/13/10	05/13/10	05/13/10	05/13/10
			Depth:	2-3'	1-2'	2-4'	2-3'	2-4'	2-4'	2-4'	1-2'	1-2'	2-3'	2-3'	5-6'	5-6'	5.5-6.5'	2-3'	1-2'	3-4'	2-3'
VOCs																					
1,1,1-Trichloroethane	ug/kg	500,000	680	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
1,1,2,2-Tetrachloroethane	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
1,1,2-Trichloroethane	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 UJ	4.8 UJ	60 U	6.8 UJ	4.1 UJ	65 U
1,1-Dichloroethane	ug/kg	240,000	270	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
1,1-Dichloroethene	ug/kg	500,000	330	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
1,2,4-Trichlorobenzene	ug/kg			180 U	36 J	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	6600	9500	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
1,2-Dibromo-3-chloropropane	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 UJ	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
1,2-Dibromoethane	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
1,2-Dichlorobenzene	ug/kg	500,000	1,100	180 U	140	4.6 U	5.6 U	3 J	6 U	770	6 U	110000	12000	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	53 J
1,2-Dichloroethane	ug/kg	30,000	20	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
1,2-Dichloropropane	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
1,3-Dichlorobenzene	ug/kg	280,000	2,400	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	130 J	6 U	1100 J	410	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
1,4-Dichlorobenzene	ug/kg	130,000	1,800	180 U	46 J	4.6 U	5.6 U	5.4 U	6 U	230	6 U	13000	1400	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
2-Butanone (MEK)	ug/kg	500,000	120	920 U	1100	4.7 J	22 J	11 J	3 J	950 U	14 J	6800 U	1100 U	340 U	270 U	21 U	24 U	300 U	34 U	1.7 J	320 U
2-Hexanone	ug/kg			920 U	290 U	23 U	28 U	27 U	30 U	950 U	30 U	6800 U	1100 U	340 U	270 U	21 U	24 U	300 U	34 U	21 U	320 U
4-Methyl-2-pentanone (MIBK)	ug/kg			920 U	290 U	23 U	28 U	27 U	30 U	950 U	30 U	6800 U	1100 U	340 U	270 U	21 U	24 U	300 U	34 U	21 U	320 U
Acetone	ug/kg	500,000	50	920 U	290 U	37	110	59	31	950 U	68	6800 U	1100 U	340 U	270 U	21 UJ	24 UJ	300 U	34 UJ	21 UJ	320 U
Benzene	ug/kg	44,000	60	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	5.6 J	790 J	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Bromodichloromethane	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Bromoform	ug/kg			180 UJ	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 UJ	67 UJ	54 UJ	4.2 U	4.8 U	60 UJ	6.8 U	4.1 U	65 UJ
Bromomethane	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	55 J	54 UJ	4.2 UJ	4.8 UJ	60 UJ	6.8 UJ	4.1 UJ	65 UJ
Carbon disulfide	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 UJ	4.8 UJ	60 U	6.8 UJ	4.1 UJ	65 U
Carbon Tetrachloride	ug/kg	22,000	760	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Chlorobenzene	ug/kg	500,000	1,100	11000	74	4.6 U	5.6 U	5.4 U	6 U	8700	6	3600	110 J	4100	10000	4.2 U	4.8 U	4400	6.8 U	4.1 U	65 U
Chloroethane	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 UJ	54 UJ	4.2 UJ	4.8 UJ	60 UJ	6.8 UJ	4.1 UJ	65 UJ
Chloroform	ug/kg	350,000	370	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Chloromethane	ug/kg			180 U	57 U	U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
cis-1,2-Dichloroethene	ug/kg	500,000	250	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
cis-1,3-Dichloropropene	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Cyclohexane	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Dibromochloromethane	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 UJ	54 UJ	4.2 U	4.8 U	60 UJ	6.8 U	4.1 U	65 UJ
Dichlorodifluoromethane	ug/kg			180 UJ	57 U	4.6 U	5.6 U	5.4 U	6 U	190 UJ	6 U	1400 U	220 UJ	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Ethylbenzene	ug/kg	390,000	1,000	180 U	130	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Isopropylbenzene	ug/kg			180 U	33 J	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Methyl Acetate	ug/kg			180 UJ	140	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	700 J	220 UJ	67 U	54 U	4.2 UJ	4.8 UJ	60 U	6.8 UJ	4.1 UJ	65 U
Methyl tert-Butyl Ether (MTBE)	ug/kg	500,000	930	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Methylcyclohexane	ug/kg			180 U	67	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	240	50 J	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Methylene Chloride	ug/kg	500,000	50	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	150	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Styrene	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Tetrachloroethene	ug/kg	150,000	1,300	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	730
Toluene	ug/kg	500,000	700	180 U	30 J	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	69000	220 U	36 J	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
trans-1,2-Dichloroethene	ug/kg	500,000	190	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
trans-1,3-Dichloropropene	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Trichloroethene	ug/kg	200,000	470	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Trichlorofluoromethane	ug/kg			180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Vinyl chloride	ug/kg	13,000	20	180 U	57 U	4.6 U	5.6 U	5.4 U	6 U	190 U	6 U	1400 U	220 U	67 U	54 U	4.2 U	4.8 U	60 U	6.8 U	4.1 U	65 U
Xylenes, total	ug/kg	500,000	1,600	370 U	53 J	9.2 U	11 U	11 U	12 U	380 U	12 U	2700 U	440 U	130 U	110 U	8.5 U	9.6 U	120 U	14 U	8.2 U	130 U

See notes at end of table

Table 7
Pre-Design Investigation and Final Design
Area E Confirmatory Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units (1)	NYSDEC Values (2) Commercial Use	NYSDEC Values (2) Protection of GW	CS-36-0203	CS-37-0304	CS-37-OIL	CS-38-0304	CS-39-0506	CS-40-0203	CS-41-0203	CS-42-0204	CS-43-0203	CS-44-0203	CS-45-0304	CS-46-0203	CS-47-0203	CS-48-0204	CS-49-0203	CS-50-0204	CS-51-0204
			Date:	05/13/10	05/13/10	05/13/10	05/13/10	05/13/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	08/06/10	08/06/10	08/06/10	08/06/10
			Depth:	2-3'	3-4'	NA	3-4'	5-6'	2-3'	2-3'	2-4'	2-3'	2-3'	3-4'	2-3'	2-3'	2-4'	2-3'	2-4'	2-4'
VOCs																				
1,1,1-Trichloroethane	ug/kg	500,000	680	5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
1,1,2,2-Tetrachloroethane	ug/kg			5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
1,1,2-Trichloroethane	ug/kg			5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg			5.4 UJ	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 UJ	4.5 U	5.4 UJ	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
1,1-Dichloroethane	ug/kg	240,000	270	5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
1,1-Dichloroethene	ug/kg	500,000	330	5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
1,2,4-Trichlorobenzene	ug/kg			5.4 U	520	4100 J	43 U	50 U	6.4 U	6.1 U	2.9 J	34000 J	5.4 U	7.7	79 J	120000	2700	1300	280 J	6500 J
1,2-Dibromo-3-chloropropane	ug/kg			5.4 U	61 U	60 U	43 U	50 U	6.4 UJ	6.1 UJ	4.5 UJ	4.5 UJ	5.4 UJ	4.6 UJ	85 UJ	480 UJ	45 U	49 U	58 U	57 U
1,2-Dibromoethane	ug/kg			5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
1,2-Dichlorobenzene	ug/kg	500,000	1,100	5.4 U	**49000**	**10000**	64	50 U	6.4 U	6.1 U	2.4 J	**2500000**	7.1	69	**6300**	**130000**	490	890	**22000** J	**19000**
1,2-Dichloroethane	ug/kg	30,000	20	5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
1,2-Dichloropropane	ug/kg			5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
1,3-Dichlorobenzene	ug/kg	280,000	2,400	5.4 U	310	**2800** J	43 U	50 U	6.4 U	6.1 U	4.5 U	**27000** J	5.4 U	53	1100	**2700**	380	49 U	**3000** J	**4700** J
1,4-Dichlorobenzene	ug/kg	130,000	1,800	5.4 U	**3400**	**19000**	43 U	50 U	18	6.1 U	4.5 U	**260000**	5.4 U	51	**3500**	**9500**	150	120	**68000**	**64000**
2-Butanone (MEK)	ug/kg	500,000	120	27 U	300 U	300 U	210 U	250 U	13 J	10 J	22 U	22 U	27 U	23 U	430 U	2400 U	220 U	240 U	290 U	280 U
2-Hexanone	ug/kg			27 U	300 U	300 U	210 U	250 U	32 U	30 U	22 U	22 U	27 U	23 U	430 U	2400 U	220 U	240 U	290 U	280 U
4-Methyl-2-pentanone (MIBK)	ug/kg			27 U	300 U	300 U	210 U	250 U	32 U	30 U	22 U	22 U	27 U	23 U	430 U	2400 U	220 U	240 U	290 U	280 U
Acetone	ug/kg	500,000	50	27 UJ	300 U	300 U	210 U	250 U	**63**	49	22 U	17 J	27 U	23 U	430 U	2400 U	220 U	240 U	290 U	280 U
Benzene	ug/kg	44,000	60	5.4 U	**330**	**1900** J	43 U	28 J	27	2.5 J	4.5 U	16	5.4 U	4.6 U	85 U	480 U	45 U	49 U	**5700** J	**5900** J
Bromodichloromethane	ug/kg			5.4 U	61 U	60 U	43 U	50 U	6.4 UJ	6.1 UJ	4.5 UJ	4.5 UJ	5.4 UJ	4.6 UJ	85 U	480 U	45 U	49 U	58 U	57 U
Bromoform	ug/kg			5.4 U	61 UJ	60 UJ	43 UJ	50 UJ	6.4 UJ	6.1 UJ	4.5 UJ	4.5 UJ	5.4 UJ	4.6 UJ	85 UJ	480 UJ	45 U	49 U	58 U	57 U
Bromomethane	ug/kg			5.4 UJ	61 UJ	60 UJ	43 UJ	50 UJ	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
Carbon disulfide	ug/kg			5.4 UJ	61 U	60 U	43 U	50 U	6.4 UJ	6.1 UJ	4.5 UJ	4.5 UJ	5.4 UJ	4.6 UJ	85 U	480 U	45 U	49 U	58 U	57 U
Carbon Tetrachloride	ug/kg	22,000	760	5.4 U	61 U	60 U	43 U	50 U	6.4 UJ	6.1 UJ	4.5 UJ	4.5 UJ	5.4 UJ	4.6 UJ	85 U	480 U	45 U	49 U	58 U	57 U
Chlorobenzene	ug/kg	500,000	1,100	5.4 U	**34000**	**440000**	55	50 U	**85000**	6.1 U	4.5 U	590 J	5.4 U	16	**6800**	**14000**	120	27 J	**670000**	**600000**
Chloroethane	ug/kg			5.4 UJ	61 UJ	60 UJ	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
Chloroform	ug/kg	350,000	370	5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
Chloromethane	ug/kg			5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
cis-1,2-Dichloroethene	ug/kg	500,000	250	5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
cis-1,3-Dichloropropene	ug/kg			5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
Cyclohexane	ug/kg			5.4 U	61 U	31 J	43 U	50 U	6.4 U	6.1 U	4.5 U	1.9 J	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
Dibromochloromethane	ug/kg			5.4 U	61 UJ	60 UJ	43 UJ	50 UJ	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
Dichlorodifluoromethane	ug/kg			5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 UJ	4.5 U	5.4 UJ	4.6 U	85 UJ	480 UJ	45 U	49 U	58 U	57 U
Ethylbenzene	ug/kg	390,000	1,000	5.4 U	53 J	110 J	43 U	27 J	6.4 U	6.1 U	4.5 U	6.7	5.4 U	4.6 U	85 U	480 U	45 U	49 U	29000 U	**5200** J
Isopropylbenzene	ug/kg			5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	37 J	57 U
Methyl Acetate	ug/kg			5.4 UJ	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	130 J	120 J
Methyl tert-Butyl Ether (MTBE)	ug/kg	500,000	930	5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
Methylcyclohexane	ug/kg			5.4 U	77	80 J	43 U	77	6.4 U	6.1 U	4.5 U	3.6 J	5.4 U	4.6 U	85 U	480 U	45 U	49 U	67 J	78 J
Methylene Chloride	ug/kg	500,000	50	5.4 U	61 U	60 U	43 U	50 U	6.4 UJ	6.1 UJ	4.5 UJ	4.5 UJ	5.4 UJ	4.6 UJ	85 UJ	480 UJ	45 U	49 U	58 U	57 U
Styrene	ug/kg			5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
Tetrachloroethene	ug/kg	150,000	1,300	5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
Toluene	ug/kg	500,000	700	5.4 U	180	300 J	43 U	50 U	6.4 U	6.1 U	4.5 U	520 J	5.4 U	4.6 U	85 U	480 U	40 J	49 U	44 J	410 J
trans-1,2-Dichloroethene	ug/kg	500,000	190	5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
trans-1,3-Dichloropropene	ug/kg			5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
Trichloroethene	ug/kg	200,000	470	5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
Trichlorofluoromethane	ug/kg			5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
Vinyl chloride	ug/kg	13,000	20	5.4 U	61 U	60 U	43 U	50 U	6.4 U	6.1 U	4.5 U	4.5 U	5.4 U	4.6 U	85 U	480 U	45 U	49 U	58 U	57 U
Xylenes, total	ug/kg	500,000	1,600	11 U	120	120 J	85 U	71 J	13 U	12 U	8.9 U	6 J	11 U	9.1 U	170 U	960 U	89 U	97 U	340 J	170 J

See notes at end of table

Table 7
Pre-Design Investigation and Final Design
Area E Confirmatory Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units (1)	NYSDEC Values (2) Commercial Use	NYSDEC Values (2) Protection of GW	CS-01-0102	CS-02-0203	CS-03-0203	CS-04-0102	CS-05-0203	CS-06-0203	CS-07-0204	CS-08-0103	CS-09-0103	CS-10-0102	CS-11-0102	CS-12-0203	CS-13-0203	CS-14-0203	CS-15-0203	CS-16-0203	CS-17-0204	CS-18-0102
			Date:	03/23/10	03/23/10	03/23/10	03/23/10	03/23/10	03/23/10	03/23/10	03/23/10	03/23/10	03/23/10	03/23/10	03/23/10	03/23/10	03/23/10	03/23/10	03/24/10	03/23/10	03/24/10
			Depth:	1-2'	2-3'	2-3'	1-2'	2-3'	2-3'	2-4'	1-3'	1-3'	1-2'	1-2'	2-3'	2-3'	2-3'	2-3'	2-3'	2-4'	1-2'
SVOCs																					
2,2'-Oxybis(1-Chloropropane)	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
2,4,5-Trichlorophenol	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 UJ	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
2,4,6-Trichlorophenol	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
2,4-Dichlorophenol	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
2,4-Dimethylphenol	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 UJ	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
2,4-Dinitrophenol	ug/kg			370 UJ	410 U	4600 U	350 UJ	2400 U	2200 U	4700 U	21000 UJ	3400 U	1700 U	6900 U	1800 U	2100 U	3800 U	410 U	1900 U	1700 U	400 U
2,4-Dinitrotoluene	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 UJ	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
2,6-Dinitrotoluene	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
2-Chloronaphthalene	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
2-Chlorophenol	ug/kg			190 U	210 U	2400 U	180 U	210 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U		2000 U	210 U	980 U	900 U	210 U
2-Methylnaphthalene	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	35 J
2-Methylphenol	ug/kg	500,000	330	190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
2-Nitroaniline	ug/kg			370 U	410 U	4600 U	350 U	2400 U	2200 U	4700 U	21000 U	3400 U	1700 U	6900 U	1800 U	2100 U	3800 U	410 U	1900 U	1700 U	400 U
2-Nitrophenol	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
3,3'-Dichlorobenzidine	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 UJ	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
3-Nitroaniline	ug/kg			370 U	410 U	4600 U	350 U	2400 U	2200 U	4700 U	21000 U	3400 U	1700 U	6900 U	1800 U	2100 U	3800 U	410 U	1900 U	1700 U	400 U
4,6-Dinitro-2-methylphenol	ug/kg			370 UJ	410 U	4600 U	350 UJ	2400 U	2200 U	4700 U	21000 UJ	3400 U	1700 U	6900 U	1800 U	2100 U	3800 U	410 U	1900 U	1700 U	400 U
4-Bromophenyl phenyl ether	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
4-Chloro-3-methylphenol	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
4-Chloroaniline	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
4-Chlorophenyl phenyl ether	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
4-Methylphenol	ug/kg	500,000	330	370 U	410 U	4600 U	350 U	2400 U	2200 U	4700 U	21000 U	3400 U	1700 U	6900 U	1800 U	**530** J	3800 U	410 U	1900 U	1700 U	400 U
4-Nitroaniline	ug/kg			370 U	410 U	4600 U	350 U	2400 U	2200 U	4700 U	21000 UJ	3400 U	1700 U	6900 U	1800 U	2100 U	3800 U	410 U	1900 U	1700 U	400 U
4-Nitrophenol	ug/kg			370 U	410 U	4600 U	350 U	2400 U	2200 U	4700 U	21000 UJ	3400 U	1700 U	6900 U	1800 U	2100 U	3800 U	410 U	1900 U	1700 U	400 U
Acenaphthene	ug/kg	500,000	98,000	190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	89 J	2000 U	210 U	980 U	900 U	210 U
Acenaphthylene	ug/kg	500,000	107,000	190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	98 J	2000 U	210 U	980 U	900 U	210 U
Acetophenone	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Aniline	ug/kg			370 U	410 U	1500 J	350 U	3400	2200 U	16000	370000 J	44000	1700 U	6900 U	1800 U	2100 U	3800 U	410 U	1900 U	1700 U	520
Anthracene	ug/kg	500,000	1,000,000	190 U	210 U	2400 U	180 U	100 J	1100 U	320 J	11000 U	1800 U	890 U	3500 U	130 J	410 J	2000 U	210 U	150 J	900 U	10 J
Atrazine	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 UJ	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Benzaldehyde	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Benzo(a)anthracene	ug/kg	5,600	1,000	20 J	18 J	410 J	32 J	460 J	1100 U	820 J	11000 U	1800 U	890 U	3500 U	410 J	890 J	460 J	26 J	550 J	900 U	36 J
Benzo(a)pyrene	ug/kg	1,000	22,000	190 U	210 U	300 J	20 J	330 J	1100 U	580 J	11000 U	1800 U	890 U	3500 U	360 J	580 J	410 J	210 U	460 J	900 U	31 J
Benzo(b)fluoranthene	ug/kg	5,600	1,700	30 J	210 U	320 J	41 J	350 J	1100 U	440 J	11000 U	1800 U	890 U	3500 U	410 J	670 J	580 J	20 J	490 J	900 U	31 J
Benzo(ghi)perylene	ug/kg	500,000	1,000,000	20 J	210 U	180 J	21 J	150 J	1100 U	250 J	11000 U	1800 U	890 U	3500 U	220 J	230 J	290 J	210 U	310 J	900 U	26 J
Benzo(k)fluoranthene	ug/kg	56,000	1,700	190 U	210 U	170 J	180 U	220 J	1100 U	510 J	11000 U	1800 U	890 U	3500 U	240 J	390 J	320 J	210 U	310 J	900 U	23 J
Biphenyl	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Bis(2-chloroethoxy)methane	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Bis(2-chloroethyl)ether	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Bis(2-ethylhexyl) phthalate	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 UJ	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Butyl benzyl phthalate	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 UJ	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Caprolactam	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 UJ	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Carbazole	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	68 J	900 U	210 U
Chrysene	ug/kg	56,000	1,000	39 U	14 J	350 J	58 U	540 J	1100 U	730 J	11000 U	1800 U	890 U	3500 U	410 J	850 J	550 J	21 J	480 J	900 U	43 J
Dibenzo(a,h)anthracene	ug/kg	560	1,000,000	190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 UJ	1800 U	890 U	3500 U	930 U	92 J	2000 U	210 U	980 U	900 U	210 U
Dibenzofuran	ug/kg	350,000	210,000	190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	180 J	2000 U	210 U	980 U	900 U	15 J
Diethyl phthalate	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Dimethyl phthalate	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Di-n-butyl phthalate	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Di-n-octyl phthalate	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Fluoranthene	ug/kg	500,000	1,000,000	32 J	28 J	960 J	58 J	970 J	1100 U	1500 J	11000 U	1800 U	890 U	3500 U	930 J	2800	990 J	40 J	1100	900 U	63 J
Fluorene	ug/kg	500,000	386,000	190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	110 J	430 J	2000 U	210 U	75 J	900 U	210 U
Hexachlorobenzene	ug/kg	6,000	3,200	190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Hexachlorobutadiene	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Hexachlorocyclopentadiene	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 UJ	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Hexachloroethane	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Indeno(1,2,3-cd)pyrene	ug/kg	5,600	8,200	19 J	210 U	2400 U	21 J	130 J	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	180 J	240 J	230 J	210 U	230 J	900 U	17 J
Isophorone	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
Naphthalene	ug/kg	500,000	12,000	190 U	210 U	2400 U	180 U	250 J	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	320 J	2000 U	210 U	980 U	900 U	19 J
Nitrobenzene	ug/kg			190 U	210 U	40000	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	42 J
N-Nitrosodi-n-propylamine	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	210 U
N-Nitrosodiphenylamine	ug/kg			190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	1100 U	2000 U	210 U	980 U	900 U	32 J
Pentachlorophenol	ug/kg	6,700	800	370 U	410 U	4600 U	350 U	2400 U	2200 U	4700 U	21000 UJ	3400 U	1700 U	6900 U	1800 U	2100 U	3800 U	410 U	1900 U	1700 U	400 U
Phenanthrene	ug/kg	500,000	1,000,000	190 U	210 U	950 J	180 U	720 J	1100 U	1400 J	11000 U	1800 U	890 U	3500 U	660 J	2400	700 J	22 J	640 J	900 U	64 J
Phenol	ug/kg	500,000	330	190 U	210 U	2400 U	180 U	1200 U	1100 U	2400 U	11000 U	1800 U	890 U	3500 U	930 U	**600** J	2000 U	210 U	980 U	900 U	210 U
Pyrene	ug/kg	500,000	1,000,000	26 J	20 J	840 J	39 J	680 J	1100 U	1100 J	11000 U	1800 U	890 U	3500 U	710 J	1900	840 J	34 J	820 J	900 U	57 J

See notes at end of table

Table 7
Pre-Design Investigation and Final Design
Area E Confirmatory Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units [1]	NYSDEC Values [2] Commercial Use	NYSDEC Values [2] Protection of GW	CS-19-0203	CS-20-0102	CS-21-0204	CS-22-0203	CS-23-0204	CS-23R-0204	CS-24-0204	CS-25-0102	CS-26-0102	CS-27-0203	CS-28-0203	CS-29-0506	CS-30-0506	CS-31-5565	CS-32-0203	CS-33-0102	CS-34-0304	CS-35-0203
			Date:	03/23/10	03/24/10	03/24/10	03/24/10	03/24/10	03/24/10	03/24/10	03/24/10	03/24/10	03/24/10	05/13/10	05/13/10	05/13/10	05/13/10	05/13/10	05/13/10	05/13/10	05/13/10
			Depth:	2-3'	1-2'	2-4'	2-3'	2-4'	2-4'	2-4'	1-2'	1-2'	2-3'	2-3'	5-6'	5-6'	5.5-6.5'	2-3'	1-2'	3-4'	2-3'
SVOCs																					
2,2'-Oxybis(1-Chloropropane)	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
2,4,5-Trichlorophenol	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	R	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
2,4,6-Trichlorophenol	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	R	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
2,4-Dichlorophenol	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	R	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
2,4-Dimethylphenol	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	R	4000 U	1200 UJ	190 UJ	190 UJ	210 UJ	230 UJ	1300 UJ	180 UJ	2300 UJ
2,4-Dinitrophenol	ug/kg			1700 U	2200 U	390 U	430 U	400 U	410 U	1800 U	430 U	R	7900 U	2300 U	380 U	380 U	420 U	440 U	2500 U	360 U	4500 U
2,4-Dinitrotoluene	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
2,6-Dinitrotoluene	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
2-Chloronaphthalene	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
2-Chlorophenol	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	R	4000 U	1200 U	23 J	190 U	210 U	230 U	1300 U	180 U	2300 U
2-Methylnaphthalene	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	12 J	84 J	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	730 J
2-Methylphenol	ug/kg	500,000	330	880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	R	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
2-Nitroaniline	ug/kg			1700 U	2200 U	390 U	430 U	400 U	410 U	1800 U	430 U	350 U	7900 U	2300 U	380 U	380 U	420 U	440 U	2500 U	360 U	4500 U
2-Nitrophenol	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	R	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
3,3'-Dichlorobenzidine	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
3-Nitroaniline	ug/kg			1700 U	2200 U	390 U	430 U	400 U	410 U	1800 U	430 U	350 U	7900 U	2300 U	380 U	380 U	420 U	440 U	2500 U	360 U	4500 U
4,6-Dinitro-2-methylphenol	ug/kg			1700 U	2200 U	390 U	430 U	400 U	410 U	1800 U	430 U	R	7900 U	2300 UJ	380 UJ	380 UJ	420 UJ	440 UJ	2500 UJ	360 UJ	4500 UJ
4-Bromophenyl phenyl ether	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
4-Chloro-3-methylphenol	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	R	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
4-Chloroaniline	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 UJ	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
4-Chlorophenyl phenyl ether	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
4-Methylphenol	ug/kg	500,000	330	1700 U	2200 U	390 U	430 U	400 U	410 U	1800 U	430 U	R	7900 U	2300 U	380 U	380 U	420 U	440 U	2500 U	360 U	4500 U
4-Nitroaniline	ug/kg			1700 U	2200 U	390 U	430 U	400 U	410 U	1800 U	430 U	350 U	7900 U	2300 U	380 U	380 U	420 U	440 U	2500 U	360 U	4500 U
4-Nitrophenol	ug/kg			1700 U	2200 U	390 U	430 U	400 U	410 U	1800 U	430 U	R	7900 U	2300 U	380 U	380 U	420 U	440 U	2500 U	360 U	4500 U
Acenaphthene	ug/kg	500,000	98,000	880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	8.5 J	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	430 J
Acenaphthylene	ug/kg	500,000	107,000	880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Acetophenone	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Aniline	ug/kg			1700 U	1300 J	390 U	430 U	400 U	410 U	1800 U	430 U	5500 J	7900 U	2300 U	380 U	380 U	420 U	440 U	2500 U	360 U	4500 U
Anthracene	ug/kg	500,000	1,000,000	880 U	77 J	13 J	220 U	26 J	210 U	130 J	220 U	180 U	260 J	1200 U	190 U	18 J	210 U	230 U	1300 U	180 U	1700 J
Atrazine	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Benzaldehyde	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Benzo(a)anthracene	ug/kg	5,600	1,000	880 U	240 J	30 J	23 J	38 J	210 U	330 J	23 J	14 J	**1100** J	330 J	190 U	75 J	210 U	230 U	290 J	180 U	**2400**
Benzo(a)pyrene	ug/kg	1,000	22,000	880 U	220 J	22 J	15 J	29 J	210 U	340 J	22 J	8.1 J	860 J	290 J	190 U	55 J	210 U	230 U	260 J	180 U	**1600** J
Benzo(b)fluoranthene	ug/kg	5,600	1,700	880 U	370 J	23 J	23 J	25 J	210 U	360 J	42 J	16 J	980 J	460 J	190 U	80 J	210 U	230 U	440 J	180 U	**2300**
Benzo(ghi)perylene	ug/kg	500,000	1,000,000	880 U	150 J	12 J	15 J	15 J	210 U	240 J	27 J	180 U	430 J	220 J	190 U	39 J	210 U	230 U	200 J	180 U	970 J
Benzo(k)fluoranthene	ug/kg	56,000	1,700	880 U	1100 U	13 J	10 J	20 J	210 U	180 J	220 U	180 U	620 J	160 J	190 U	35 J	210 U	230 U	160 J	180 U	960 J
Biphenyl	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Bis(2-chloroethoxy)methane	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Bis(2-chloroethyl)ether	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Bis(2-ethylhexyl) phthalate	ug/kg			880 U	1100 U	99 J	220 U	200 U	210 U	910 U	220 U	97 J	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	89 J	2300 U
Butyl benzyl phthalate	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Caprolactam	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 UJ	190 UJ	190 UJ	210 UJ	230 UJ	1300 UJ	180 UJ	2300 UJ
Carbazole	ug/kg			880 U	1100 U	200 U	220 U	17 J	210 U	70 J	220 U	140 J	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	730 J
Chrysene	ug/kg	56,000	1,000	880 U	260 J	23 J	20 J	33 J	210 U	320 J	30 J	17 J	910 J	370 J	190 U	71 J	210 U	230 U	320 J	180 U	**2300**
Dibenzo(a,h)anthracene	ug/kg	560	1,000,000	880 U	1100 U	200 U	220 U	200 U	210 U	66 J	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Dibenzofuran	ug/kg	350,000	210,000	880 U	88 J	200 U	220 U	17 J	210 U	79 J	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	890 J
Diethyl phthalate	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Dimethyl phthalate	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Di-n-butyl phthalate	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Di-n-octyl phthalate	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Fluoranthene	ug/kg	500,000	1,000,000	880 U	510 J	66 J	37 J	110 J	210 U	820 J	44 J	21 J	1900 J	540 J	190 U	140 J	210 U	230 U	450 J	180 U	5100
Fluorene	ug/kg	500,000	386,000	880 U	68 J	10 J	220 U	30 J	210 U	98 J	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	990 J
Hexachlorobenzene	ug/kg	6,000	3,200	880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Hexachlorobutadiene	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Hexachlorocyclopentadiene	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Hexachloroethane	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Indeno(1,2,3-cd)pyrene	ug/kg	5,600	8,200	880 U	120 J	11 J	13 J	13 J	210 U	200 J	20 J	180 U	380 J	210 J	190 U	36 J	210 U	230 U	190 J	180 U	850 J
Isophorone	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Naphthalene	ug/kg	500,000	12,000	880 U	1100 U	200 U	220 U	18 J	210 U	57 J	16 J	27 J	670 J	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	640 J
Nitrobenzene	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	150 J	66 J	18000 J	4000 U	1200 U	190 U	190 U	210 U	230 U	1100 J	180 U	2300 U
N-Nitrosodi-n-propylamine	ug/kg			880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
N-Nitrosodiphenylamine	ug/kg			880 U	120 J	200 U	220 U	200 U	210 U	910 U	220 U	180 U	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Pentachlorophenol	ug/kg	6,700	800	1700 U	2200 U	390 U	430 U	400 U	410 U	1800 U	430 U	R	7900 U	2300 UJ	380 UJ	380 UJ	420 UJ	440 UJ	2500 UJ	360 UJ	4500 UJ
Phenanthrene	ug/kg	500,000	1,000,000	880 U	300 J	67 J	33 J	150 J	210 U	670 J	28 J	32 J	2000 J	320 J	190 U	75 J	210 U	230 U	320 J	180 U	6200
Phenol	ug/kg	500,000	330	880 U	1100 U	200 U	220 U	200 U	210 U	910 U	220 U	R	4000 U	1200 U	190 U	190 U	210 U	230 U	1300 U	180 U	2300 U
Pyrene	ug/kg	500,000	1,000,000	880 U	410 J	53 J	30 J	84 J	210 U	640 J	39 J	19 J	1600 J	460 J	190 U	120 J	210 U	230 U	320 J	180 U	3700

See notes at end of table

Table 7
Pre-Design Investigation and Final Design
Area E Confirmatory Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

			Sample ID:	CS-36-0203	CS-37-0304	CS-37-OIL	CS-38-0304	CS-39-0506	CS-40-0203	CS-41-0203	CS-42-0204	CS-43-0203	CS-44-0203	CS-45-0304	CS-46-0203	CS-47-0203	CS-48-0204	CS-49-0203	CS-50-0204	CS-51-0204
			Date:	05/13/10	05/13/10	05/13/10	05/13/10	05/13/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	06/16/10	08/06/10	08/06/10	08/06/10	08/06/10
			Depth:	2-3'	3-4'	NA	3-4'	5-6'	2-3'	2-3'	2-4'	2-3'	2-3'	3-4'	2-3'	2-3'	2-4'	2-3'	2-4'	2-4'
		NYSDEC Values (2)																		
Parameter	Units (1)	Commercial Use	Protection of GW																	
SVOCs																				
2,2'-Oxybis(1-Chloropropane)	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
2,4,5-Trichlorophenol	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
2,4,6-Trichlorophenol	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
2,4-Dichlorophenol	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	28 J	240 U
2,4-Dimethylphenol	ug/kg			1000 UJ	1100 UJ	2100 UJ	210 UJ	1000 UJ	230 UJ	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
2,4-Dinitrophenol	ug/kg			2000 U	2100 U	4100 U	400 U	2000 U	450 UJ	460 UJ	3500 UJ	1900 UJ	360 UJ	350 UJ	390 UJ	360 UJ	1700 U	1700 U	420 U	470 U
2,4-Dinitrotoluene	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
2,6-Dinitrotoluene	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
2-Chloronaphthalene	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
2-Chlorophenol	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	510	150 J
2-Methylnaphthalene	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	210 J	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
2-Methylphenol	ug/kg	500,000	330	1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
2-Nitroaniline	ug/kg			2000 U	2100 U	4100 U	400 U	2000 U	450 U	460 U	3500 U	1900 U	360 U	350 U	390 U	360 U	1700 U	1700 U	420 U	470 U
2-Nitrophenol	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
3,3'-Dichlorobenzidine	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	3900	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
3-Nitroaniline	ug/kg			2000 U	2100 U	4100 U	400 U	2000 U	450 U	460 U	3500 U	1900 U	360 U	350 U	390 U	360 U	1700 U	1700 U	420 U	470 U
4,6-Dinitro-2-methylphenol	ug/kg			2000 UJ	2100 UJ	4100 UJ	400 UJ	2000 UJ	450 U	460 U	3500 U	1900 U	360 U	350 U	390 U	360 U	1700 U	1700 U	420 U	470 U
4-Bromophenyl phenyl ether	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
4-Chloro-3-methylphenol	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
4-Chloroaniline	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
4-Chlorophenyl phenyl ether	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
4-Methylphenol	ug/kg	500,000	330	2000 U	2100 U	4100 U	400 U	2000 U	450 U	460 U	3500 U	1900 U	360 U	350 U	390 U	360 U	1700 U	1700 U	420 U	470 U
4-Nitroaniline	ug/kg			2000 U	2100 U	4100 U	400 U	2000 U	450 U	460 U	3500 U	1900 U	360 U	350 U	390 U	360 U	1700 U	1700 U	420 U	470 U
4-Nitrophenol	ug/kg			2000 U	2100 U	4100 U	400 U	2000 U	450 U	460 U	3500 U	1900 U	360 U	350 U	390 U	360 U	1700 U	1700 U	420 U	470 U
Acenaphthene	ug/kg	500,000	98,000	1000 U	1100 U	2100 U	210 U	1000 U	230 U	27 J	1800 U	150 J	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Acenaphthylene	ug/kg	500,000	107,000	1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	130 J	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Acetophenone	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 UJ	860 UJ	220 UJ	240 UJ
Aniline	ug/kg			2000 U	2100 U	4100 U	400 U	2000 U	450 U	7200	3500 U	1900 U	360 U	350 U	390 U	360 U	1700 U	1700 U	240 J	470 U
Anthracene	ug/kg	500,000	1,000,000	1000 U	1100 U	200 J	210 U	1000 U	230 U	240 U	150 J	1100	180 U	180 U	200 U	190 U	900 U	860 U	220 U	14 J
Atrazine	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 UJ	860 UJ	220 UJ	240 UJ
Benzaldehyde	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	110 J
Benzo(a)anthracene	ug/kg	5,600	1,000	85 J	87 J	510 J	210 U	130 J	230 U	240 U	290 J	1500	37 J	19 J	200 U	190 U	900 U	42 J	220 U	52 J
Benzo(a)pyrene	ug/kg	1,000	22,000	1000 U	1100 U	440 J	210 U	130 J	230 U	240 U	240 J	1300	26 J	180 U	200 U	190 U	900 U	860 U	810	39 J
Benzo(b)fluoranthene	ug/kg	5,600	1,700	120 J	100 J	460 J	16 J	190 J	230 U	240 U	230 J	1300	28 J	23 J	200 U	190 U	900 U	860 U	220 U	54 J
Benzo(ghi)perylene	ug/kg	500,000	1,000,000	1000 U	77 J	280 J	210 U	120 J	230 U	24 J	150 J	710 J	27 J	180 U	200 U	190 U	900 U	860 U	220 U	26 J
Benzo(k)fluoranthene	ug/kg	56,000	1,700	1000 U	67 J	360 J	210 U	1000 U	230 U	240 U	110 J	540 J	11 J	180 U	200 U	190 U	900 U	860 U	220 U	28 J
Biphenyl	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 UJ	860 UJ	220 UJ	240 UJ
Bis(2-chloroethoxy)methane	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Bis(2-chloroethyl)ether	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Bis(2-ethylhexyl) phthalate	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	1900	860 U	220 U	240 U
Butyl benzyl phthalate	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Caprolactam	ug/kg			1000 UJ	1100 UJ	2100 UJ	210 UJ	1000 UJ	230 UJ	240 UJ	1800 UJ	970 UJ	180 UJ	180 UJ	200 UJ	190 UJ	900 UJ	860 UJ	220 UJ	240 UJ
Carbazole	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	450 J	180 U	180 U	200 U	190 U	900 U	860 U	220 U	9.4 J
Chrysene	ug/kg	56,000	1,000	1000 U	1100 U	460 J	210 U	140 J	230 U	240 U	240 J	1300	26 J	18 J	200 U	190 U	900 U	37 J	220 U	53 J
Dibenzo(a,h)anthracene	ug/kg	560	1,000,000	1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	230 J	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Dibenzofuran	ug/kg	350,000	210,000	1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	640 J	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Diethyl phthalate	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Dimethyl phthalate	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Di-n-butyl phthalate	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Di-n-octyl phthalate	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Fluoranthene	ug/kg	500,000	1,000,000	1000 U	1100 U	960 J	21 J	220 J	230 U	240 U	590 J	4500	58 J	28 J	200 U	190 U	900 U	37 J	220 U	96 J
Fluorene	ug/kg	500,000	386,000	1000 U	1100 U	2100 U	210 U	1000 U	230 U	21 J	1800 U	1100	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Hexachlorobenzene	ug/kg	6,000	3,200	1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Hexachlorobutadiene	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 UJ	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Hexachlorocyclopentadiene	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 UJ	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Hexachloroethane	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 UJ	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Indeno(1,2,3-cd)pyrene	ug/kg	5,600	8,200	1000 U	1100 U	230 J	210 U	1000 U	230 U	240 U	1800 U	600 J	19 J	180 U	200 U	190 U	900 U	860 U	220 U	19 J
Isophorone	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Naphthalene	ug/kg	500,000	12,000	1000 U	1100 U	410 J	210 U	1000 U	230 U	240 U	1800 U	420 J	180 U	180 U	200 U	190 U	900 U	860 U	18 J	15 J
Nitrobenzene	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	14000	220 U	240 U
N-Nitrosodi-n-propylamine	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
N-Nitrosodiphenylamine	ug/kg			1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Pentachlorophenol	ug/kg	6,700	800	2000 UJ	2100 UJ	4100 UJ	400 UJ	2000 UJ	450 U	460 U	3500 U	1900 U	360 U	350 U	390 U	360 U	1700 U	1700 U	420 U	470 U
Phenanthrene	ug/kg	500,000	1,000,000	1000 U	1100 U	670 J	25 J	120 J	230 U	240 U	450 J	4900	45 J	180 U	200 U	190 U	900 U	860 U	220 U	70 J
Phenol	ug/kg	500,000	330	1000 U	1100 U	2100 U	210 U	1000 U	230 U	240 U	1800 U	970 U	180 U	180 U	200 U	190 U	900 U	860 U	220 U	240 U
Pyrene	ug/kg	500,000	1,000,000	69 J	1100 U	820 J	17 J	200 J	230 U	240 U	500 J	3600	52 J	26 J	200 U	190 U	900 U	34 J	220 U	86 J

Notes:
(1) Units: ug/kg = micrograms per kilogram
(2) New York State Department of Environmental Conservation, Restricted Use Soil Cleanup Objectives, Commercial Use and Protection of Groundwater, Table 375-6.8(b)
Qualifiers: U = not detected; J = estimated value; UJ = non-detect reported, reporting limit qualified as estimated; R = data rejected during validation; E = exceeded instrument calibration range, estimated value
Shaded value = exceedance of Restricted Use Soil Cleanup Objective

Table 8
Pre-Design Investigation and Final Design
Area E Composite Test Pit Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units [1]	NYSDEC Values [2] Commercial Use	NYSDEC Values [2] Protection of GW	TP-E1 08/04/10 4-10'	TP-E1-0507 08/04/10 5-7'	TP-E1-0709 08/04/10 7-9'	TP-E1-0910 08/04/10 9-10'	TP-E2 08/04/10 4-11'	TP-E2-0507 08/04/10 5-7'	TP-E2-0709 08/04/10 7-9'	TP-E2-0911 08/04/10 9-11'
VOCs											
1,1,1-Trichloroethane	ug/kg	500,000	680	160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
1,1,2,2-Tetrachloroethane	ug/kg			160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
1,1,2-Trichloroethane	ug/kg			160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg			NA [3]	520 U	2500 U	50 U	NA	240 U	210 U	5 U
1,1-Dichloroethane	ug/kg	240,000	270	160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
1,1-Dichloroethene	ug/kg	500,000	330	160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
1,2,4-Trichlorobenzene	ug/kg			355 U	520 U	2500 U	50 U	352 U	240 U	210 U	5 U
1,2-Dibromo-3-chloropropane	ug/kg			NA	520 U	2500 U	50 U	NA	240 U	210 U	5 U
1,2-Dibromoethane	ug/kg			NA	520 U	2500 U	50 U	NA	240 U	210 U	5 U
1,2-Dichlorobenzene	ug/kg	500,000	1,100	399 U	520 U	2500 U	50 U	352 U	240 U	210 U	5 U
1,2-Dichloroethane	ug/kg	30,000	20	160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
1,2-Dichloropropane	ug/kg			160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
1,3-Dichlorobenzene	ug/kg	280,000	2,400	399 U	520 U	2500 U	50 U	352 U	240 U	210 U	5 U
1,4-Dichlorobenzene	ug/kg	130,000	1,800	355 U	520 U	2500 U	30 J	352 U	240 U	210 U	5 U
2-Butanone (MEK)	ug/kg	500,000	120	798 U	2600 U	13000 U	250 U	676 U	1200 U	1100 U	25 U
2-Chloroethyl vinyl ether	ug/kg			798 U	NA	NA	NA	676 U	NA	NA	NA
2-Hexanone	ug/kg			399 U	2600 U	13000 U	250 U	338 U	1200 U	1100 U	25 U
4-Methyl-2-pentanone (MIBK)	ug/kg			399 U	2600 U	13000 U	250 U	338 U	1200 U	1100 U	25 U
Acetone	ug/kg	500,000	50	798 U	2600 U	13000 U	250 U	676 U	1200 U	1100 U	8.7 J
Benzene	ug/kg	44,000	60	160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
Bromodichloromethane	ug/kg			160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
Bromoform	ug/kg			399 U	520 U	2500 U	50 U	338 U	240 U	210 U	5 U
Bromomethane	ug/kg			160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
Carbon disulfide	ug/kg			160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
Carbon Tetrachloride	ug/kg	22,000	760	399 U	520 U	2500 U	50 U	338 U	240 U	210 U	5 U
Chlorobenzene	ug/kg	500,000	1,100	**2990**	**48000**	**110000**	35 J	**5830**	**18000**	**17000**	5 U
Chloroethane	ug/kg			160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
Chloroform	ug/kg	350,000	370	160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
Chloromethane	ug/kg			160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
cis-1,2-Dichloroethene	ug/kg	500,000	250	160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
cis-1,3-Dichloropropene	ug/kg			160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
Cyclohexane	ug/kg			NA	520 U	2500 U	50 U	NA	240 U	210 U	5 U
Dibromochloromethane	ug/kg			160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
Dichlorodifluoromethane	ug/kg			NA	520 U	2500 U	50 U	NA	240 U	210 U	5 U
Ethylbenzene	ug/kg	390,000	1,000	160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
Isopropylbenzene	ug/kg			NA	520 U	2500 U	50 U	NA	240 U	210 U	5 U
Methyl Acetate	ug/kg			NA	520 U	2500 U	50 U	NA	240 U	210 U	5 U
Methyl tert-Butyl Ether (MTBE)	ug/kg	500,000	930	NA	520 U	2500 U	50 U	NA	240 U	210 U	5 U
Methylcyclohexane	ug/kg			NA	520 U	2500 U	50 U	NA	240 U	210 U	5 U
Methylene Chloride	ug/kg	500,000	50	399 U	520 U	2500 U	50 U	338 U	240 U	210 U	5 U
Styrene	ug/kg			399 U	520 U	2500 U	50 U	338 U	240 U	210 U	5 U
Tetrachloroethene	ug/kg	150,000	1,300	160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
Toluene	ug/kg	500,000	700	160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
trans-1,2-Dichloroethene	ug/kg	500,000	190	160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
trans-1,3-Dichloropropene	ug/kg			160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
Trichloroethene	ug/kg	200,000	470	160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
Trichlorofluoromethane	ug/kg			160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
Vinyl acetate	ug/kg			399 U	NA	NA	NA	338 U	NA	NA	NA
Vinyl chloride	ug/kg	13,000	20	160 U	520 U	2500 U	50 U	135 U	240 U	210 U	5 U
Xylenes, total	ug/kg	500,000	1,600	160 U	1000 U	5000 U	99 U	135 U	470 U	420 U	9.9 U

See notes at end of table

Produced by: NCF 09/09/10
Checked by: SCC 09/10/10

Table 8
Pre-Design Investigation and Final Design
Area E Composite Test Pit Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

			Sample ID:	TP-E1	TP-E1-0507	TP-E1-0709	TP-E1-0910	TP-E2	TP-E2-0507	TP-E2-0709	TP-E2-0911
			Date:	08/04/10	08/04/10	08/04/10	08/04/10	08/04/10	08/04/10	08/04/10	08/04/10
			Depth:	4-10'	5-7'	7-9'	9-10'	4-11'	5-7'	7-9'	9-11'
		NYSDEC Values [2]									
Parameter	Units [1]	Commercial Use	Protection of GW								
SVOCs											
2,2'-Oxybis(1-Chloropropane)	ug/kg			NA	200 U	340 U	220 U	NA	210 U	200 U	220 U
2,4,5-Trichlorophenol	ug/kg			887 U	200 U	340 U	220 U	880 U	210 U	200 U	220 U
2,4,6-Trichlorophenol	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
2,4-Dichlorophenol	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
2,4-Dimethylphenol	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
2,4-Dinitrophenol	ug/kg			887 U	390 U	650 U	420 U	880 U	400 U	390 U	420 U
2,4-Dinitrotoluene	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
2,6-Dichlorophenol	ug/kg			355 U	NA	NA	NA	352 U	NA	NA	NA
2,6-Dinitrotoluene	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
2-Chloronaphthalene	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
2-Chlorophenol	ug/kg			355 U	270	500	220 U	352 U	84 J	200 U	220 U
2-Methylnaphthalene	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
2-Methylphenol	ug/kg	500,000	330	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
2-Nitroaniline	ug/kg			887 U	390 U	650 U	420 U	880 U	400 U	390 U	420 U
2-Nitrophenol	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
3,3'-Dichlorobenzidine	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
3-Nitroaniline	ug/kg			887 U	390 U	650 U	420 U	880 U	400 U	390 U	420 U
4,6-Dinitro-2-methylphenol	ug/kg			887 U	390 U	650 U	420 U	880 U	400 U	390 U	420 U
4-Bromophenyl phenyl ether	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
4-Chloro-3-methylphenol	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
4-Chloroaniline	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
4-Chlorophenyl phenyl ether	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
4-Methylphenol	ug/kg	500,000	330	355 U	390 U	650 U	420 U	352 U	400 U	390 U	420 U
4-Nitroaniline	ug/kg			887 U	390 U	650 U	420 U	880 U	400 U	390 U	420 U
4-Nitrophenol	ug/kg			887 U	390 U	650 U	420 U	880 U	400 U	390 U	420 U
Acenaphthene	ug/kg	500,000	98,000	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Acenaphthylene	ug/kg	500,000	107,000	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Acetophenone	ug/kg			NA	200 U	340 U	220 U	NA	210 U	200 U	220 U
Aniline	ug/kg			355 U	390 U	650 U	420 U	352 U	400 U	390 U	420 U
Anthracene	ug/kg	500,000	1,000,000	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Atrazine	ug/kg			NA	200 U	340 U	220 U	NA	210 U	200 U	220 U
Benzaldehyde	ug/kg			NA	200 U	340 U	220 U	NA	210 U	200 U	220 U
Benzidine	ug/kg			887 U	NA	NA	NA	880 U	NA	NA	NA
Benzyl alcohol	ug/kg			887 U	NA	NA	NA	880 U	NA	NA	NA
Benzo(a)anthracene	ug/kg	5,600	1,000	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Benzo(a)pyrene	ug/kg	1,000	22,000	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Benzo(b)fluoranthene	ug/kg	5,600	1,700	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Benzo(ghi)perylene	ug/kg	500,000	1,000,000	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Benzo(k)fluoranthene	ug/kg	56,000	1,700	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Benzoic acid	ug/kg			887 U	NA	NA	NA	880 U	NA	NA	NA
Biphenyl	ug/kg			NA	200 U	340 U	220 U	NA	210 U	200 U	220 U
Bis(2-chloroethoxy)methane	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Bis(2-chloroethyl)ether	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Bis(2-chloroisopropyl)ether	ug/kg			355 U	NA	NA	NA	352 U	NA	NA	NA
Bis(2-ethylhexyl) phthalate	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Butyl benzyl phthalate	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Caprolactam	ug/kg			NA	200 U	340 U	220 U	NA	210 U	200 U	220 U
Carbazole	ug/kg			NA	200 U	340 U	220 U	NA	210 U	200 U	220 U
Chrysene	ug/kg	56,000	1,000	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Dibenzo(a,h)anthracene	ug/kg	560	1,000,000	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Dibenzofuran	ug/kg	350,000	210,000	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Diethyl phthalate	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Dimethyl phthalate	ug/kg			887 U	200 U	340 U	220 U	880 U	210 U	200 U	220 U
Di-n-butyl phthalate	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Di-n-octyl phthalate	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Fluoranthene	ug/kg	500,000	1,000,000	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Fluorene	ug/kg	500,000	386,000	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Hexachlorobenzene	ug/kg	6,000	3,200	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Hexachlorobutadiene	ug/kg			355 UJ	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Hexachlorocyclopentadiene	ug/kg			355 UJ	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Hexachloroethane	ug/kg			355 UJ	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Indeno(1,2,3-cd)pyrene	ug/kg	5,600	8,200	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Isophorone	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Naphthalene	ug/kg	500,000	12,000	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Nitrobenzene	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
N-Nitrosodimethylamine	ug/kg			355 U	NA	NA	NA	352 U	NA	NA	NA
N-Nitrosodi-n-propylamine	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
N-Nitrosodiphenylamine	ug/kg			355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Pentachlorophenol	ug/kg	6,700	800	887 U	390 U	650 U	420 U	880 U	400 U	390 U	420 U
Phenanthrene	ug/kg	500,000	1,000,000	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Phenol	ug/kg	500,000	330	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U
Pyrene	ug/kg	500,000	1,000,000	355 U	200 U	340 U	220 U	352 U	210 U	200 U	220 U

See notes at end of table

Produced by: NCF 09/09/10
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Table 8
Pre-Design Investigation and Final Design
Area E Composite Test Pit Soil Analytical Data
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter	Units (1)	NYSDEC Values (2) Commercial Use	NYSDEC Values (2) Protection of GW	TP-E1	TP-E1-0507	TP-E1-0709	TP-E1-0910	TP-E2	TP-E2-0507	TP-E2-0709	TP-E2-0911
			Date:	08/04/10	08/04/10	08/04/10	08/04/10	08/04/10	08/04/10	08/04/10	08/04/10
			Depth:	4-10'	5-7'	7-9'	9-10'	4-11'	5-7'	7-9'	9-11'
PCBs											
Aroclor 1016	mg/kg	1	25	0.374 U	NA	NA	NA	0.368 U	NA	NA	NA
Aroclor 1221	mg/kg	1	25	0.374 U	NA	NA	NA	0.368 U	NA	NA	NA
Aroclor 1232	mg/kg	1	25	0.374 U	NA	NA	NA	0.368 U	NA	NA	NA
Aroclor 1242	mg/kg	1	25	0.374 U	NA	NA	NA	0.368 U	NA	NA	NA
Aroclor 1248	mg/kg	1	25	0.374 U	NA	NA	NA	0.368 U	NA	NA	NA
Aroclor 1254	mg/kg	1	25	0.374 U	NA	NA	NA	0.368 U	NA	NA	NA
Aroclor 1260	mg/kg	1	25	0.374 U	NA	NA	NA	0.368 U	NA	NA	NA

Parameter	Units (1)	Regulatory Limits	TP-E1	TP-E1-0507	TP-E1-0709	TP-E1-0910	TP-E2	TP-E2-0507	TP-E2-0709	TP-E2-0911
		Date:	08/04/10	08/04/10	08/04/10	08/04/10	08/04/10	08/04/10	08/04/10	08/04/10
		Depth:	4-10'	5-7'	7-9'	9-10'	4-11'	5-7'	7-9'	9-11'
TCLP VOCs										
1,1-Dichloroethene	ug/l	700	20 U	NA	NA	NA	20 U	NA	NA	NA
1,2-Dichloroethane	ug/l	500	20 U	NA	NA	NA	20 U	NA	NA	NA
1,4-Dichlorobenzene	ug/l	7,500	40 U	NA	NA	NA	40 U	NA	NA	NA
2-Butanone	ug/l	200,000	100 U	NA	NA	NA	100 U	NA	NA	NA
Benzene	ug/l	500	20 U	NA	NA	NA	20 U	NA	NA	NA
Carbon Tetrachloride	ug/l	500	20 U	NA	NA	NA	20 U	NA	NA	NA
Chlorobenzene	ug/l	100,000	299	NA	NA	NA	232	NA	NA	NA
Chloroform	ug/l	6,000	20 U	NA	NA	NA	20 U	NA	NA	NA
Tetrachloroethene	ug/l	700	20 U	NA	NA	NA	20 U	NA	NA	NA
Trichloroethene	ug/l	500	20 U	NA	NA	NA	20 U	NA	NA	NA
Vinyl Chloride	ug/l	200	20 U	NA	NA	NA	20 U	NA	NA	NA
TCLP SVOCs										
2,4-Dinitrotoluene	ug/l	130	40 U	NA	NA	NA	40 U	NA	NA	NA
2,4,5-Trichlorophenol	ug/l	400,000	100 U	NA	NA	NA	100 U	NA	NA	NA
2,4,6-Trichlorophenol	ug/l	2,000	40 U	NA	NA	NA	40 U	NA	NA	NA
Cresols (as m,p,o-Cresol)	ug/l	200,000	80 U	NA	NA	NA	80 U	NA	NA	NA
Hexachlorobenzene	ug/l	130	40 U	NA	NA	NA	40 U	NA	NA	NA
Hexachlorobutadiene	ug/l	130	40 U	NA	NA	NA	40 U	NA	NA	NA
Hexachloroethane	ug/l	3,000	40 U	NA	NA	NA	40 U	NA	NA	NA
Nitrobenzene	ug/l	2,000	40 U	NA	NA	NA	40 U	NA	NA	NA
Pyridine	ug/l	5,000	40 U	NA	NA	NA	40 U	NA	NA	NA
Pentachlorophenol	ug/l	100,000	100 U	NA	NA	NA	100 U	NA	NA	NA

Notes:
(1) Units: ug/L = micrograms per liter; ug/kg = micrograms per kilogram; mg/kg = milligrams per kilogram
(2) New York State Department of Environmental Conservation, Restricted Use Soil Cleanup Objectives, Commercial Use and Protection of Groundwater, Table 375-6.8(b)
(3) NA - not analyzed for parameter
Qualifiers: U = not detected; J = estimated value
Shaded value = exceedance of Restricted Use Soil Cleanup Objective

Table 9
Pre-Design Investigation and Final Design
Area E Storm Sewer Dry Weather Sample Results
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter		**Class C Surface Water Standard**	DMH-E7-0410 4/23/2010	DMH-E07-0111 1/7/2011	DMH-E15-0410 4/23/2010	DMH-E15-0111 1/7/2011	DMH-E18-0410 4/23/2010	DMH-E18-0111 1/7/2011	DMH-E21-0410 4/23/2010	DMH-E21-0111 1/7/2011	DMH-E30-0410 4/23/2010	DMH-E30-0111 1/7/2011
General Chemistry	**Units**		4/23/2010	1/7/2011	4/23/2010	1/7/2011	4/23/2010	1/7/2011	4/23/2010	1/7/2011	4/23/2010	1/7/2011
Ammonia as N	mg/L	**	0.551	0.28	0.734	0.6	1.62	0.6	1.21	2.7	1.01	1.7
pH	S.U.	6.5 ≤ Value ≤ 8.5	7.8	8	7.92	8.06	7.9	8.01	7.93	8.26	7.67	8.1
Phenolics, Total Recoverable	mg/L	---	0.0149	<0.01	0.0309	0.078	0.0133	0.068	0.037	2.5	0.0203	0.034
Total Organic Carbon	mg/L	---	19.3 J	12.4	17 J	12.8	24.3 J	13	23.9 J	31.5	14.9 J	23.1
Total Suspended Solids	mg/L	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals												
Aluminum, Dissolved	mg/L	0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Antimony, Dissolved	mg/L	---	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	**0.0213**	**0.025**
Arsenic, Dissolved	mg/L	0.15	<0.01	**0.024**	**0.0148**	**0.021**	<0.01	**0.016**	<0.01	**0.011**	<0.01	<0.01
Barium, Dissolved	mg/L	---	**0.0634**	**0.059**	**0.0529**	**0.073**	**0.0622**	**0.069**	**0.0605**	**0.03**	**0.0666**	**0.053**
Beryllium, Dissolved	mg/L	*	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cadmium, Dissolved	mg/L	*	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Calcium, Dissolved	mg/L	---	**100**	**86.5**	**82**	**87.7**	**108**	**87.2**	**118**	**52.9**	**149**	**106**
Chromium, Dissolved	mg/L	*	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	**0.055**	<0.004	**0.04**
Cobalt, Dissolved	mg/L	0.005	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Copper, Dissolved	mg/L	*	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.038**	<0.01	**0.023**
Iron, Dissolved	mg/L	---	**0.14**	<0.05	<0.087	<0.05	<0.091	<0.05	<0.052	<0.05	<0.05	<0.05
Lead, Dissolved	mg/L	*	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium, Dissolved	mg/L	---	**21**	**18.7**	**16.4**	**18.4**	**20.4**	**17.4**	**20.7**	**10**	**27.6**	**18.6**
Manganese, Dissolved	mg/L	---	**0.926**	**0.099**	**0.408**	**0.088**	**0.634**	**0.051**	**0.605**	**0.045**	**0.357**	**0.16**
Mercury, Dissolved	mg/L	0.00077	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel, Dissolved	mg/L	*	**0.0293**	<0.01	**0.0108**	<0.01	**0.0152**	<0.01	**0.0161**	**0.012**	**0.0108**	<0.01
Potassium, Dissolved	mg/L	---	**8.23**	**7.2**	**6.43**	**7.2**	**9.8**	**9.2**	**10.2**	**69.9**	**9.09**	**52**
Selenium, Dissolved	mg/L	0.0046	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	0.0001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Sodium, Dissolved	mg/L	---	**249 J**	**245**	**230 J**	**271**	**266 J**	**249**	**254 J**	**255**	**179 J**	**210**
Thallium, Dissolved	mg/L	0.008	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Vanadium, Dissolved	mg/L	0.014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc, Dissolved	mg/L	*	**0.0548**	**0.093**	**0.053**	**0.082**	**0.061**	**0.099**	**0.0811**	**0.051**	**0.0456**	**0.049**
VOCs												
1,1,1-Trichloroethane	ug/L	---	<1	<4.1	<1	<4.1	<1	<4.1	<1	<4.1	<1	<0.82
1,1,2,2-Tetrachloroethane	ug/L	---	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.21
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	---	<1	<1.6	<1	<1.6	<1	<1.6	<1	<1.6	<1	<0.31
1,1,2-Trichloroethane	ug/L	---	<1	<1.2	<1	<1.2	<1	<1.2	<1	<1.2	<1	<0.23
1,1-Dichloroethane	ug/L	---	<1	<1.9	<1	<1.9	<1	<1.9	<1	<1.9	<1	<0.38
1,1-Dichloroethene	ug/L	---	<1	<1.4	<1	<1.4	<1	<1.4	<1	<1.4	<1	<0.29
1,2,4-Trichlorobenzene	ug/L	5	**2**	<2	**1.1**	<2	**4.1**	<2	**7.8**	**21**	**12**	**15**
1,2-Dibromo-3-Chloropropane	ug/L	---	<1	<2	<1	<2	<1	<2	<1	<2	<1	<0.39
1,2-Dibromoethane	ug/L	---	<1	<3.6	<1	<3.6	<1	<3.6	<1	<3.6	<1	<0.73
1,2-Dichlorobenzene	ug/L	5	**4**	<4	**3.4**	<4	**55**	**5.2**	**66**	**82**	**51**	**64**
1,2-Dichloroethane	ug/L	---	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.21
1,2-Dichloropropane	ug/L	---	<1	<3.6	<1	<3.6	<1	<3.6	<1	<3.6	<1	<0.72
1,3-Dichlorobenzene	ug/L	5	**0.86 J**	<3.9	<1	<3.9	**3.4**	<3.9	**4.6**	<3.9	**12**	**6.6**
1,4-Dichlorobenzene	ug/L	5	**1.2**	<4.2	**0.95 J**	<4.2	**15**	<4.2	**16**	**15**	**23**	**19**
2-Butanone (MEK)	ug/L	--	<5	<6.6	<5	<6.6	**2.5 J**	<6.6	**1.9 J**	<6.6	<5	**2.1 J**
2-Hexanone	ug/L	---	<5	<6.2	<5	<6.2	<5	<6.2	<5	<6.2	<5	<1.2
4-Methyl-2-pentanone (MIBK)	ug/L	---	<5	<10	<5	<10	<5	<10	<5	<10	<5	<2.1
Acetone	ug/L	---	**21**	<15	**22**	<15	**24**	<15	**40**	**24 J**	**6.3**	**14**
Benzene	ug/L	10	**0.76 J**	<2	**2.3**	**12**	**82**	**20**	**34**	**88**	**3.7**	**12**
Bromodichloromethane	ug/L	---	<1	<1.9	<1	<1.9	<1	<1.9	<1	<1.9	<1	<0.38
Bromoform	ug/L	---	<1	<1.3	<1	<1.3	<1	<1.3	<1	<1.3	<1	<0.26
Bromomethane	ug/L	---	<1	<3.4	<1	<3.4	<1	<3.4	<1	<3.4	<1	<0.69
Carbon disulfide	ug/L	---	<1	<0.95	<1	<0.95	<1	<0.95	<1	<0.95	<1	<0.19
Carbon tetrachloride	ug/L	---	<1	<1.4	<1	<1.4	<1	<1.4	<1	<1.4	<1	<0.27
Chlorobenzene	ug/L	5 to 400	**10**	**7.8**	**14**	**11**	**660**	**72**	**900**	**740**	**150**	**170**
Chloroethane	ug/L	---	<1	<1.6	<1	<1.6	<1	<1.6	<1	<1.6	<1	<0.32
Chloroform	ug/L	---	<1	<1.7	<1	<1.7	<1	<1.7	<1	<1.7	<1	<0.34
Chloromethane	ug/L	---	**0.74 J**	<1.8	**0.57 J**	<1.8	**0.71 J**	<1.8	<1	<1.8	<1	<0.35
cis-1,2-Dichloroethene	ug/L	---	<1	<4	<1	<4	<1	<4	<1	<4	<1	<0.81
cis-1,3-Dichloropropene	ug/L	---	<1	<1.8	<1	<1.8	<1	<1.8	<1	<1.8	<1	<0.36
Cyclohexane	ug/L	---	<1	<0.9	<1	<0.9	<1	<0.9	<1	<0.9	<1	<0.18
Dibromochloromethane	ug/L	---	<1	<1.6	<1	<1.6	<1	<1.6	<1	<1.6	<1	<0.32
Dichlorodifluoromethane	ug/L	---	<1	<3.4	<1	<3.4	<1	<3.4	<1	<3.4	<1	<0.68
Ethylbenzene	ug/L	---	<1	<3.7	<1	<3.7	**3**	<3.7	**3.7**	<3.7	<1	<0.74
Isopropylbenzene	ug/L	---	<1	<4	<1	<4	<1	<4	<1	<4	<1	<0.79
Methyl acetate	ug/L	---	<1	<2.5	<1	<2.5	<1	<2.5	<1	<2.5	<1	<0.50
Methylcyclohexane	ug/L	---	<1	<0.8	<1	<0.8	<1	<0.8	<1	<0.8	<1	<0.16
Methylene Chloride	ug/L	200	<1	**3.9 J**	<1	**2.9 J**	<1	**3 J**	<1	**3 J**	<1	<0.44
Methyl-t-Butyl Ether (MTBE)	ug/L	---	<1	<0.8	<1	<0.8	<1	<0.8	<1	<0.8	<1	<0.16
Styrene	ug/L	---	<1	<3.6	<1	<3.6	<1	<3.6	<1	<3.6	<1	<0.73
Tetrachloroethene	ug/L	---	<1	<1.8	<1	<1.8	<1	<1.8	<1	<1.8	<1	<0.36
Toluene	ug/L	6000	<1	<2.6	**0.63 J**	<2.6	**0.86 J**	<2.6	**1.8**	**6.1**	<1	**1.8**
trans-1,2-Dichloroethene	ug/L	---	<1	<4.5	<1	<4.5	<1	<4.5	<1	<4.5	<1	<0.90
trans-1,3-Dichloropropene	ug/L	---	<1	<1.8	<1	<1.8	<1	<1.8	<1	<1.8	<1	<0.37
Trichloroethene	ug/L	40	<1	<2.3	<1	<2.3	<1	<2.3	<1	<2.3	<1	<0.46
Trichlorofluoromethane	ug/L	---	<1	<4.4	<1	<4.4	<1	<4.4	<1	<4.4	<1	<0.88
Vinyl chloride	ug/L	---	<1	<4.5	<1	<4.5	<1	<4.5	<1	<4.5	<1	<0.90
Xylenes, Total	ug/L	---	**0.94 J**	<3.3	<2	<3.3	<2	<3.3	<2	<3.3	<2	<0.66

Created By: SCC
Checked By: ESW/GSO

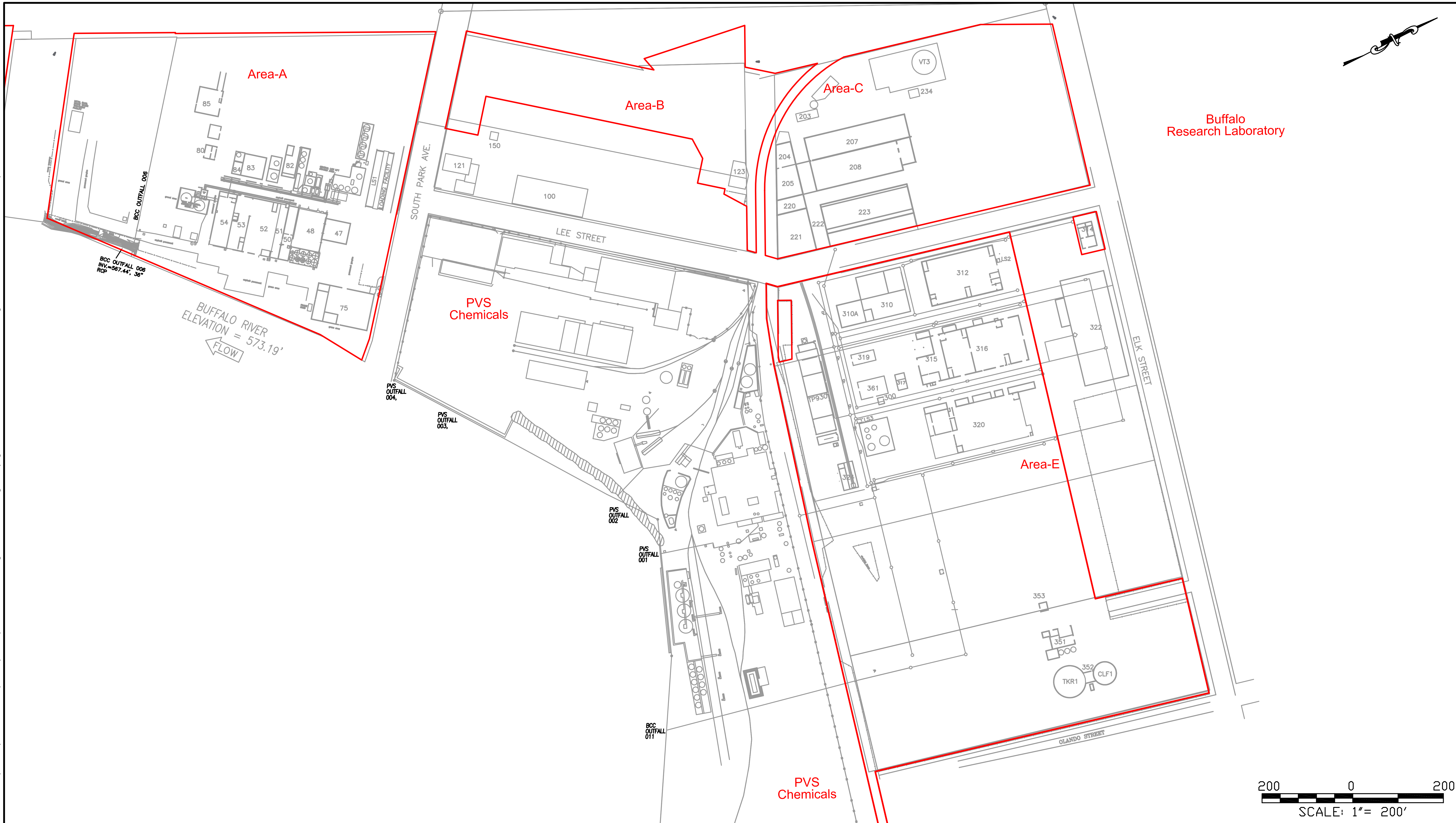
Table 9
Pre-Design Investigation and Final Design
Area E Storm Sewer Dry Weather Sample Results
Former Buffalo Color Facility, Buffalo, NY
Project #: 3410090701

Parameter		Class C Surface Water Standard	DMH-E7-0410 4/23/2010	DMH-E07-0111 1/7/2011	DMH-E15-0410 4/23/2010	DMH-E15-0111 1/7/2011	DMH-E18-0410 4/23/2010	DMH-E18-0111 1/7/2011	DMH-E21-0410 4/23/2010	DMH-E21-0111 1/7/2011	DMH-E30-0410 4/23/2010	DMH-E30-0111 1/7/2011
SVOCs												
2,4,5-Trichlorophenol	ug/L	---	<100	<0.45	<100	<0.45	<110	<0.45	<52	<0.45	<48	<0.45
2,4,6-Trichlorophenol	ug/L	---	<100	<0.58	<100	<0.58	<110	<0.58	<52	<0.58	<48	<0.58
2,4-Dichlorophenol	ug/L	1.0	<100	<0.48	<100	<0.48	<110	<0.48	<52	**1.2 J**	<48	**1.1 J**
2,4-Dimethylphenol	ug/L	1000	<100	<0.47	<100	<0.47	<110	<0.47	<52	**0.79 J**	<48	<0.47
2,4-Dinitrophenol	ug/L	400	<200	<2.1	<200	<2.1	<210	<2.1	<100	<2.1	< 95	<2.1
2,4-Dinitrotoluene	ug/L	---	<100	<0.42	<100	<0.42	<110	<0.42	<34 J	**130**	**16 J**	**77**
2,6-Dinitrotoluene	ug/L	---	<100	<0.38	<100	<0.38	<110	**3.2 J**	**160**	**180**	**81**	**130**
2-Chloro-5-Nitrobenzenediami	ug/L	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	ug/L	---	<100	<0.43	<100	<0.43	<110	<0.43	<52	**1.3 J**	<48	<0.43
2-Chlorophenol	ug/L	---	<100	<0.50	<100	<0.50	<110	<0.50	<52	**6.2**	<48	**4.2 J**
2-Methylnaphthalene	ug/L	---	<100	<0.57	<100	<0.57	<110	<0.57	<52	**2.3 J**	<48	**0.89 J**
2-Methylphenol	ug/L	---	<100	<0.38	<100	<0.38	<110	**0.43 J**	<52	**1.6 J**	<48	**1 J**
2-Nitroaniline	ug/L	---	<200	<0.40	<200	**1.5 J**	<210	<0.40	<100	<0.40	< 95	<0.40
2-Nitrophenol	ug/L	---	<100	<0.45	<100	<0.45	<110	<0.45	<52	**4.8**	<48	**2.3 J**
2-Nitrotoluene	ug/L	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	ug/L	---	<100	<0.38	<100	<0.38	<110	<0.38	<52	<0.38	**5.5 J**	<0.38
3-Methylbenzeneamine	ug/L	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	ug/L	---	<200	<0.45	<200	<0.45	<210	<0.45	<100	<0.45	< 95	<0.45
4,6-Dinitro-2-methylphenol	ug/L	---	<200	<2.1	<200	<2.1	<210	<2.1	<100	<2.1	< 95	<2.1
4-Bromophenyl phenyl ether	ug/L	---	<100	<0.42	<100	<0.42	<110	<0.42	<52	<0.42	<48	<0.42
4-Chloro-3-methylphenol	ug/L	---	<100	<0.42	<100	<0.42	<110	<0.42	<52	<0.42	<48	<0.42
4-Chloroaniline	ug/L	---	<100	<0.56	<100	**0.58 J**	<110	<0.56	<52	**8.4**	<48	**10**
4-Chlorophenyl phenyl ether	ug/L	---	<100	<0.33	<100	<0.33	<110	<0.33	<52	<0.33	<48	<0.33
4-Methyl-1,3-Benzenediamine	ug/L	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	ug/L	---	**30 J**	<0.34	<200	**0.69 J**	<210	**0.43 J**	<100	**8.1 J**	< 95	**5.1 J**
4-Nitroaniline	ug/L	---	<200	<0.24	<200	<0.24	<210	<0.24	<100	**0.73 J**	< 95	**0.68 J**
4-Nitrophenol	ug/L	---	<200	<1.4 J	<200	<1.4 J	<210	<1.4 J	<100	<1.4 J	< 95	<1.4 J
Acenaphthene	ug/L	---	<100	<0.39	<100	<0.39	<110	<0.39	<52	**6.2**	<48	**3.3 J**
Acenaphthylene	ug/L	---	<100	<0.36	<100	<0.36	<110	<0.36	<52	**0.41 J**	<48	**0.77 J**
Acetophenone	ug/L	---	<100	<0.51	<100	<0.51	<110	**0.64 J**	<52	**2.4 J**	<48	**1.7 J**
Aniline	ug/L	---	**31 J**	<0.58	**240**	**330**	**1300**	**470**	**57 J**	**1000**	**22 J**	**260**
Anthracene	ug/L	---	<100	<0.26	<100	**0.79 J**	<110	<0.26	<52	**4.6 J**	<48	**1 J**
Atrazine	ug/L	---	<100	<0.43	<100	<0.43	<110	<0.43	<52	<0.43	<48	<0.43
Benzaldehyde	ug/L	---	<100	<0.25	<100	<0.25	<110	<0.25	<52	<0.25	<48	**0.37 J**
Benzo(a)anthracene	ug/L	---	**10 J**	<0.34	**12 J**	<0.34	<110	<0.34	<52	<0.34	<48	<0.34
Benzo(a)pyrene	ug/L	---	**11 J**	<0.44	**10 J**	**0.6 J**	<110	<0.44	<52	<0.44	<48	<0.44
Benzo(b)fluoranthene	ug/L	---	**14 J**	<0.32	**15 J**	**1.1 J**	<110	<0.32	<52	**0.55 J**	<48	<0.32
Benzo(g,h,i)perylene	ug/L	---	**8.3 J**	<0.33	**8.2 J**	<0.33	<110	<0.33	<52	<0.33	<48	<0.33
Benzo(k)fluoranthene	ug/L	---	<100	<0.69	<100	<0.69	<110	<0.69	<52	<0.69	<48	<0.69
Biphenyl	ug/L	---	<100	<0.62	<100	<0.62	<110	<0.62	<52	**0.84 J**	<48	<0.62
bis (2-chloroisopropyl) ether	ug/L	---	<100	<0.49	<100	<0.49	<110	<0.49	<52	<0.49	<48	<0.49
Bis(2-chloroethoxy)methane	ug/L	---	<100	<0.33	<100	<0.33	<110	<0.33	<52	<0.33	<48	<0.33
Bis(2-chloroethyl)ether	ug/L	---	<100	<0.38	<100	<0.38	<110	**760**	<52	**1600**	<48	**410**
Bis(2-ethylhexyl) phthalate	ug/L	0.6	<100	<1.7	<100	<1.7	<110	<1.7	<52	<1.7	<48	<1.7
Butyl benzyl phthalate	ug/L	---	<100	<0.40	<100	<0.40	<110	**1.3 J**	<52	<0.40	<48	<0.40
Caprolactam	ug/L	---	<100 J	<2.1	<100 J	<2.1	<110 J	<2.1	<52 J	**3.2 J**	<48 J	**35**
Carbazole	ug/L	---	<100	<0.28	<100	<0.28	<110	<0.28	<52	**6.8**	<48	**3.6 J**
Chrysene	ug/L	---	**9.9 J**	<0.31	**12 J**	**0.76 J**	<110	<0.31	<52	**0.61 J**	<48	<0.31
Dibenz(a,h)anthracene	ug/L	---	<100	<0.40	<100	<0.40	<110	<0.40	<52	<0.40	<48	<0.40
Dibenzofuran	ug/L	---	<200	<0.48	<200	<0.48	<210	<0.48	<100	<0.48	< 95	**1.3 J**
Diethyl phthalate	ug/L	---	<100	<0.21	<100	<0.21	<110	<0.21	<52	<0.21	<48	<0.21
Dimethyl phthalate	ug/L	---	<100	<0.34	<100	<0.34	<110	<0.34	<52	<0.34	<48	<0.34
Di-n-butyl phthalate	ug/L	---	<100	**0.4 J**	<100	<0.29	<110	**0.39 J**	<52	**0.48 J**	<48	**0.48 J**
Di-n-octyl phthalate	ug/L	---	<100	<0.44	<100	<0.44	<110	<0.44	<52	<0.44	<48	<0.44
Fluoranthene	ug/L	---	**22 J**	<0.38	**30 J**	**1.6 J**	<110	**0.49 J**	<52	**1.9 J**	**3.9 J**	**1.1 J**
Fluorene	ug/L	---	<100	<0.34	<100	<0.34	<110	<0.34	<52	**3.4 J**	<48	**1.9 J**
Hexachlorobenzene	ug/L	0.00003	<100	<0.48	<100	<0.48	<110	<0.48	<52	<0.48	<48	<0.48
Hexachlorobutadiene	ug/L	0.01 to 1.0	<100	<0.64	<100	<0.64	<110	<0.64	<52	<0.64	<48	<0.64
Hexachlorocyclopentadiene	ug/L	0.45	<100	<0.56	<100	<0.56	<110	<0.56	<52	<0.56	<48	<0.56
Hexachloroethane	ug/L	0.6	<100	<0.56	<100	<0.56	<110	<0.56	<52	<0.56	<48	<0.56
Indeno(1,2,3-cd)pyrene	ug/L	---	<100	<0.44	<100	<0.44	<110	<0.44	<52	<0.44	<48	<0.44
Indole	ug/L	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	ug/L	---	<100	<0.41	<100	<0.41	<110	<0.41	<52	<0.41	<48	<0.41
Naphthalene	ug/L	---	<100	<0.72	<100	<0.72	<110	<0.72	<52	**14**	<48	**4.9**
Nitrobenzene	ug/L	---	<100	<0.27	**350**	**250**	**220**	**29**	<52	**790**	**50**	**16**
N-Nitrosodi-n-propylamine	ug/L	---	<100	<0.51	<100	<0.51	<110	<0.51	<52	<0.51	<48	<0.51
N-Nitrosodiphenylamine	ug/L	---	<100	<0.48	<100	<0.48	<110	<0.48	<52	**2 J**	<48	**0.95 J**
O-Chloroaniline	ug/L	---	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	ug/L	*	<200	<2.1	<200	<2.1	<210	<2.1	<100	<2.1	< 95	<2.1
Phenanthrene	ug/L	---	**16 J**	<0.42	**17 J**	**0.8 J**	<110	<0.42	<52	**4.6 J**	<48	**1 J**
Phenol	ug/L	1.0	<100 J	<0.37 J	<100 J	<0.37 J	<110 J	<0.37 J	<52 J	<0.37 J	<48 J	<0.37 J
Pyrene	ug/L	---	**16 J**	<0.32	**20 J**	**1.2 J**	<110	<0.32	<52	**1.2 J**	<48	**0.74 J**

Notes:
NA - Not Analyzed
J - Analyte detected at level less than reporting limit
and greater than or equal to method detection limit; concentration is estimated.
Bold- Lab Dectection
* - Hardness Dependant
** - pH and Temperature Dependant
*** - Sum of 1,2-, 1,3-, and 1,4-Dichlorobenzene
^ - Range Based on All Types

FIGURES

DRAWN BY: NEL 4-26-2010 APPROVED BY: ESW 5-17-2010



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AREAS ABCE
SITE PLAN

FIGURE: 1

1

P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Final Area E Desgn Document Figures\Figure 1 - Area ABCE Site Plan.dwg Thu, 14 Oct 2010 - 1:14pm esweiler

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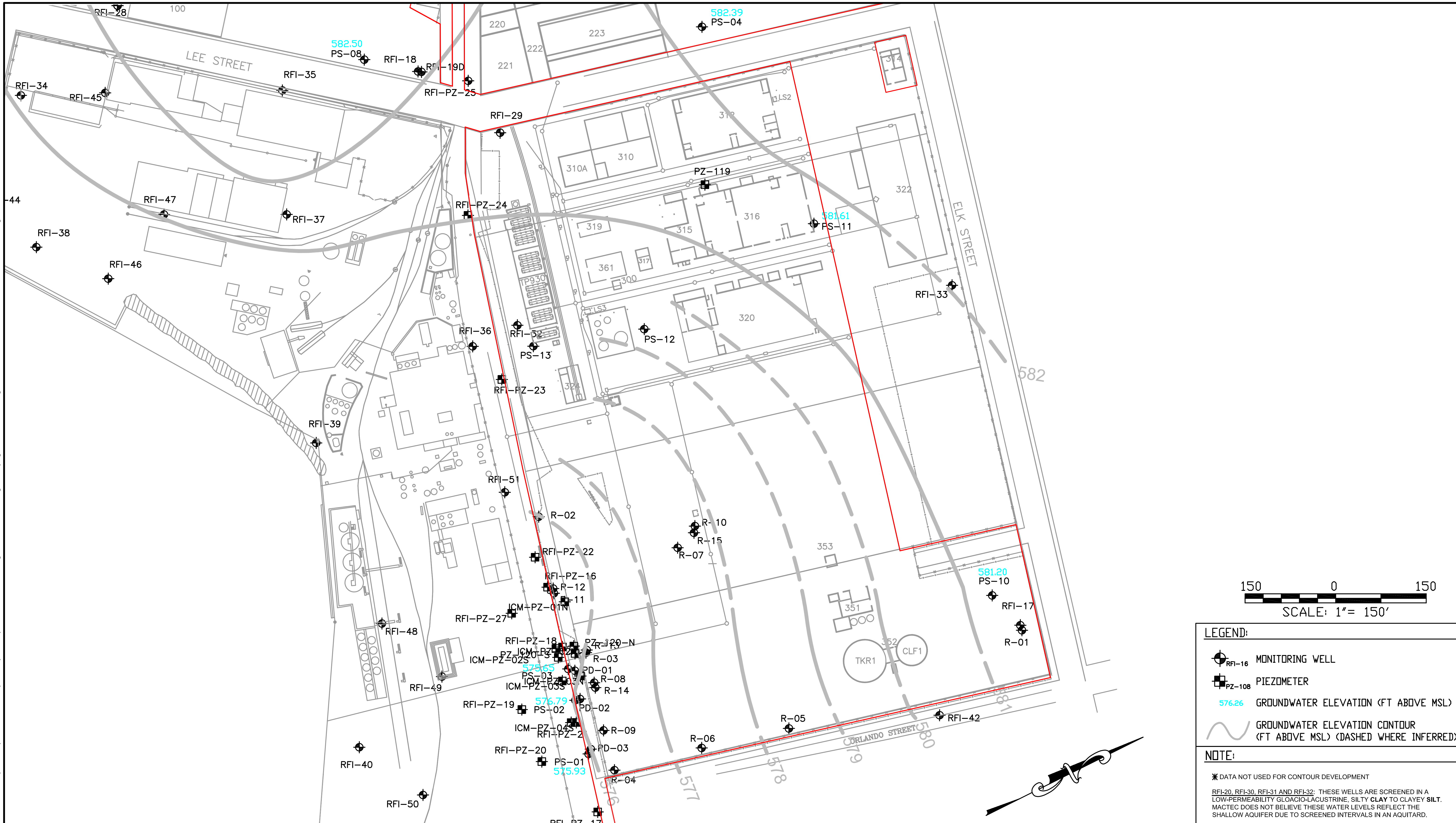

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AREA E
GROUNDWATER CONTOUR
FILL UNIT, APRIL 2008

FIGURE: 3.1

3.1

P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Final Area E Desgn Document Figures\Figure 3.1 through 3.8 - 2008 Area E GW Contours.dwg Tue, 19 Oct 2010 - 8:34am esweiler

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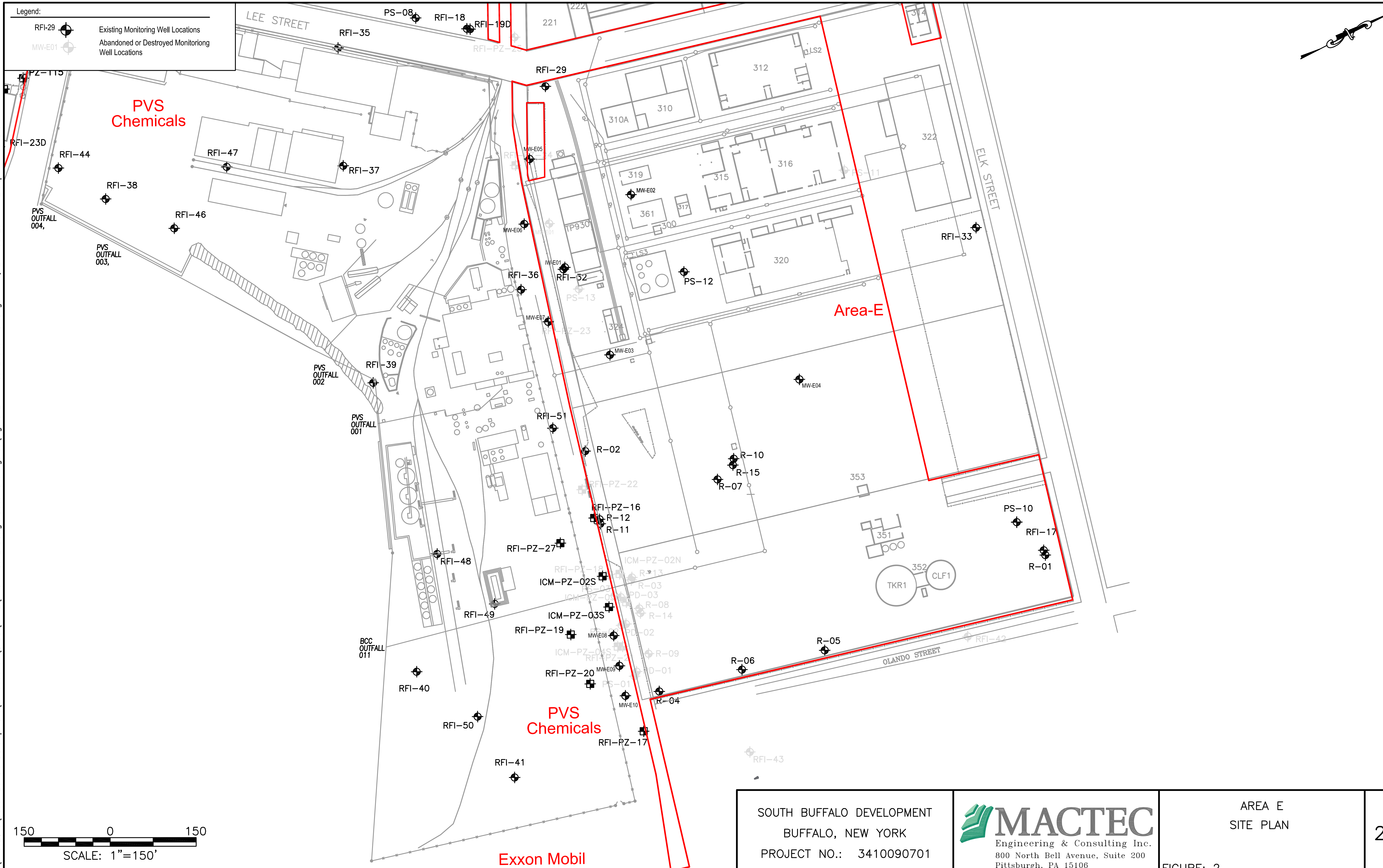

P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Final Area E Design Document Figures\Figure 2 - Area E Site Plan.dwg Thu, 24 Feb 2011 - 2:54pm esweiler

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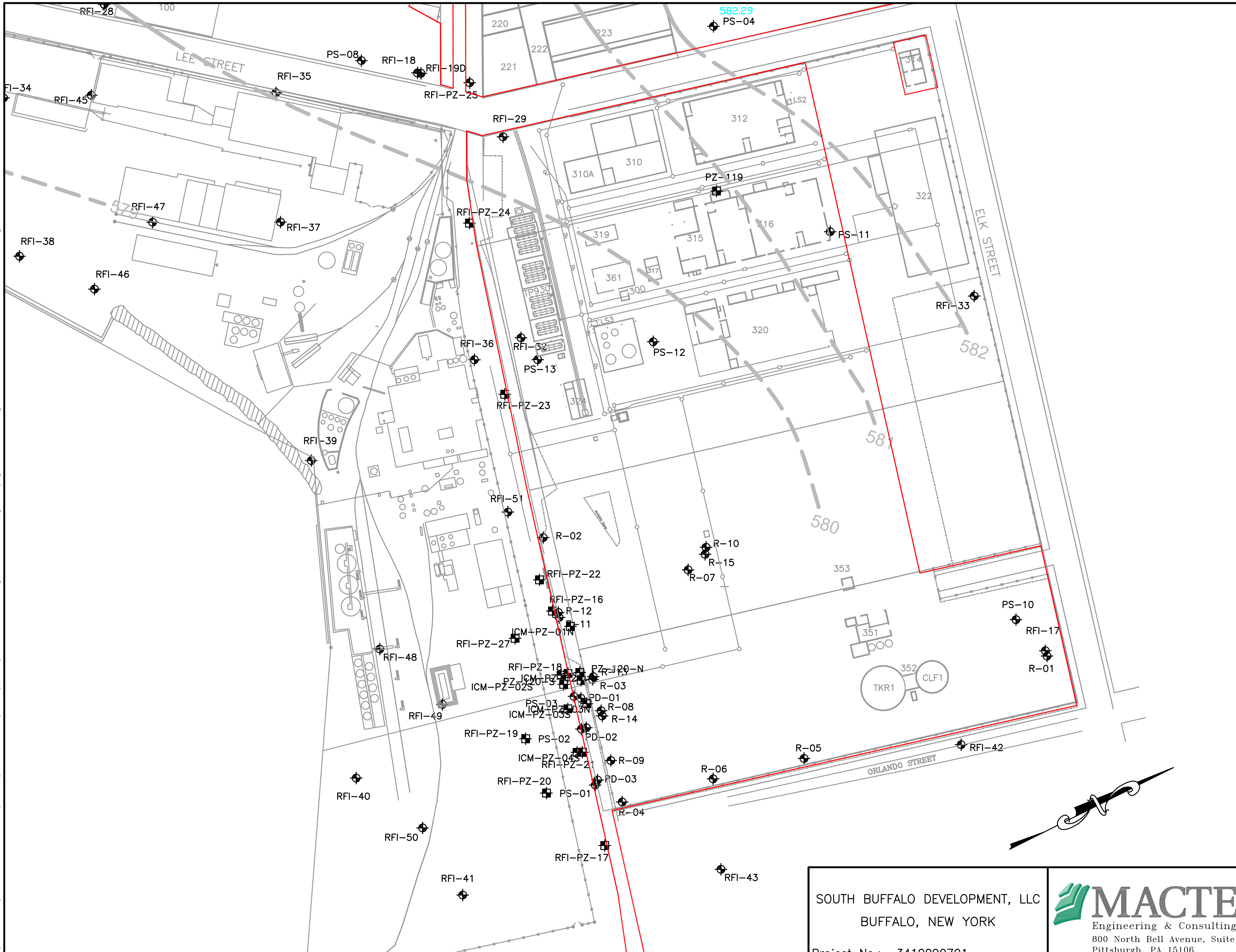
AREA E
SITE PLAN

FIGURE: 2

2

DRAWN BY: NEL 5-5-2010 APPROVED BY: ESW 10-18-10



150 0 150

SCALE: 1"= 150'

LEGEND:

RFI-16 MONITORING WELL

PZ-108 PIEZOMETER

576.26 GROUNDWATER ELEVATION (FT ABOVE MSL)

GROUNDWATER ELEVATION CONTOUR (FT ABOVE MSL) (DASHED WHERE INFERRED)

NOTE:

* DATA NOT USED FOR CONTOUR DEVELOPMENT

RFI-20, RFI-30, RFI-31 AND RFI-32: THESE WELLS ARE SCREENED IN A LOW-PERMEABILITY GLOACIO-LACUSTRINE, SILTY **CLAY** TO CLAYEY **SILT**. MACTEC DOES NOT BELIEVE THESE WATER LEVELS REFLECT THE SHALLOW AQUIFER DUE TO SCREENED INTERVALS IN AN AQUITARD.

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AREA E
GROUNDWATER CONTOUR
FILL UNIT, OCTOBER 2008

FIGURE: 3.2

3.2

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AREA E
GROUNDWATER CONTOUR
SHALLOW AQUIFER, JANUARY 2008
FIGURE: 3.3

3.3

P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Final Area E Desgn Document Figures\Figure 3.1 through 3.8 - 2008 Area E GW Contours.dwg Tue, 19 Oct 2010 - 8:37am esweiler

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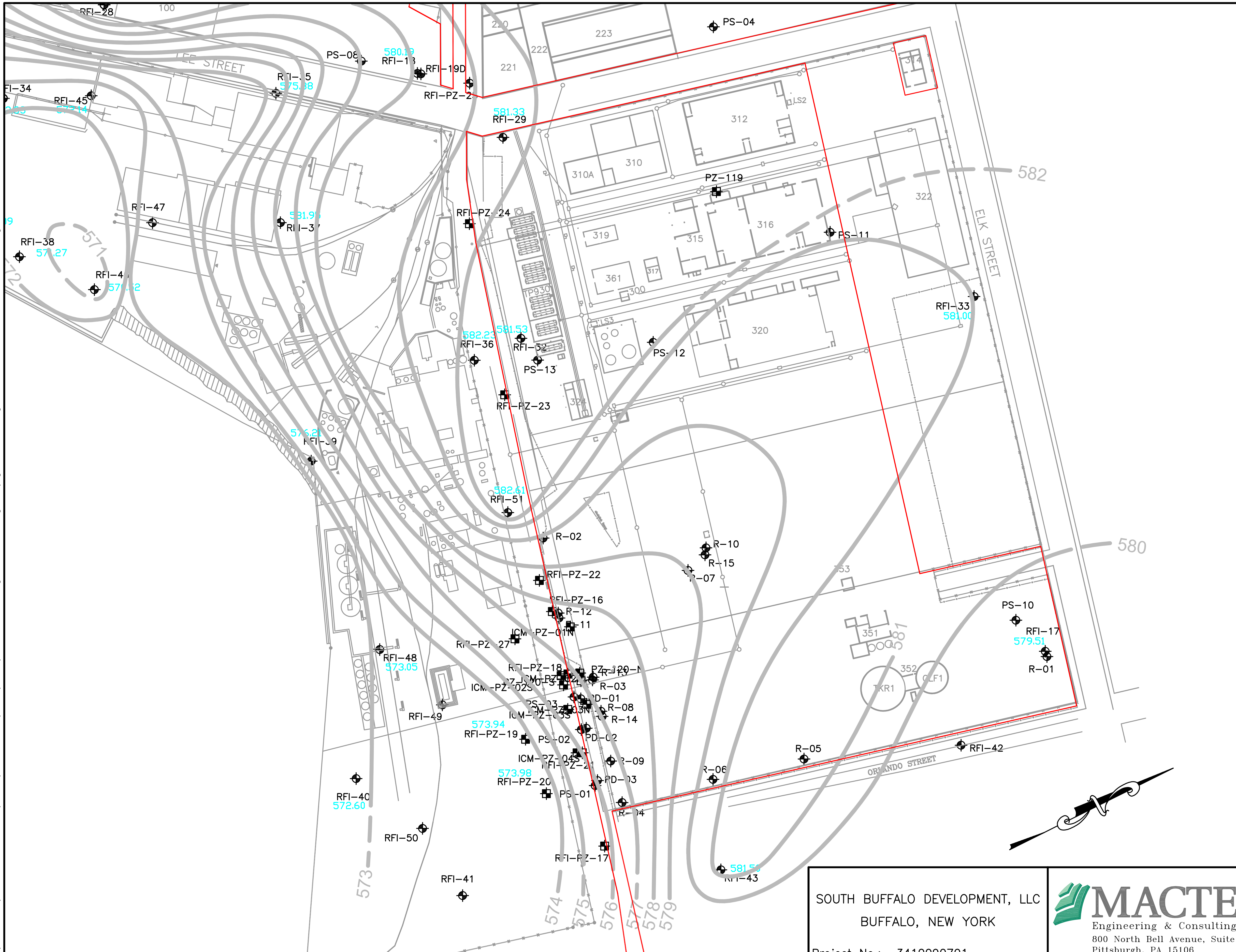

150 0 150

SCALE: 1"= 150'

LEGEND:

RFI-16 MONITORING WELL

PZ-108 PIEZOMETER

576.26 GROUNDWATER ELEVATION (FT ABOVE MSL)

GROUNDWATER ELEVATION CONTOUR (FT ABOVE MSL) (DASHED WHERE INFERRED)

NOTE:

✳ DATA NOT USED FOR CONTOUR DEVELOPMENT

RFI-20, RFI-30, RFI-31 AND RFI-32: THESE WELLS ARE SCREENED IN A LOW-PERMEABILITY GLOACIO-LACUSTRINE, SILTY **CLAY** TO CLAYEY **SILT**. MACTEC DOES NOT BELIEVE THESE WATER LEVELS REFLECT THE SHALLOW AQUIFER DUE TO SCREENED INTERVALS IN AN AQUITARD.

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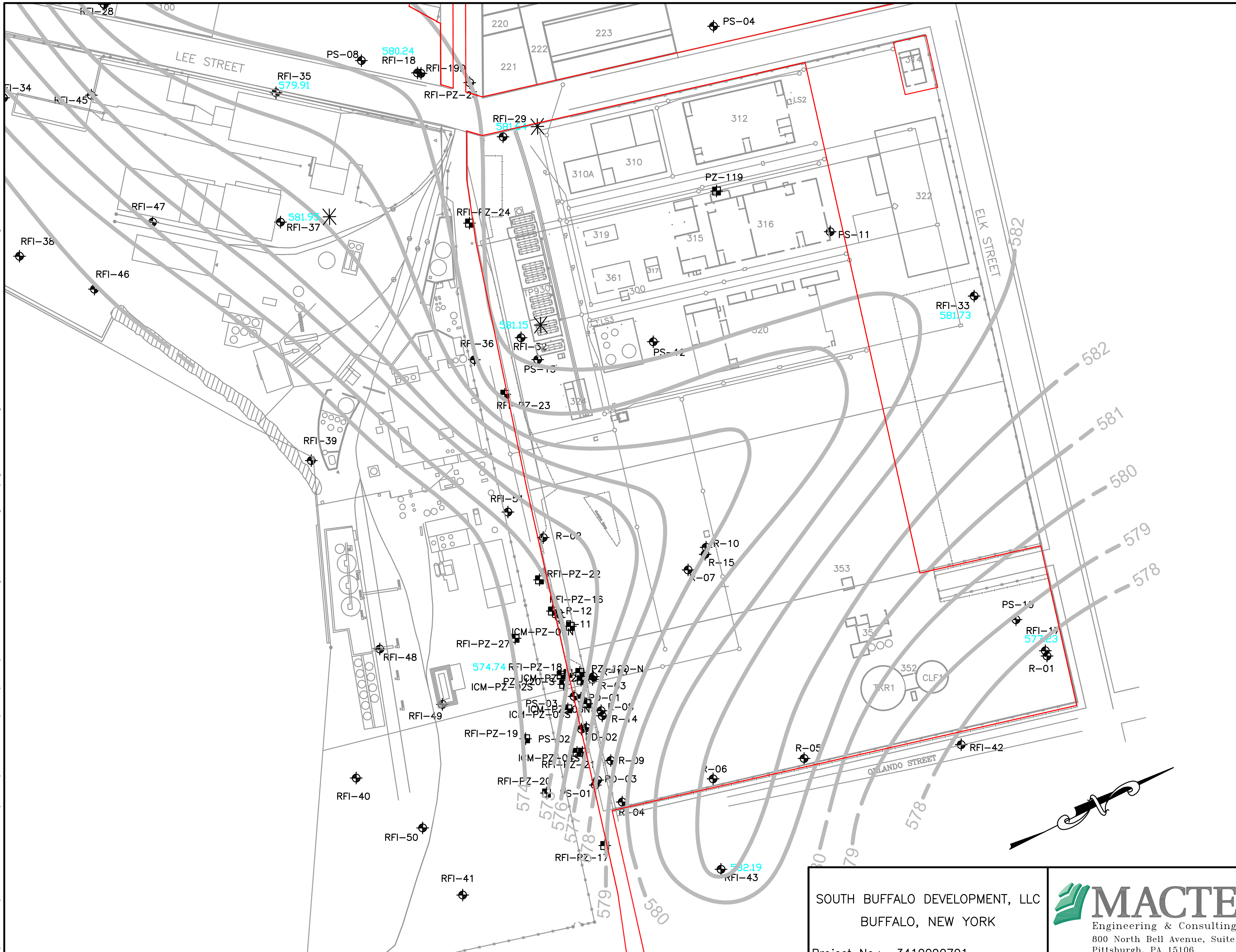
AREA E
GROUNDWATER CONTOUR
SHALLOW AQUIFER, APRIL 2008

FIGURE: 3.4

3.4

P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Final Area E Desgn Document Figures\Figure 3.1 through 3.8 - 2008 Area E GW Contours.dwg Tue, 19 Oct 2010 - 8:38am esweiler

DRAWN BY: NEL 5-5-2010 APPROVED BY: ESW 10-18-10



P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Final Area E Desgn Document Figures\Figure 3.1 through 3.8 – 2008 Area E GW Contours.dwg Tue, 19 Oct 2010 – 8:38am esweiler

LEGEND:

- RFI-16 MONITORING WELL
- PZ-108 PIEZOMETER
- 576.26 GROUNDWATER ELEVATION (FT ABOVE MSL)
- GROUNDWATER ELEVATION CONTOUR (FT ABOVE MSL) (DASHED WHERE INFERRED)

NOTE:

✱ DATA NOT USED FOR CONTOUR DEVELOPMENT

RFI-20, RFI-30, RFI-31 AND RFI-32: THESE WELLS ARE SCREENED IN A LOW-PERMEABILITY GLOACIO-LACUSTRINE, SILTY **CLAY** TO CLAYEY **SILT**. MACTEC DOES NOT BELIEVE THESE WATER LEVELS REFLECT THE SHALLOW AQUIFER DUE TO SCREENED INTERVALS IN AN AQUITARD.

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AREA E
GROUNDWATER CONTOUR
SHALLOW AQUIFER, JULY 2008

FIGURE: 3.5

3.5

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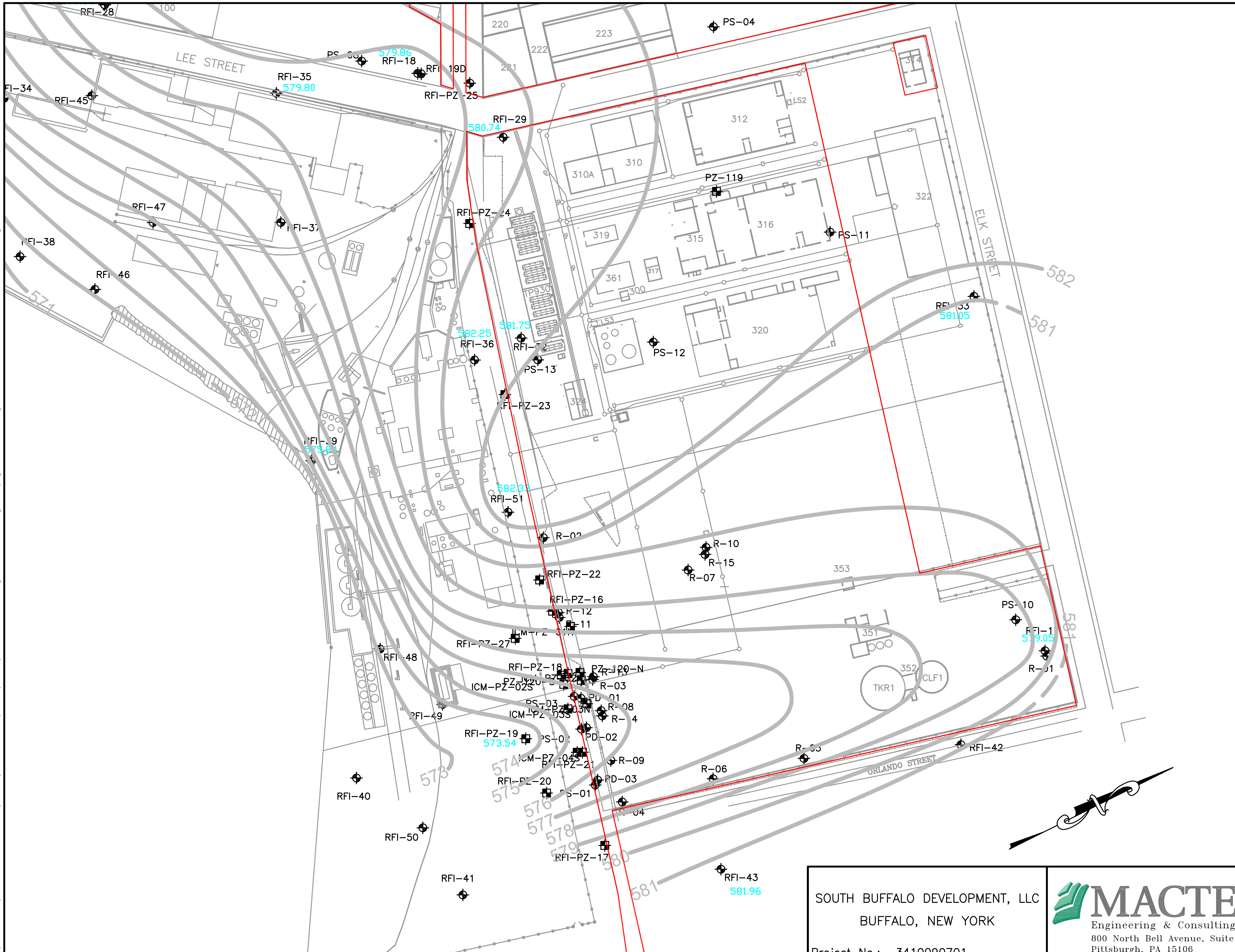

LEGEND:

- MONITORING WELL (RFI-16)
- PIEZOMETER (PZ-108)
- 576.26 GROUNDWATER ELEVATION (FT ABOVE MSL)
- GROUNDWATER ELEVATION CONTOUR (FT ABOVE MSL) (DASHED WHERE INFERRED)

NOTE:

* DATA NOT USED FOR CONTOUR DEVELOPMENT

RFI-20, RFI-30, RFI-31 AND RFI-32: THESE WELLS ARE SCREENED IN A LOW-PERMEABILITY GLOACIO-LACUSTRINE, SILTY **CLAY** TO CLAYEY **SILT**. MACTEC DOES NOT BELIEVE THESE WATER LEVELS REFLECT THE SHALLOW AQUIFER DUE TO SCREENED INTERVALS IN AN AQUITARD.

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AREA E
GROUNDWATER CONTOUR
SHALLOW AQUIFER, OCTOBER 2008

FIGURE: 3.6

3.6

P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Final Area E Design Document Figures\Figure 3.1 through 3.8 - 2008 Area E GW Contours.dwg Tue, 19 Oct 2010 - 8:40am esweiler

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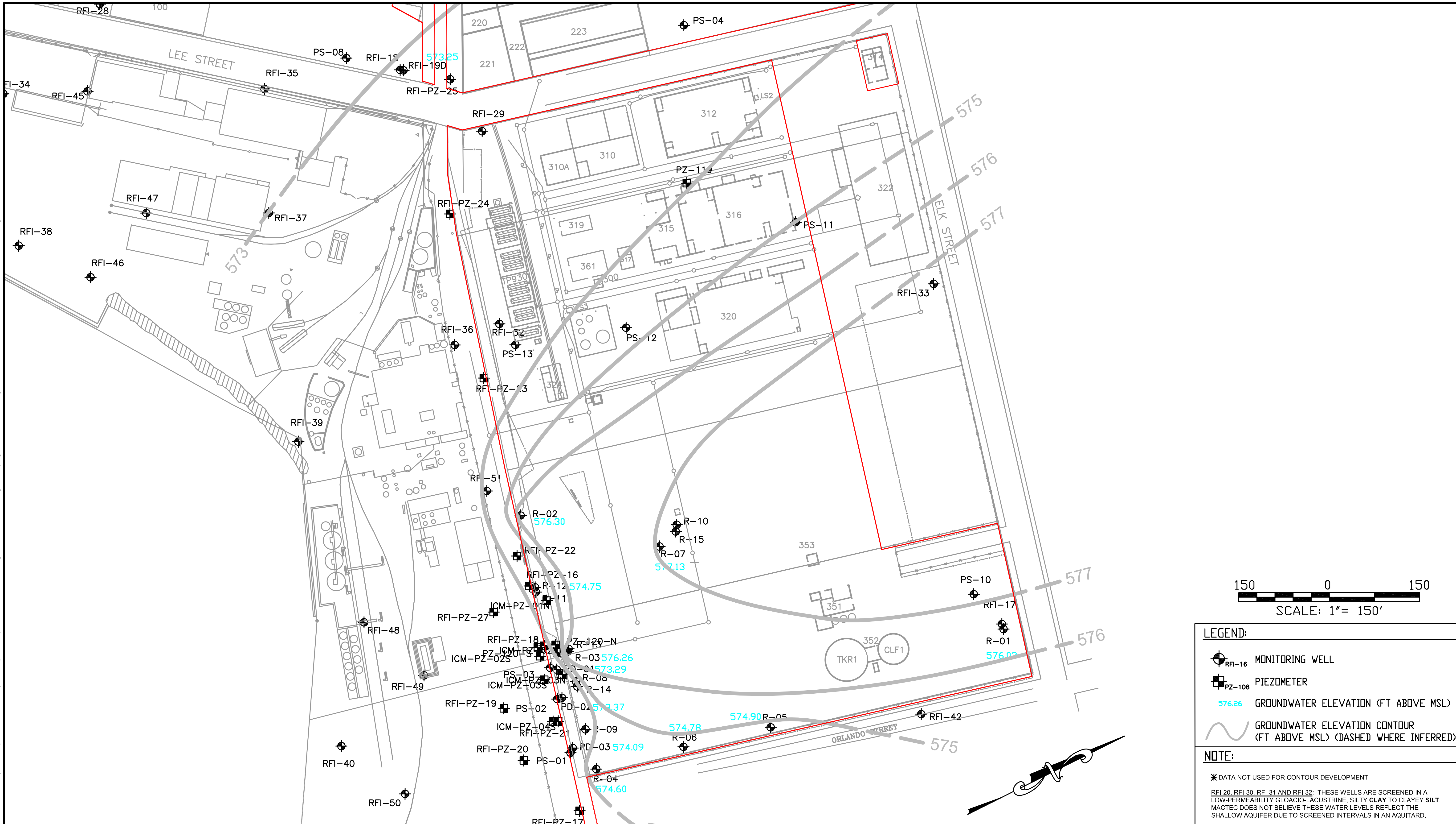

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AREA E
GROUNDWATER CONTOUR
CONFINED AQUIFER, APRIL 2008

FIGURE: 3.7

3.7

P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Final Area E Desgn Document Figures\Figure 3.1 through 3.8 - 2008 Area E GW Contours.dwg Tue, 19 Oct 2010 - 9:02am esweiler

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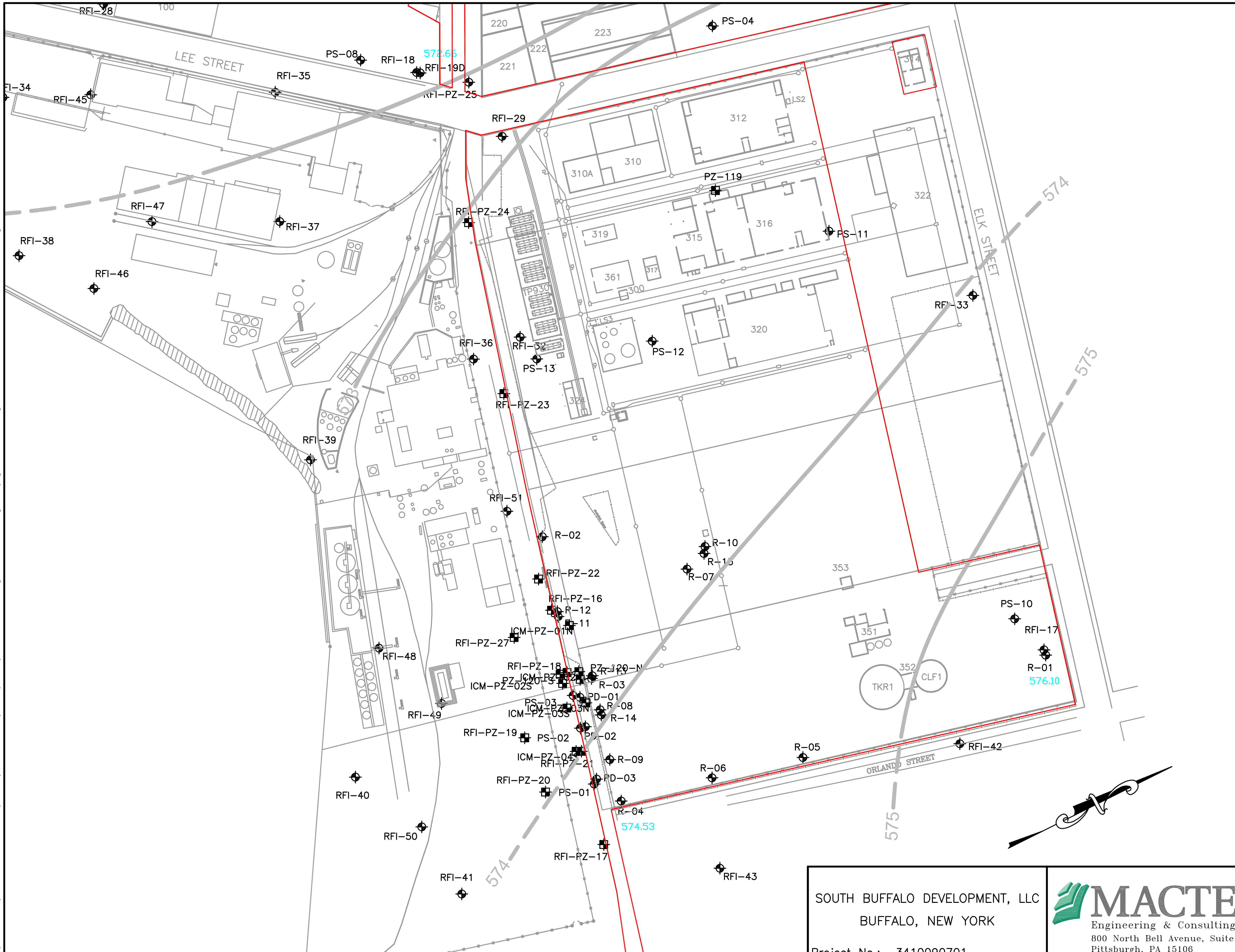

LEGEND:

- MONITORING WELL (RFI-16)
- PIEZOMETER (PZ-108)
- 576.26 GROUNDWATER ELEVATION (FT ABOVE MSL)
- GROUNDWATER ELEVATION CONTOUR (FT ABOVE MSL) (DASHED WHERE INFERRED)

NOTE:

✱ DATA NOT USED FOR CONTOUR DEVELOPMENT

RFI-20, RFI-30, RFI-31 AND RFI-32: THESE WELLS ARE SCREENED IN A LOW-PERMEABILITY GLOACIO-LACUSTRINE, SILTY **CLAY** TO CLAYEY **SILT**. MACTEC DOES NOT BELIEVE THESE WATER LEVELS REFLECT THE SHALLOW AQUIFER DUE TO SCREENED INTERVALS IN AN AQUITARD.

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AREA E
GROUNDWATER CONTOUR
CONFINED AQUIFER, OCTOBER 2008

FIGURE: 3.8

3.8

P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Final Area E Desgn Document Figures\Figure 3.1 through 3.8 - 2008 Area E GW Contours.dwg Tue, 19 Oct 2010 - 9:02am esweiler

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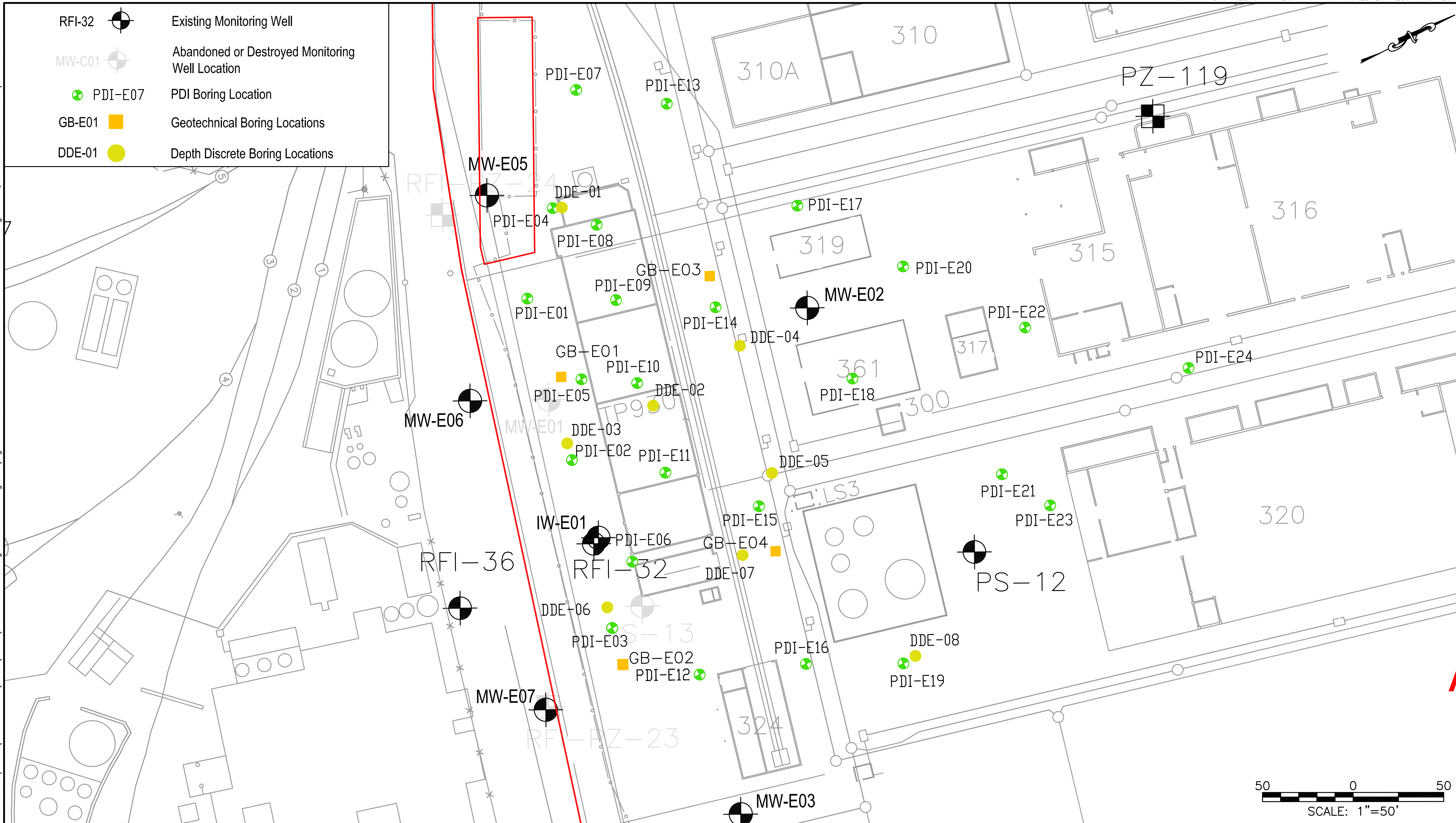

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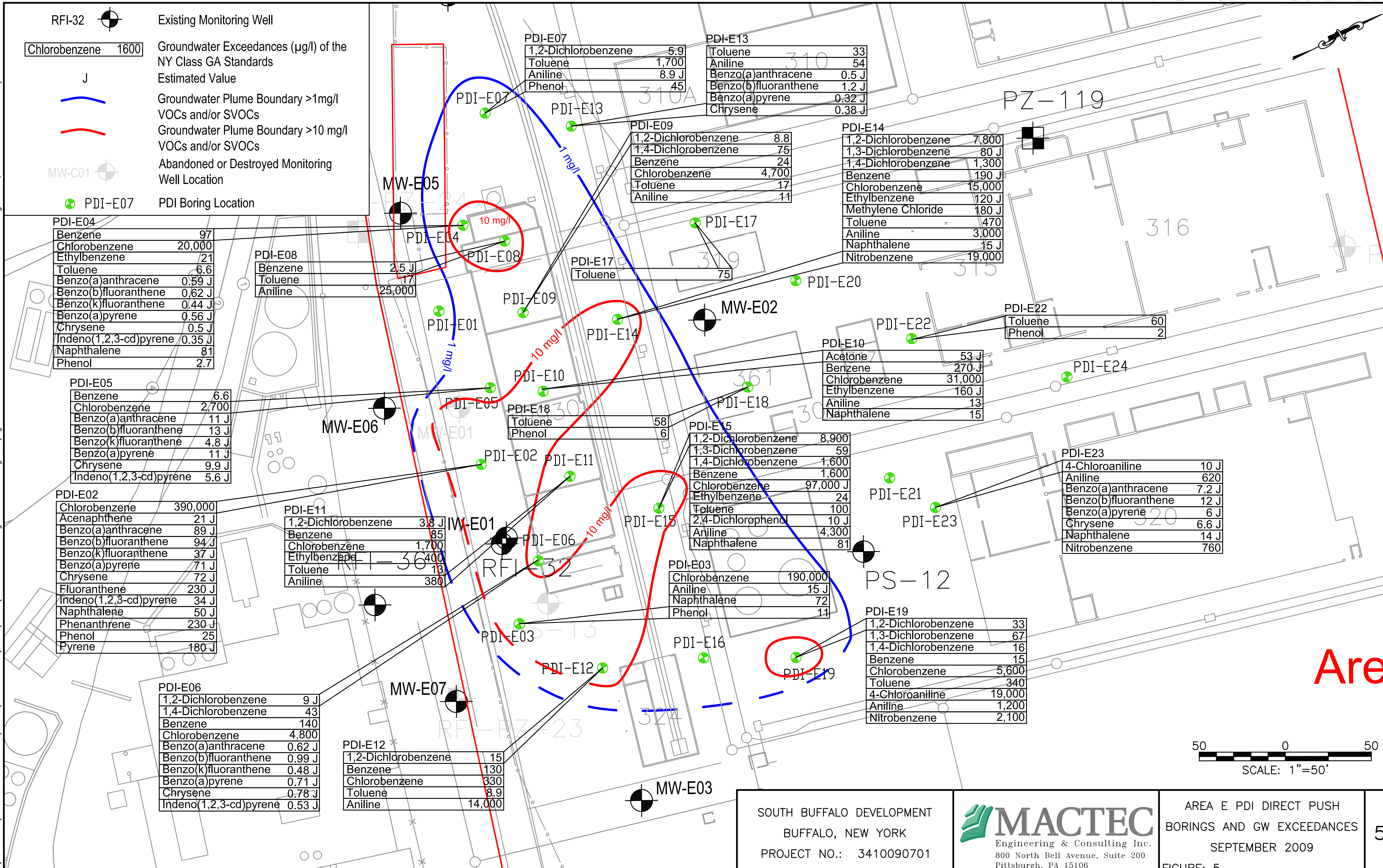
AREA E PDI DIRECT PUSH BORING LOCATIONS 2009–2010

FIGURE: 4

4

DRAWN BY: NEL 5-14-2010 APPROVED BY: ESW 7-21-2010



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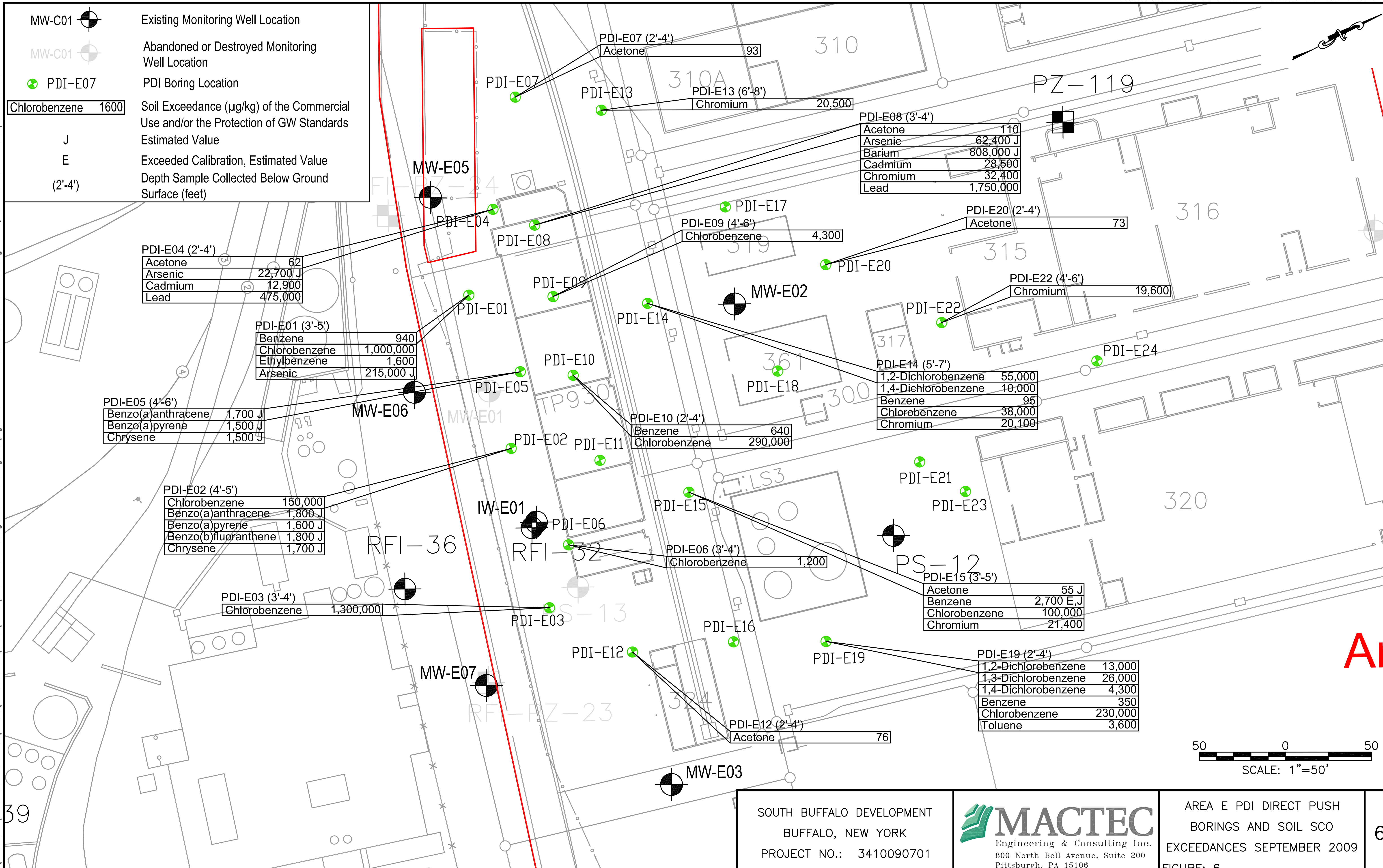
AREA E PDI DIRECT PUSH BORINGS AND GW EXCEEDANCES
SEPTEMBER 2009
FIGURE: 5

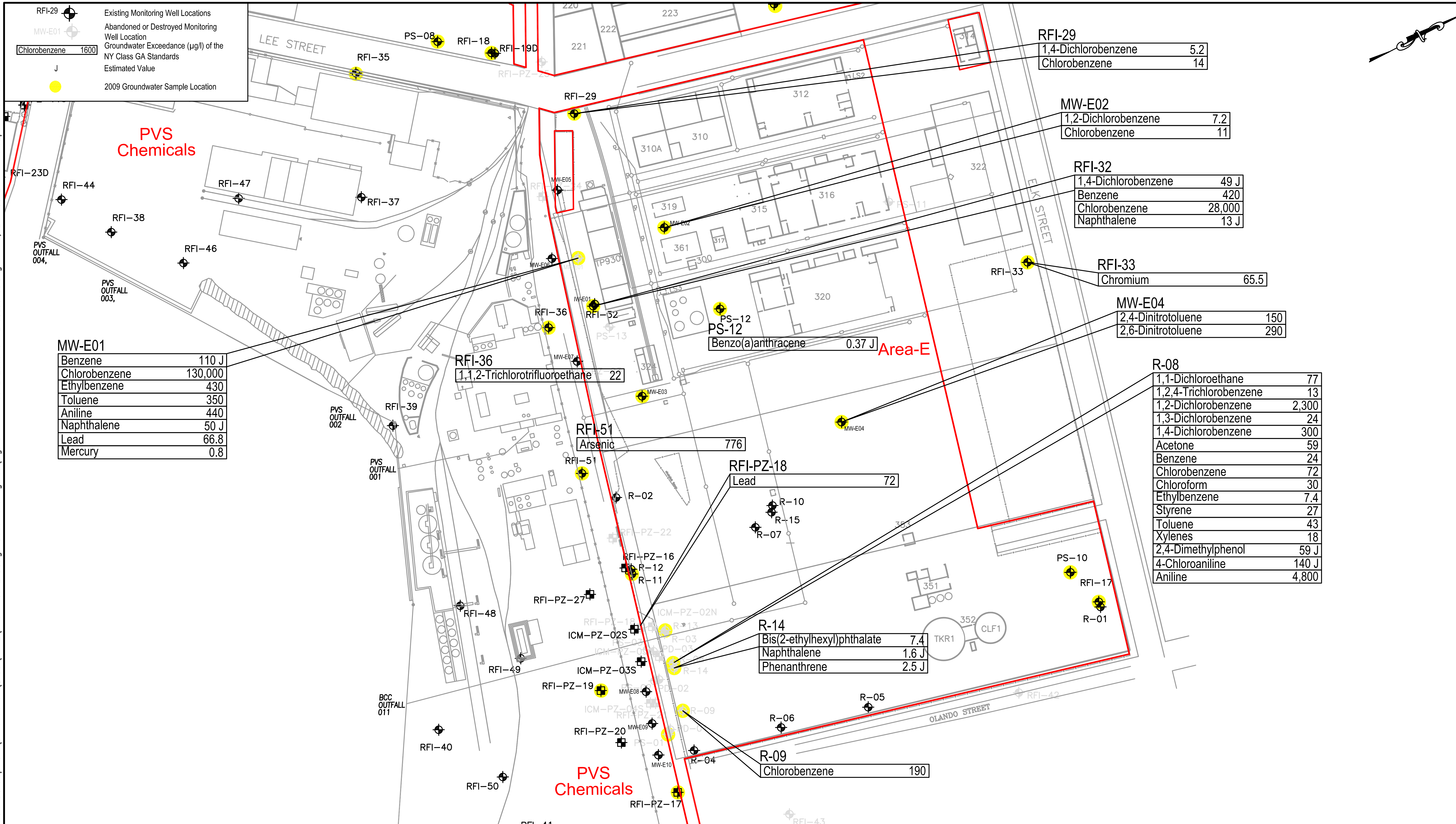
5

P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Final Area E Design Document Figures\Figure 4 and 5 - Area E 2009 PDI GW Exceedance.dwg Thu, 24 Feb 2011 - 2:58pm esweiler

DRAWN BY: NEL 5-14-2010 APPROVED BY: ESW 7-21-2010



P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Final Area E Design Document Figures\Figure 6 - Area E 2009 Soil Exceedance.dwg Thu, 24 Feb 2011 - 3:01pm esweiler



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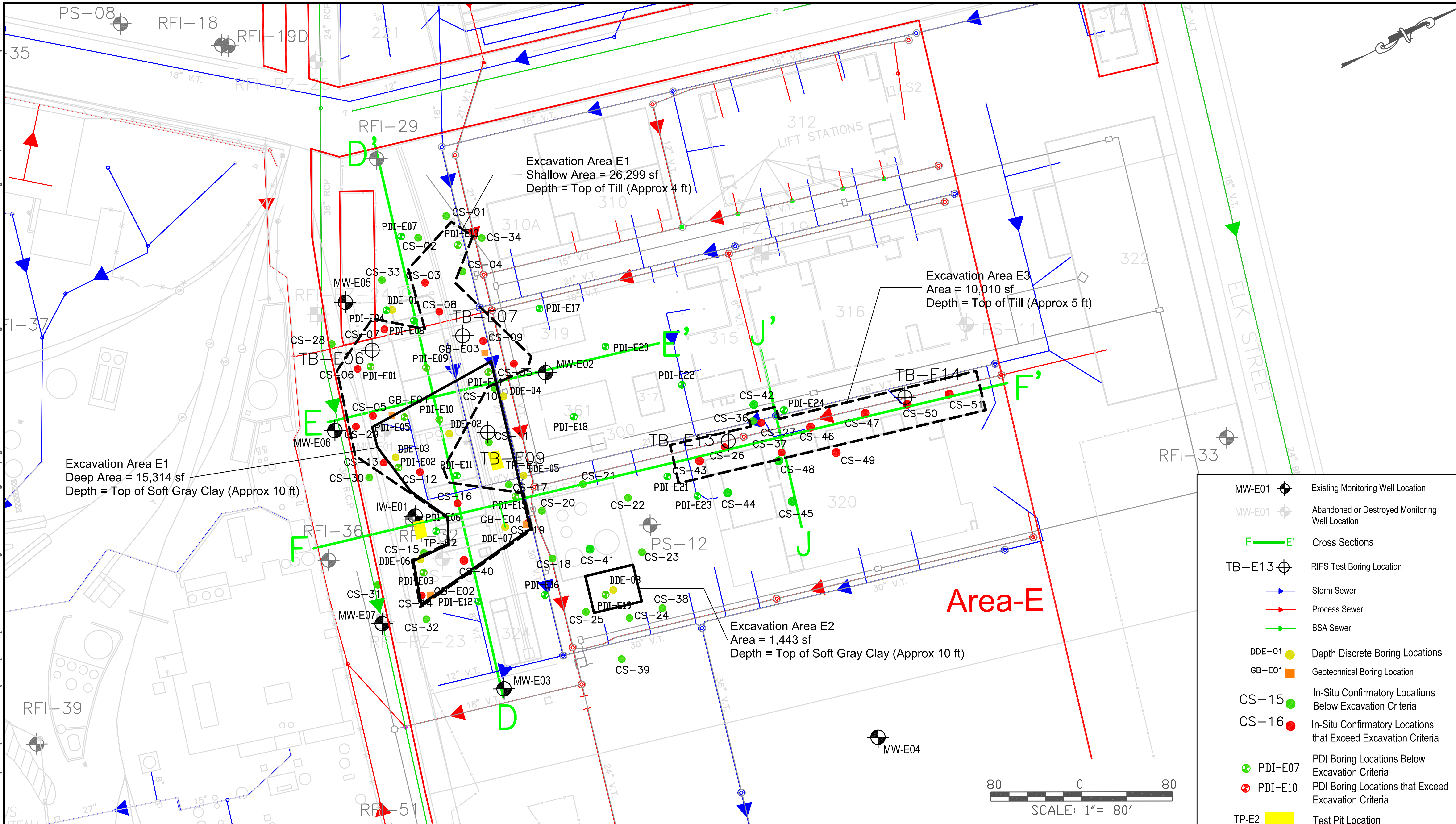
AREA E MONITORING WELL GROUNDWATER EXCEEDANCES
NOVEMBER 2009

FIGURE: 7

7

P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Final Area E Design Document Figures\Figure 7 - Area E 2009 GW Exceedance.dwg Thu, 24 Feb 2011 - 3:02pm esweiler

DRAWN BY: NEL 4-2-2010 APPROVED BY: ESW 9-8-2010



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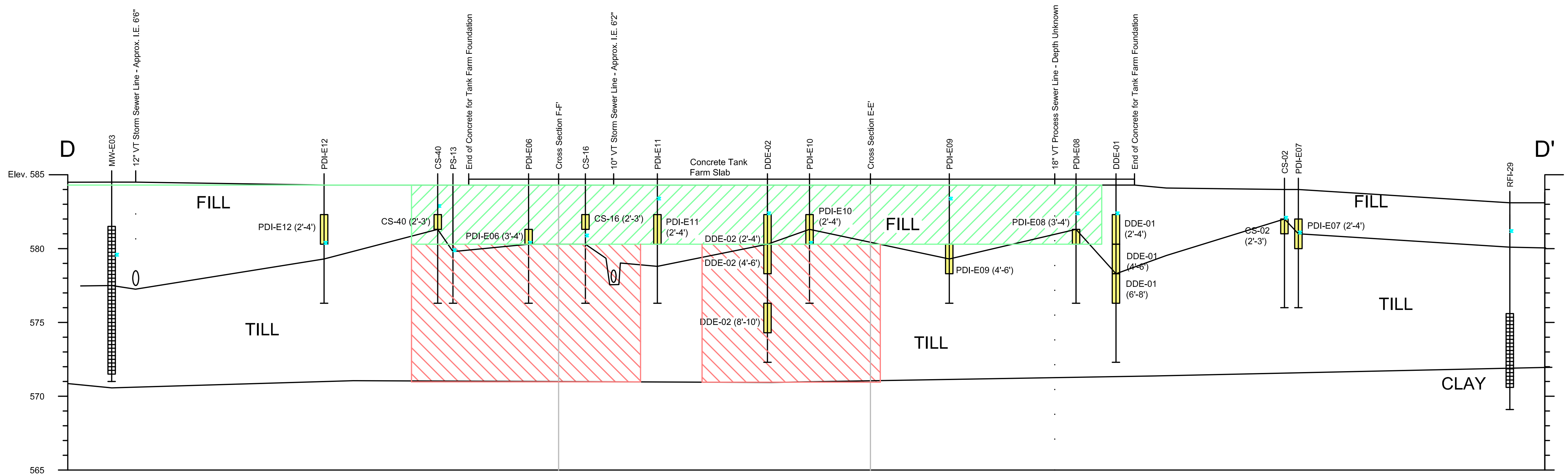
AREA E DEPTH DISCRETE AND GEOTECHNICAL BORINGS WITH CROSS SECTIONS AND EXCAVATION LIMITS

FIGURE: 8

8

DRAWN BY: NEL 4-9-2010 APPROVED BY: ESW 10-18-10

CROSS-SECTION D-D'



PDI-E06 (3'-4')
Chlorobenzene - 1.2 mg/kg

CS-40 (2'-3')
Acetone - 0.063 mg/kg
Chlorobenzene - 85 mg/kg

CS-16 (2'-3')
1,4-Dichlorobenzene - 1.5 mg/kg
Chlorobenzene - 55 mg/kg
Fluoranthene - 1.1 mg/kg

DDE-02 (2'-4')
Benzene - 1.3 mg/kg
Methylcyclohexane - 1.6 mg/kg
Chlorobenzene - 870 mg/kg
Ethylbenzene - 240 mg/kg

DDE-02 (4'-6')
Ethylbenzene - 4.4 mg/kg
Chlorobenzene - 390 mg/kg

DDE-02 (8'-10')
Ethylbenzene - 3.4 mg/kg
Chlorobenzene - 32 mg/kg

PDI-E10 (2'-4')
Chlorobenzene - 290 mg/kg

PDI-E09 (4'-6')
Chlorobenzene - 4.3 mg/kg

PDI-E08 (3'-4')
Aniline - 1.2 mg/kg

Legend

- Groundwater Elevation
- CS-16 (2'-3') Soil Sample Location Interval
- Monitoring Well Screen Interval
- Shallow Excavation Area
- Deep Excavation Area

Fill - Clay, Silt, Crushed Stone, Gravel, Brick, and Miscellaneous Building Demolition Debris
Till - Clay and Silt Tills, with varying amounts of Sand and Sand Seams
Clay - Gray, Soft, Clay with limited occurrence of fine Sand Seams

40 0 40
HORIZONTAL SCALE: 1"= 40'
VERTICAL SCALE: 1"= 8'

SOUTH BUFFALO DEVELOPMENT, LLC
BUFFALO COLOR AREAS ABCE
PROJECT NO.: 3410090701

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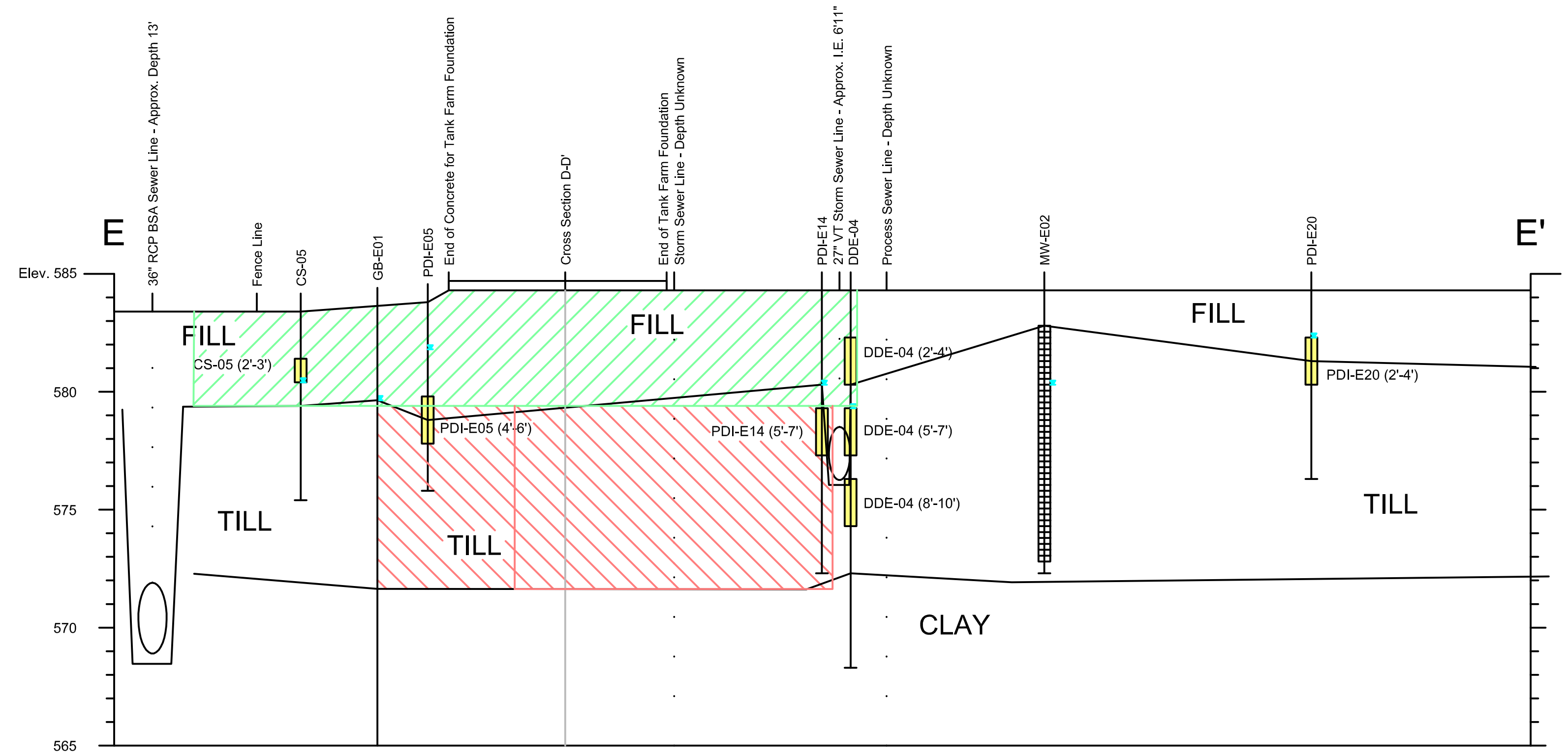
AREA E CROSS SECTION D-D'
SOUTH BUFFALO DEVELOPMENT
BUFFALO, NEW YORK
FIGURE: 9

9

P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Final Area E Desgn Document Figures\Figure 9 10 11 12 - Area E Cross Sections.dwg Tue, 19 Oct 2010 - 9:04am esweiler

DRAWN BY: NEL 4-9-2010 APPROVED BY: ESW 10-18-10

CROSS-SECTION E-E'



CS-05 (2'-3')
Chlorobenzene - 990 mg/kg
Aniline - 3.4 mg/kg

PDI-E05 (4'-6')
Benzo(a)Anthracene - 1.7 mg/kg
Benzo(a)Pyrene - 1.5 mg/kg
Benzo(b)Fluoranthene - 1.7 mg/kg
Chrysene - 1.5 mg/kg
Fluoranthene- 4.8 mg/kg
Phenanthrene - 3.5 mg/kg
Pyrene - 3.6 mg/kg

PDI-E14 (5'-7')
1,2-Dichlorobenzene - 55 mg/kg
1,4-Dichlorobenzene - 10 mg/kg
Chlorobenzene - 38 mg/kg

DDE-04 (2'-4')
1,2-Dichlorobenzene - 3.3 mg/kg
1,4-Dichlorobenzene - 2.6 mg/kg
Chlorobenzene - 49 mg/kg

DDE-04 (5'-7')
1,2-Dichlorobenzene - 370 mg/kg
1,3-Dichlorobenzene - 51 mg/kg
1,4-Dichlorobenzene - 110 mg/kg
Chlorobenzene - 460 mg/kg

DDE-04 (8'-10')
1,2,4-Trichlorobenzene - 3.8 mg/kg
1,2-Dichlorobenzene - 130 mg/kg
1,3-Dichlorobenzene - 3.4 mg/kg
1,4-Dichlorobenzene - 19 mg/kg
Chlorobenzene - 66 mg/kg

Legend

- Groundwater Elevation
- CS-16 (2'-3') Soil Sample Location Interval
- Monitoring Well Screen Interval
- Shallow Excavation Area
- Deep Excavation Area

Fill - Clay, Silt, Crushed Stone, Gravel, Brick, and Miscellaneous Building Demolition Debris
Till - Clay and Silt Tills, with varying amounts of Sand and Sand Seams
Clay - Gray, Soft, Clay with limited occurrence of fine Sand Seams

40 0 40
HORIZONTAL SCALE: 1"= 40'
VERTICAL SCALE: 1"= 8'

SOUTH BUFFALO DEVELOPMENT, LLC
BUFFALO COLOR AREAS ABCE
PROJECT NO.: 3410090701

MACTEC
Engineering & Consulting Inc.
800 North Bell Avenue, Suite 200
Pittsburgh, PA 15106

AREA E CROSS SECTION E–E'
SOUTH BUFFALO DEVELOPMENT
BUFFALO, NEW YORK
FIGURE: 10

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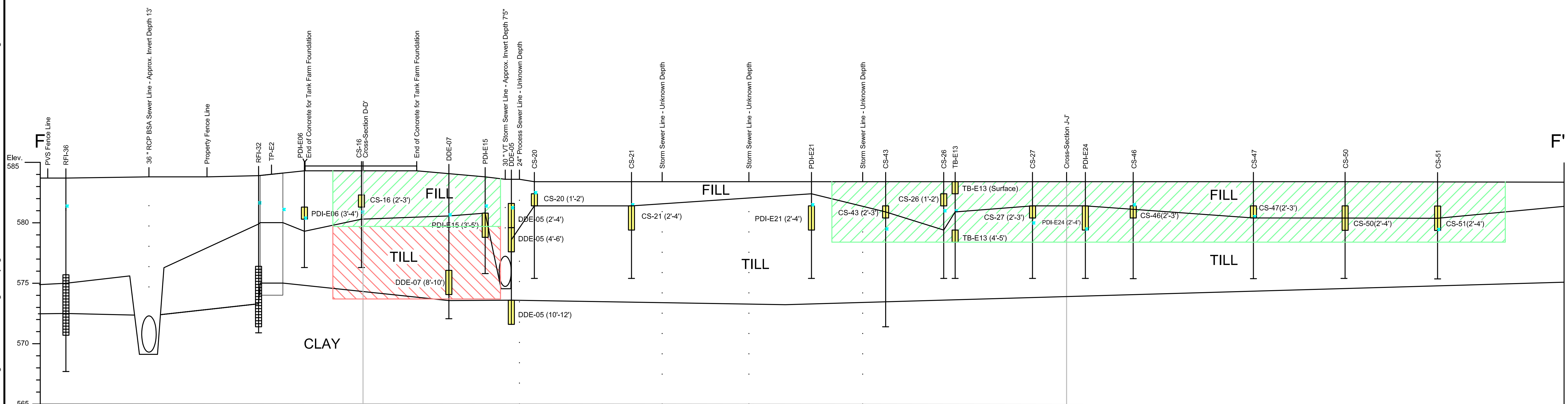
DRAWN BY: NEL 4-9-2010 APPROVED BY: ESW 10-18-10

CROSS-SECTION F-F'



PDI-E06 (3'-4')
Chlorobenzene - 1.2 mg/kg

CS-16 (2'-3')
1,4-Dichlorobenzene - 1.5 mg/kg
Chlorobenzene - 55 mg/kg
Fluoranthene - 1.1 mg/kg

DDE-07 (8'-10')
1,2-Dichlorobenzene - 140 mg/kg
1,3-Dichlorobenzene - 3.5 mg/kg
1,4-Dichlorobenzene - 30J mg/kg
Benzene - 0.41 mg/kg
Chlorobenzene - 840 mg/kg

PDI-E15 (3'-5')
Benzene - 32 mg/kg
Chlorobenzene - 100 mg/kg
Ethylbenzene - 1 mg/kg

DDE-05 (10'-12')
Chlorobenzene - 47 mg/kg

CS-20 (1'-2')
2-Butanone - 1.1 mg/kg
Aniline - 1.3 mg/kg

CS-26 (1'-2')
1,2,4-Trichlorobenzene - 6.6 mg/kg
1,2-Dichlorobenzene - 110 mg/kg
1,3-Dichlorobenzene - 1.1 mg/kg
1,4-Dichlorobenzene - 13 mg/kg
Chlorobenzene - 3.6 mg/kg
Toluene - 69 mg/kg
Aniline - 5.5 mg/kg
Nitrobenzene - 16 mg/kg

CS-43 (2'-3')
1,2-Dichlorobenzene - 2500 mg/kg
1,3-Dichlorobenzene - 27 mg/kg
1,4-Dichlorobenzene - 260 mg/kg
Benzo(a)Anthracene - 1.5 mg/kg
Benzo(a)Pyrene - 1.3 mg/kg
Chrysene - 1.3 mg/kg

TB-E13 (4'-5')
1,2-Dichlorobenzene - 110 mg/kg
1,4-Dichlorobenzene - 14 mg/kg
Aniline - 3 mg/kg

CS-46 (2'-3')
1,2-Dichlorobenzene - 6.3 mg/kg
1,4-Dichlorobenzene - 3.5 mg/kg
Chlorobenzene - 6.8 mg/kg

CS-27 (2'-3')
1,2,4-Trichlorobenzene - 9.5 mg/kg
1,2-Dichlorobenzene - 12 mg/kg
1,4-Dichlorobenzene - 1.4 mg/kg
Benzo(a)anthrecene - 1.1 mg/kg
Fluoranthene - 1.9 mg/kg
Phenanthrene - 2 mg/kg
Pyrene - 1.6 mg/kg

CS-47 (2'-3')
1,2-Dichlorobenzene - 130 mg/kg
1,3-Dichlorobenzene - 2.7 mg/kg
1,4-Dichlorobenzene - 9.5 mg/kg
Chlorobenzene - 14 mg/kg

CS-50 (2'-4')
1,2-Dichlorobenzene - 22 mg/kg
1,3-Dichlorobenzene - 3 mg/kg
1,4-Dichlorobenzene - 68 mg/kg
Chlorobenzene - 670 mg/kg

CS-47 (2'-3')
1,2-Dichlorobenzene - 19 mg/kg
1,3-Dichlorobenzene - 4.7 mg/kg
1,4-Dichlorobenzene - 64 mg/kg
Chlorobenzene - 600 mg/kg
Benzene - 5.9 mg/kg
Ethylbenzene - 5.2 mg/kg

Legend

- Groundwater Elevation
- CS-16 (2'-3') Soil Sample Location Interval
- Monitoring Well Screen Interval
- Shallow Excavation Area
- Deep Excavation Area

Fill - Clay, Silt, Crushed Stone, Gravel, Brick, and Miscellaneous Building Demolition Debris
Till - Clay and Silt Tills, with varying amounts of Sand and Sand Seams
Clay - Gray, Soft, Clay with limited occurrence of fine Sand Seams

40 0 40
HORIZONTAL SCALE: 1"= 40'
VERTICAL SCALE: 1"= 8'

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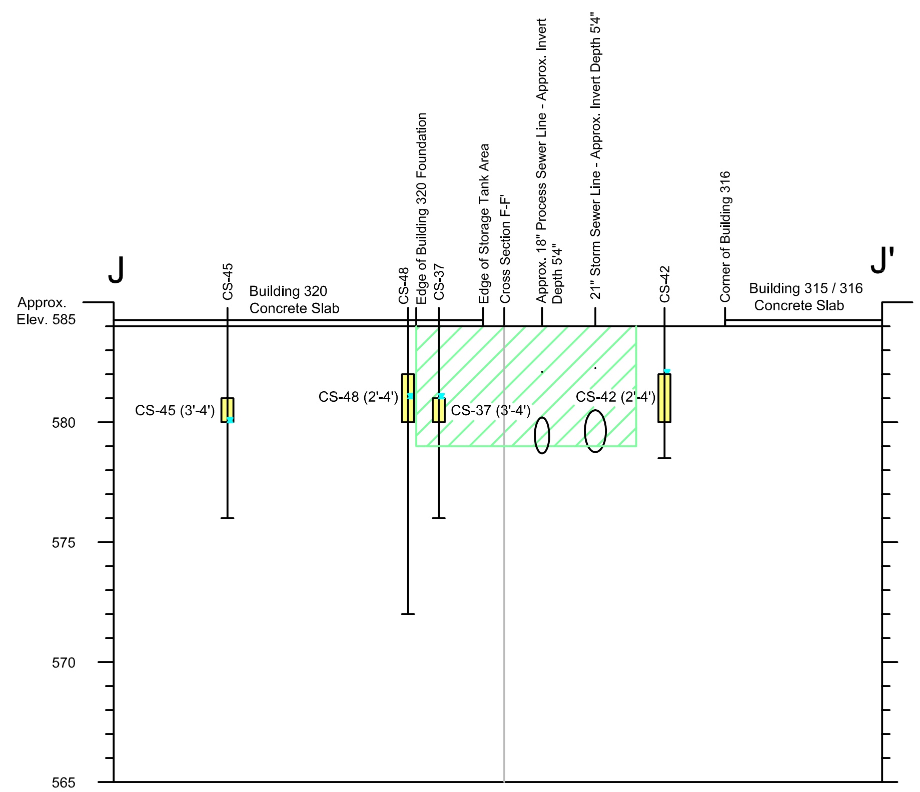
AREA E CROSS SECTION F-F'
SOUTH BUFFALO DEVELOPMENT
BUFFALO, NEW YORK
FIGURE: 11

11

DRAWN BY: NEL 9-8-2010 APPROVED BY: ESW 10-18-10

CROSS-SECTION J-J'



CS-37 (3'-4')
1,2-Dichlorobenzene - 49 mg/kg
1,4-Dichlorobenzene - 3.4 mg/kg
Benzene - 0.33 mg/kg
Chlorobenzene - 34 mg/kg

Legend

- Groundwater Elevation
- CS-16 (2'-3') Soil Sample Location Interval
- Monitoring Well Screen Interval
- Shallow Excavation Area
- Deep Excavation Area

Fill - Clay, Silt, Crushed Stone, Gravel, Brick, and Miscellaneous Building Demolition Debris
Till - Clay and Silt Tills, with varying amounts of Sand and Sand Seams
Clay - Gray, Soft, Clay with limited occurrence of fine Sand Seams

40 0 40
HORIZONTAL SCALE: 1"= 40'
VERTICAL SCALE: 1"= 8'

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AREA E CROSS SECTION J-J'
SOUTH BUFFALO DEVELOPMENT
BUFFALO, NEW YORK
FIGURE: 12

12

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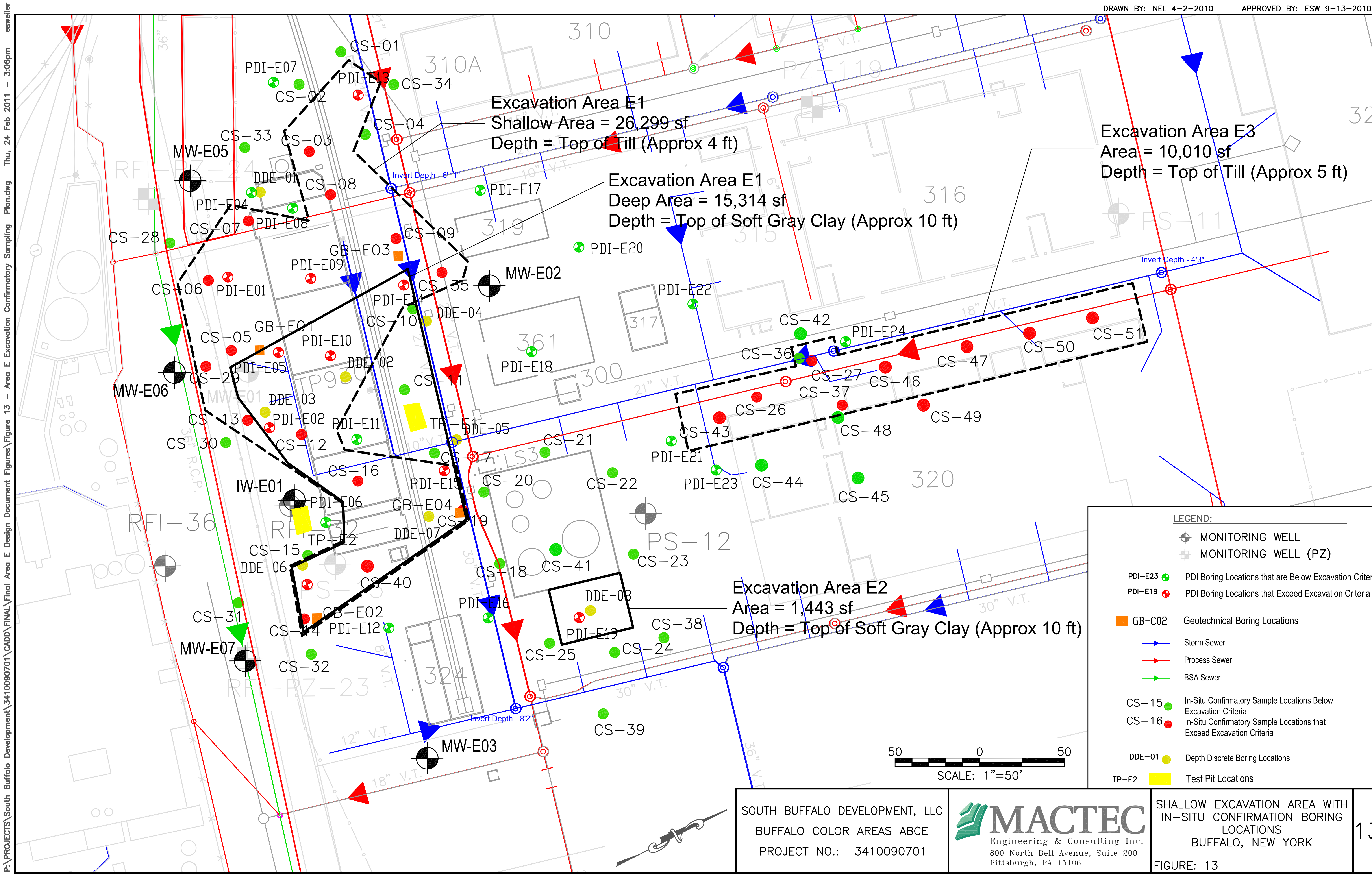

DRAWN BY: NEL 4-2-2010
APPROVED BY: ESW 9-13-2010
Excavation Area E1
Shallow Area = 26,299 sf
Depth = Top of Till (Approx 4 ft)
Excavation Area E1
Deep Area = 15,314 sf
Depth = Top of Soft Gray Clay (Approx 10 ft)
Excavation Area E3
Area = 10,010 sf
Depth = Top of Till (Approx 5 ft)
Excavation Area E2
Area = 1,443 sf
Depth = Top of Soft Gray Clay (Approx 10 ft)
MW-E05
MW-E06
MW-E07
MW-E02
MW-E03
IW-E01
Invert Depth - 6'1"
Invert Depth - 4'3"
Invert Depth - 8'2"
LEGEND:
MONITORING WELL
MONITORING WELL (PZ)
PDI-E23 PDI Boring Locations that are Below Excavation Criteria
PDI-E19 PDI Boring Locations that Exceed Excavation Criteria
GB-C02 Geotechnical Boring Locations
Storm Sewer
Process Sewer
BSA Sewer
CS-15 In-Situ Confirmatory Sample Locations Below Excavation Criteria
CS-16 In-Situ Confirmatory Sample Locations that Exceed Excavation Criteria
DDE-01 Depth Discrete Boring Locations
TP-E2 Test Pit Locations
50 0 50
SCALE: 1"=50'
SOUTH BUFFALO DEVELOPMENT, LLC
BUFFALO COLOR AREAS ABCE
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SHALLOW EXCAVATION AREA WITH IN-SITU CONFIRMATION BORING LOCATIONS
BUFFALO, NEW YORK
FIGURE: 13
13
P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\Final Area E Design Document Figures\Figure 13 - Area E Excavation Confirmatory Sampling Plan.dwg Thu, 24 Feb 2011 - 3:06pm esweiler