

FINAL CLOSURE REPORT
CLOSURE OF GROUNDWATER
COLLECTION AND TREATMENT SYSTEM

NYSDEC SITE NO. 9-15-066, OPERABLE UNIT 2
CHEEKTOWAGA, NEW YORK

PREPARED BY



CBS CORPORATION
PITTSBURGH, PENNSYLVANIA

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1.0 INTRODUCTION

CBS Corporation (CBS)¹ has prepared this Final Closure Report to document activities associated with closure of the groundwater collection and treatment system that was a component of Operable Unit 2 (OU2) of the Remedial Program at New York State Department of Environmental Conservation (NYSDEC) Site No. 9-15-066 in Cheektowaga, New York (the “Site”). Under the OU2 Record of Decision (ROD) issued by NYSDEC in December 1995, the collection and treatment system addressed groundwater in the central and southern portion of the Site using former plant storm sewers for subsurface collection and conveyance. Figure 1 is a Site plan showing the location of the collection system and associated Site groundwater monitoring wells. Beginning in 1999, CBS managed the Remedial Program at the Site on behalf of the Respondents (CBS and Niagara Frontier Transportation Authority [NFTA]) to the Order on Consent and Settlement Agreement, Index No. B9-0381-91-8 (the “Order”) entered with NYSDEC, including the operation, maintenance, and monitoring of the groundwater collection and treatment system.

CBS presented the rationale for closing the Site groundwater collection and treatment system in the report *Termination of Operation, Maintenance, and Monitoring Activities* submitted to NYSDEC on September 7, 2012 and reviewed with NYSDEC in the meeting of September 12, 2012. As described in that report, the remediation goals and Remedial Action Objectives (RAOs) for volatile organic compounds (VOCs) and metals in groundwater have been met throughout the portion of the Site influenced by the collection and treatment system, and all potential environmental benefits have been achieved. CBS determined that the closure of the

¹ CBS Corporation is the successor by corporate name change to Viacom Inc., which, in turn was the successor to Westinghouse Electric Corporation. For simplicity in this report, references to recent (1999 and later) actions undertaken by “CBS” include actions by its predecessors.

system was a prudent and responsible action consistent with NYSDEC technical guidance (NYSDEC, 2010), the 1995 ROD for OU2, and the requirements of the Order.

CBS prepared a Work Plan describing the sequence and methods to be employed in closing the collection and treatment system, the plan for post-closure monitoring, and the schedule of planned activities. The Work Plan also outlined the environmental restrictive covenants to be placed on the affected portion of the Site by the Niagara Frontier Transportation Authority (NFTA) as the property owner and a Respondent under the Order.

The Work Plan was submitted to NYSDEC on October 10, 2012. NYSDEC reviewed the Work Plan and provided comments via its correspondence to CBS dated November 27, 2012. CBS evaluated the NYSDEC comments and concerns, and responses to comments were reflected in Revision 1 to the Work Plan, which was submitted to the NYSDEC on December 2, 2013. The NYSDEC approved the Work Plan (Revision 1) on January 27, 2014.

This Final Closure Report documents the work performed in 2014 to complete the closure activities in accordance with the approved Work Plan. Conestoga-Rovers and Associates (CRA) served as the primary contractor for the OU2 system closure and retained needed subcontractors (*e.g.*, drilling and grouting, vacuum truck service, and off-site disposal) and suppliers (*e.g.*, concrete). Encotech, Inc. (Encotech) decommissioned the treatment plant. Analytical laboratory support was provided by the TestAmerica Laboratories, Inc. facility in Pittsburgh, Pennsylvania (TestAmerica).

2.0 PLANS AND PROCEDURES FOR SYSTEM CLOSURE

This section describes the step-by-step approach that was used to close the OU2 groundwater collection and treatment system at the Site. Appendix A provides a daily work summary for on-site work activities, and Appendix B provides photographs of closure activities.

2.1 COLLECTION SYSTEM CLOSURE SEQUENCE

The collection system was closed sequentially starting with the 001 segment and then proceeding, in turn, to the 002 and 003 segments. Some overlap of the sequential closing occurred to accommodate access to various portions of the Site and Contractor availability. This portion of the work was completed on October 15, 2014.

2.1.1 001 SEGMENT

The 001 segment of the collection system had been partially closed in 2009 in accordance with the approved Revised Work Plan submitted by CBS to NYSDEC in November 2008. Partial closure involved the permanent plugging of manholes MH-001-02 and MH-001-06 located midway along the 001 segment profile (Figure 1). Plugging of these manholes was designed to split the 001 segment of the collection system, separating the upper portions where water levels were relatively deep below grade from the lower portions where water levels were near or at the ground surface. Closure involved both filling the manholes and plugging permeable pipe bedding materials around the outside of the manholes. Also, in accordance with the November 2008 Work Plan, an additional groundwater monitoring well, MW-35, was installed just downgradient of the pumping sump for the 001 segment of the collection system (*i.e.*, CSMH-001 or “Sump 001”).² CBS submitted the report on this partial closure to NYSDEC in September 2009.

² The terminal manholes are referred to as CSMH-001, CSMH-002, and CSMH-003, respectively, for the three segments of the collection system from east to west at the Site (Figure 1). In some reports and drawings, these pumping stations are referred to as Sumps 001, 002, and 003, respectively.

Figure 2 provides an overview of the work completed in 2014 as part of the closure of the remaining sections of the 001 segment. These work activities involved the permanent plugging of manholes and associated piping at MH-001-09, MH-001-10, and MH-001-13,³ all of which are located upstream of previously closed manhole MH-001-06 (Figure 2). At each location, the manhole was inspected to assess the thickness of accumulated sediment. Sediment thickness was determined to be minimal. Consequently, in accordance with the approved Work Plan, the sediment was dislodged using a high-pressure water jet. The loosened sediment resettled within the pipe network. These three manholes were then permanently sealed using the procedures described in Section 2.2.2 on July 14 and 15, 2014.

While the upstream manholes were being closed, water levels were pumped down in CSMH-001 to dewater the piping system below previously closed manhole MH-001-02. The pumped water was conveyed via an overland temporary pipe that discharged the water into the 002 system. From there, the water was conveyed through the existing 002 pipe network to the groundwater treatment system for treatment and discharge. Work then proceeded to plugging the remaining manholes on the 001 system, *i.e.*, MH-001-01, MH-001-14, and CSMH-001, on July 15, 2014. Prior to plugging, these manholes were inspected to assess the thickness of accumulated sediment. Like the upstream 001 system manhole, sediment accumulation was minimal and therefore dislodged using a high-pressure water jet. The sump pump and loose piping were then pulled from CSMH-001, and the electrical service to this location was disconnected and permanently locked out at the treatment building. Manholes and remaining piping at MH-001-01, MH-001-14, and CSMH-001 were then permanently sealed using the procedures described in Section 2.2.2 and 2.2.3 (Figure 2). The entrance port of the conveyance line from CSMH-001 to the treatment facility was also filled with concrete as part of the manhole sealing.

³ Despite multiple attempts to locate it, manhole MH-001-03 could not be found following NFTA's completion of runway extension work in this portion of the Site, and this manhole is assumed to be buried beneath a taxiway. As a result, manhole MH-001-03 was not addressed in the Work Plan.

2.1.2 002 SEGMENT

In parallel with the work on the 001 segment, work was also conducted on the 002 segment of the collection system. Figure 3 summarizes the work tasks for closing the 002 segment.

For the 002 segment, the closure sequence generally began with manholes in the upper portion of the system and progressed downstream. The treatment system remained in operation during closure activities to provide for treatment and discharge of the water draining from the open pipes. The manholes were closed in the following sequence:

- July 14, 2014: MH-002-12;
- July 15, 2014: MH-002-13;
- July 16, 2014: MH-002-09, MH-002-10, and MH-002-15; and
- July 17, 2014: MH-002-03, MH-002-06, and MH-002-07.⁴

The most downgradient section of the 002 segment (consisting of MH-002-01, MH002-02, and CSMH-002) was left open for an extended period following the closure of the upstream portion of the 002 segment. At NFTA's request, this hiatus was to allow time to observe the effect on the groundwater table and water levels in the collection system resulting from the closure of the upper portion. No overtopping of the open manholes occurred, and with NFTA concurrence, closure of the lower portion was scheduled and completed on October 15, 2014. One modification was made to the closure of the lower section of the 002 segment. It was decided to fill the pipes between MH-002-01 and MH-002-02 and between MH-002-01 and CSMH-002 with flowable fill, rather than just seal the manholes.

Sediment accumulations in most manholes of the 002 segment were minimal and displaced using the high-pressure water jet. The exception to this was in CSMH-002 where the sediment layer was thicker. Here the accumulated sediment was removed using a vacuum truck. The manholes and associated piping were then sealed using the procedures described in Sections 2.2.2 and 2.2.3 (Figure 3).

⁴ Despite multiple attempts to locate it, manhole MH-002-05 could not be found following NFTA's completion of parking lot and road construction in this portion of the Site, and this manhole is assumed to be buried. As a result, manhole MH-002-05 was not addressed in the Work Plan.

Once manhole MH-002-01 was closed, the sump pump was pulled from CSMH-002 and the electrical service to this location was disconnected and permanently locked out at the treatment building. Manhole CSMH-002 and its inlet piping were then permanently sealed using the procedures described in Sections 2.2.2 and 2.2.3. The entrance port to the conveyance line from CSMH-002 to the treatment facility was also filled with cement as part of the manhole sealing.

2.1.3 003 SEGMENT

Closure of the 003 segment of the system was initiated following the closure of the upper half of the 002 segment. Figure 4 summarizes the work tasks used to close the 003 segment.

Work on the 003 segment began with sediment displacement from the manholes using the high-pressure jet. The only exceptions to this method were at MH-003-02, MH-003-04, and CSMH-003 where the sediment accumulation was thicker. At these three manholes, a vacuum truck was used to remove the sediment.

Closure of the 003 segment was initiated by plugging manholes MH-003-07 (July 17, 2014) and MH-003-03 (July 28, 2014) and associated piping using the procedures described in Section 2.2.2. The piping downstream of manholes MH-003-02, MH-003-03, and MH-003-04 and between manholes MH-003-01 and CSMH-003 was then partially filled with flowable fill using the methods described in Section 2.2.4. Once filling of these lines was complete, manholes MH-003-01, MH-003-02, MH-003-03, MH-003-04, and CSMH-003 were sealed using the procedures described in Sections 2.2.2 and 2.2.3. This pipe filling and manhole sealing were completed on July 28 and 29, 2014. The Access Manhole adjacent to MH-003-01 was also to have been sealed but could not be located and has likely been paved over. This situation was reported to the NYSDEC, and the Access Manhole was not addressed in the closure program.

The treatment system remained in operation during the 003 closure process to provide for treatment and discharge of displaced water. The water in 003 was removed to the extent necessary using a vacuum truck and transferred to a temporary storage tank adjacent to the treatment plant. After the sediment settled, the water in the temporary tank was transferred to the treatment system for treatment and discharge. The sediment that accumulated in the tank

was drummed, characterized, and sent off-site for disposal at a permitted Subtitle D waste facility.

Once the upstream manholes on the 003 segment were closed, the sump pump and loose piping were pulled from CSMH-003 and the electrical service to this location was disconnected and permanently locked out at the treatment building. Manhole CSMH-003 and its inlet piping were then permanently sealed on July 29, 2014 using the procedures described in Sections 2.2.2 and 2.2.3. The entrance port to the conveyance line from CSMH-003 to the treatment facility was also filled with concrete grout as part of the manhole sealing.

2.2 COLLECTION SYSTEM CLOSURE METHODS

2.2.1 SEDIMENT REMOVAL

Solids were present in some manholes and associated piping, although in most cases the accumulated thickness was minimal.⁵ Site experience, including past pipe and manhole cleaning activities, indicated the sediments present in the collection system were predominantly calcium carbonate and magnesium carbonate precipitate formed by mixing waters of elevated pH and high hardness. Overall, the sediments were very fine-grained and exhibited a low specific gravity. Their very low permeability was demonstrated by the fact that they blinded the particulate filters in the water treatment system.

Except where present in such quantities and depths that they could have interfered with the physical introduction of materials used to plug manholes and piping, the presence of such solids was not expected to affect the ability to effectively close manholes and piping. Because of their fine-grained texture and low specific gravity, these solids readily mixed with the introduced materials used in plugging. These solids are chemically compatible with the plugging materials. While the strength of the plugging materials may have been reduced somewhat by the presence of solids due to physical mixing and dilution, high strength was not

⁵ At 11 of 12 accessible manholes on the 002 and 003 segments of the collection system, sediment thicknesses were measured at 0 to 3 inches and averaged less than 1.5 inches. The only exception was Manhole CSMH-002 (Sump 002) where sediments were found to be 18 inches thick. Measurements were not collected at manholes on the 001 segment due to restricted access.

needed to achieve the intended purpose of plugging the manholes and the potential reduction in strength was of no significant consequence to the effectiveness of the closure.

Where sediment accumulations in manholes were appreciable (as noted in CSMH-002, CSMH-003, MH-003-02, and MH-003-04), the sediments were first removed from the manholes using a vacuum truck. The sediments were then discharged from the vacuum truck into a temporary settling tank, separated from the water, and collected in drums for off-site disposal at a permitted off-site Subtitle D waste facility. A sample of the sediment was collected on October 9, 2014 and sent to TestAmerica for analysis of hazardous waste characteristics. The analytical laboratory report, which shows that the sediment did not exhibit the characteristic of a hazardous waste, is provided in Appendix C. Waste disposal documentation for this non-hazardous waste is provided in Appendix D.

For all of the other manholes where there was minimal loose sediment present, the sediment was simply dislodged using a high-pressure water jet. The loosened sediment was directed into the pipes entering the manhole where it eventually dropped out of suspension. Such jetting was performed immediately prior to placement of the concrete plugs to minimize the amount of sediment that resettled on the pipe opening and manhole bottoms before the concrete was pumped into place. The minimal amount of sediment that resettled on the base was readily infused into the concrete mix, thereby allowing a tight seal.

2.2.2 MANHOLE AND ASSOCIATED PIPE PLUGGING

All 23 remaining manholes in the collection system⁶ and the immediately adjacent sections of associated piping were sealed by filling the manholes with Portland cement concrete to a level at least two feet above the highest crown elevation of the associated manhole piping. Figure 5 provides a typical detail of the concrete placement.

The concrete was placed using a pumper truck that pumped the concrete into the bottom of the manhole through a flexible hose and tremie pipe. The concrete mix was specified with a four-

⁶ This total excludes MH-001-03, MH-002-05, and the Access Manhole because they could not be located and are presumed buried.

inch slump to accommodate the pumping and contained one percent of an accelerating admixture (*e.g.*, Pozzutec 20) to speed the rate of hardening. A total of 217 cubic yards of Portland cement concrete were placed in the manholes (an average of approximately 9.4 cubic yards in each manhole). Typically, to start, one truckload of concrete was placed in each manhole to facilitate concrete delivery based on accessibility to the various manholes and concrete availability. In many cases, this initially placed concrete extended to just beneath the manhole cover, and no further work was required to complete the closure activity at that manhole. In some cases, however, it was necessary to “top off” above the concrete to just below the manhole cover level using a controlled low-strength material (CLSM or “flowable fill”). The amount of concrete pumped into each manhole is presented in Table 1.

All of the manhole covers were put back in place following the closure. Where appropriate, NFTA performed (or will perform) some additional surface treatment to make the finished areas consistent with surrounding use (*e.g.*, asphalt pavement, concrete pavement, or grass cover).

2.2.3 PLUGGING OF PIPE BEDDING AT SELECTED MANHOLES

At selected manhole locations, especially manholes located in the downstream portions of the collection system, cement-bentonite grout was injected to plug the pipe bedding to provide a barrier to migration of groundwater along the exterior of the piping adjacent to the selected manholes. Such grouting was performed at the following locations:

- 001 Segment - Manholes MH-001-01 and CSMH-001;
- 002 Segment - Manholes MH-002-09, MH-002-06, MH-002-02, MH-002-01, and CSMH-002; and
- 003 Segment - Manholes MH-003-04, MH-003-02, MH-003-01, and CSMH-003.

To ensure the best bedding seal possible and to minimize complications with water handling, the bedding seals were installed around the pipes associated with these manholes at locations slightly offset from the manholes rather than at the manhole locations themselves. Grouting the bedding around the pipes was performed with the expectation that it would have a higher probability of success in creating a good bedding seal than grouting at the manholes.

To seal the bedding around the pipes, the cement-bentonite grout was injected into boreholes that were drilled along both sides of the pipe approximately 15 feet upstream and downstream from the selected manhole. The boreholes were installed as close as possible to the exterior of the pipe using sight lines between adjacent manhole locations. The boreholes were drilled to a depth of one foot below the elevation of the pipe invert. The grout was then injected under pressure through the opening in the end of the drill rod. The rods were retracted about 12 inches from their maximum penetration point to allow pumping of the cement-bentonite grout through the drill rods and into the previously drilled opening and into the bedding. As the drill rods were extracted, additional grout was added to continue to plug the bedding to the extent possible. Typically, three batches of grout were injected at the bottom of the borehole, then the injection string was extracted to an elevation approximately equal to the top of the pipe and an additional three batches of grout were injected. Each batch consisted of three bags of cement plus bentonite and water. On this basis, each borehole received 18 bags of cement. By placing two boreholes on opposite sides of the pipe, each pair of boreholes received a total of 36 bags of cement, equivalent to approximately 3,400 pounds of solids. Occasionally, a borehole would not accept the grout. In these cases, an attempt was made to pump additional grout into the adjacent borehole to compensate for the reduced volume.

The cement-bentonite grout was mixed on-site using a flash mixer or mixing drum in large batches. The grout mix was designed with the following composition:

- 45 percent Portland cement;
- 53 percent water; and
- 2 percent bentonite.

The amount of grout injected into each borehole is presented in Table 2.

2.2.4 PIPE FILLING

Historical data have shown that VOC concentrations were one to two orders of magnitude higher in the water encountered in portions of the 003 segment than elsewhere within the collection system. Accordingly, as added protection to reduce the potential water contact with bedding materials, the piping in the lower portion of the 003 segment was partially filled with CLSM (flowable fill) to a minimum depth equal to one-half of the pipe diameter. The final

grout level in the pipes formed a level (or near-level) surface even though the base of the pipes were sloped. In some locations, the lower reaches of the pipe were filled 100 percent full in order for the upper reaches to be 50 percent full.

The pipe sections filled were the following:

- MH-003-02 to MH-003-01: 280 feet;
- MH-003-03 to MH-003-01: 120 feet;
- MH-003-04 to MH-003-01: 190 feet; and
- MH-003-01 to CSMH-0003: 40 feet.

The CLSM was pumped into multiple manhole openings on connected sections to ensure that the required plug thickness was achieved. The amount of CLSM placed in each section is presented in Table 3.

As noted in Section 2.1.2, the following two segments of the 002 segment were also filled with CLSM:

- MH-002-01 to MH-002-02: 70 feet; and
- MH-002-01 to CSMH-002: 30 feet.

2.3 TREATMENT SYSTEM CLOSURE

Beginning on November 10, 2014, after completing the closure of all three segments and processing the water generated in closure of the collection system, the equipment in the treatment plant was emptied, cleaned, and disconnected. The disposition of the various equipment and materials removed from the treatment plant is summarized as follows:

- Liquids were drained from vessels and treated through the system;⁷
- The spent carbon removed from the three adsorbers was placed in the spent (non-hazardous) carbon inventory at Encotech and subsequently shipped to the Norit America, Inc. facility in Pryor, Oklahoma for reactivation;

⁷ The discharge was sampled, and the effluent data reported to NYSDEC in the November 2014 monthly progress report (dated December 10, 2014). The electronic data were subsequently submitted for uploading to the NYSDEC EQUIS database. The effluent complied with all discharge limitations.

- The three carbon vessels were cleaned and returned to Encotech for reuse elsewhere;
- Certain equipment and supplies (*e.g.*, control panel, pumps) were cleaned as needed and claimed by CRA for reuse elsewhere;
- Solids collected from the process vessels were collected in drums for off-site disposal along with the drums of sediment previously staged at the Site;
- Other equipment was shipped to Triad Recycling and Energy for reclamation; and
- Remaining non-salvageable equipment and demolition debris were disposed of at the Allied Waste Landfill in Niagara Falls, New York.

Waste disposal documentation is provided in Appendix D.

After being emptied and cleaned, the building was turned over to NFTA for its use.

3.0 POST-CLOSURE MONITORING

Monitoring and inspection will be conducted to assess the effects of the closure on groundwater and surface water quality and to identify any newly manifested discharges to surface water. The monitoring and inspections will be performed in accordance with the Site Management Plan (prepared by C&S Engineers, Inc.) that was submitted to the NYSDEC in September 2014.

In accordance with the approved Work Plan and Site Management Plan (SMP) (September 2014), nine wells located in the central and southern portion of the Site (*i.e.*, wells within the former area of the groundwater collection system) will be monitored quarterly for two years after closure. These are the same wells that have been routinely monitored for groundwater quality since completion of Operable Unit 1 (OU1), *i.e.*, MW-2, MW-5, MW-28, MW-30, MW-31, MW-33, MW-34, MW-34D, and MW-35.⁸ In addition, well MW-32, located in the northern portion of the Site, will be monitored quarterly for two years.

Surface water from the NFTA storm sewer system will also be monitored quarterly for two years. Samples will be collected at 10 catch basins and inlets located downstream of the former groundwater recovery system. Sampling locations are shown on Figure 6.

⁸ Well MW-35 was installed in 2008.

4.0 RESTRICTIVE COVENANTS

On February 4, 1999, the Respondents filed a “Declaration of Covenants and Restrictions” with the Clerk of Erie County, New York, to give notice to all parties who may acquire interest in the Site in the future of the actions specified in the Order. To supplement that deed notice, and as part of the closure process, NFTA placed covenants on the Site property and groundwater that impart the following environmental restrictions:

- The property shall remain in industrial or commercial use and shall not be used for residential development;
- No groundwater wells or other structures shall be installed on the property for the purpose of extracting groundwater for any potential consumptive use; and
- No surface water cisterns or other surface water collection devices or structures designed for the provision of water for consumptive use shall be installed at the Site.

The restrictive covenants also include a requirement to perform a vapor intrusion assessment for any building proposed for construction within the area from which groundwater was being recovered, and, if necessary, require preventative or mitigation measures where sources of VOCs may adversely impact indoor air quality in any such buildings.

These institutional controls are specifically focused on ensuring that the second of the ROD-specified remediation goals (*i.e.*, prevent human exposure to impacted on-site groundwater) continue to be achieved at the Site and are complied with into the future.

5.0 SCHEDULE

This report concludes the implementation phase of the remedial work. The schedule for monitoring and inspection phase of the work is specified in the SMP.

In accordance with the approved Work Plan, the first round of quarterly groundwater and surface water sampling was conducted within 30 days of completion of closure activities in November 2014. On that basis, the required two years of quarterly groundwater and surface water monitoring will be completed in September 2016 and the final termination notice filed with NYSDEC in the winter of 2016/2017.

REFERENCES

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TABLES

Table 1
Volume of Portland Cement Concrete
Placed to Fill Manholes

Manhole ID	Date Closed	Volume of Concrete Placed (cy)
001-01	07/15/14	13
001-09	07/14/14	7
001-10	07/14/14	8
001-13	07/15/14	5
001-14	07/15/14	8
CSMH-001	07/15/14	17
002-01	10/15/14	9
002-02	10/15/14	10
002-03	07/17/14	5
002-06	07/17/14	7
002-07	07/17/14	9
002-09	07/16/14	18
002-10	07/16/14	9
002-12	07/14/14	9
002-13	07/15/14	10
002-15	07/16/14	6
CSMH-002	10/15/14	10
003-01	07/29/14	15
003-02	07/29/14	8
003-03	07/28/14	8
003-04	07/28/14	4
003-07	07/17/14	10
CSMH-003	07/29/14	12
Total		217
Average per Manhole		9.9

Table 2
Volume of Grout Injected to Seal Pipe Bedding

Manhole ID	Borehole ID	Date Completed	Volume of Grout Injected (gallons)
001-01	NE	09/12/14	150
	NW	09/12/14	210
	SE	09/15/14	240
	SW	09/15/14	280
002-09	SE	07/31/14	240
	SW	07/31/14	240
002-06	SE	08/01/14	240
	SW	08/01/14	240
002-02	N (east)	07/22/14	240
	E (south)	08/01/14	240
	SE	08/04/14	240
	SW	08/05/14	240
002-01	NE	08/05/14	120
	NW	08/06/14	360
	SE	08/07/14	240
	SW	08/07/14	240
003-04	NE	09/09/14	240
	NW	09/09/14	240
	SE	09/10/14	360
	SW	09/10/14	40
003-02	NE	08/08/14	240
	SE	08/08/14	240

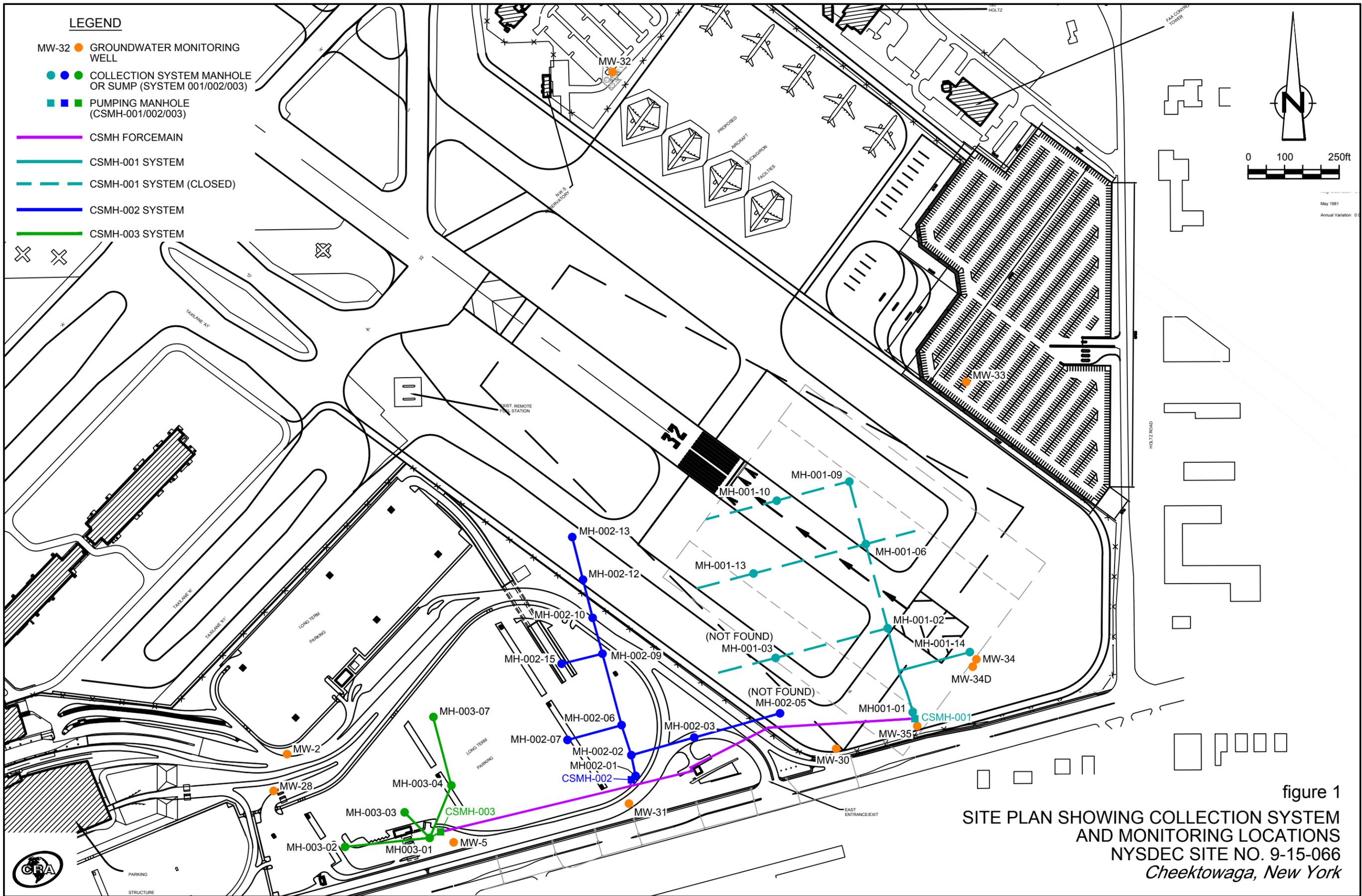
Table 2
Volume of Grout Injected to Seal Pipe Bedding

Manhole ID	Borehole ID	Date Completed	Volume of Grout Injected (gallons)
003-01	BH1	09/03/14	240
	BH2	09/03/14	200
	BH3	09/04/14	160
	BH4	09/04/14	320
	BH5	09/04/14	240
	BH6	09/05/14	240
	BH7	09/05/14	240
	BH8	09/08/14	240
CSMH003	NW	09/08/14	240
	SW	09/09/14	240
Total			7,480

Table 3
Volume of CLSM Pumped into Pipe Sections

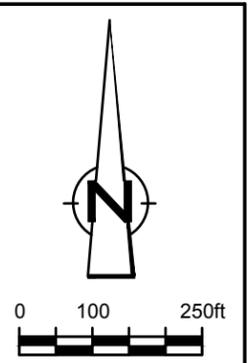
Pipe Section	Date Completed	Volume of Flowable Fill (cy)
003-04 to 003-01	07/28/14	32
003-03 to 003-01	07/28/14	8
003-02 to 003-01	07/29/14	35
003-01 to CSMH003	07/29/14	8
002-02 to CSMH002	10/15/14	50
Total		133

FIGURES



LEGEND

- MW-32 ○ GROUNDWATER MONITORING WELL
- COLLECTION SYSTEM MANHOLE OR SUMP (SYSTEM 001/002/003)
- PUMPING MANHOLE (CSMH-001/002/003)
- CSMH FORCEMAIN
- CSMH-001 SYSTEM
- - - CSMH-001 SYSTEM (CLOSED)
- CSMH-002 SYSTEM
- CSMH-003 SYSTEM
- ✕ ✕



May 1981
Annual Variation 0.0

figure 1
SITE PLAN SHOWING COLLECTION SYSTEM
AND MONITORING LOCATIONS
NYSDEC SITE NO. 9-15-066
Cheektowaga, New York

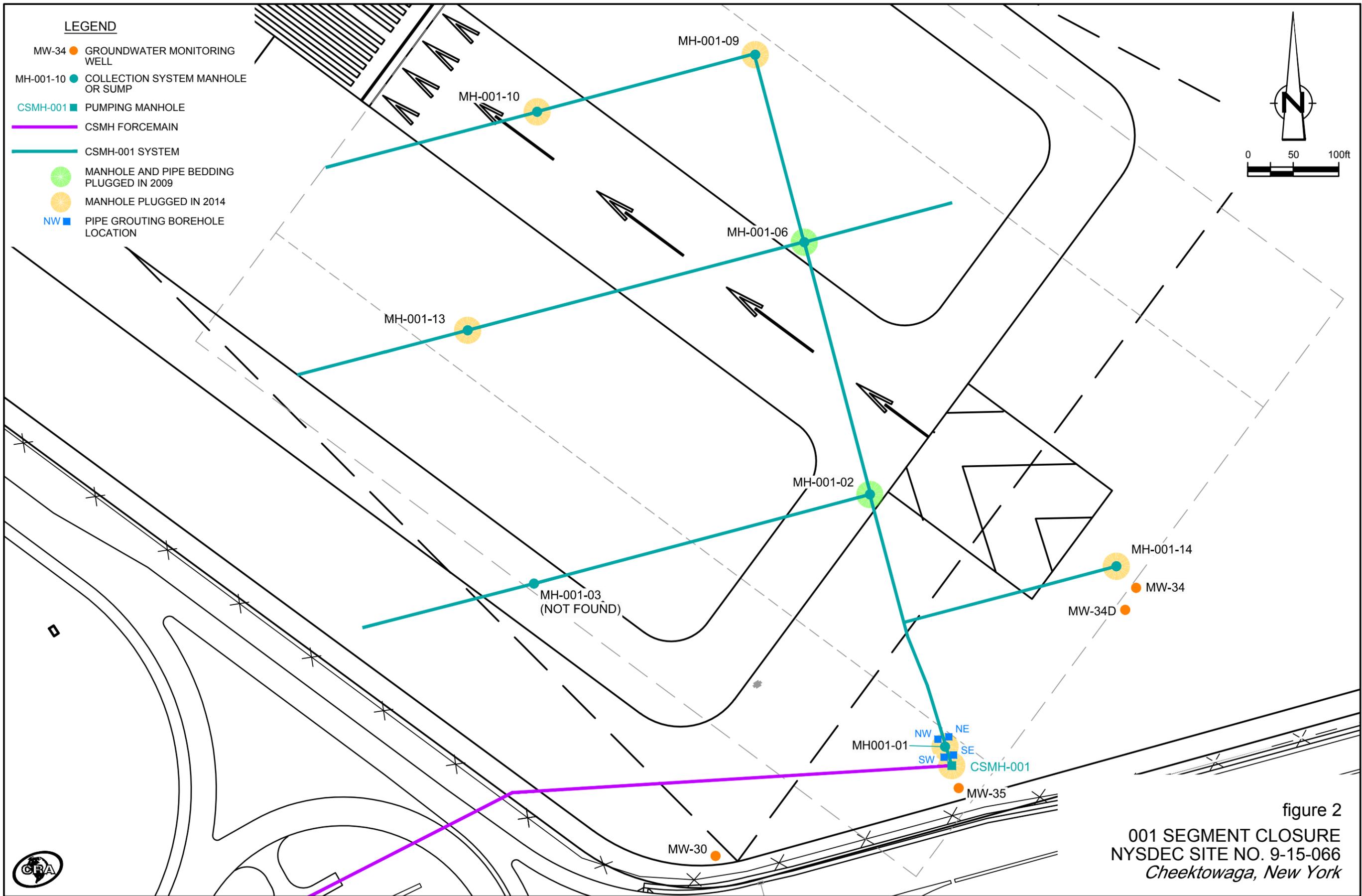


figure 2
 001 SEGMENT CLOSURE
 NYSDEC SITE NO. 9-15-066
 Cheektowaga, New York

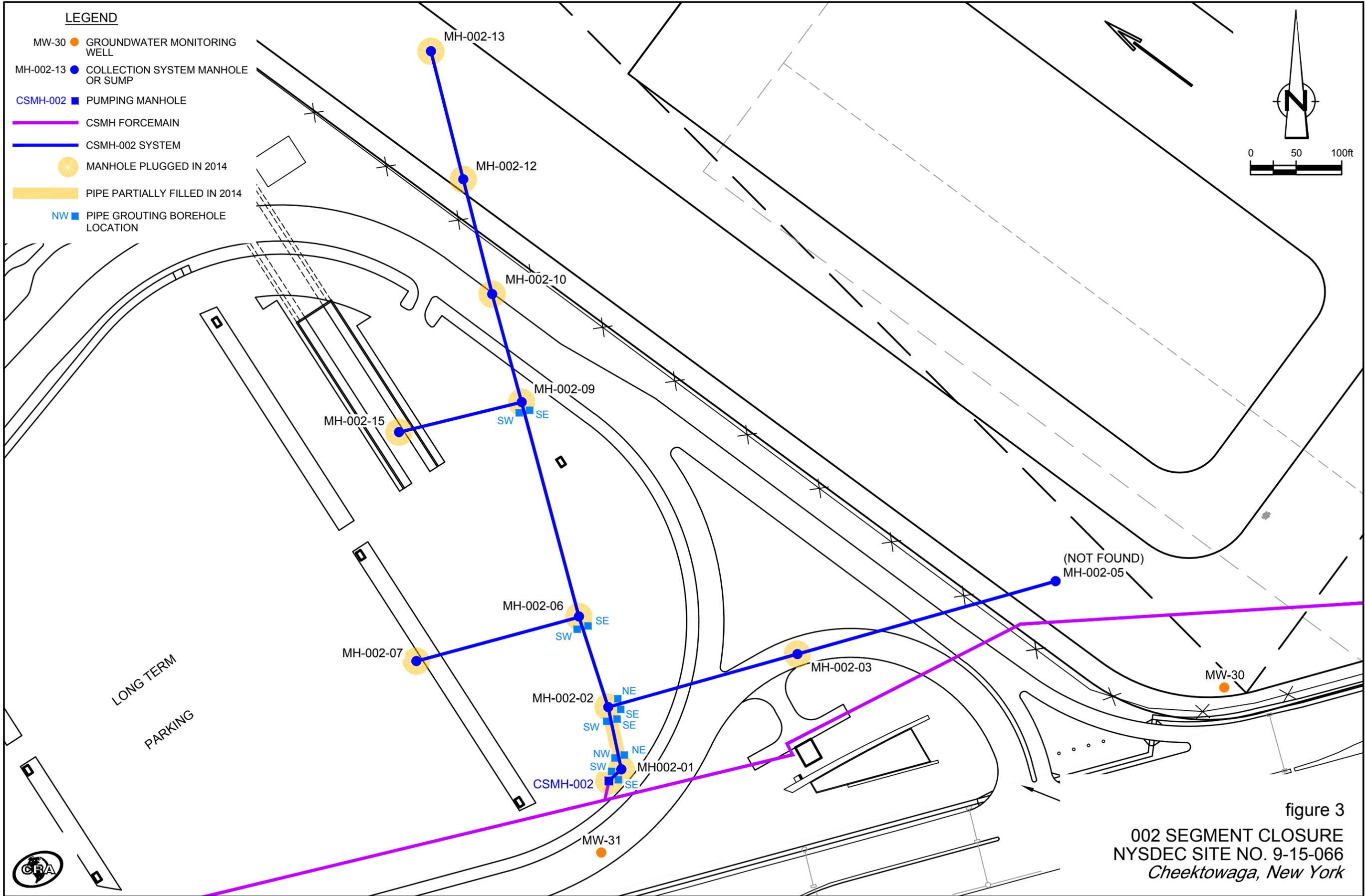


figure 3
 002 SEGMENT CLOSURE
 NYSDEC SITE NO. 9-15-066
 Cheektowaga, New York

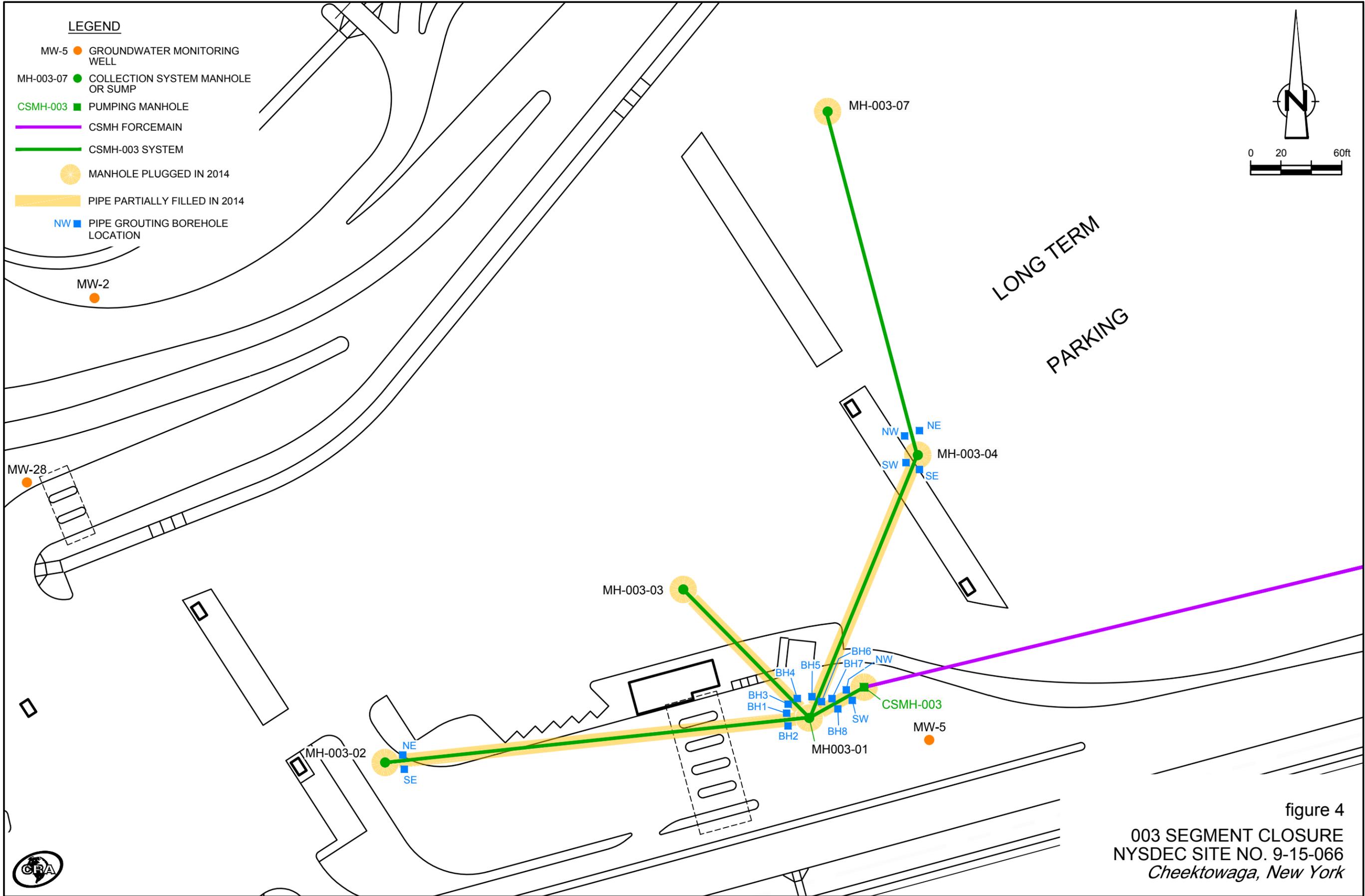
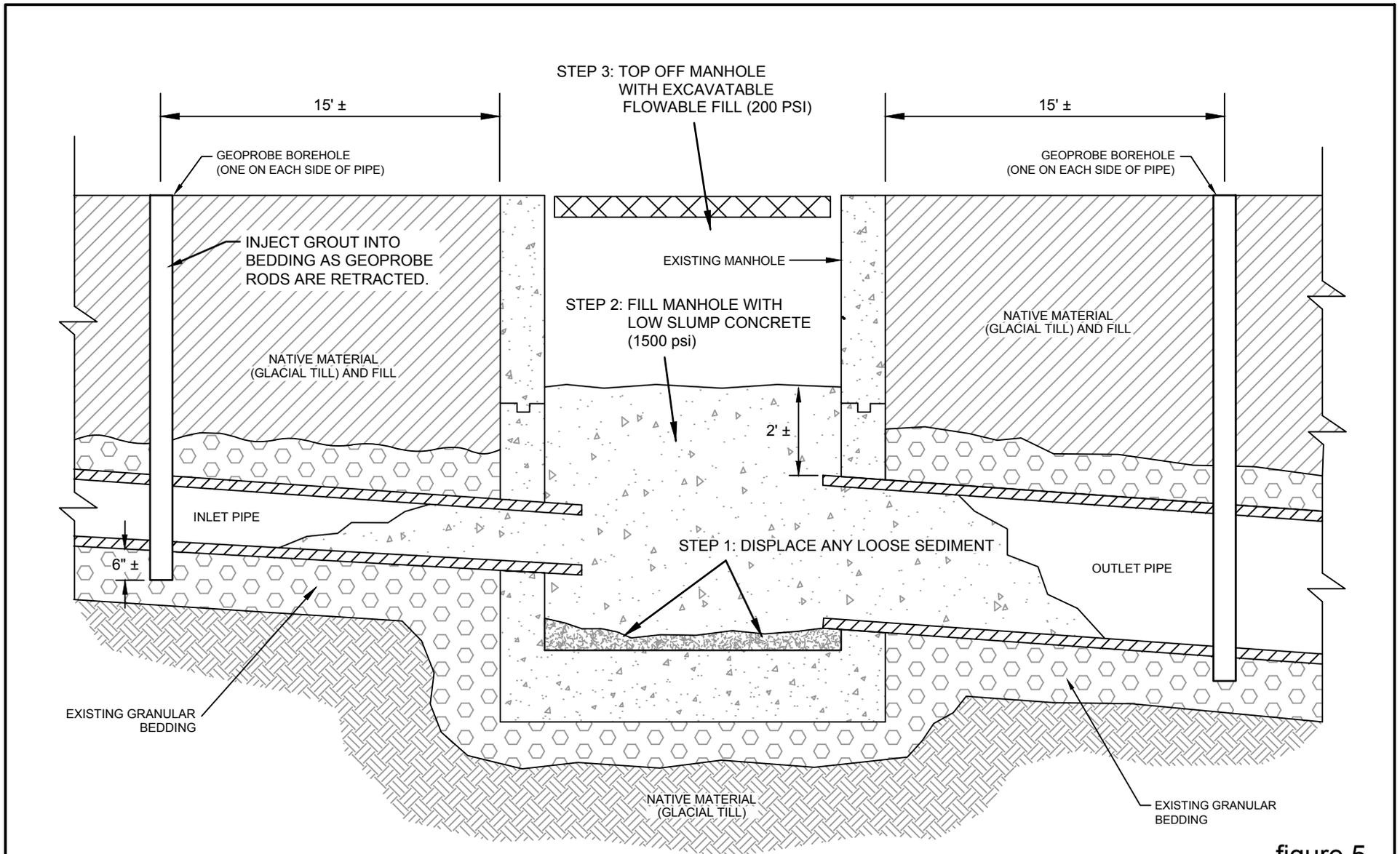


figure 4
 003 SEGMENT CLOSURE
 NYSDEC SITE NO. 9-15-066
 Cheektowaga, New York





NOT TO SCALE

figure 5
 MANHOLE PLUGGING AND PIPE BEDDING PLUGGING DETAIL
 NYSDEC SITE No. 9-15-066
 Cheektowaga, New York



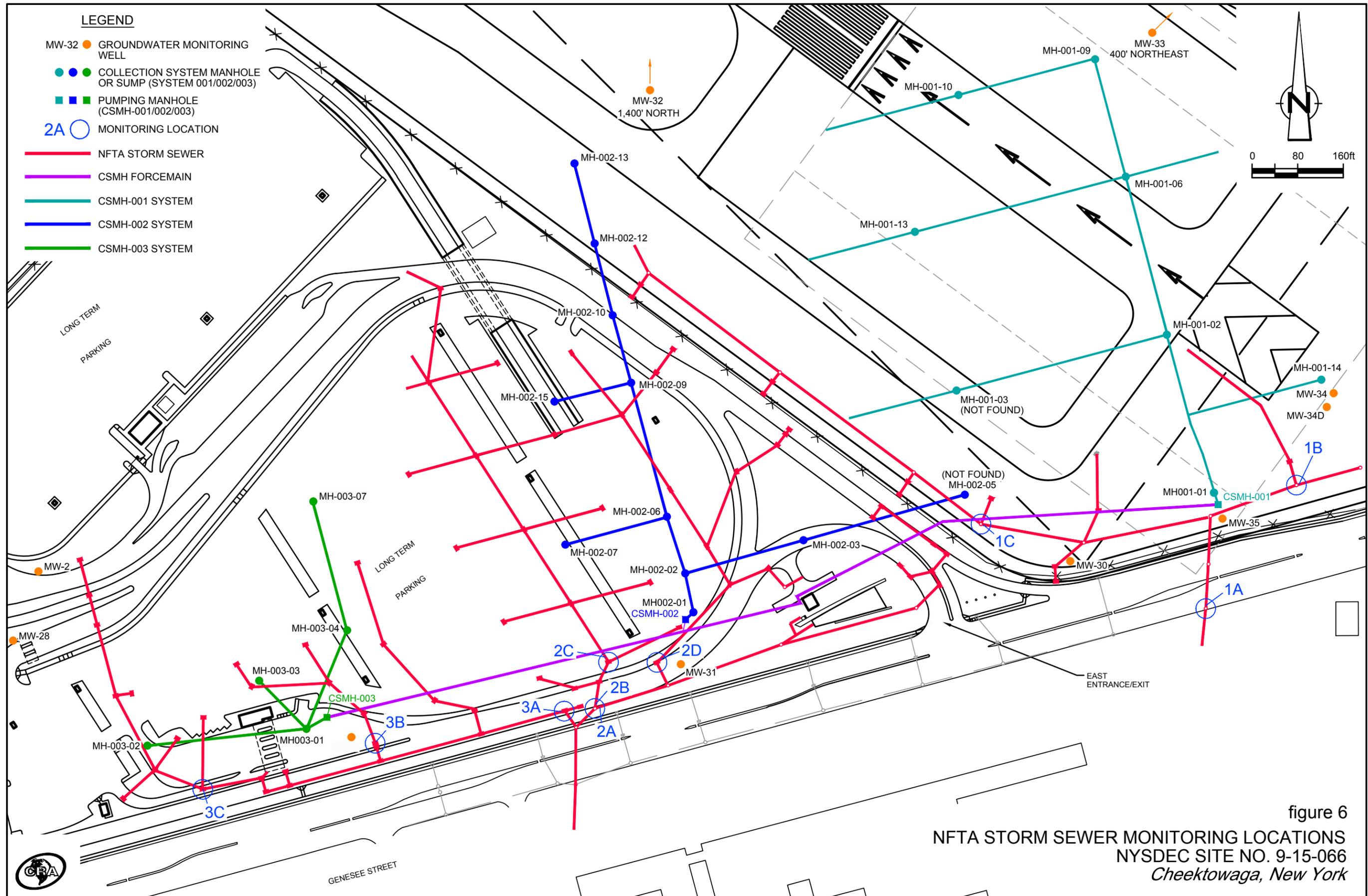


figure 6
 NFTA STORM SEWER MONITORING LOCATIONS
 NYSDEC SITE NO. 9-15-066
 Cheektowaga, New York

APPENDIX A
DAILY WORK SUMMARY

**APPENDIX A
DAILY WORK SUMMARY**

Date	Activity	Location(s)
07/14/14	Manhole Sealing	001-09, 001-10, 002-12
07/15/14	Manhole Sealing	001-01, 001-13, 001-14, CSMH-001, 002-13
07/16/14	Manhole Sealing	002-09, 002-10, 002-15
07/17/14	Manhole Sealing	002-03, 002-06, 002-07
07/28/14	Manhole Sealing	003-03, 003-04
	Pipe Filling	003-03 to 003-01, 003-04 to 003-01
07/29/14	Manhole Sealing	003-01, 003-02, CSMH-003
	Pipe Filling	003-02 to 003-01; 003-01 to CSMH-003
07/31/14	Bed Grouting	002-09 SE, 002-09 SW
08/01/14	Bed Grouting	002-06 SE, 002-06 SW
08/01/14	Bed Grouting	002-02 NE, 002-02 SE
08/04/14	Bed Grouting	002-02 SE
08/05/14	Bed Grouting	002-02 SW, 002-01 NE
08/06/14	Bed Grouting	002-01 NW
08/07/14	Bed Grouting	002-01 SE, 002-01 SW
08/08/14	Bed Grouting	003-02 NE, 003-02 SE
09/03/14	Bed Grouting	003-01 BH1, 003-01 BH2
09/04/14	Bed Grouting	003-01 BH3, 003-01 BH4, 003-01 BH5
09/05/14	Bed Grouting	003-01 BH6, 003-01 BH7
09/08/14	Bed Grouting	003-01 BH8, CSMH-003 NW
09/09/14	Bed Grouting	003-04 NE, 003-04 NW, CSMH-003
09/10/14	Bed Grouting	003-04 SE, 003-04 SW
09/12/14	Bed Grouting	001-01 NE, 001-01 NW
09/15/14	Bed Grouting	001-01 SE, 001-01 SW
10/15/14	MH Sealing	002-02
10/15/14	MH Sealing	002-01, CSMH-002
10/15/14	Pipe Filling	002-02 to CSMH-002
11/10/14	Treatment Plant Decommissioning	
11/11/14	Treatment Plant Decommissioning	
11/12/14	Treatment Plant Decommissioning	
11/17/14	Waste Removal for Off-Site Disposal	

APPENDIX B
SITE PHOTOGRAPHS



Photograph 1, July 14, 2014: Pumping concrete into MH001-10.



Photograph 2, July 15, 2014: Pumping from MH001-01.



Photograph 3, July 15, 2014: Filled MH-002-13.



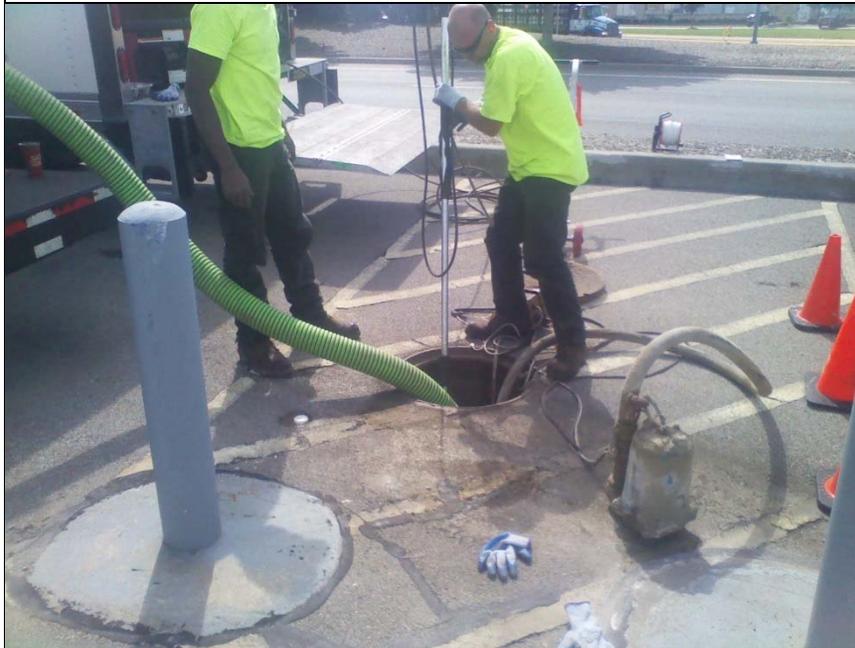
Photograph 4, July 16, 2014: Filled MH-001-13.



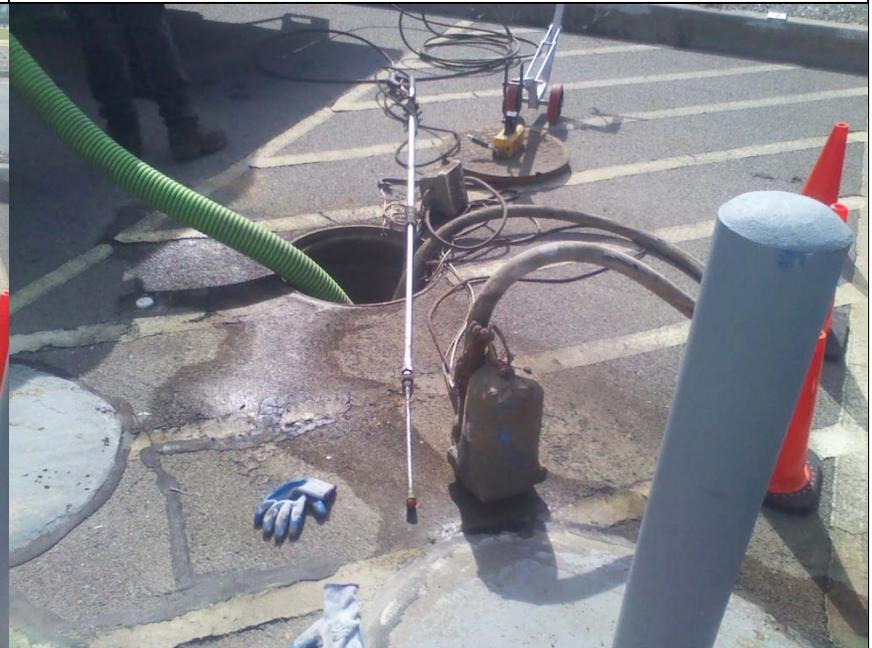
Photograph 5, July 16, 2014: Filled MH-001-01.



Photograph 6, July 17, 2014: Filled MH-002-06.



Photograph 7, July 24, 2014: Wand loosening sediment at CSMH-002.



Photograph 8, July 24, 2014: Pumping sediment from CSMH-002.



Photograph 9, July 28, 2014: Pumping flowable fill into MH-003-04.



Photograph 10, July 29, 2014: Filled MH-003-01.



Photograph 11, July 29, 2014: Pumping grout into CSMH-003.



Photograph 12, July 29, 2014: Filled CSMH-003.



Photograph 13, August 2, 2014: Grout plant.



Photograph 14, August 2, 2014: Mixing grout.



Photograph 15, August 2, 2014: Injecting grout around MH002-02.



Photograph 16, September 3, 2014: Drilling grout hole at MH003-01.

APPENDIX C
ANALYTICAL LABORATORY REPORT FOR SEDIMENT
(WASTE) SAMPLE

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-37601-1

Client Project/Site: Buffalo Airport

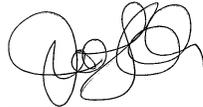
For:

Leo Brausch Consulting

131 Wedgewood Drive

Gibsonia, Pennsylvania 15044

Attn: Mr. Leo Brausch



Authorized for release by:

10/23/2014 2:29:57 PM

Jill Colussy, Project Manager I

(412)963-2444

jill.colussy@testamericainc.com

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results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Job ID: 180-37601-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative
180-37601-1

Receipt

The sample was received on 10/10/2014 10:30 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.6° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

The following sample appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the sample do not closely match any of the laboratory's Aroclor standards used for instrument calibration: SL-18036-100914-001 (180-37601-1). The sample has been quantified and reported as Aroclor 1016. Due to the poor match with the Aroclor standards, there is increased qualitative and quantitative uncertainty associated with this result.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.



Definitions/Glossary

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
F1	MS and/or MSD Recovery exceeds the control limits

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: Leo Brausch Consulting
 Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Laboratory: TestAmerica Pittsburgh

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-15
California	State Program	9	2891	03-31-15
Connecticut	State Program	1	PH-0688	09-30-14 *
Florida	NELAP	4	E871008	06-30-15
Illinois	NELAP	5	002602	06-30-15
Kansas	NELAP	7	E-10350	01-31-15
Louisiana	NELAP	6	04041	06-30-15
New Hampshire	NELAP	1	203011	04-04-15
New Jersey	NELAP	2	PA005	06-30-15
New York	NELAP	2	11182	03-31-15
North Carolina (WW/SW)	State Program	4	434	12-31-14
Pennsylvania	NELAP	3	02-00416	04-30-15
South Carolina	State Program	4	89014	04-30-15
Texas	NELAP	6	T104704528	03-31-15
US Fish & Wildlife	Federal		LE94312A-1	11-30-14
USDA	Federal		P330-10-00139	05-23-16
Utah	NELAP	8	STLP	05-31-15
Virginia	NELAP	3	460189	09-14-15
West Virginia DEP	State Program	3	142	01-31-15

* Certification renewal pending - certification considered valid.



Sample Summary

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-37601-1	SL-18036-100914-001	Sediment	10/09/14 09:00	10/10/14 10:30

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Method Summary

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL PIT
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PIT
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL PIT
6010C	Metals (ICP)	SW846	TAL PIT
7470A	Mercury (CVAA)	SW846	TAL PIT
2540G	SM 2540G	SM22	TAL PIT
9014	Cyanide	SW846	TAL PIT
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL PIT
9045D	pH	SW846	TAL PIT

Protocol References:

SM22 = SM22

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Client Sample ID: SL-18036-100914-001

Lab Sample ID: 180-37601-1

Date Collected: 10/09/14 09:00

Matrix: Sediment

Date Received: 10/10/14 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			25.00 g	500 mL	122232	10/21/14 13:19	SLM	TAL PIT
TCLP	Analysis	8260C		1	0.125 mL	5 mL	122328	10/22/14 21:30	PJJ	TAL PIT
		Instrument ID: CHHP7								
TCLP	Leach	1311			20.01 g	400 mL	121916	10/18/14 15:09	SLM	TAL PIT
TCLP	Prep	3510C			200 mL	10.0 mL	122098	10/21/14 03:05	KLG	TAL PIT
TCLP	Analysis	8270D		1	200 mL	10.0 mL	122115	10/21/14 09:12	VVP	TAL PIT
		Instrument ID: CH732								
Total/NA	Prep	3541			15.1 g	10.0 mL	122136	10/21/14 06:15	KLG	TAL PIT
Total/NA	Analysis	8082A		1	15.1 g	10.0 mL	122261	10/21/14 18:24	AKG	TAL PIT
		Instrument ID: CHGC8								
TCLP	Leach	1311			20.01 g	400 mL	121916	10/18/14 15:09	SLM	TAL PIT
TCLP	Prep	3010A			5 mL	50 mL	121955	10/19/14 11:26	SLB	TAL PIT
TCLP	Analysis	6010C		1	5 mL	50 mL	122106	10/20/14 21:42	RJG	TAL PIT
		Instrument ID: C								
TCLP	Leach	1311			20.01 g	400 mL	121916	10/18/14 15:09	SLM	TAL PIT
TCLP	Prep	7470A			50 mL	50 mL	122016	10/20/14 09:22	LEM	TAL PIT
TCLP	Analysis	7470A		1	50 mL	50 mL	122086	10/20/14 16:38	LEM	TAL PIT
		Instrument ID: K								
Total/NA	Analysis	2540G		1			121304	10/13/14 17:13	AB1	TAL PIT
		Instrument ID: NOEQUIP								
Total/NA	Prep	9010C			1.99 g	50 mL	121850	10/17/14 11:40	PGJ	TAL PIT
Total/NA	Analysis	9014		1	1.99 g	50 mL	121878	10/17/14 15:32	PGJ	TAL PIT
		Instrument ID: NOEQUIP								
Total/NA	Prep	9030B			4.98 g	50 mL	121357	10/14/14 08:55	MEB	TAL PIT
Total/NA	Analysis	9034		1	4.98 g	50 mL	121362	10/14/14 09:20	MEB	TAL PIT
		Instrument ID: NOEQUIP								
Total/NA	Analysis	9045D		1	20 g	20 mL	121268	10/13/14 11:25	AB1	TAL PIT
		Instrument ID: NOEQUIP								

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Analyst References:

Lab: TAL PIT

Batch Type: Leach

SLM = Sarah McCann

Batch Type: Prep

KLK = Kevin Geehring

LEM = Lauren McGrath

MEB = Michael Bucklaw

PGJ = Paul Johnson

SLB = Sandy Becker

Batch Type: Analysis

AB1 = Ashwin Baikadi

AKG = Ashok Gupta

LEM = Lauren McGrath

MEB = Michael Bucklaw

PGJ = Paul Johnson

PJJ = Patrick Journet

RJG = Rob Good

VVP = Vincent Piccolino

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Client Sample Results

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Client Sample ID: SL-18036-100914-001

Lab Sample ID: 180-37601-1

Date Collected: 10/09/14 09:00

Matrix: Sediment

Date Received: 10/10/14 10:30

Method: 8260C - Volatile Organic Compounds by GC/MS - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	200	U	200	38	ug/L			10/22/14 21:30	1
2-Butanone (MEK)	200	U	200	43	ug/L			10/22/14 21:30	1
Benzene	200	U	200	40	ug/L			10/22/14 21:30	1
Carbon tetrachloride	200	U	200	43	ug/L			10/22/14 21:30	1
Chlorobenzene	200	U	200	21	ug/L			10/22/14 21:30	1
Chloroform	200	U	200	40	ug/L			10/22/14 21:30	1
Tetrachloroethene	200	U	200	33	ug/L			10/22/14 21:30	1
Trichloroethene	200	U	200	32	ug/L			10/22/14 21:30	1
Vinyl chloride	200	U	200	52	ug/L			10/22/14 21:30	1
1,1-Dichloroethene	200	U	200	43	ug/L			10/22/14 21:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		62 - 123		10/22/14 21:30	1
4-Bromofluorobenzene (Surr)	94		75 - 120		10/22/14 21:30	1
Dibromofluoromethane (Surr)	101		80 - 120		10/22/14 21:30	1
Toluene-d8 (Surr)	88		80 - 120		10/22/14 21:30	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.050	U	0.050	0.012	mg/L		10/21/14 03:05	10/21/14 09:12	1
2,4,5-Trichlorophenol	0.050	U	0.050	0.013	mg/L		10/21/14 03:05	10/21/14 09:12	1
2,4,6-Trichlorophenol	0.050	U	0.050	0.011	mg/L		10/21/14 03:05	10/21/14 09:12	1
2,4-Dinitrotoluene	0.050	U	0.050	0.010	mg/L		10/21/14 03:05	10/21/14 09:12	1
2-Methylphenol	0.050	U	0.050	0.014	mg/L		10/21/14 03:05	10/21/14 09:12	1
Methylphenol, 3 & 4	0.050	U	0.050	0.027	mg/L		10/21/14 03:05	10/21/14 09:12	1
Hexachlorobenzene	0.050	U	0.050	0.011	mg/L		10/21/14 03:05	10/21/14 09:12	1
Hexachlorobutadiene	0.050	U	0.050	0.013	mg/L		10/21/14 03:05	10/21/14 09:12	1
Hexachloroethane	0.050	U	0.050	0.013	mg/L		10/21/14 03:05	10/21/14 09:12	1
Nitrobenzene	0.050	U	0.050	0.013	mg/L		10/21/14 03:05	10/21/14 09:12	1
Pentachlorophenol	0.25	U	0.25	0.022	mg/L		10/21/14 03:05	10/21/14 09:12	1
Pyridine	0.10	U	0.10	0.0083	mg/L		10/21/14 03:05	10/21/14 09:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	73		35 - 115	10/21/14 03:05	10/21/14 09:12	1
2-Fluorophenol (Surr)	78		20 - 110	10/21/14 03:05	10/21/14 09:12	1
2,4,6-Tribromophenol (Surr)	82		19 - 138	10/21/14 03:05	10/21/14 09:12	1
Nitrobenzene-d5 (Surr)	76		39 - 115	10/21/14 03:05	10/21/14 09:12	1
Phenol-d5 (Surr)	68		30 - 118	10/21/14 03:05	10/21/14 09:12	1
Terphenyl-d14 (Surr)	75		30 - 143	10/21/14 03:05	10/21/14 09:12	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	32		17	2.6	ug/Kg	☼	10/21/14 06:15	10/21/14 18:24	1
PCB-1221	17	U	17	3.3	ug/Kg	☼	10/21/14 06:15	10/21/14 18:24	1
PCB-1232	17	U	17	3.0	ug/Kg	☼	10/21/14 06:15	10/21/14 18:24	1
PCB-1242	17	U	17	2.8	ug/Kg	☼	10/21/14 06:15	10/21/14 18:24	1
PCB-1248	17	U	17	1.6	ug/Kg	☼	10/21/14 06:15	10/21/14 18:24	1
PCB-1254	17	U	17	2.5	ug/Kg	☼	10/21/14 06:15	10/21/14 18:24	1
PCB-1260	17	U	17	2.5	ug/Kg	☼	10/21/14 06:15	10/21/14 18:24	1

TestAmerica Pittsburgh

Client Sample Results

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Client Sample ID: SL-18036-100914-001

Lab Sample ID: 180-37601-1

Date Collected: 10/09/14 09:00

Matrix: Sediment

Date Received: 10/10/14 10:30

Percent Solids: 48.0

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	54		45 - 135	10/21/14 06:15	10/21/14 18:24	1
DCB Decachlorobiphenyl (Surr)	84		45 - 125	10/21/14 06:15	10/21/14 18:24	1

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.50	U	0.50	0.030	mg/L		10/19/14 11:26	10/20/14 21:42	1
Barium	1.1	J B	2.0	0.0019	mg/L		10/19/14 11:26	10/20/14 21:42	1
Cadmium	0.0094	J B	0.50	0.0017	mg/L		10/19/14 11:26	10/20/14 21:42	1
Chromium	0.50	U	0.50	0.010	mg/L		10/19/14 11:26	10/20/14 21:42	1
Lead	0.50	U	0.50	0.015	mg/L		10/19/14 11:26	10/20/14 21:42	1
Selenium	0.50	U	0.50	0.017	mg/L		10/19/14 11:26	10/20/14 21:42	1
Silver	0.50	U	0.50	0.0027	mg/L		10/19/14 11:26	10/20/14 21:42	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000038	mg/L		10/20/14 09:22	10/20/14 16:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	52		0.10	0.10	%			10/13/14 17:13	1
Percent Solids	48		0.10	0.10	%			10/13/14 17:13	1
Cyanide, Total	1.6		0.52	0.15	mg/Kg	✱	10/17/14 11:40	10/17/14 15:32	1
Sulfide	77		63	13	mg/Kg	✱	10/14/14 08:55	10/14/14 09:20	1
pH	12.0		0.100	0.100	SU			10/13/14 11:25	1

QC Sample Results

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: LCS 180-122328/10

Matrix: Sediment

Analysis Batch: 122328

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	400	418		ug/L		104	63 - 140
2-Butanone (MEK)	400	361		ug/L		90	31 - 139
Benzene	400	376		ug/L		94	80 - 120
Carbon tetrachloride	400	443		ug/L		111	63 - 139
Chlorobenzene	400	374		ug/L		93	83 - 120
Chloroform	400	382		ug/L		95	77 - 119
Tetrachloroethene	400	385		ug/L		96	78 - 126
Trichloroethene	400	400		ug/L		100	80 - 120
Vinyl chloride	400	367		ug/L		92	57 - 128
1,1-Dichloroethene	400	424		ug/L		106	69 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		62 - 123
4-Bromofluorobenzene (Surr)	89		75 - 120
Dibromofluoromethane (Surr)	97		80 - 120
Toluene-d8 (Surr)	91		80 - 120

Lab Sample ID: LB 180-122232/9-A

Matrix: Sediment

Analysis Batch: 122328

Client Sample ID: Method Blank

Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	50	U	50	9.6	ug/L			10/22/14 13:05	1
2-Butanone (MEK)	50	U	50	11	ug/L			10/22/14 13:05	1
Benzene	50	U	50	9.9	ug/L			10/22/14 13:05	1
Carbon tetrachloride	50	U	50	11	ug/L			10/22/14 13:05	1
Chlorobenzene	50	U	50	5.3	ug/L			10/22/14 13:05	1
Chloroform	50	U	50	10	ug/L			10/22/14 13:05	1
Tetrachloroethene	50	U	50	8.2	ug/L			10/22/14 13:05	1
Trichloroethene	50	U	50	8.0	ug/L			10/22/14 13:05	1
Vinyl chloride	50	U	50	13	ug/L			10/22/14 13:05	1
1,1-Dichloroethene	50	U	50	11	ug/L			10/22/14 13:05	1

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		62 - 123		10/22/14 13:05	1
4-Bromofluorobenzene (Surr)	89		75 - 120		10/22/14 13:05	1
Dibromofluoromethane (Surr)	91		80 - 120		10/22/14 13:05	1
Toluene-d8 (Surr)	90		80 - 120		10/22/14 13:05	1

Lab Sample ID: 180-37559-B-5-A MS

Matrix: Sediment

Analysis Batch: 122328

Client Sample ID: Matrix Spike

Prep Type: TCLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	200	U	1600	1660		ug/L		104	63 - 140
2-Butanone (MEK)	200	U	1600	1760		ug/L		110	31 - 139
Benzene	200	U	1600	1470		ug/L		92	80 - 120

TestAmerica Pittsburgh

QC Sample Results

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 180-37559-B-5-A MS

Matrix: Sediment

Analysis Batch: 122328

Client Sample ID: Matrix Spike

Prep Type: TCLP

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Carbon tetrachloride	200	U	1600	1610		ug/L		101	63 - 139	
Chlorobenzene	200	U	1600	1510		ug/L		95	83 - 120	
Chloroform	200	U	1600	1530		ug/L		96	77 - 119	
Tetrachloroethene	200	U	1600	1520		ug/L		95	78 - 126	
Trichloroethene	200	U	1600	1630		ug/L		102	80 - 120	
Vinyl chloride	200	U	1600	1320		ug/L		83	57 - 128	
1,1-Dichloroethene	200	U	1600	1490		ug/L		93	69 - 127	
MS MS										
Surrogate	%Recovery	Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)	97		62 - 123							
4-Bromofluorobenzene (Surr)	91		75 - 120							
Dibromofluoromethane (Surr)	99		80 - 120							
Toluene-d8 (Surr)	94		80 - 120							

Lab Sample ID: 180-37559-B-5-A MSD

Matrix: Sediment

Analysis Batch: 122328

Client Sample ID: Matrix Spike Duplicate

Prep Type: TCLP

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec.	Limits	RPD	RPD
	Result	Qualifier		Result	Qualifier						Limit	
1,2-Dichloroethane	200	U	1600	1700		ug/L		106	63 - 140	2	25	
2-Butanone (MEK)	200	U	1600	1410		ug/L		88	31 - 139	22	35	
Benzene	200	U	1600	1500		ug/L		94	80 - 120	2	20	
Carbon tetrachloride	200	U	1600	1670		ug/L		104	63 - 139	3	25	
Chlorobenzene	200	U	1600	1480		ug/L		93	83 - 120	2	20	
Chloroform	200	U	1600	1550		ug/L		97	77 - 119	1	20	
Tetrachloroethene	200	U	1600	1510		ug/L		95	78 - 126	0	25	
Trichloroethene	200	U	1600	1610		ug/L		100	80 - 120	2	20	
Vinyl chloride	200	U	1600	1390		ug/L		87	57 - 128	5	26	
1,1-Dichloroethene	200	U	1600	1550		ug/L		97	69 - 127	3	20	
MSD MSD												
Surrogate	%Recovery	Qualifier	Limits									
1,2-Dichloroethane-d4 (Surr)	100		62 - 123									
4-Bromofluorobenzene (Surr)	93		75 - 120									
Dibromofluoromethane (Surr)	93		80 - 120									
Toluene-d8 (Surr)	92		80 - 120									

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-122098/1-A

Matrix: Sediment

Analysis Batch: 122115

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 122098

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dichlorobenzene	0.050	U	0.050	0.012	mg/L		10/21/14 03:05	10/21/14 06:57	1
2,4,5-Trichlorophenol	0.050	U	0.050	0.013	mg/L		10/21/14 03:05	10/21/14 06:57	1
2,4,6-Trichlorophenol	0.050	U	0.050	0.011	mg/L		10/21/14 03:05	10/21/14 06:57	1
2,4-Dinitrotoluene	0.050	U	0.050	0.010	mg/L		10/21/14 03:05	10/21/14 06:57	1

TestAmerica Pittsburgh

QC Sample Results

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-122098/1-A

Matrix: Sediment

Analysis Batch: 122115

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 122098

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Methylphenol	0.050	U	0.050	0.014	mg/L		10/21/14 03:05	10/21/14 06:57	1
Methylphenol, 3 & 4	0.050	U	0.050	0.027	mg/L		10/21/14 03:05	10/21/14 06:57	1
Hexachlorobenzene	0.050	U	0.050	0.011	mg/L		10/21/14 03:05	10/21/14 06:57	1
Hexachlorobutadiene	0.050	U	0.050	0.013	mg/L		10/21/14 03:05	10/21/14 06:57	1
Hexachloroethane	0.050	U	0.050	0.013	mg/L		10/21/14 03:05	10/21/14 06:57	1
Nitrobenzene	0.050	U	0.050	0.013	mg/L		10/21/14 03:05	10/21/14 06:57	1
Pentachlorophenol	0.25	U	0.25	0.022	mg/L		10/21/14 03:05	10/21/14 06:57	1
Pyridine	0.10	U	0.10	0.0083	mg/L		10/21/14 03:05	10/21/14 06:57	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	73		35 - 115	10/21/14 03:05	10/21/14 06:57	1
2-Fluorophenol (Surr)	78		20 - 110	10/21/14 03:05	10/21/14 06:57	1
2,4,6-Tribromophenol (Surr)	82		19 - 138	10/21/14 03:05	10/21/14 06:57	1
Nitrobenzene-d5 (Surr)	79		39 - 115	10/21/14 03:05	10/21/14 06:57	1
Phenol-d5 (Surr)	69		30 - 118	10/21/14 03:05	10/21/14 06:57	1
Terphenyl-d14 (Surr)	74		30 - 143	10/21/14 03:05	10/21/14 06:57	1

Lab Sample ID: LCS 180-122098/2-A

Matrix: Sediment

Analysis Batch: 122115

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 122098

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,4-Dichlorobenzene	0.250	0.178		mg/L		71	37 - 115
2,4,5-Trichlorophenol	0.250	0.180		mg/L		72	35 - 115
2,4,6-Trichlorophenol	0.250	0.195		mg/L		78	40 - 115
2,4-Dinitrotoluene	0.250	0.169		mg/L		68	40 - 115
2-Methylphenol	0.250	0.185		mg/L		74	43 - 115
Methylphenol, 3 & 4	0.500	0.362		mg/L		72	30 - 121
Hexachlorobenzene	0.250	0.162		mg/L		65	45 - 115
Hexachlorobutadiene	0.250	0.197		mg/L		79	42 - 115
Hexachloroethane	0.250	0.185		mg/L		74	25 - 106
Nitrobenzene	0.250	0.197		mg/L		79	40 - 115
Pentachlorophenol	0.250	0.115	J	mg/L		46	16 - 140
Pyridine	0.250	0.210		mg/L		84	22 - 105

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	80		35 - 115
2-Fluorophenol (Surr)	86		20 - 110
2,4,6-Tribromophenol (Surr)	91		19 - 138
Nitrobenzene-d5 (Surr)	85		39 - 115
Phenol-d5 (Surr)	76		30 - 118
Terphenyl-d14 (Surr)	82		30 - 143

TestAmerica Pittsburgh

QC Sample Results

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 180-122098/3-A

Matrix: Sediment

Analysis Batch: 122115

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 122098

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
1,4-Dichlorobenzene	0.250	0.172		mg/L		69	37 - 115	3	35	
2,4,5-Trichlorophenol	0.250	0.184		mg/L		74	35 - 115	2	40	
2,4,6-Trichlorophenol	0.250	0.186		mg/L		75	40 - 115	4	37	
2,4-Dinitrotoluene	0.250	0.165		mg/L		66	40 - 115	3	42	
2-Methylphenol	0.250	0.166		mg/L		66	43 - 115	11	47	
Methylphenol, 3 & 4	0.500	0.334		mg/L		67	30 - 121	8	35	
Hexachlorobenzene	0.250	0.161		mg/L		64	45 - 115	1	22	
Hexachlorobutadiene	0.250	0.180		mg/L		72	42 - 115	9	28	
Hexachloroethane	0.250	0.176		mg/L		70	25 - 106	5	38	
Nitrobenzene	0.250	0.196		mg/L		78	40 - 115	0	26	
Pentachlorophenol	0.250	0.109	J	mg/L		44	16 - 140	5	40	
Pyridine	0.250	0.216		mg/L		86	22 - 105	3	40	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	73		35 - 115
2-Fluorophenol (Surr)	83		20 - 110
2,4,6-Tribromophenol (Surr)	88		19 - 138
Nitrobenzene-d5 (Surr)	79		39 - 115
Phenol-d5 (Surr)	73		30 - 118
Terphenyl-d14 (Surr)	78		30 - 143

Lab Sample ID: LB 180-121916/2-D

Matrix: Sediment

Analysis Batch: 122115

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 122098

Analyte	LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dichlorobenzene	0.050	U	0.050	0.012	mg/L		10/21/14 03:05	10/21/14 07:42	1
2,4,5-Trichlorophenol	0.050	U	0.050	0.013	mg/L		10/21/14 03:05	10/21/14 07:42	1
2,4,6-Trichlorophenol	0.050	U	0.050	0.011	mg/L		10/21/14 03:05	10/21/14 07:42	1
2,4-Dinitrotoluene	0.050	U	0.050	0.010	mg/L		10/21/14 03:05	10/21/14 07:42	1
2-Methylphenol	0.050	U	0.050	0.014	mg/L		10/21/14 03:05	10/21/14 07:42	1
Methylphenol, 3 & 4	0.050	U	0.050	0.027	mg/L		10/21/14 03:05	10/21/14 07:42	1
Hexachlorobenzene	0.050	U	0.050	0.011	mg/L		10/21/14 03:05	10/21/14 07:42	1
Hexachlorobutadiene	0.050	U	0.050	0.013	mg/L		10/21/14 03:05	10/21/14 07:42	1
Hexachloroethane	0.050	U	0.050	0.013	mg/L		10/21/14 03:05	10/21/14 07:42	1
Nitrobenzene	0.050	U	0.050	0.013	mg/L		10/21/14 03:05	10/21/14 07:42	1
Pentachlorophenol	0.25	U	0.25	0.022	mg/L		10/21/14 03:05	10/21/14 07:42	1
Pyridine	0.10	U	0.10	0.0083	mg/L		10/21/14 03:05	10/21/14 07:42	1

Surrogate	LB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	77		35 - 115	10/21/14 03:05	10/21/14 07:42	1
2-Fluorophenol (Surr)	81		20 - 110	10/21/14 03:05	10/21/14 07:42	1
2,4,6-Tribromophenol (Surr)	85		19 - 138	10/21/14 03:05	10/21/14 07:42	1
Nitrobenzene-d5 (Surr)	79		39 - 115	10/21/14 03:05	10/21/14 07:42	1
Phenol-d5 (Surr)	72		30 - 118	10/21/14 03:05	10/21/14 07:42	1
Terphenyl-d14 (Surr)	74		30 - 143	10/21/14 03:05	10/21/14 07:42	1

TestAmerica Pittsburgh

QC Sample Results

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 180-122136/1-A
Matrix: Sediment
Analysis Batch: 122261

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 122136

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	8.3	U	8.3	1.2	ug/Kg		10/21/14 06:15	10/21/14 17:52	1
PCB-1221	8.3	U	8.3	1.6	ug/Kg		10/21/14 06:15	10/21/14 17:52	1
PCB-1232	8.3	U	8.3	1.4	ug/Kg		10/21/14 06:15	10/21/14 17:52	1
PCB-1242	8.3	U	8.3	1.4	ug/Kg		10/21/14 06:15	10/21/14 17:52	1
PCB-1248	8.3	U	8.3	0.79	ug/Kg		10/21/14 06:15	10/21/14 17:52	1
PCB-1254	8.3	U	8.3	1.2	ug/Kg		10/21/14 06:15	10/21/14 17:52	1
PCB-1260	8.3	U	8.3	1.2	ug/Kg		10/21/14 06:15	10/21/14 17:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	97		45 - 135	10/21/14 06:15	10/21/14 17:52	1
DCB Decachlorobiphenyl (Surr)	115		45 - 125	10/21/14 06:15	10/21/14 17:52	1

Lab Sample ID: LCS 180-122136/2-A
Matrix: Sediment
Analysis Batch: 122261

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 122136

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	667	590		ug/Kg		89	55 - 135
PCB-1260	667	692		ug/Kg		104	50 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	99		45 - 135
DCB Decachlorobiphenyl (Surr)	116		45 - 125

Lab Sample ID: 180-37601-1 MS
Matrix: Sediment
Analysis Batch: 122261

Client Sample ID: SL-18036-100914-001
Prep Type: Total/NA
Prep Batch: 122136

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	32		1390	736	F1	ug/Kg	☼	51	55 - 135
PCB-1260	17	U	1390	907		ug/Kg	☼	65	50 - 140

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene (Surr)	58		45 - 135
DCB Decachlorobiphenyl (Surr)	90		45 - 125

Lab Sample ID: 180-37601-1 MSD
Matrix: Sediment
Analysis Batch: 122261

Client Sample ID: SL-18036-100914-001
Prep Type: Total/NA
Prep Batch: 122136

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
PCB-1016	32		1380	839		ug/Kg	☼	59	55 - 135	13	20
PCB-1260	17	U	1380	1010		ug/Kg	☼	73	50 - 140	11	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene (Surr)	66		45 - 135
DCB Decachlorobiphenyl (Surr)	99		45 - 125

TestAmerica Pittsburgh

QC Sample Results

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 180-121955/1-A
Matrix: Sediment
Analysis Batch: 122106

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121955

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.050	U	0.050	0.0030	mg/L		10/19/14 11:26	10/20/14 21:22	1
Barium	0.20	U	0.20	0.00019	mg/L		10/19/14 11:26	10/20/14 21:22	1
Cadmium	0.050	U	0.050	0.00017	mg/L		10/19/14 11:26	10/20/14 21:22	1
Chromium	0.050	U	0.050	0.0010	mg/L		10/19/14 11:26	10/20/14 21:22	1
Lead	0.050	U	0.050	0.0015	mg/L		10/19/14 11:26	10/20/14 21:22	1
Selenium	0.050	U	0.050	0.0017	mg/L		10/19/14 11:26	10/20/14 21:22	1
Silver	0.050	U	0.050	0.00027	mg/L		10/19/14 11:26	10/20/14 21:22	1

Lab Sample ID: LCS 180-121955/2-A
Matrix: Sediment
Analysis Batch: 122106

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121955

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.500	0.519		mg/L		104	80 - 120
Barium	2.00	2.07		mg/L		104	80 - 120
Cadmium	0.0500	0.0514		mg/L		103	80 - 120
Chromium	0.200	0.200		mg/L		100	80 - 120
Lead	0.500	0.474		mg/L		95	80 - 120
Selenium	0.500	0.515		mg/L		103	80 - 120
Silver	0.0500	0.0506		mg/L		101	80 - 120

Lab Sample ID: LCSD 180-121955/3-A
Matrix: Sediment
Analysis Batch: 122106

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 121955

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.500	0.513		mg/L		103	80 - 120	1	20
Barium	2.00	2.06		mg/L		103	80 - 120	0	20
Cadmium	0.0500	0.0511		mg/L		102	80 - 120	1	20
Chromium	0.200	0.199		mg/L		100	80 - 120	1	20
Lead	0.500	0.473		mg/L		95	80 - 120	0	20
Selenium	0.500	0.511		mg/L		102	80 - 120	1	20
Silver	0.0500	0.0504		mg/L		101	80 - 120	0	20

Lab Sample ID: LB 180-121916/2-B
Matrix: Sediment
Analysis Batch: 122106

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 121955

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.50	U	0.50	0.030	mg/L		10/19/14 11:26	10/20/14 21:27	1
Barium	0.00670	J	2.0	0.0019	mg/L		10/19/14 11:26	10/20/14 21:27	1
Cadmium	0.00190	J	0.50	0.0017	mg/L		10/19/14 11:26	10/20/14 21:27	1
Chromium	0.50	U	0.50	0.010	mg/L		10/19/14 11:26	10/20/14 21:27	1
Lead	0.50	U	0.50	0.015	mg/L		10/19/14 11:26	10/20/14 21:27	1
Selenium	0.50	U	0.50	0.017	mg/L		10/19/14 11:26	10/20/14 21:27	1
Silver	0.50	U	0.50	0.0027	mg/L		10/19/14 11:26	10/20/14 21:27	1

TestAmerica Pittsburgh

QC Sample Results

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-122016/1-A
Matrix: Sediment
Analysis Batch: 122086

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 122016

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000038	mg/L		10/20/14 09:12	10/20/14 16:01	1

Lab Sample ID: LCS 180-122016/2-A
Matrix: Sediment
Analysis Batch: 122086

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 122016

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.00263		mg/L		105	80 - 120

Lab Sample ID: LCSD 180-122016/3-A
Matrix: Sediment
Analysis Batch: 122086

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 122016

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00250	0.00258		mg/L		103	80 - 120	2	20

Lab Sample ID: LB 180-121916/2-C
Matrix: Sediment
Analysis Batch: 122086

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 122016

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000038	mg/L		10/20/14 09:22	10/20/14 16:36	1

Method: 2540G - SM 2540G

Lab Sample ID: 180-37595-A-30 DU
Matrix: Sediment
Analysis Batch: 121304

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	54		55		%		1	20
Percent Solids	46		45		%		2	20

Method: 9014 - Cyanide

Lab Sample ID: MB 180-121850/4-A
Matrix: Sediment
Analysis Batch: 121878

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121850

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.25	U	0.25	0.073	mg/Kg		10/17/14 11:40	10/17/14 14:59	1

Lab Sample ID: HLCS 180-121850/2-A
Matrix: Sediment
Analysis Batch: 121878

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121850

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.250	0.240		mg/Kg		96	90 - 110

TestAmerica Pittsburgh

QC Sample Results

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Method: 9014 - Cyanide (Continued)

Lab Sample ID: LCS 180-121850/3-A
Matrix: Sediment
Analysis Batch: 121878

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121850

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	64.5	74.0		mg/Kg		115	38 - 162

Lab Sample ID: LLCS 180-121850/1-A
Matrix: Sediment
Analysis Batch: 121878

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121850

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0500	0.0501		mg/Kg		100	90 - 110

Lab Sample ID: 180-37584-C-2-N MS
Matrix: Sediment
Analysis Batch: 121878

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 121850

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.55	U	11.0	13.0		mg/Kg	☼	118	75 - 125

Lab Sample ID: 180-37584-D-2-C MSD
Matrix: Sediment
Analysis Batch: 121878

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 121850

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.55	U	11.4	10.3	F2	mg/Kg	☼	90	75 - 125	24	20

Lab Sample ID: 180-37601-1 MS
Matrix: Sediment
Analysis Batch: 121878

Client Sample ID: SL-18036-100914-001
Prep Type: Total/NA
Prep Batch: 121850

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	1.6		10.4	10.8		mg/Kg	☼	89	75 - 125

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 180-121357/1-A
Matrix: Sediment
Analysis Batch: 121362

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121357

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	30	U	30	6.0	mg/Kg		10/14/14 08:55	10/14/14 09:20	1

Lab Sample ID: LCS 180-121357/2-A
Matrix: Sediment
Analysis Batch: 121362

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121357

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	192	175		mg/Kg		91	85 - 115

TestAmerica Pittsburgh

QC Sample Results

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: 180-37584-E-2-B MS

Matrix: Sediment

Analysis Batch: 121362

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 121357

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	240		432	609		mg/Kg	✘	85	75 - 125

Lab Sample ID: 180-37584-E-2-C MSD

Matrix: Sediment

Analysis Batch: 121362

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 121357

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	240		434	620		mg/Kg	✘	87	75 - 125	2	20

Method: 9045D - pH

Lab Sample ID: LCS 180-121268/1

Matrix: Sediment

Analysis Batch: 121268

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.050		SU		101	99 - 101

Lab Sample ID: 180-37574-A-1 DU

Matrix: Sediment

Analysis Batch: 121268

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	6.44		6.480		SU		0.6	2

QC Association Summary

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

GC/MS VOA

Leach Batch: 122232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37559-B-5-A MS	Matrix Spike	TCLP	Sediment	1311	
180-37559-B-5-A MSD	Matrix Spike Duplicate	TCLP	Sediment	1311	
180-37601-1	SL-18036-100914-001	TCLP	Sediment	1311	
LB 180-122232/9-A	Method Blank	TCLP	Sediment	1311	

Analysis Batch: 122328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37559-B-5-A MS	Matrix Spike	TCLP	Sediment	8260C	122232
180-37559-B-5-A MSD	Matrix Spike Duplicate	TCLP	Sediment	8260C	122232
180-37601-1	SL-18036-100914-001	TCLP	Sediment	8260C	122232
LB 180-122232/9-A	Method Blank	TCLP	Sediment	8260C	122232
LCS 180-122328/10	Lab Control Sample	Total/NA	Sediment	8260C	

GC/MS Semi VOA

Leach Batch: 121916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37601-1	SL-18036-100914-001	TCLP	Sediment	1311	
LB 180-121916/2-D	Method Blank	TCLP	Sediment	1311	

Prep Batch: 122098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37601-1	SL-18036-100914-001	TCLP	Sediment	3510C	121916
LB 180-121916/2-D	Method Blank	TCLP	Sediment	3510C	121916
LCS 180-122098/2-A	Lab Control Sample	Total/NA	Sediment	3510C	
LCSD 180-122098/3-A	Lab Control Sample Dup	Total/NA	Sediment	3510C	
MB 180-122098/1-A	Method Blank	Total/NA	Sediment	3510C	

Analysis Batch: 122115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37601-1	SL-18036-100914-001	TCLP	Sediment	8270D	122098
LB 180-121916/2-D	Method Blank	TCLP	Sediment	8270D	122098
LCS 180-122098/2-A	Lab Control Sample	Total/NA	Sediment	8270D	122098
LCSD 180-122098/3-A	Lab Control Sample Dup	Total/NA	Sediment	8270D	122098
MB 180-122098/1-A	Method Blank	Total/NA	Sediment	8270D	122098

GC Semi VOA

Prep Batch: 122136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37601-1	SL-18036-100914-001	Total/NA	Sediment	3541	
180-37601-1 MS	SL-18036-100914-001	Total/NA	Sediment	3541	
180-37601-1 MSD	SL-18036-100914-001	Total/NA	Sediment	3541	
LCS 180-122136/2-A	Lab Control Sample	Total/NA	Sediment	3541	
MB 180-122136/1-A	Method Blank	Total/NA	Sediment	3541	

Analysis Batch: 122261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37601-1	SL-18036-100914-001	Total/NA	Sediment	8082A	122136
180-37601-1 MS	SL-18036-100914-001	Total/NA	Sediment	8082A	122136

TestAmerica Pittsburgh

QC Association Summary

Client: Leo Brausch Consulting
Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

GC Semi VOA (Continued)

Analysis Batch: 122261 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37601-1 MSD	SL-18036-100914-001	Total/NA	Sediment	8082A	122136
LCS 180-122136/2-A	Lab Control Sample	Total/NA	Sediment	8082A	122136
MB 180-122136/1-A	Method Blank	Total/NA	Sediment	8082A	122136

Metals

Leach Batch: 121916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37601-1	SL-18036-100914-001	TCLP	Sediment	1311	
LB 180-121916/2-B	Method Blank	TCLP	Sediment	1311	
LB 180-121916/2-C	Method Blank	TCLP	Sediment	1311	

Prep Batch: 121955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37601-1	SL-18036-100914-001	TCLP	Sediment	3010A	121916
LB 180-121916/2-B	Method Blank	TCLP	Sediment	3010A	121916
LCS 180-121955/2-A	Lab Control Sample	Total/NA	Sediment	3010A	
LCSD 180-121955/3-A	Lab Control Sample Dup	Total/NA	Sediment	3010A	
MB 180-121955/1-A	Method Blank	Total/NA	Sediment	3010A	

Prep Batch: 122016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37601-1	SL-18036-100914-001	TCLP	Sediment	7470A	121916
LB 180-121916/2-C	Method Blank	TCLP	Sediment	7470A	121916
LCS 180-122016/2-A	Lab Control Sample	Total/NA	Sediment	7470A	
LCSD 180-122016/3-A	Lab Control Sample Dup	Total/NA	Sediment	7470A	
MB 180-122016/1-A	Method Blank	Total/NA	Sediment	7470A	

Analysis Batch: 122086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37601-1	SL-18036-100914-001	TCLP	Sediment	7470A	122016
LB 180-121916/2-C	Method Blank	TCLP	Sediment	7470A	122016
LCS 180-122016/2-A	Lab Control Sample	Total/NA	Sediment	7470A	122016
LCSD 180-122016/3-A	Lab Control Sample Dup	Total/NA	Sediment	7470A	122016
MB 180-122016/1-A	Method Blank	Total/NA	Sediment	7470A	122016

Analysis Batch: 122106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37601-1	SL-18036-100914-001	TCLP	Sediment	6010C	121955
LB 180-121916/2-B	Method Blank	TCLP	Sediment	6010C	121955
LCS 180-121955/2-A	Lab Control Sample	Total/NA	Sediment	6010C	121955
LCSD 180-121955/3-A	Lab Control Sample Dup	Total/NA	Sediment	6010C	121955
MB 180-121955/1-A	Method Blank	Total/NA	Sediment	6010C	121955

General Chemistry

Analysis Batch: 121268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37574-A-1 DU	Duplicate	Total/NA	Sediment	9045D	
180-37601-1	SL-18036-100914-001	Total/NA	Sediment	9045D	

TestAmerica Pittsburgh

QC Association Summary

Client: Leo Brausch Consulting
 Project/Site: Buffalo Airport

TestAmerica Job ID: 180-37601-1

General Chemistry (Continued)

Analysis Batch: 121268 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-121268/1	Lab Control Sample	Total/NA	Sediment	9045D	

Analysis Batch: 121304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37595-A-30 DU	Duplicate	Total/NA	Sediment	2540G	
180-37601-1	SL-18036-100914-001	Total/NA	Sediment	2540G	

Prep Batch: 121357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37584-E-2-B MS	Matrix Spike	Total/NA	Sediment	9030B	
180-37584-E-2-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	9030B	
180-37601-1	SL-18036-100914-001	Total/NA	Sediment	9030B	
LCS 180-121357/2-A	Lab Control Sample	Total/NA	Sediment	9030B	
MB 180-121357/1-A	Method Blank	Total/NA	Sediment	9030B	

Analysis Batch: 121362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37584-E-2-B MS	Matrix Spike	Total/NA	Sediment	9034	121357
180-37584-E-2-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	9034	121357
180-37601-1	SL-18036-100914-001	Total/NA	Sediment	9034	121357
LCS 180-121357/2-A	Lab Control Sample	Total/NA	Sediment	9034	121357
MB 180-121357/1-A	Method Blank	Total/NA	Sediment	9034	121357

Prep Batch: 121850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37584-C-2-N MS	Matrix Spike	Total/NA	Sediment	9010C	
180-37584-D-2-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	9010C	
180-37601-1	SL-18036-100914-001	Total/NA	Sediment	9010C	
180-37601-1 MS	SL-18036-100914-001	Total/NA	Sediment	9010C	
HLCS 180-121850/2-A	Lab Control Sample	Total/NA	Sediment	9010C	
LCS 180-121850/3-A	Lab Control Sample	Total/NA	Sediment	9010C	
LLCS 180-121850/1-A	Lab Control Sample	Total/NA	Sediment	9010C	
MB 180-121850/4-A	Method Blank	Total/NA	Sediment	9010C	

Analysis Batch: 121878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-37584-C-2-N MS	Matrix Spike	Total/NA	Sediment	9014	121850
180-37584-D-2-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	9014	121850
180-37601-1	SL-18036-100914-001	Total/NA	Sediment	9014	121850
180-37601-1 MS	SL-18036-100914-001	Total/NA	Sediment	9014	121850
HLCS 180-121850/2-A	Lab Control Sample	Total/NA	Sediment	9014	121850
LCS 180-121850/3-A	Lab Control Sample	Total/NA	Sediment	9014	121850
LLCS 180-121850/1-A	Lab Control Sample	Total/NA	Sediment	9014	121850
MB 180-121850/4-A	Method Blank	Total/NA	Sediment	9014	121850



CONESTOGA-ROVERS & ASSOCIATES

CHAIN OF CUSTODY RECORD

COC NO.: 48053

PAGE 1 OF 1

(See Reverse Side for Instructions)

Address: NIAGARA FALLS, NY

Phone: 716-297-6150 Fax: 716-297-2265

Project No/ Phase/Task Code: <u>018036-2014</u>		Laboratory Name: <u>TEST AMERICA</u>		Lab Location: <u>PITTSBURGH, PA</u>		SSOW ID:	
Project Name: <u>BUFFALO AIRPORT</u>		Lab Contact: <u>Jill Coussey</u>		Lab Quote No.:		Cooler No.:	
Project Location: <u>CHEEKTOWAGA, NY</u>		CONTAINER QUANTITY & PRESERVATION		ANALYSIS REQUESTED (See Back of COC for Definitions)		Carrier: <u>FED EX</u>	
Chemistry Contact: <u>LEO BRAUSCH</u>		SAMPLE TYPE		Total Containers/Sample		Airbill No.:	
Sampler(s): <u>DOUG OSCAR</u>		Matrix Code		Other:		Date Shipped: <u>10/9/14</u>	
SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)		DATE (mm/dd/yy)		EnCores 3x5-g, 1x25-g		COMMENTS/SPECIAL INSTRUCTIONS:	
1 <u>SL-18036-100914-0010/09/14 0900SL-C</u>		TIME (hh:mm)		VOC		M/MSD Request	
2				Methanol/Water (Soil)			
3				Sodium Hydroxide (NaOH)			
4				Sulfuric Acid (H ₂ SO ₄)			
5				Nitric Acid (HNO ₃)			
6				Hydrochloric Acid (HCl)			
7				Unpreserved			
8				Grab (g) or Comp (c)			
9				(see back of COC)			
10				Total Containers/Sample			
11				Other:			
12				EnCores 3x5-g, 1x25-g			
13				VOC			
14				Methanol/Water (Soil)			
15				Sodium Hydroxide (NaOH)			
16				Sulfuric Acid (H ₂ SO ₄)			
17				Nitric Acid (HNO ₃)			
18				Hydrochloric Acid (HCl)			
19				Unpreserved			
20				Grab (g) or Comp (c)			
21				(see back of COC)			
22				Total Containers/Sample			
23				Other:			
24				EnCores 3x5-g, 1x25-g			
25				VOC			
26				Methanol/Water (Soil)			
27				Sodium Hydroxide (NaOH)			
28				Sulfuric Acid (H ₂ SO ₄)			
29				Nitric Acid (HNO ₃)			
30				Hydrochloric Acid (HCl)			
31				Unpreserved			
32				Grab (g) or Comp (c)			
33				(see back of COC)			
34				Total Containers/Sample			
35				Other:			
36				EnCores 3x5-g, 1x25-g			
37				VOC			
38				Methanol/Water (Soil)			
39				Sodium Hydroxide (NaOH)			
40				Sulfuric Acid (H ₂ SO ₄)			
41				Nitric Acid (HNO ₃)			
42				Hydrochloric Acid (HCl)			
43				Unpreserved			
44				Grab (g) or Comp (c)			
45				(see back of COC)			
46				Total Containers/Sample			
47				Other:			
48				EnCores 3x5-g, 1x25-g			
49				VOC			
50				Methanol/Water (Soil)			
51				Sodium Hydroxide (NaOH)			
52				Sulfuric Acid (H ₂ SO ₄)			
53				Nitric Acid (HNO ₃)			
54				Hydrochloric Acid (HCl)			
55				Unpreserved			
56				Grab (g) or Comp (c)			
57				(see back of COC)			
58				Total Containers/Sample			
59				Other:			
60				EnCores 3x5-g, 1x25-g			
61				VOC			
62				Methanol/Water (Soil)			
63				Sodium Hydroxide (NaOH)			
64				Sulfuric Acid (H ₂ SO ₄)			
65				Nitric Acid (HNO ₃)			
66				Hydrochloric Acid (HCl)			
67				Unpreserved			
68				Grab (g) or Comp (c)			
69				(see back of COC)			
70				Total Containers/Sample			
71				Other:			
72				EnCores 3x5-g, 1x25-g			
73				VOC			
74				Methanol/Water (Soil)			
75				Sodium Hydroxide (NaOH)			
76				Sulfuric Acid (H ₂ SO ₄)			
77				Nitric Acid (HNO ₃)			
78				Hydrochloric Acid (HCl)			
79				Unpreserved			
80				Grab (g) or Comp (c)			
81				(see back of COC)			
82				Total Containers/Sample			
83				Other:			
84				EnCores 3x5-g, 1x25-g			
85				VOC			
86				Methanol/Water (Soil)			
87				Sodium Hydroxide (NaOH)			
88				Sulfuric Acid (H ₂ SO ₄)			
89				Nitric Acid (HNO ₃)			
90				Hydrochloric Acid (HCl)			
91				Unpreserved			
92				Grab (g) or Comp (c)			
93				(see back of COC)			
94				Total Containers/Sample			
95				Other:			
96				EnCores 3x5-g, 1x25-g			
97				VOC			
98				Methanol/Water (Soil)			
99				Sodium Hydroxide (NaOH)			
100				Sulfuric Acid (H ₂ SO ₄)			
101				Nitric Acid (HNO ₃)			
102				Hydrochloric Acid (HCl)			
103				Unpreserved			
104				Grab (g) or Comp (c)			
105				(see back of COC)			
106				Total Containers/Sample			
107				Other:			
108				EnCores 3x5-g, 1x25-g			
109				VOC			
110				Methanol/Water (Soil)			
111				Sodium Hydroxide (NaOH)			
112				Sulfuric Acid (H ₂ SO ₄)			
113				Nitric Acid (HNO ₃)			
114				Hydrochloric Acid (HCl)			
115				Unpreserved			
116				Grab (g) or Comp (c)			
117				(see back of COC)			
118				Total Containers/Sample			
119				Other:			
120				EnCores 3x5-g, 1x25-g			
121				VOC			
122				Methanol/Water (Soil)			
123				Sodium Hydroxide (NaOH)			
124				Sulfuric Acid (H ₂ SO ₄)			
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126				Hydrochloric Acid (HCl)			
127				Unpreserved			
128				Grab (g) or Comp (c)			
129				(see back of COC)			
130				Total Containers/Sample			
131				Other:			
132				EnCores 3x5-g, 1x25-g			
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138				Hydrochloric Acid (HCl)			
139				Unpreserved			
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141				(see back of COC)			
142				Total Containers/Sample			
143				Other:			
144				EnCores 3x5-g, 1x25-g			
145				VOC			
146				Methanol/Water (Soil)			
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150				Hydrochloric Acid (HCl)			
151				Unpreserved			
152				Grab (g) or Comp (c)			
153				(see back of COC)			
154				Total Containers/Sample			
155				Other:			
156				EnCores 3x5-g, 1x25-g			
157				VOC			
158				Methanol/Water (Soil)			
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162				Hydrochloric Acid (HCl)			
163				Unpreserved			
164				Grab (g) or Comp (c)			
165				(see back of COC)			
166				Total Containers/Sample			
167				Other:			
168				EnCores 3x5-g, 1x25-g			
169				VOC			
170				Methanol/Water (Soil)			
171				Sodium Hydroxide (NaOH)			
172				Sulfuric Acid (H ₂ SO ₄)			
173				Nitric Acid (HNO ₃)			
174				Hydrochloric Acid (HCl)			
175				Unpreserved			
176				Grab (g) or Comp (c)			
177				(see back of COC)			
178				Total Containers/Sample			
179				Other:			
180				EnCores 3x5-g, 1x25-g			
181				VOC			
182				Methanol/Water (Soil)			
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187				Unpreserved			
188				Grab (g) or Comp (c)			
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190				Total Containers/Sample			
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192				EnCores 3x5-g, 1x25-g			
193				VOC			
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200				Grab (g) or Comp (c)			
201				(see back of COC)			
202				Total Containers/Sample			
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204				EnCores 3x5-g, 1x25-g			
205				VOC			
206				Methanol/Water (Soil)			
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209				Nitric Acid (HNO ₃)			
210				Hydrochloric Acid (HCl)			
211				Unpreserved			
212				Grab (g) or Comp (c)			
213				(see back of COC)			
214				Total Containers/Sample			
215				Other:			
216				EnCores 3x5-g, 1x25-g			
217				VOC			
218				Methanol/Water (Soil)			
219				Sodium Hydroxide (NaOH)			
220				Sulfuric Acid (H ₂ SO ₄)			
221				Nitric Acid (HNO ₃)			

Login Sample Receipt Checklist

Client: Leo Brausch Consulting

Job Number: 180-37601-1

Login Number: 37601

List Source: TestAmerica Pittsburgh

List Number: 1

Creator: Watson, Debbie

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



APPENDIX D
WASTE DISPOSAL DOCUMENTATION

19/12/14

NON-HAZARDOUS WASTE MANIFEST

TRMNI-019036

Please print or type (Form designed for use on 60/12 pitch typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N/A		Manifest Document No. 60031	2. Page 1 of 1
3. Generator's Name and Mailing Address CBS Corporation 11 Starwik Street, 10th floor, Pittsburgh, PA 15222				Buffalo Airport Buffalo NY	
4. Generator's Phone () 412-642-3580 Attn: W. Wall					
5. Transporter 1 Company Name OP-TECH Environmental Services, Inc.		6. US EPA ID Number NYD080080753		A. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone 716-525-1002	
9. Designated Facility Name and Site Address American Ref-Fuel of Niagara 100 Energy Blvd. & 56th St. Niagara Falls, NY 14304		10. US EPA ID Number NYD080030543		C. State Transporter's ID	
				D. Transporter 2 Phone	
				E. State Facility's ID	
				F. Facility's Phone 716-278-8500	
11. WASTE DESCRIPTION			Containers		13. Total Quantity
			No.	Type	14. Unit WL/Vol.
a. NON DOT Regulated Liquids, NOS (Manhole Sludge)			17	DM	1000 935
b. NON DOT Regulated Liquids, NOS (manhole sludge)			2	DF	110
c.					
d.					
G. Additional Descriptions for Materials Listed Above			H. Handling Codes for Wastes Listed Above		
a. Job # FCRV0031			a. B c.		
b.			b. B d.		
15. Special Handling Instructions and Additional Information					
In Case of Emergency Call 1-800-225-6750. This material has been verified as approval # 7603 NYSDEC 08-010.					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name Agent/ Kevin Lynch				Signature <i>[Signature]</i>	
				Date 11/17/14	
17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name GREGORY Joseph II				Signature <i>[Signature]</i>	
				Date 11/17/14	
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name				Signature	
				Date	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in Item 19.					
Printed/Typed Name Kathy Steele				Signature <i>[Signature]</i>	
				Date 11/20/14	

NON-HAZARDOUS WASTE



1017779

BILL OF LADING



ORDER NUMBER 141219002

TO: CONSIGNEE NORIT AMERICAS INC STREET DESTINATION 1432 6 TH STREET MAIP CITY/STATE/ZIP PRYOR, OK 74361		<u>TRAILER/CAR NUMBER</u> R3204	<u>B/L DATE</u> 12-19-2014
FROM: SHIPPER ENCOTECH INC. STREET 1037 ROUTE 519 CITY/STATE/ZIP EIGHTY FOUR, PA 15330 Ref: 15703-C019		<u>CARRIER INSTRUCTIONS</u> CONTACT: Donna Cummings 724-222-3334 Pickup at 84PA 12-19 AM	
FOR PAYMENT, SENT BILL TO: NAME NORIT AMERICAS INC. STREET 1432 6 TH STREET MAIP CITY/STATE/ZIP PRYOR, OK 74361-4434		DRIVER WILL HAVE TO BACK INTO LOT	

Number of Shipping Units	HM	Packaging Type, Description of Articles, Special Marks & Exceptions	Gross Weight (Subject To Correction)
24		Pallets BULK BAGS SPENT CARBON, (NON RCRA, NON REGULATED Various TSR #'s	40,000 LBS
		TSR#2001-104 3 bags TSR#2010-050 3 bags TSR#98-090 6 bags TSR#98-027 8 bags TSR#98-109 4 bags	

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

SHIPPER Encotech	CARRIER Truckload
PER	DATE 12-19-14

RECEIVED subject to the classifications and lawfully filed tariffs in effect on the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to the said destination. It is mutually agreed as to each carrier of all or any of said property, over all or any portion of said route to destination and as to either party at any time interested in all or any said property that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions on the back hereof in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Ed Baynes

TRIOD

RECYCLING AND ENERGY

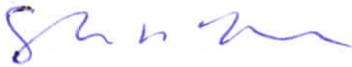
January 12, 2015

Encotech, Inc.
P.O. Box 305
1037 Route 519
Eighty Four, PA 15330

Dear Donna,

Pertaining to waste disposal ticket number 17006 from our facility, the contents from this load were processed and sent to Allied Waste Landfill in Niagara Falls, NY. If you request and further information, please feel free to contact us.

Sincerely,



Steve Hannon
Scale Master

Triad Recycling & Energy Corp.
3755 River Road

Tonawanda, NY 14150

Ticket No :17006
Date :11/11/14
Phone :(716)235-8822
Fax :(716)235-8824

Customer: GUARD
Guard Contracting
3755 River Road

Tonawanda, NY 14150

Order No : 2013

Loads : 6405
Miles : 0
Tons : 724.56

Truck : G3016

Gross :	29920	lb	Scale 1	In	2:26 pm
Tare :	23400	lb	STORED	Out	2:26 pm
Net :	6520	lb			
	3.260	tn			

Weigh Master: RICK Rick Bossert

Remarks: 28120
Buffalo Airport

Material \$
Delivery \$
Misc \$
Tax \$
Total \$

Signature:

MATERIAL	QTY	UNIT-\$	DELIVERY-\$	MISC-\$	TAX-\$	TOTAL-\$
Construction Debris	3.260	tn				