US Army, Engineering & Support Center
Huntsville, AL

Seneca Army Depot Activity
Romulus, NY

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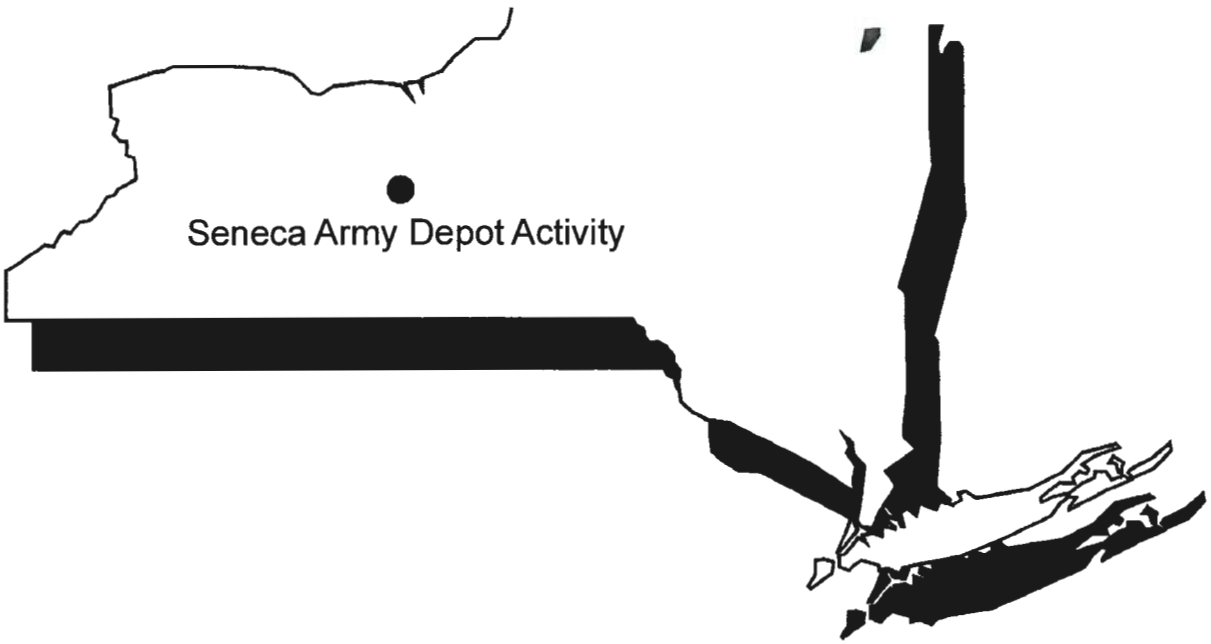

DRAFT
ANNUAL REPORT AND YEAR 8 REVIEW
ASH LANDFILL OPERABLE UNIT
SENECA ARMY DEPOT ACTIVITY

Contract No. W912DY-08-D-0003
Task Order No. 0015
EPA Site ID# NY0213820830
NY Site ID# 8-50-006

PARSONS
August 2015

DRAFT

ANNUAL REPORT AND YEAR 8 REVIEW

FOR THE

ASH LANDFILL OPERABLE UNIT
SENECA ARMY DEPOT ACTIVITY, ROMULUS, NEW YORK

Prepared for:

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1.0 INTRODUCTION

This Annual Report is for the Ash Landfill Operable Unit (OU), located at the Seneca Army Depot Activity (SEDA or the Depot) in Romulus, New York (**Figure 1**). This report provides a review of the eighth year of long-term groundwater monitoring (LTM) of the full-scale biowall system installed in 2006 and provides recommendations for future long-term monitoring at the site. This report is based on an annual review of the effectiveness of the remedy implemented in 2006 and includes the following:

- A comparison of the groundwater data to the LTM objectives (**Section 1.1**);
- An evaluation of the need to recharge (i.e., add substrate) the biowalls as outlined in the Remedial Design Report (RDR) (Parsons, 2006c) (**Section 3.5**); and
- An assessment of the remedy's compliance with the United States Environmental Protection Agency's (USEPA) "Guidance for Evaluation of Federal Agency Demonstrations (Section 12(h)(s))."

A remedial action (RA) was completed in October and November 2006 in accordance with the Record of Decision (ROD) for the Ash Landfill OU (Parsons, 2004), the Remedial Design Work Plan (Parsons, 2006b), and the RDR (Parsons, 2006c). The RA involved the following:

- Installation of three dual biowall systems, A1/A2, B1/B2, and C1/C2, to address volatile organic compounds (VOCs) in groundwater that exceed New York State Department of Environmental Conservation's (NYSDEC) Class GA groundwater standards;
- Construction and establishment of a 12-inch vegetative cover over the Ash Landfill and the Non-Combustible Fill Landfill (NCFL) to prevent ecological receptors from coming into direct contact with the underlying soils that are contaminated with metals and polycyclic aromatic hydrocarbons (PAHs);
- Excavation and disposal of Debris Piles A, B, and C; and
- Re-grading of the Incinerator Cooling Water Pond to promote positive drainage.

As part of the RA at the Ash Landfill OU, post-closure operations include LTM. Groundwater monitoring is required as part of the remedial design, which was formulated to comply with the ROD. The first four rounds of groundwater sampling were performed in the first year of LTM and were completed in January 2007, March 2007, June 2007, and November 2007.

The analytical and geochemical results were presented in four letter reports. The results of the Year 1 LTM were reported and evaluated in the "Annual Report and One-Year Review for the Ash Landfill Operable Unit, Seneca Army Depot Activity" (Parsons, 2008a). As part of the Year 1 report, the Army recommended that the frequency of LTM events at the Ash Landfill OU be reduced from quarterly to semi-annually; this recommendation was approved by the USEPA and NYSDEC.

Exhibit 1.1 presents the sampling dates and annual report titles since the initiation of LTM at the Ash Landfill OU. A separate semiannual letter report was generated for each sampling round except for Round 16. The results of Round 18 are provided within this Annual Report.

- Confirm that there are no exceedances of groundwater standards for contaminants of concern (COCs) at the off-site compliance monitoring well MW-56;
- Document the effectiveness of the biowalls to remediate and attenuate the chlorinated ethene plume; and
- Confirm that groundwater concentrations throughout the plume are decreasing to eventually meet NYSDEC Class GA groundwater standards.

Biowall process monitoring is being conducted at two locations to determine if, and when, any biowall maintenance activities should be performed. The first location is within Biowalls B1/B2 (MWT-27 and MWT-28) in the segment that runs along the pilot-scale biowalls that were installed in July 2005 (**Figure 2**). The second location is within Biowall C2 (MWT-23), the furthest downgradient biowall. The objectives of biowall process monitoring for operations and maintenance (O&M) activities are as follows:

- Monitor the long-term performance and sustainability of the biowalls;
- Monitor substrate depletion and geochemical conditions under which the effectiveness of the biowalls may decline; and
- Determine if, and when, the biowalls need maintenance (i.e., need to be recharge with additional organic substrate).

2.2 Site Geology/Hydrogeology

The site is underlain by a broad north-to-south trending series of rock terraces covered by a mantle of glacial till. As part of the Appalachian Plateau, the region is underlain by a tectonically undisturbed sequence of Paleozoic rocks consisting of shale, sandstone, conglomerate, limestone and dolostone. At the Ash Landfill site, these rocks (the Ludlowville Formation) are characterized by gray, calcareous shale and mudstone and thin limestone with numerous zones of abundant invertebrate fossils. Locally, the shale is soft, gray, and fissile. The shale, which has a thin weathered zone at the top, is overlain by 2 to 3 feet of Pleistocene-age[1] till deposits. The till matrix varies locally, but generally consists of unsorted silt, clay, sand, and gravel (Brett et al., 1995).

The thickness of the till at the Ash Landfill OU generally ranges from 4 to 15 feet. At the location of the biowalls, the thickness of the till and weathered shale is approximately 10 to 15 feet. Groundwater is present in both the shallow till/weathered shale layer and in the deeper competent shale layer. In both water-bearing units, the predominant direction of groundwater flow is to the west, toward Seneca Lake. Based on the historical data, the wells at the Ash Landfill site exhibit rhythmic and seasonal fluctuations in the water table and the saturated thickness. Historic data at the Ash Landfill OU indicate that the saturated interval is thin (generally between 1 and 3 feet thick) in the month of September and is thickest (generally between 6 and 8.5 feet thick) between December and March (Parsons Engineering Science Inc., 1994).

The average linear velocity of the groundwater in the till/weathered shale layer was calculated during the Remedial Investigation (RI) in 1994 using the following parameters: 1) average hydraulic conductivity of 4.5×10^{-4} centimeters per second (cm/sec) (1.28 feet per day [ft/day]), 2) estimated effective porosity of 15% to 20%, and 3) groundwater gradient of 1.95×10^{-2} feet per foot (ft/ft) (Parsons Engineering Science, Inc., 1994). The average linear velocity was calculated as 0.166 ft/day or 60.7 feet per year (ft/yr) at 15% effective porosity and 0.125 ft/day or 45.5 ft/yr at 20% effective porosity. The actual velocity of on-site groundwater may be locally influenced by zones of higher-than-average permeability; these zones are possibly associated with variations in the porosity of the till/weathered shale.

2.3 Soil and Groundwater Impacts

The nature and extent of the COCs at the Ash Landfill OU were evaluated through a comprehensive RI program. It was determined that surface water and sediment were not media of concern and did not require remediation. A groundwater contaminant plume that emanated from the northern end of the Ash Landfill was delineated during the RI. The primary COCs in groundwater at the Ash Landfill are VOCs; the primary COCs in soil at the Ash Landfill are chlorinated and aromatic compounds, semivolatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), and, to a lesser degree, metals. Release of the COCs is believed to have occurred during the former activities at the Ash Landfill OU (described in Section 2.1).

[1] The Pleistocene Age occurred 11,700 to 2.588 million years before present.

linear trench to competent bedrock then backfilling the trench to the ground surface with a mixture of mulch and sand.

Biowalls A1/A2, B1/B2, and C1/C2 were constructed perpendicular to the chlorinated solvent plume at the locations prescribed in the RDR (**Figure 2**). The entire length of Biowalls A1/A2 and the northern portion of B1/B2 were combined into a single double-width trench (minimum of 6 feet in width) due to unstable soil conditions that caused trench widening. Approximately 2,840 linear feet (lf) of biowalls were constructed in the areas downgradient of the Ash Landfill at depths ranging from 7 feet below ground surface (bgs) to 18.5 feet bgs.

A 12-inch soil cover was placed over the entire length of the biowalls to impede surface water from preferentially flowing into the biowall trenches. Trench spoils were used as the cover material and were compacted with a backhoe. A site visit in December 2014 confirmed that the mulch backfill in the trenches has settled to a level approximately equal to the surrounding ground surface.

2.4.2 Incinerator Cooling Water Pond

As specified in the RDR, the Incinerator Cooling Water Pond (ICWP) was re-graded to meet the surrounding grade to prevent the accumulation of water in this inactive pond. Prior to re-grading, the vegetation on the berms surrounding the ICWP was removed with an excavator. The soil berm was then regraded with a dozer to match the surrounding grade. The ICWP was seeded with a standard meadow mix to promote vegetation and to prevent erosion.

2.4.3 Ash Landfill and NCFL Vegetative Cover

A soil cover comprised of mulch, biowall trench spoils that met the site cleanup criteria, and off-site topsoil was placed over the 2.2 acres of the Ash Landfill. The Ash Landfill was covered with 4,380 cubic yards (cy) of fill to achieve a minimum cover thickness of 12 inches. Biowall trench spoils that met the site cleanup criteria and off-site topsoil were placed over the 3.4 acre NCFL. The NCFL was covered with 6,015 cy of fill to achieve a minimum cover thickness of 12 inches. The purpose of the covers is to prevent terrestrial wildlife from directly contacting or incidentally ingesting metal-impacted soils.

2.4.4 Debris Pile Removal

During the RA, approximately 200 cy of debris was removed from Debris Piles B and C. Approximately 1,000 cy of debris was removed from within and beyond the staked limits of Debris Pile A (**Figure 3**). The total volume of debris removed was approximately 1,200 cy (1,548 tons).

2.5 Description of Technology Used in Biowalls

Reductive dechlorination is the most important process for natural biodegradation of highly chlorinated solvents (USEPA, 1998) (**Figure 5**). Complete dechlorination of TCE and other chlorinated solvents is the goal of anaerobic biodegradation via mulch biowall technology.

Biodegradation causes measurable changes in groundwater geochemistry that can be used to evaluate the effectiveness of substrate addition in stimulating biodegradation. For anaerobic reductive dechlorination to be an effective process, generally groundwater must be sulfate-reducing or methanogenic. Thus,

3.0 LONG-TERM MONITORING DATA ANALYSIS AND GROUNDWATER REMEDY EVALUATION

3.1 Sample Collection

Exhibit 3.1 below presents the sample collection dates for the eight years of LTM. The first year of sampling was quarterly, and at that time, the sampling rounds were identified as xQyyyy, where "x" is the round number, and "yyyy" is the 4 digit year. After the first year, the sample frequency was modified to semiannual. An "R" was used to replace the "Q" to denote the round. The round number has been used sequentially since the first quarterly round.

Exhibit 3.1 – LTM Sampling Dates

LTM Year	Round Name	Sampling Dates
Year 1	1Q2007	January 3, 2007 – January 4, 2007
	2Q2007	March 15, 2007 – March 17, 2007
	3Q2007	June 5, 2007 – June 7, 2007
	4Q2007	November 13, 2007 – November 15, 2007
Year 2	5R2008	June 24, 2008 – June 26, 2008
	6R2008	December 11, 2008 – December 15, 2008
Year 3	7R2009	June 1, 2009 – June 4, 2009
	8R2009	December 14, 2009 – December 18, 2009
Year 4	9R2010	June 28, 2010 – July 2, 2010
	10R2010	December 14, 2010 – December 19, 2010
Year 5	11R2011	July 18, 2011 – July 22, 2011
	12R2011	December 12, 20111 – December 15, 2011
Year 6	13R2012	June 18, 2012 – June 22, 2012
	14R2012	December 10, 2012 – December 14, 2012
Year 7	15R2013	July 8, 2013 – July 11, 2013
	16R2013	December 9, 2013 – December 14, 2013
Year 8	17R2014	June 17, 2014 – June 22, 2014
	18R2014	December 15, 2014 – December 19, 2014

Fourteen monitoring wells were sampled and classified into three groups (listed in **Table 1**): eleven on-site plume performance monitoring wells, one off-site compliance monitoring well, and five biowall process monitoring wells. The off-site performance monitoring well, MW-56, is monitored on a semi-annual basis, and was monitored in January 2007, June 2007, June 2008, December 2008, June 2009, December 2009, June 2010, December 2010, October 2011, December 2011, June 2012, December 2012, July 2013, December 2013, June 2014, and December 2014. The well locations are shown on **Figure 6.**

3.3 Geochemical Data

Biodegradation causes measurable changes in groundwater geochemistry that can be used to evaluate the effectiveness of substrate addition in stimulating biodegradation. Groundwater conditions that are sulfate-reducing or methanogenic improve the overall effectiveness of anaerobic reductive dechlorination. As mentioned in Section 3.1, geochemical parameters measured in the field that also serve as water quality indicators (i.e., pH, ORP, DO, conductivity, and temperature) were recorded for all wells in the LTM program. Analysis for the additional geochemical parameters of TOC, sulfate, and MEE, and field tests for ferrous iron and manganese were completed at PT-17, MWT-7, MWT-23, MWT-26, MWT-27, MWT-28, and MWT-29. According to USEPA (1998) guidance on natural attenuation of chlorinated solvents, conditions are conducive for anaerobic reductive dechlorination to occur if the following geochemical signatures are identified:

- Depleted concentrations of DO and sulfate;
- Elevated concentrations of methane;
- Reduced ORP;
- Elevated concentrations of soluble organic substrate as defined by TOC in groundwater; and
- An increase in the concentrations of ferrous iron and manganese relative to background conditions.

Geochemical parameter results are shown in **Table 3,** organized with the most upgradient well listed first and the most downgradient well listed last. A comparison of the geochemical parameters for wells MWT-26 (upgradient of Biowall B1) to MWT-28 (in Biowall B2) for Year 8, summarized below, demonstrates the change in geochemistry across the B1/B2 Biowalls.

Dissolved Oxygen

DO is the most favored electron acceptor (i.e., yields the most energy) used by microbes during biodegradation of organic carbon, and its presence can inhibit the anaerobic degradation of chlorinated ethenes. In the wells sampled within Biowalls B1/B2 and Biowall C2, DO levels are depleted (less than 1.0 milligrams per liter [mg/L]) in both Year 8 events (**Table 3**). DO is depleted due to the biological activity encouraged by the biowall substrate. The depletion of DO enhances the potential for anaerobic degradation of chlorinated ethenes in groundwater.

Sulfate

Sulfate is used as an electron acceptor during sulfate reduction, competing with anaerobic reductive dechlorination for available substrate/electron donor. Sulfate levels lower than 20 mg/L are desired to prevent inhibition of reductive dechlorination of chlorinated ethenes (USEPA, 1998). In Year 8, Round 17 concentrations were less than 20 mg/L in Biowall B1 (MWT-27), Biowall B2 (MWT-28) and Biowall C2 (MWT-23). In Year 8, Round 18 sulfate concentrations were less than 20 mg/L in Biowall B2 (MWT-28) and Biowall C2 (MWT-23). At Biowall B1 (MWT-27), the sulfate level was above 20 mg/L with a concentration of 36.5 mg/L; note that this sulfate level was orders of magnitude lower than the concentration of sulfate detected upgradient of Biowalls B1/B2 at MWT-26 (250 – 1060 mg/L) (**Table 3**).

(**Table 3**). In Biowall C2, the TOC concentration has decreased below the threshold value of 20 mg/L, but remained equivalent to the concentration at upgradient wells MWT-26 and MWT-29.

A decrease in the concentration of TOC occurs as readily degraded organics (i.e., vegetable oil and cellulose) in the mulch mixture are consumed; however, TOC concentrations on-site remain sufficiently high enough to serve as an energy source for anaerobic bacteria in the biowalls. As discussed below, the change in TOC concentrations has little impact on the efficiency at which chlorinated organics are degraded within the biowalls and does not indicate that the biowalls need to be recharged at this time. Since the TOC concentrations are lower, a conclusion on the continuing effectiveness of the biowalls will be made relying on the other lines of evidence (e.g., other geochemical parameters and chemistry) in the analysis of the effective operation of the biowall system.

Ferrous Iron and Manganese

As described in USEPA (1998), Iron III (ferric iron) is an electron acceptor used by iron-reducing bacteria under anaerobic conditions; Iron II (ferrous iron) is the product. Iron III is relatively insoluble in groundwater relative to Iron II. Therefore, an increase in concentrations of Iron II in groundwater is a clear indication that anaerobic iron reduction is occurring. Similarly, USEPA (1998) states that manganese (IV) is an electron acceptor used by manganese-reducing bacteria under anaerobic environments; soluble manganese (II) is the product. Under anaerobic conditions like those at the Ash Landfill, the presence of manganese and ferrous iron in the biowalls at concentrations above those found at upgradient locations, or locations unaffected by the biowalls, demonstrates that manganese and iron reduction are occurring at the site. For example, Year 8 ferrous iron and soluble manganese concentrations continue to be higher within biowall wells MWT-27 and MWT-28 compared to the upgradient well MWT-26 (**Table 3**).

During the Round 17 and 18 sampling events, ferrous iron and manganese concentrations were collected from an upgradient well, MW-40, to delineate background concentrations. The average ferrous iron and manganese concentrations collected from these two events were 0.04 mg/L and 0.55 mg/L, respectively. The background values are lower than the ferrous iron and manganese values measured in the biowalls thus supporting the conclusion that conditions within the biowalls are anaerobic and conducive to the degradation of chlorinated ethenes.

Summary

Monitoring data for wells within the biowalls during the eighth year of LTM indicate the following:

- DO remains below 1.0 mg/L at Biowalls B1/B2 and Biowall C2;
- Concentrations of TOC remain elevated (4.7 mg/L to 39 mg/L) in the biowalls, and greater than or equivalent to the upgradient well;
- ORP values ranged from -105 mV to -56 mV;
- Sulfate concentrations are a magnitude lower within the biowalls than in upgradient wells;
- Methane concentrations ranged from 12,000 µg/L to 16,500 µg/L; and

Concentrations of TCE and cis-DCE within the biowalls at MWT-27 (in Biowall B1), MWT-28 (in Biowall B2), and MWT-23 (in Biowall C2) remain below Class GA standards, which is an expected performance measure (**Figure 6**). TCE was reported below Class GA standards in the biowalls in all rounds and cis-DCE has been below Class GA standards in every round since Quarter 2. In Rounds 17 and 18, concentrations of VC within the biowall wells (MWT-27, MWT-28, and MWT-23) were below the Class GA standards. However, in the previous two rounds (R15 and R16), the VC concentrations (2.9 µg/L and 2.5 µg/L) within the C2 biowall at well MWT-23 were above the Class GA standard (2 µg/L). The 2014 data for MWT-23 supports the absence of a trend of increasing VC concentrations with concentrations in R17 and R18 that are non-detect and below the Class GA Standard. Continued sampling will further confirm the trend for VC at MWT-23 in subsequent monitoring events.

The reduction in concentrations of TCE and cis-DCE within the biowall wells versus upgradient concentrations suggests that complete mineralization of chlorinated ethenes is occurring. Therefore, the biowalls are operating as expected with no observed loss of performance.

Evidence of ethene (a final product of reductive dechlorination) production within the biowalls suggests that multiple anaerobic degradation processes may be occurring (**Table 3**). For example, ethene is not produced by anaerobic oxidation of cis-DCE or VC or by abiotic transformation of chlorinated ethenes by reduced iron sulfides. The concentrations of ethene may be low within the biowalls since ethene can be further reduced under highly anaerobic conditions or can off-gas with carbon dioxide or methane since it is volatile.

The overall trend in the concentrations of TCE, cis-DCE, and VC at well MWT-26 (between Biowalls A1/A2 and Biowalls B1/B2) is decreasing over time (**Appendix C-2**). Since the eleventh round, some seasonal variation is evident in the concentrations measured at well MWT-26 with cis-DCE and VC exhibiting higher concentrations in the summer sampling events and lower concentrations in the winter (**Figure 6**). Since the ninth round, TCE concentrations in well MWT-26 have been below its Class GA standard with a limited range in concentration between 0.83 µg/L and 4.2 µg/L (**Table 4**). During the same time period, cis-DCE has ranged in concentration between 1.1 µg/L and 12 µg/L with an average concentration (5.9 µg/L) approximately equal to its Class GA standard. Similarly, VC has a limited range in concentration of between 0.47 J µg/L and 7.6 µg/L with an average concentration (2.3 µg/L) approximately equal to its Class GA standard. The area downgradient of MWT-26 is bounded by Biowalls B1/B2 in which the concentrations of TCE, cis-DCE, and VC are non-detect or below their respective Class GA standards. The Army will continue to monitor well MWT-26 to see if a trend in decreasing concentrations persists.

Cis-DCE and VC concentrations at MWT-24 (downgradient of Biowall C2) show an overall decline over time (**Appendix C-9**). Cis-DCE concentrations have declined by an order of magnitude since Quarter 1 and have been in continuous decline since round 13 (**Table 4**). VC concentrations have declined from a maximum in Quarter 2 to below, or approximately equal to, the Class GA standard in the last two rounds (**Figure 6**). TCE concentrations have been at or below the Class GA groundwater standard (5 µg/L) at MWT-24 in all rounds, with the exceptions of 6.0 µg/L in Round 6 and 5.6 µg/L in Round 11, which were

highest observed value of any other subsequent month leading up to a summer groundwater sampling event (NOAA, 2014). This confirms that the higher concentrations that were observed during the winter monitoring events and the most recent summer event were likely due to limiting factors such as desorption and back diffusion from low permeability soils, as well as the effect of desorption on the groundwater concentrations observed when groundwater levels were elevated. These factors may drive the actual time required to reach compliance, but do not indicate weakened biowall effectiveness. Elevated water levels were also observed during the winter sampling event in Year 8 (**Figure 7**).

An exponential regression, which models first-order decay typical in biological processes, was calculated for each monitoring well. The regression serves as a means of estimating the time required for the concentrations of chlorinated organics to meet their respective GA groundwater standards under the assumption that the historical trend of the data will continue throughout the predicted lifetime of the source. The software SourceDK was used as a screening model for estimating the groundwater remediation timeframe and the uncertainties associated with the estimated timeframe (SourceDK, 2011). Using the Tier 1 Extrapolation tool, which compares records of concentration versus time, the log concentration versus time is plotted and then extrapolated to estimate how long it will take to achieve a cleanup goal. The cleanup goals selected are the NYS Class GA groundwater standards (5 µg/L for TCE and cis-DCE and 2 µg/L for VC). The software also provides the 95% confidence level in the estimation of the time to achieve the cleanup goal. The regression plots continue to indicate that there are no trends for some COC concentrations at PT-17 and MWT-22.

Table 5 summarizes the predicted remedial timeframes and their 95% upper and lower confidence limits. Remediation time estimates were calculated by solving the regression equations for when each COC would achieve its respective Class GA standard. If the regression curve displayed an increasing trend, the determination of an expected remedial timeframe could not be calculated. With the exception of the wells with increasing concentration trends, all wells are expected to reach Class GA groundwater standards for 1) TCE by 2040; 2) cis-DCE by 2071; and 3) VC by 2023 (the MWT-22 VC trendline was excluded due to extremely poor fit). Due to variations in data, some of the regression curves show stronger correlations (as indicated by the R^2 values shown on the **Appendix C** figures) than others. The COCs for which MWT-22, PT-22, PT-17 and MWT-7 are not expected to comply with Class GA groundwater standards by 2074 tend to exhibit very poor correlation (e.g., $R^2 < 0.1$). Additional data at these well locations will need to be collected to establish COC trends.

Time plots of the concentration of TCE, cis-DCE, and VC for wells PT-18A, PT-17, and MWT-7 are provided in **Figures 11A**, **11B**, and **11C**, respectively; these plots include historic data prior to the installation of the biowalls. TCE, cis-DCE, and VC concentrations exhibit an overall decreasing trend at well PT-18A (**Figure 11A**). Since PT-18A is located in the Ash Landfill source area upgradient of all biowalls, decreasing trends at this location reflect natural attenuation processes. TCE concentrations at well PT-17 are stable since biowall installation (**Figure 11B**). There is no trend for cis-DCE or VC at PT-17 and MWT-7 (**Figures 11B** and **11C**). At MWT-7, there is a decreasing trend for TCE (**Figure 11C**).

PT-17 and MWT-7 are located 150 ft and 310 ft from Biowalls C1/C2, respectively. As such, it is possible that treatment zones have not been established this far downgradient of the biowalls.

that recharge may need to be considered. Concentrations within the biowalls, not at downgradient locations, will be used to make this evaluation so that the effectiveness of the wall itself is being measured without the interference of effects such as desorption and mixing.

- Geochemical parameters, specifically ORP, TOC, and DO, in the biowalls (e.g., at MWT-27, MWT-28, and MWT-23). Benchmark values will be used initially to evaluate anaerobic conditions in the groundwater. The benchmarks are:
  - ORP < -100 mV
  - TOC > 20 mg/L
  - DO < 1.0 mg/L

Parameters described in the bullets above are guidelines and will be considered in evaluating if, and when, a depletion of bioavailable organic substrate results in a rebound in geochemical redox conditions under which effective anaerobic degradation of chlorinated ethenes does not occur.

Recharge Evaluation for Year 8

The recharge evaluation for Year 8 indicates that recharging the biowalls is not necessary at this time.

Section 3.2 presents the geochemical data for Year 8. The values of geochemical parameters measured in Year 7 support the interpretation that reductive dechlorination is occurring in Biowalls A1/A2, B1/B2, and C1/C2. **Exhibits 3.5A, 3.5B**, and **3.5C** below show that the geochemical parameters for the wells within the biowalls meet or are close to the benchmark values and that groundwater conditions remain highly reducing.

Section 3.3 presents the analytical data for Year 8. As shown in **Exhibit 3.5D** below, concentrations of TCE and cis-DCE in the biowalls remain below their respective Class GA Standards and have not exceeded their screening criteria since the second round of sampling (e.g., 11 µg/L, cis-DCE in MWT-23). VC is typically non-detect in Biowall B1 and B2; however, it has exceeded the Class GA Standard in Biowalls B1 and C2. A trend in the exceedances is not evident and the results are interspersed with non-detects or detections below the GA Standard. The ability of the biowalls to sustain a high degree of reductive dechlorination is well established.

Exhibit 3.5D – Biowall Analytical Data

	MWT-27 (Biowall B1)			MWT-28 (Biowall B2)			MWT-23 (Biowall C2)		
	TCE (µg/L)	Cis-DCE (µg/L)	VC (µg/L)	TCE (µg/L)	Cis-DCE (µg/L)	VC (µg/L)	TCE (µg/L)	Cis-DCE (µg/L)	VC (µg/L)
Q1	ND	ND	ND	ND	ND	ND	ND	60	23
Q2	ND	ND	ND	ND	ND	ND	ND	11	4.8
Q3	ND	ND	ND	ND	ND	ND	ND	3.1	ND
Q4	ND	ND	ND	ND	ND	ND	ND	3.6 J	3.65
R5	ND	ND	ND	ND	ND	ND	ND	ND	ND
R6	ND	ND	ND	ND	ND	ND	0.4	2.4	2.8
R7	ND	ND	ND	ND	ND	ND	ND	0.42 J	ND
R8	ND	ND	3.1 J	ND	ND	ND	ND	0.47 J	ND
R9	ND	0.18 J	ND	ND	ND	ND	ND	0.41 J	ND
R10	0.51 J	1.1	2.1	ND	0.51 J	0.64 J	0.29 J	4.6	5.3
R11	ND	0.21 J	ND	ND	ND	ND	ND	0.57 J	0.33 J
R12	ND	1.4	3.0	ND	0.28 J	0.56 J	0.18 J	2.0	1.8
R13	ND	0.42 J	0.61 J	ND	ND	ND	ND	0.55 J	0.33 J
R14	ND	ND	ND	ND	ND	0.31 J	ND	1.9	1.65
R15	ND	ND	ND	ND	ND	ND	ND	3.3	2.9
R16	ND	0.48 J	0.84 J	ND	0.37 J	ND	ND	2.6	2.5
R17	ND	0.83 J	1.0	ND	ND	ND	ND	0.45 J	0.37 J
R18	ND	0.70 J	1.2	ND	0.19 J	ND	0.19 J	2.7	ND

Notes:
1. ND = Not detected at the reporting limit
2. NYSDEC Class GA Groundwater Standards: TCE = 5 µg/L; cis-DCE = 5 µg/L; VC = 2 µg/L

- Prohibit excavation of the soil or construction of inhabitable structures (temporary or permanent) above the area of the existing groundwater plume; and
- Maintain the vegetative soil layer over the ash fill areas and the NCFL to limit ecological contact.

As part of the LTM program, the Army inspected the site to determine that the LUCs are being maintained. While performing the groundwater sampling, it was confirmed that no prohibited facilities have been constructed and no access to or use of groundwater was evident other than that needed for monitoring. As discussed in **Section 3.6**, the vegetative covers are limiting ecological contact with the underlying soil.

During Rounds 17 and 18, groundwater monitoring wells were inspected by field personnel. The integrity of all wells at the Ash Landfill is intact and each well is viable for groundwater elevation readings and groundwater sampling, where appropriate. Monitoring wells not required as part of the LTM were decommissioned between September 2010 and January 2011 (Parsons, 2013).

3.8 Operating Properly and Successfully

The implemented design has met the requirements for "operating properly and successfully" (OPS) as outlined in Section 12(h)(s) of the USEPA "Guidance for Evaluation of Federal Agency Demonstrations" (USEPA, 1996). Parsons submitted a letter on behalf of the Army to USEPA, dated June 6, 2008, declaring that the Army had determined that the remedy met the OPS requirements. The Army submitted a letter under separate cover on February 26, 2009 further certifying that the "information, data and analysis provided in Parsons' June 6, 2008 letter was true and accurate." On March 11, 2009, the USEPA transmitted a letter to the Army approving the Army's OPS demonstration. The data for Year 8 of the LTM program are consistent with the data for Years 1 through 7 and demonstrate that the remedy is OPS, as described below.

The remedial action is operating "properly."

The USEPA guidance describes that "a remedial action is operating 'properly' if it is operating as designed." The Construction Completion Report (CCR) (Parsons, 2007) details that the vegetative covers were installed as designed, meeting or exceeding the 12-inch of soil cover requirement. **Section 3.6** describes that the covers are intact and effectively prevent ecological contact with the underlying soil; therefore, the vegetative covers are operating properly.

The CCR also details the construction of the biowalls. Deviation from the intended design resulted in wider-than-intended biowalls that required the emplacement of additional mulch; since this is an enhancement of the design, it is fair to say that the biowalls were constructed as designed. The geochemical data presented and discussed in **Section 3.3** indicate that conditions that are favorable to anaerobic reductive dechlorination have been established within and near the biowalls, which was the expectation of the design of the biowall system.

The remedial action is operating "successfully."

A remedial action may receive the USEPA's designation of "operating successfully" (1) if "a system will achieve the cleanup levels or performance goals delineated in the decision document" and (2) if "the

4.0 LONG-TERM MONITORING CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

Based on the results of the long-term monitoring at the Ash Landfill since the installation of the full-scale biowalls, the Army has made the following conclusions:

- TCE within the biowalls remains below or close to detection limits;
- TCE, cis-DCE, and VC are present in the groundwater at the site at concentrations above respective Class GA groundwater standards;
- Chemical results indicate that the concentrations of chlorinated ethenes are decreasing as they pass through the biowall systems;
- Geochemical parameters indicate that groundwater redox conditions are conducive for reductive dechlorination to occur within the biowalls;
- Concentrations of chlorinated ethenes at off-site well MW-56 are below Class GA groundwater standards;
- Continued monitoring is required to determine trends in concentrations of COCs at MWT-22, PT-22, PT-17, and MWT-7;
- Recharge of the biowalls is not necessary at this time;
- The remedial action continues to meets the requirements of the USEPA's "operating properly and successfully" designation; and
- The Army will continue to monitor the performance of the biowall system, including semi-annual periodic evaluations of the potential need to recharge the biowalls.

4.2 Recommendations

Based on the first eight years of long-term monitoring at the Ash Landfill OU, the Army recommends continuing the semi-annual frequency of monitoring based on the process shown in **Figure 12** (which is also Figure 7-3 of the RDR). The recommendations for LTM during year eight of monitoring are as follows:

- Biowall process monitoring wells (MWT-26, MWT-27, MWT-28, MWT-29, and MWT-23) will be monitored on a semi-annual basis. Each year a recharge evaluation will be completed. As stated in the RDR (Parsons, 2006b), if a recharge is conducted, MWT-26, MWT-27, and MWT-29 would be excluded from the LTM program, as detailed in **Figure 12**. MWT-28 and MWT-23 will continue to be monitored as part of the performance monitoring wells to supplement data that will be used to determine whether additional biowall recharge is required. The recharge evaluation(s) conducted each year after the first biowall recharge would review the chemical and geochemical data at MWT-28 and MWT-23, and determine if the contaminant increase is a result of poor biowall performance or due to other issues such as seasonal variations in groundwater levels, unusual precipitation events, or desorption and back diffusion;

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TABLES

Table 1
Groundwater Sample Collection
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

	Monitoring Well Group			Laboratory Analysis				Field Test	
Monitoring Wells	On-Site Plume Performance Monitoring	Biowall Process Monitoring	Off-Site Performance Monitoring	VOC 8260B	TOC 9060A	MEE RSK-175	Sulfate EPA 300.1	Ferrous Iron (mg/L)	Manganese (mg/L)
PT-18A	X			X					
MWT-25	X			X					
MWT-26		X		X	X	X	X	X	X
MWT-27		X		X	X	X	X	X	X
MWT-28	X	X		X	X	X	X	X	X
MWT-29	X	X		X	X	X	X	X	X
MWT-22	X			X					
PT-22	X			X					
MWT-23	X	X		X	X	X	X	X	X
MWT-24	X			X					
PT-17	X			X	X	X	X	X	X
MWT-7	X			X	X	X	X	X	X
PT-24	X			X					
MW-56			X	X					

Notes:
1. All samples were analyzed for field parameters including pH, ORP, dissolved oxygen, conductivity, temperature and turbidity.
2. All samples were collected in Round 17 between June 19, 2014 and June 22, 2014 and in Round 18 between December 16, 2014 and December 19, 2014.

Table 3
Groundwater Geochemical Data
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Well ID	Location Description	Sample ID	Sample Round	pH	Turbidity (NTU)	Specific Conductance (mS/cm)	DO (mg/L)	ORP (mV)	TOC (mg/L)	Sulfate (mg/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	Manganese (ug/L)	Ferrous Iron (ug/L)
PT-18A	Upgradient of walls	ALBW20059	1Q2007	6.63	141	1.69	1.33	93							
		ALBW20074	2Q2007	6.44	110	2.87	0.76	-177							
		ALBW20088	3Q2007	6.71	5	1.66	0	-23							
		ALBW20103	4Q2007	6.41	0.0	1.25	0.04	-5							
		ALBW20117	5R2008	6.36	1.9	1.75	0.22	-10						8.2	> 3.3
		ALBW20132	6R2008	6.58	0.56	2.04	1.76	83							
		ALBW20147	7R2009	6.77	0.45	2.01	0.12	66							
		ALBW20162	8R2009	6.71	0.00	2.04	0.62	154							
		ALBW02177	9R2010	6.7	1.00	2.05	0.1	62						1.5	0.15
		ALBW20192	10R2010	6.66	1.50	1.25	0.16	84							
		ALBW20207	11R2011	6.62	3.30	1.27	0.19	-17							
		ALBW20222	12R2011	6.62	0.40	1.75	0.09	59.9							
		ALBW20237	13R2012	6.80	4.25	1.06	0.12	78							
		ALBW20252	14R2012	6.84	1.83	1.33	4.22	74							
		ALBW20265	15R2013	6.83	2.49	1.46	0.13	199							
		ALBW20280	16R2013	6.76	0.92	1.11	1.18	201							
		ALBW20296	17R2014	6.95	0.77	1.20	0.15	76							
		ALBW20312	18R2014	7.07	0.93	1.23	2.99	107							
MWT-25	Upgradient of Biowall A	ALBW20064	1Q2007	8	9.6	0.29	2.83	63							
		ALBW20079	2Q2007	7.27	14	2.20	2.8	52							
		ALBW20093	3Q2007	7.36	6.2	2.43	4.14	100							
		ALBW20108	4Q2007	6.9	0	1.20	0.21	65							
		ALBW20123	5R2008	6.91	0.52	1.47	0.15	-41						1.4	0.75
		ALBW20138	6R2008	6.69	1.32	1.36	2.91	90							
		ALBW20153	7R2009	7.03	1.6	1.46	0.1	-31							
		ALBW20168	8R2009	7.21	0	0.79	3.35	98							
		ALBW20183	9R2010	7.06	0.7	1.48	0.2	-116							
		ALBW20198	10R2010	7.11	2.59	1.23	0.48	-94							
		ALBW20213	11R2011	6.72	13	1.13	0.03	13							
		ALBW20228	12R2011	7	5.2	1.50	1.5	-54.9							
		ALBW20243	13R2012	7.13	1.71	0.93	0.01	18							
		ALBW20258	14R2012	7.5	3.08	0.88	6.63	32							
		ALBW20271	15R2013	6.93	1.74	1.11	0.08	-5							
		ALBW20286	16R2013	7.49	2.44	1.00	2.77	185							
		ALBW20302	17R2014	7.36	0.92	1.46	0.09	-19							
		ALBW20318	18R2014	7.57	1.71	1.22	4.7	87							
MWT-26	Upgradient of Biowalls B1/B2	ALBW20066	1Q2007	6.89	10	2.01	1.84	-3	3.9 J	958	ND	ND	ND		
		ALBW20081	2Q2007	7.26	9	1.90	0.48	-135	15.2	738	0.4	7.8	210	2.1	> 3.3
		ALBW20095	3Q2007	6.89	2.2	1.94	0.21	-170	10.3	473	1	13	390	3.1	> 3.3
		ALBW20111	4Q2007	7.08	50	1.90	0.89	-40	6.1	1060	0.16	0.4	44	0.0	1.09
		ALBW20126	5R2008	7.05	0.67	1.88	0.31	-71	5.6	600	0.82	2.9	210	1.3	0.81
		ALBW20141	6R2008	7.01	28.7	1.58	3.54	60	4.4	541	0.046	0.028	10	0.6	0.22
		ALBW20156	7R2009	6.95	2.7	1.75	0.34	-11	6.9	570	3.2	2.7	1,100	0.5	0.71
		ALBW20171	8R2009	7.01	10	2.45	4.66	71	5.6	912	2.2	1.8	610	0.7	0.18
		ALBW20186	9R2010	6.99	1.4	2.04	0.14	-81	4.6	680	2.2	0.71	740	1.7	2.67
		ALBW20202	10R2010	6.77	0.6	1.71	0.5	109	5.5	690	3.7	3.3	1600	0	0.13
		ALBW20216	11R2011	6.64	2.4	1.67	0.07	-31	6.3	510	4.5	1	960	6.3	0.89
		ALBW20232	12R2011	7.05	2.2	1.87	0.54	12.1	4.5	860	0.23	ND	39	0.5	0
		ALBW20246	13R2012	7.26	8.72	1.02	0.48	2	4.4	640	1	0.5	230	0.6	0.09
		ALBW20262	14R2012	7.37	1.5	0.91	5.47	103	4.5	430	0.096	0.069	9.4	0	0.01
		ALBW20274	15R2013	6.91	1.24	0.83	0.13	24	4.1	250	0.69	0.54	130	1.0	0.02
		ALBW20289	16R2013	7.42	3.89	1.40	2.88	140	5.4	610	0.52	0.2	61	0.3	0.00
		ALBW20306	17R2014	6.80	17.5	1.72	0.36	61	4.7	680	0.92	0.15 J	240	1.2	0.04
		ALBW20321	18R2014	7.31	1.47	1.16	5.5	154	4.4	460	0.62	0.24	60	0	0
MWT-27	In Biowall B1	ALBW20067	1Q2007	6.34	120	5.31	0.25	-158	2,050 J	ND	ND	ND			
		ALBW20082	2Q2007	6.65	87	4.37	0.08	-145	1350	ND	0.15	2.7	15,000	> 22	> 3.3
		ALBW20096	3Q2007	6.59	154	3.35	0	-141	755	1.9 J	0.081	0.33	13,500	> 22	> 3.3
		ALBW20112	4Q2007	6.43	58	5.76	0.06	-166	167	31.7	ND	0.014 J	13,000	> 22	2.19
		ALBW20127	5R2008	6.49	40	3.07	0.18	-133	88.9	ND	2.3	0.049	13,000	> 22	3.23
		ALBW20142	6R2008	5.95	24.5	2.59	0.13	-126	53.5	24	1.6	0.13	15,000	> 22	3.05
		ALBW20157	7R2009	6.68	38	2.99	0.06	-128	81.7	0.93 J	5.1	0.15	14,000	22	1.88
		ALBW20172/73	8R2009	6.32	5.1	2.38	0.15	-102	50.0	14.0	4.35	1.2	15,500	9	1.26
		ALBW20187	9R2010	6.52	1.4	2.55	0.05	-121	61	0.95 J	3.8	0.12	13,000	> 22	2.54
		ALBW20203	10R2010	6.42	8.91	2.22	0.05	-111	32	25.0	3	0.88	18,000	48	3.30
		ALBW20217/18	11R2011	6.3	3.2	1.75	0.01	-109	42	0.69 J	6.2	0.077	14,000	>22	>3.3
		ALBW20233	12R2011	5.55	16	1.98	0.08	-71	35	19.0	2	1.6	16,000	>22	1.23
		ALBW20247	13R2012	6.68	15.3	1.81	0.03	-82	28	1.4	8.4	0.68	14,000	22	1.80
		ALBW20263	14R2012	6.62	15.6	2.26	0.03	-120	35	2.5	0.88	0.051	13,000	47.5	2.17
		ALBW20275/76	15R2013	6.59	9.33	2.14	0.04	-33	41	4.1	2.15	ND	12,500	>47.5	2.63
		ALBW20290	16R2013	6.43	15.0	1.85	0.22	-66	37 J	5.2	1.4	0.16 J	20,000	19.2	2.75
		ALBW20307	17R2014	6.53	18.5	2.09	0.52	-77	39	6.6	5.3	0.79	16,000	>22	>3.3
		ALBW20322/23	18R2014	6.79	8.29	1.77	0.08	-105	38	36.5	2.2	0.335	12,000	>22	>3.3
MWT-28	In Biowall B2	ALBW20068	1Q2007	7.5	163	0.61	0.16	-150	1,775 J	1.7	ND	ND	12,500 J		
		ALBW20083	2Q2007	6.6	21	2.30	0.09	-113	171	ND	0.67	0.48	19,000	7.5	> 3.3
		ALBW20098	3Q2007	6.56	100	2.74	0	-131	309	ND	0.01 J	0.057	11,000	> 22	> 3.3
		ALBW20113	4Q2007	6.48	10	1.72	0.08	-151	92	ND	0.014 J	ND	11,000	> 22	2.15
		ALBW20128	5R2008	6.31	14	2.16	0.15	-91	49.2	ND	0.65	0.044	12,000	> 22	> 3.3
		ALBW20144	6R2008	5.76	17	1.58	0.10	-95	27.9	48.3	2	0.12	19,000	5.3	1.98
		ALBW20158/59	7R2009	6.49	8.5	1.73	0.18	-135	28.2	ND	1.8	0.064	13,000	20.8	2.87
		ALBW20174	8R2009	6.4	10.8	1.88	0.29	-148	25.5	3.16	1.6	0.12	15,000	6.5	2.15
		ALBW20188/89	9R2010	6.36	5.5	1.62	0.06	-104	21	ND	1.55	0.059	13,500	18.6	0.57
		ALBW20204	10R2010	6.28	4.5	0.80	0.07	-100	12	4.8	1.4	0.17	12,000	5.8	2.58
		ALBW20219	11R2011	6.14	3.93	1.44	0.28	-135	17	0.63 J	0.9	0.0085 J	8,800	8.9	>3.3
		ALBW20234	12R2011	5.76	6.2	0.77	0.02	-125.9	12	19	1.6	ND	12,000	1.1	0.48
		ALBW20248/49	13R2012	6.46	7.41	1.16	0.06	-76	18	0.58	3.1	0.069	14,000	16.4	1.65
		ALBW20264	14R2012	6.27	16.3	1.38	0.07	-73	25	1.1	0.38	0.074	11,000	36	2.79
		ALBW20277	15R2013	6.27	6.33	1.33	0.04	-41	25	1.1 J	1.6	ND	14,000	>47.5	>3.3
		ALBW20291/92	16R2013	6.37	7.01	1.42	0.21	-49	24 J	2.5 U	1.45	0.24 J	19,500	4.3	2.74
		ALBW20308	17R2014	6.28	11.5	1.22	0.71	-87	19	1.3 U	2.8	0.0068 J	15,000	17.5	>3.3
		ALBW20324	18R2014	6.55	6.84	1.44	0.02	-88	18	11	0.35	0.049 J	12,000	7.4	2.13

Table 3
Groundwater Geochemical Data
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Well ID	Location Description	Sample ID	Sample Round	pH	Turbidity (NTU)	Specific Conductance (mS/cm)	DO (mg/L)	ORP (mV)	TOC (mg/L)	Sulfate (mg/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	Manganese (ug/L)	Ferrous Iron (ug/L)
PT-17[1]	Downgradient of biowalls	ALBW20058	1Q2007	8	3.8	92.00	0.23	-111							
		ALBW20073	2Q2007	7.1	14	0.73	0.76	-151							
		ALBW20087	3Q2007	6.99	0.4	0.73	0.9	-157							
		ALBW20102	4Q2007	7.12	8.7	2.00	NS	-24							
		ALBW20116	5R2008		70		0.24		6	15.2	98	66	5700		
		ALBW20131	6R2008	6.68	0.85	0.80	0.30	26	2.6	45.8	6.9	6.6	380	2.8	0.43
		ALBW20146	7R2009	7.19	0.2	1.00	0.30	-20	4.9	28	50	56	8300	7.5	0.53
		ALBW20161	8R2009	6.75	4	0.35	0.58	-52	2.4	46.2	9.9	5	1,500	2.1	0.07
		ALBW20176	9R2010	6.73	0.9	0.82	0.11	-13	2.4	36	16	20	4,300	5.8	0.29
		ALBW20191	10R2010	6.72	0.45	0.62	0.21	42	1.5	31	4.8	3.5	900	4.0	0.06
		ALBW20206	11R2011	6.57	4	0.57	0.85	-22	3.4	24	1.8	3.8	780	>22	0.64
		ALBW20221	12R2011	6.73	3.03	0.69	2.63	91	1.6	27	1.7	2.4	810	0.6	0.01
		ALBW20236	13R2012	7.09	2.8	0.69	0.17	28	2.8	25	10	12	8,200	4.6	0
		ALBW20251	14R2012	6.74	0.51	0.57	3.44	52	1.7	35	2.2	2.4	810	2.2	0.08
		ALBW20264	15R2013	6.94	1.36	0.68	0.24	74	1.2	27	1.1	0.69	780	3.4	0.0
		ALBW20279	16R2013	6.83	0.64	0.66	0.75	62	2.0	31	1.5	1.4	960	2.6	0.10
		ALBW20295	17R2014	6.18	0.55	0.91	0.07	35	2.9	20	4.5	6.5	5,700	4.5	0.14
		ALBW20311	18R2014	6.87	0.94	0.687	0.48	28	1.7	29	2.5	2.0	1,600	6.5	0.08
MWT-7	Immediately upgradient of ZVI wall	ALBW20062	1Q2007	6.8	19.6	0.58	0.01	62							
		ALBW20077	2Q2007	6.95	8	0.76	0.76	52							
		ALBW20091	3Q2007	6.91	4	0.59	0.19	22							
		ABLW20106	4Q2007	6.88	0	0.90	0.16	14							
		ALBW20120	5R2008	6.85	15	0.97	0.43	37	2.3	29.1	6.7	2	400	0.2	0.09
		ALBW20135	6R2008	6.85	7.37	0.86	0.28	66	29.1	3	11	0.27	670	0.8	0.16
		ALBW20150	7R2009	7.61	2.6	0.79	0.05	16	3.1	27	7.8	0.76	1100	0	0.05
		ALBW20165	8R2009	7.12	0.9	0.56	0.46	32	4.5	29.3	17	0.52	2,900	0.01	0.14
		ALBW20180	9R2010	6.85	1.35	1.04	0.02	-21	1.5	29	9	0.55	1,700	0.2	0.19
		ALBW20195	10R2010	6.85	3.3	0.76	0.06	35	1.3	31	4.5	0.2	400	1.1	0.18
		ALBW20210	11R2011	6.7	0.85	0.78	0.08	-85	2	39	4.9	0.21	1,600	0.4	0.45
		ALBW20225	12R2011	6.56	3.9	0.62	0.17	197	1.7	26	0.84	ND	79	0.2	0.05
		ALBW20240	13R2012	6.86	3.67	0.64	0.24	-35	1.6	28	3.1	0.33	1,600	0.1	0
		ALBW20255	14R2012	6.85	1.74	0.60	2.84	34	1.6	29	0.64	0.067	96	0	0.1
		ALBW20268	15R2013	6.82	1.88	0.66	0.34	68	0.89 J	31	0.5	ND	160	0.0	0.0
		ALBW20283	16R2013	6.95	3.63	0.83	0.32	66	2.0	26	1.2	0.18 J	1,000	0.8	0.27
		ALBW20299	17R2014	6.26	3.16	0.95	0.55	63	1.4	23	1.2	0.19 J	510	0.6	0.0
		ALBW20315	18R2014	7	2.35	0.954	0.61	81	2.0	23	1.1	0.095 J	1300	0.7	0
PT-24	downgradient of ZVI wall	ALBW20061	1Q2007	8.1	10	70.00	0.37	-59							
		ALBW20076	2Q2007	7.58	0	0.46	2.2	-59							
		ALBW20090	3Q2007	7.22	1.3	0.56	0.13	-80							
		ALBW20105	4Q2007	7.35	9.7	2.38	0.19	-46							
		ALBW20119	5R2008	6.99	4.3	0.90	0.16	-104						0.5	0.55
		ALBW20134	6R2008	6.84	5.8	0.66	0.11	-10							
		ALBW20149	7R2009	7.14	4.1	0.68	0.05	-101							
		ALBW20164	8R2009	7.32	1	0.41	0.34	-192						1.9	0.2
		ALBW20179	9R2010	7.07	8.3	0.78	0.19	-37							
		ALBW20194	10R2010	7.05	6.14	0.57	0.09	-29							
		ALBW20208	11R2011	6.69	1.6	0.53	0.82	-16							
		ALBW20224	12R2011	6.79	0.48	0.39	0.13	26.2							
		ALBW20239	13R2012	7.47	8.9	0.55	0.14	-55							
		ALBW20254	14R2012	6.95	1.23	0.43	1.19	77							
		ALBW20267	15R2013	7.20	1.68	0.48	0.06	10							
		ALBW20282	16R2013	6.97	2.12	0.54	0.19	19							
		ALBW20298	17R2014	6.93	1.12	0.94	0.05	18							
		ALBW20314	18R2014	7.84	8.65	0.008	0.15	83							
MW-56[2]	Off-site well	ALBW20072	1Q2007	6.85	3.30	0.46	0.37	-102							
		ALBW20101	3Q2007	6.90	0.00	0.60	NS	-65							
		ALBW20124	5R2008	6.73	2.00	0.76	0.18	-132						0.4	1.18
		ALBW20139	6R2008	6.85	6.00	0.55	0.81	-125							
		ALBW20154	7R2009	7.01	0.10	0.62	0.23	-186							
		ALBW20169	8R2009	6.59	7.30	0.31	1.86	-149							
		ALBW20184	9R2010	6.85	3.19	0.40	0.16	-131							
		ALBW20199	10R2010	6.88	1.26	0.66	0.32	-105							
		ALBW20214	11R2011	6.89	4.80	0.66	0.21	-105							
		ALBW20229	12R2011	7.15	5.50	0.42	0.45	-74.2							
		ALBW20244	13R2012	7.00	1.20	0.52	0.23	-283							
		ALBW20259	14R2012	6.95	3.16	0.50	0.93	-69							
		ALBW20272	15R2013	7.00	1.65	0.51	0.42	-192							
		ALBW20287	16R2013	6.86	1.49	0.53	0.38	-77							
		ALBW20303	17R2014	7.00	1.33	0.70	0.44	-99							
		ALBW20319	18R2014	7.11	3.03	0.687	0.52	-119							

Notes:
> = The concentration exceeded the range of the Hach DR/850 Colorimeter field kit.
J = the reported value is an estimated concentration.
ND = Non-detect.
NS = Not sampled; water level was below the indicator probe.

1Q2007 - First round of LTM (January 2007)
2Q2007 - Second round of LTM (March 2007)
3Q2007 - Third round of LTM (June 2007)
4Q2007 - Fourth round of LTM (November 2007)
5R2008 - Fifth Round of LTM (June 2008)
6R2008 - Sixth Round of LTM (December 2008)
7R2009 - Seventh Round of LTM (June 2009)
8R2009 - Eighth Round of LTM (December 2009)
9R2010 - Ninth Round of LTM (June 2010)
10R2010 - Tenth Round of LTM (December 2010)
11R2011 - Eleventh Round of LTM (July 2011)
12R2011 - Twelfth Round of LTM (December 2011)
13R2012 - Thirteenth Round of LTM (June 2012)
14R2012 - Fourteenth Round of LTM (December 2012)
15R2013 - Fifteenth Round of LTM (July 2013)
16R2013 - Sixteenth Round of LTM (December 2013)
17R2014 - Seventeenth Round of LTM (June 2014)
18R2014 - Eighteenth Round of LTM (December 2014)

Empty cells indicate that the specified analysis was not completed for that well. The bolded wells are the five wells included in the biowall process monitoring group.
Analysis of TOC, sulfate, methane, ethane, and ethene were completed for the biowall process wells only.
1. During the 5R2008 event the water level in PT-17 was extremely low and water quality readings were not collected.
2. During the 11R2011 event, data was collected at MW-56 in October 2011.

Table 4
Chlorinated Organics in Groundwater
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

	Sample Identification		Round	Sample Date	PCE (ug/L)	TCE (ug/L)	1,1-DCE (ug/L)	cis-DCE (ug/L)	trans-DCE (ug/L)	VC (ug/L)	1,1-DCA (ug/L)	1,2-DCA (ug/L)
			Class GA Standard (ug/L)		5	5	5	5	5	2	5	0.6
Upgradient	MWT-28	In Biowall B2	1	3-Jan-07	20 U	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ
			2	16-Mar-07	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
			3	5-Jun-07	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
			4	15-Nov-07	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
			5	25-Jun-08	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
			6	15-Dec-08	3.6 U	1.8 U	2.9 U	1.6 U	1.3 U	2.4 U	7.5 U	2.1 U
			7	3-Jun-09	0.36 U	0.18 U	0.29 U	0.16 U	0.13 U	0.24 U	0.75 U	0.21 U
			8	18-Dec-09	1.8 U	2.3 U	1.9 U	1.9 U	2.1 U	1.2 U	1.5 U	1.1 U
			9	29-Jun-10	0.15 U	0.13 U	0.11 U	0.15 U	0.2 U	0.18 U	0.25 U	0.1 U
			10	18-Dec-10	0.15 U	0.13 U	0.11 U	0.51 J	0.2 U	0.64 J	0.25 U	0.1 U
			11	19-Jul-11	0.15 U	0.13 U	0.11 U	0.15 U	0.2 U	0.18 U	0.25 U	0.1 U
			12	14-Dec-11	0.15 UJ	0.13 U	0.11 U	0.28 J	0.2 U	0.56 J	0.25 U	0.1 U
			13	20-Jun-12	0.15 U	0.13 U	0.11 U	0.15 U	0.2 U	0.18 U	0.25 U	0.1 UJ
			14	14-Dec-12	0.15 U	0.13 U	0.11 U	0.15 U	0.2 U	0.31 J	0.25 U	0.1 U
			15	11-Jul-13	0.15 U	0.13 U	0.11 U	0.15 U	0.2 U	0.18 U	0.25 U	0.1 U
			16	14-Dec-13	0.15 U	0.13 U	0.11 U	0.37 J	0.2 U	0.18 U	0.25 U	0.1 U
			17	19-Jun-14	0.15 U	0.13 U	0.11 U	0.15 U	0.2 U	0.18 U	0.25 U	0.1 U
			18	17-Dec-14	0.15 U	0.13 U	0.11 U	0.19 J	0.2 U	0.18 U	0.25 U	0.1 U
	MWT-29	Downgradient of Biowall B2	1	3-Jan-07	2 U	22	2 U	280	6.5	140	2 U	2 U
			2	16-Mar-07	4 U	19	4.5 U	220	7.75	165	4.5 U	5 U
			3	5-Jun-07	2 U	7.6	2 U	100	2.1	81	2 U	2 U
			4	14-Nov-07	1 U	4.4	1 U	96	0.83 J	74	1 U	1 U
			5	25-Jun-08	1 U	3.3	1 U	84	0.65 J	74	1 U	1 U
			6	15-Dec-08	0.36 U	6.6	0.29 U	91	0.6 J	80	0.75 U	0.21 U
			7	3-Jun-09	0.36 U	4.5	0.29 U	61	0.67 J	43	0.75 U	0.21 U
			8	16-Dec-09	0.36 U	3.5	0.38 U	37	0.65 J	29	0.29 U	0.21 U
			9	30-Jun-10	0.15 U	1.3	0.26 J	78	1.1	69	0.25 U	0.1 U
			10	19-Dec-10	0.15 U	2.1	0.4 J	38	0.77 J	27	0.25 U	0.1 U
			11	20-Jul-11	0.15 U	0.79 J	0.11 U	33	1.6	43	0.25 U	0.1 U
			12	14-Dec-11	0.15 UJ	2.4	0.11 U	8.5	0.26 J	5.9	0.25 U	0.1 U
			13	20-Jun-12	0.15 U	0.69 J	0.11 U	36	0.59 J	49	0.25 U	0.1 UJ
			14	14-Dec-12	0.15 U	3.3	0.11 U	25	0.44 J	11	0.25 U	0.1 U
			15	10-Jul-13	0.15 U	3.7	0.11 U	80	1.1	32	0.25 U	0.1 U
			16	12-Dec-13	0.15 U	2.1	0.11 U	28	0.42 J	20	0.25 U	0.1 U
			17	19-Jun-14	0.15 U	0.71 J	0.13 J	49	1.1	130	0.25 U	0.1 U
			18	17-Dec-14	0.15 U	2.3	0.11 U	18	0.2 U	7.5	0.25 U	0.1 U
	MWT-22	Downgradient of Biowall B2	1	3-Jan-07	2 U	5.2	2 U	130	2.7	98	2 U	2 U
			2	17-Mar-07	4 U	3.8 J	4 U	90	4 U	64	4 U	4 U
			3	6-Jun-07	1 U	6.5	1 U	120	3.2	81	1 U	1 U
			4	14-Nov-07	1 U	2.6	1 U	99	0.85 J	180	1 U	1 U
			5	25-Jun-08	5 U	3 J	5 U	68	5 U	42	5 U	5 U
			6	15-Dec-08	1.8 U	5.9	1.4 U	160	0.65 U	140	3.8 U	1 U
			7	3-Jun-09	0.36 U	2.2	0.29 U	66	0.77 J	89	0.75 U	0.21 U
			8	16-Dec-09	1.8 U	2.3 U	1.9 U	57	2.1 U	52	1.5 U	1.1 U
			9	1-Jul-10	0.15 U	0.6 J	0.12 J	41	1.3	57	0.25 U	0.1 U
			10	17-Dec-10	0.15 U	1.8	0.66 J	130	2.8	98	0.25 U	0.25 J
			11	20-Jul-11	0.15 U	0.32 J	0.11 U	23	2.0	59	0.25 U	0.1 U
			12	14-Dec-11	0.15 UJ	2.3	0.38 J	140	3.9	83	0.25 U	0.29 J
			13	21-Jun-12	0.15 U	0.48 J	0.11 U	57	5.0	90	0.25 U	0.1 UJ
			14	12-Dec-12	0.15 U	0.73 J	0.11 U	86	3.8	100	0.25 U	0.22 J
			15	10-Jul-13	0.15 U	2	0.27 J	150	6.2	84	0.25 U	0.28 J
			16	12-Dec-13	0.15 U	0.88 J	0.14 J	100	7.1	120	0.25 U	0.25 J
			17	21-Jun-14	0.15 U	0.19 J	0.11 U	19	2.8	65	0.25 U	0.11 J
			18	18-Dec-14	0.15 U	0.21 J	0.11 U	32	3.6	84	0.25 U	0.1 U
	PT-22	Between Biowalls B and C	1	3-Jan-07	1 U	11	1 U	57	0.86 J	22	1 U	3.3
			2	15-Mar-07	1 U	16	1 U	41	0.51 J	13	1 U	2.4
			3	5-Jun-07	1 U	8.5	1 U	61	0.72 J	32	1 U	5.6
			4	14-Nov-07	1 U	9.7	1 U	30	0.67 J	11	1 U	5
			5	26-Jun-08	1 U	4.1	1 U	26	0.57 J	13	1 U	3.9
			6	15-Dec-08	0.36 U	35	0.29 U	52	0.41 J	1.3	0.75 U	2.8
			7	2-Jun-09	0.36 U	6.9	0.29 U	41	0.81 J	11	0.75 U	4
			8	16-Dec-09	0.36 U	8.7	0.38 U	29	0.42 U	9.5	0.29 U	3
			9	30-Jun-10	0.15 U	4.6	0.11 U	43	0.75 J	11	0.25 U	3.2
			10	17-Dec-10	0.15 U	29	0.11 U	42	0.48 J	2.1	0.25 U	1.9
			11	22-Jul-11	0.15 U	31	0.11 U	42	0.2 U	0.18 U	0.25 U	0.1 U
			12	14-Dec-11	0.15 UJ	34	0.11 U	32	0.37 J	0.68 J	0.25 U	1.9
			13	21-Jun-12	0.15 U	7.9	0.11 U	31	0.84 J	4	0.25 U	2.1
			14	13-Dec-12	0.15 U	28	0.11 U	26	0.2 U	0.46 J	0.25 U	1.6
			15	9-Jul-13	0.15 U	38	0.11 U	49	0.45 J	1.6	0.25 U	2.3
			16	12-Dec-13	0.15 U	29	0.11 U	37	0.28 J	0.68 J	0.25 U	2
			17	21-Jun-14	0.15 U	23	0.11 U	52	1.3	2.9	0.25 U	3.1
Downgradient			18	18-Dec-14	0.15 U	23	0.11 U	23	0.2 U	0.18 U	0.25 U	1.2

Table 4
Chlorinated Organics in Groundwater
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

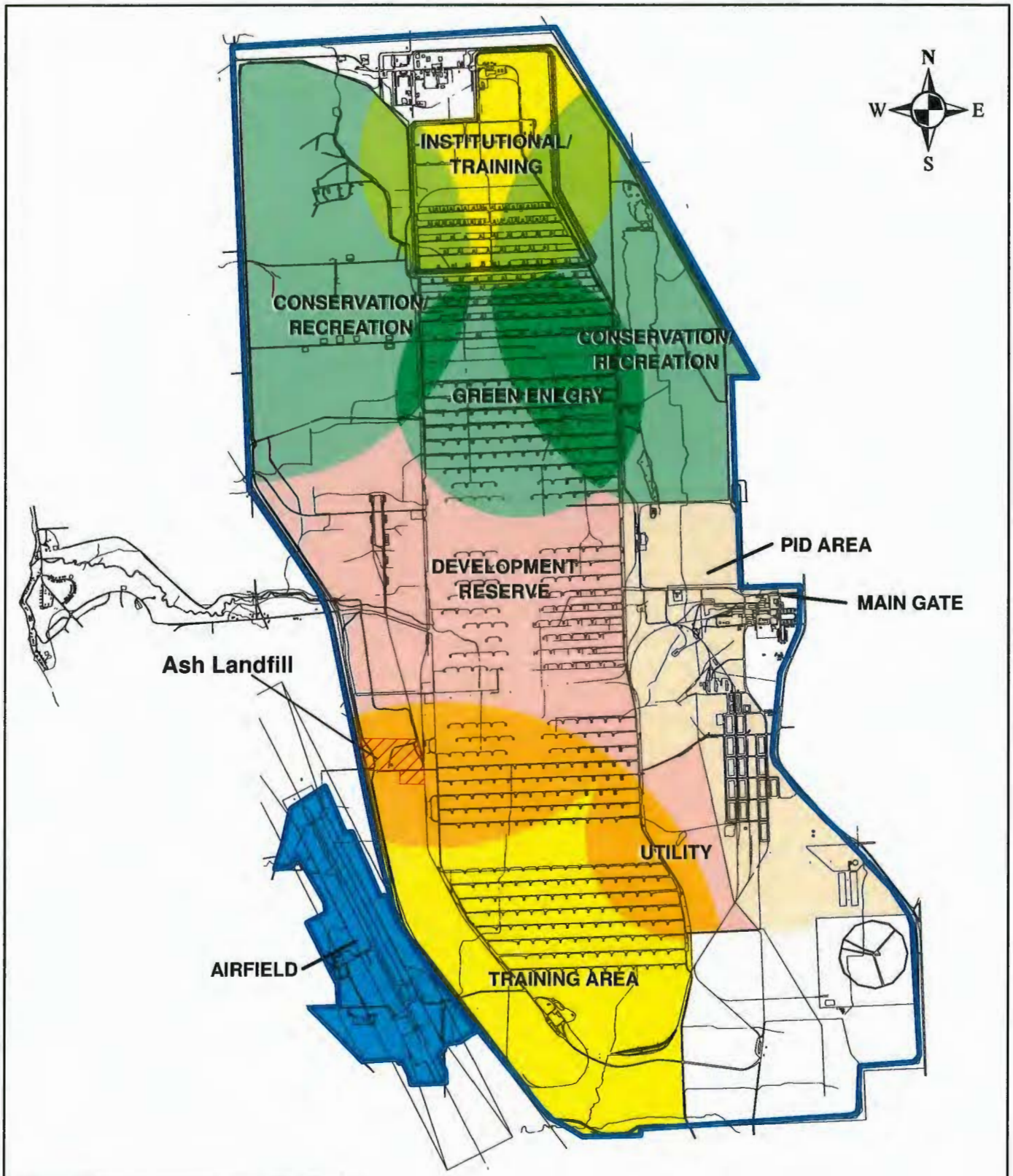
	Sample Identification		Round	Sample Date	PCE (ug/L)	TCE (ug/L)	1,1-DCE (ug/L)	cis-DCE (ug/L)	trans-DCE (ug/L)	VC (ug/L)	1,1-DCA (ug/L)	1,2-DCA (ug/L)
		Class GA Standard (ug/L)			5	5	5	5	5	2	5	0.6
Upgradient	PT-24	Downgradient of ZVI wall	1	2-Jan-07	1 U	4	1 U	54	0.86 J	0.6 J	0.68 J	1 U
			2	15-Mar-07	1 U	2.8	1 U	38	0.81 J	1 U	1 U	1 U
			3	5-Jun-07	1 U	3.1	1 U	60	1.6	2.6	0.75 J	1 U
			4	13-Nov-07	1 U	3.8	1 U	39	1 U	1 U	0.56 J	1 U
			5	26-Jun-08	1 U	2.4	1 U	48	1.1	1.9	0.69 J	1 U
			6	12-Dec-08	0.36 U	2.2	0.29 U	34	0.36 J	0.26 J	0.75 U	0.21 U
			7	2-Jun-09	0.36 U	1.7	0.29 U	32	0.83 J	2	0.75 U	0.21 U
			8	15-Dec-09	0.36 U	1.7	0.38 U	28	0.61 J	1.6	0.29 U	0.21 U
			9	30-Jun-10	0.15 U	0.39 J	0.11 U	33	1.1	3.8	0.54 J	0.1 U
			10	17-Dec-10	0.15 U	0.53 J	0.11 U	30	1.4	7.7	0.54 J	0.1 U
			11	21-Jul-11	0.15 U	0.38 J	0.11 U	37	1.4	7.9	0.78 J	0.1 U
			12	13-Dec-11	0.15 U	0.82 J	0.11 U	21	0.63 J	2.9	0.48 J	0.1 U
			13	19-Jun-12	0.15 U	0.87 J	0.11 U	30	0.84 J	2.8	0.57 J	0.1 UJ
			14	12-Dec-12	0.15 U	1.1	0.11 U	18	0.38 J	0.18 U	0.32 J	0.1 U
			15	9-Jul-13	0.15 U	1.6	0.11 U	24	0.8 J	0.83 J	0.51 J	0.1 U
			16	11-Dec-13	0.15 U	1.3	0.11 U	23	0.86 J	1.8	0.52 J	0.1 U
			17	20-Jun-14	0.15 U	1.3	0.11 U	23	1	1.7	0.25 U	0.1 U
			18	19-Dec-14	0.15 U	0.85 J	0.11 U	13	0.53 J	0.18 U	0.29 J	0.1 U
	MW-56	Off-site well	1	4-Jan-07	1 U	1 U	1 U	1.2	1 U	1 U	1 U	1 U
			3	6-Jun-07	1 U	1 U	1 U	1.7	1 U	1 U	1 U	1 U
			5	26-Jun-08	1 U	1 U	1 U	1.3	1 U	1 U	1 U	1 U
			6	11-Dec-08	0.36 U	0.33 J	0.29 U	0.4 J	0.13 U	0.24 U	0.75 U	0.21 U
			7	4-Jun-09	0.36 U	0.18 U	0.29 U	1	0.13 U	0.24 U	0.75 U	0.21 U
			8	18-Dec-09	0.36 U	0.46 U	0.38 U	0.56 J	0.42 U	0.24 U	0.29 U	0.21 U
			9	1-Jul-10	0.15 U	0.13 U	0.11 U	0.61 J	0.2 U	0.18 U	0.25 U	0.1 U
			10	19-Dec-10	0.15 U	0.13 U	0.11 U	0.86 J	0.2 U	0.18 U	0.25 U	0.1 U
			11	4-Oct-11	0.15 U	0.13 U	0.11 U	2.3	0.2 U	0.18 U	0.25 U	0.1 U
			12	12-Dec-11	0.15 U	0.13 U	0.11 U	0.95 J	0.2 U	0.18 U	0.25 U	0.1 U
			13	18-Jun-12	0.15 U	0.13 U	0.11 U	2.2	0.2 U	0.18 U	0.25 U	0.1 UJ
			14	14-Dec-12	0.15 U	0.13 U	0.11 U	0.85 J	0.2 U	0.18 U	0.25 U	0.1 U
			15	9-Jul-13	0.15 U	0.13 U	0.11 U	2.2	0.2 U	0.18 U	0.25 U	0.1 U
			16	11-Dec-13	0.15 U	0.13 U	0.11 U	1.7	0.2 U	0.18 U	0.25 U	0.1 U
			17	22-Jun-14	0.15 U	0.13 U	0.11 U	0.98 J	0.2 U	0.18 U	0.25 U	0.1 U
Downgradient			18	19-Dec-14	0.15 U	0.13 U	0.11 U	0.89 J	0.2 U	0.18 U	0.25 U	0.1 U

Notes:

1. Sample duplicate pairs were collected at MWT-28 in Jan-07, June-09, June-10, June-12, and Dec-13; MWT-29 in Mar-07 and Jun-08; MWT-27 in Jun-07, Dec-08, Dec-09, July-11, July-13, Dec-14; and MWT-23 in Nov-07, Dec-10, Dec-11, Dec-12, June-14. If an analyte was detected in the sample but not detected in the duplicate (or vice versa) the non-detect value was taken at half the detection limit averaged with the detect value.
2. Wells in bold are the biowall process monitoring wells.
3. Grey shading indicates that the concentration was detected above its Class GA groundwater standard. The Class GA Groundwater standard for TCE and cis-DCE is 5 ug/L; for VC the Class GA standard is 2 ug/L.

U = compound was not detected; detection limit shown.
J = the reported value is an estimated concentration.
UJ = the compound was not detected; the associated reporting limit is approximate.

FIGURES



PARSONS

SENECA ARMY DEPOT ACTIVITY

ASH LANDFILL ANNUAL REPORT

FIGURE 1

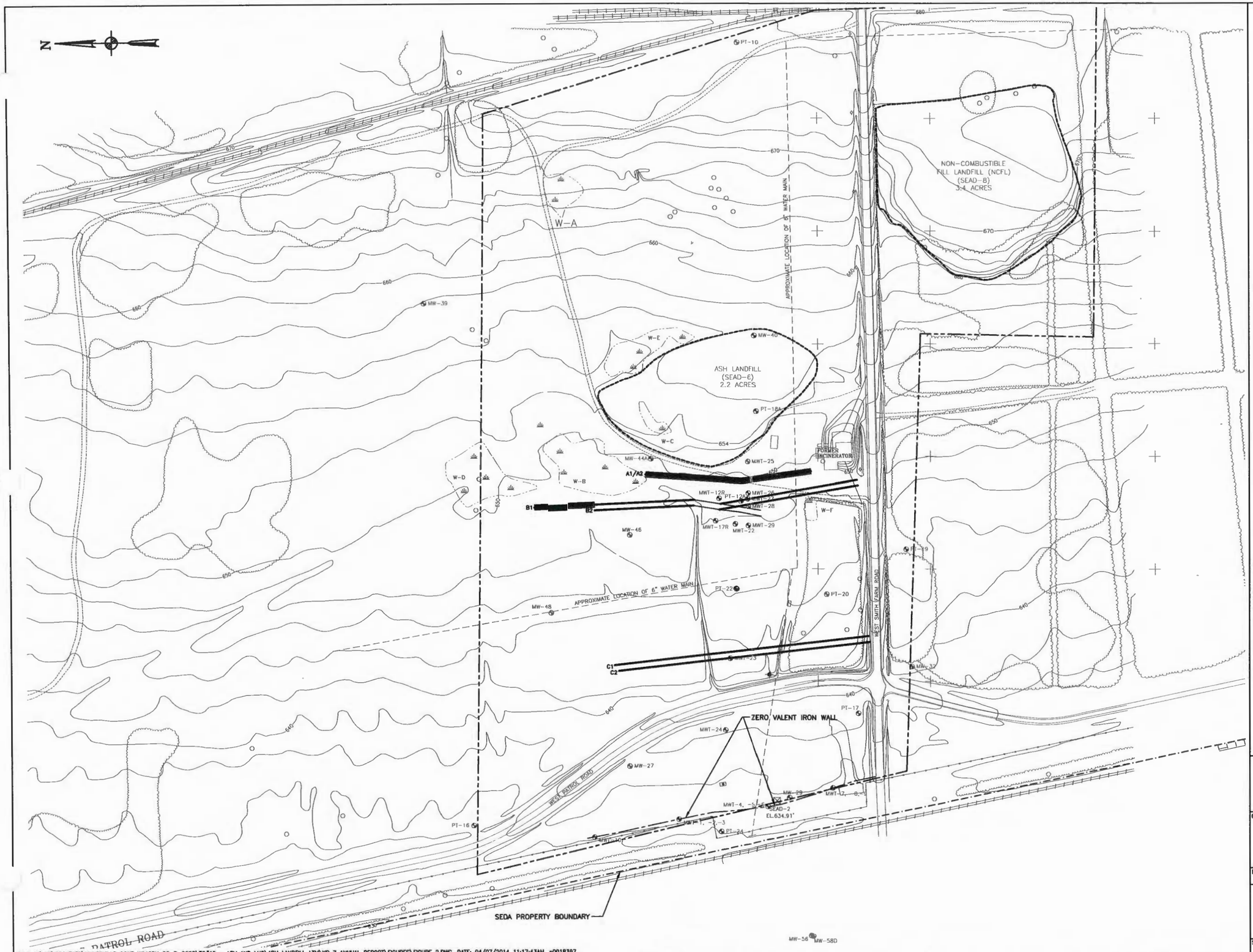
ASH LANDFILL LOCATION AT SEDA

APRIL 2015

Seneca Army Depot Boundary

Ash Landfill (SEADs 3, 6, 8, 14 & 15)
Operational Unit Boundary

Path: P:\PIT\Projects\Huntsville Cont W912DY-08-D-0003\TO#15 - LTM and LUC\Ash Landfill LTM\Yr 7 Annual Report\Figures\FIGURE 1.mxd



LEGEND:

- PAVED ROAD
- DIRT ROAD
- GROUND CONTOUR AND ELEVATION
- TREE
- WETLAND & DESIGNATION
- BRUSH
- CHAIN LINK FENCE
- UTILITY POLE
- APPROXIMATE LOCATION OF FIRE HYDRANT
- FUEL OR UNDERGROUND STORAGE TANK
- SURVEY MONUMENT
- MONITORING WELL AND DESIGNATION
- RAILROAD TRACKS
- WATER MAIN
- POST CONSTRUCTION AS BUILT GROUND ELEVATION CONTOUR
- PILOT STUDY BIOWALL (2005)
- SINGLE BIOWALL (2006)
- DOUBLE-WIDE BIOWALL (2006)
- ZERO VALENT IRON WALL (1998)
- LIMITS OF LANDFILL
- SEDA PROPERTY BOUNDARY
- OU BOUNDARY

100 0 100 200
(feet)

PARSONS

CLIENT/PROJECT TITLE

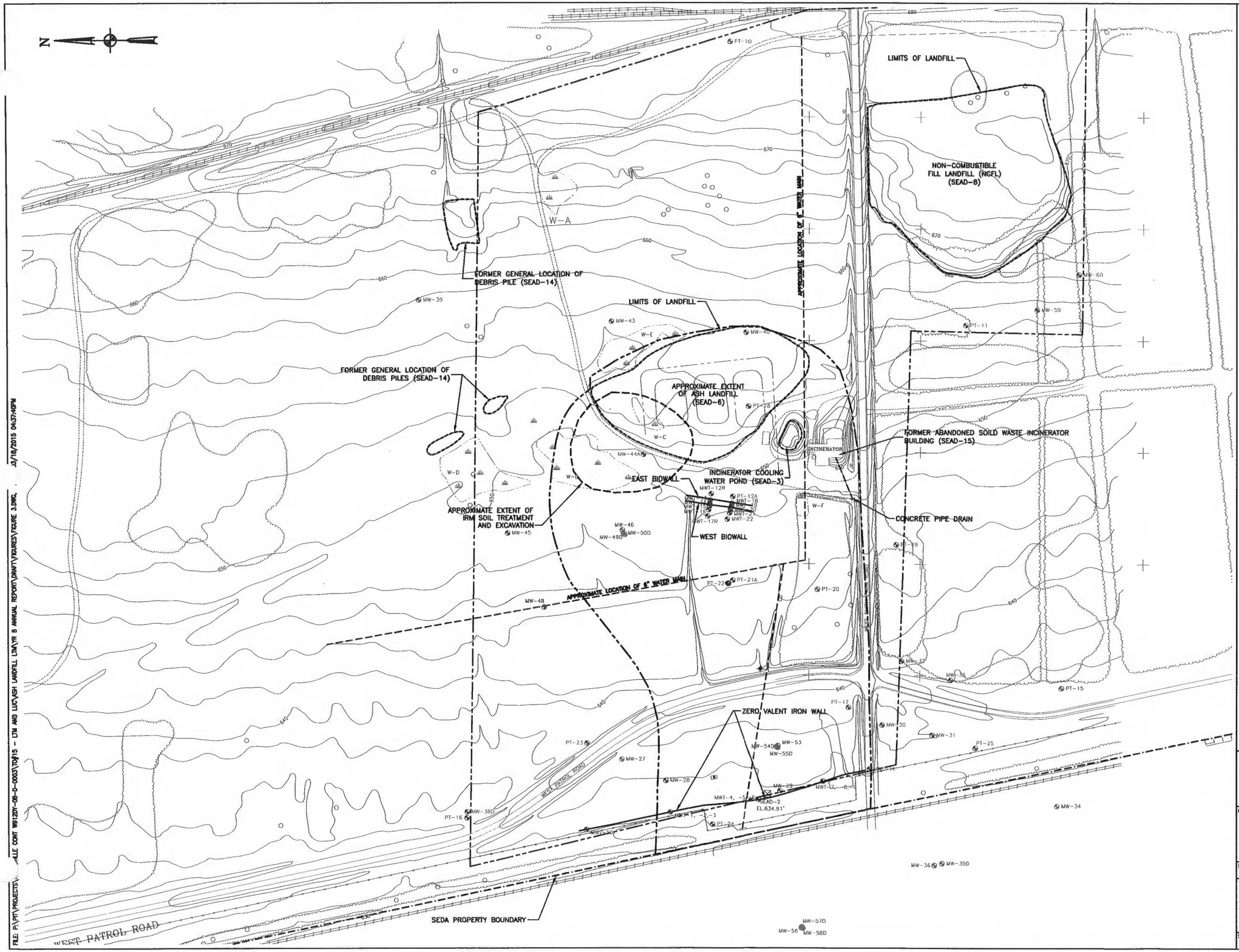
SENECA ARMY DEPOT
ASH LANDFILL
ASH LANDFILL ANNUAL REPORT

DEPT. ENVIRONMENTAL ENGINEERING | Dwg. No.

FIGURE 2
ASH LANDFILL
SITE PLAN

SCALE | DATE April 2015 | REV -

FILE: P:\PIT\PROJECTS\HUNTSVILLE CONT W912DY-08-D-0003\TO#15 - LTM AND LUC\ASH LANDFILL LTM\YR 7 ANNUAL REPORT\FIGURES\FIGURE 2.DWG, DATE: 04/07/2014 11:17:43AM, p0018397



LEGEND:

- PAVED ROAD
- DIRT ROAD
- GROUND CONTOUR AND ELEVATION
- TREE
- WETLAND & DESIGNATION
- BRUSH
- CHAIN LINK FENCE
- UTILITY POLE
- APPROXIMATE LOCATION OF FIRE HYDRANT
- FUEL OR UNDERGROUND STORAGE TANK
- SURVEY MONUMENT
- MONITORING WELL AND DESIGNATION
- RAILROAD TRACKS
- WATER MAIN
- APPROXIMATE EXTENT OF IRM SOIL TREATMENT AND EXCAVATION
- APPROXIMATE AREA REQUIRING LAND USE CONTROLS
- SEDA PROPERTY BOUNDARY
- OU BOUNDARY

NOTE:
FIGURE SHOWS PRE-CONSTRUCTION CONDITIONS

100 0 100 200
(feet)

PARSONS

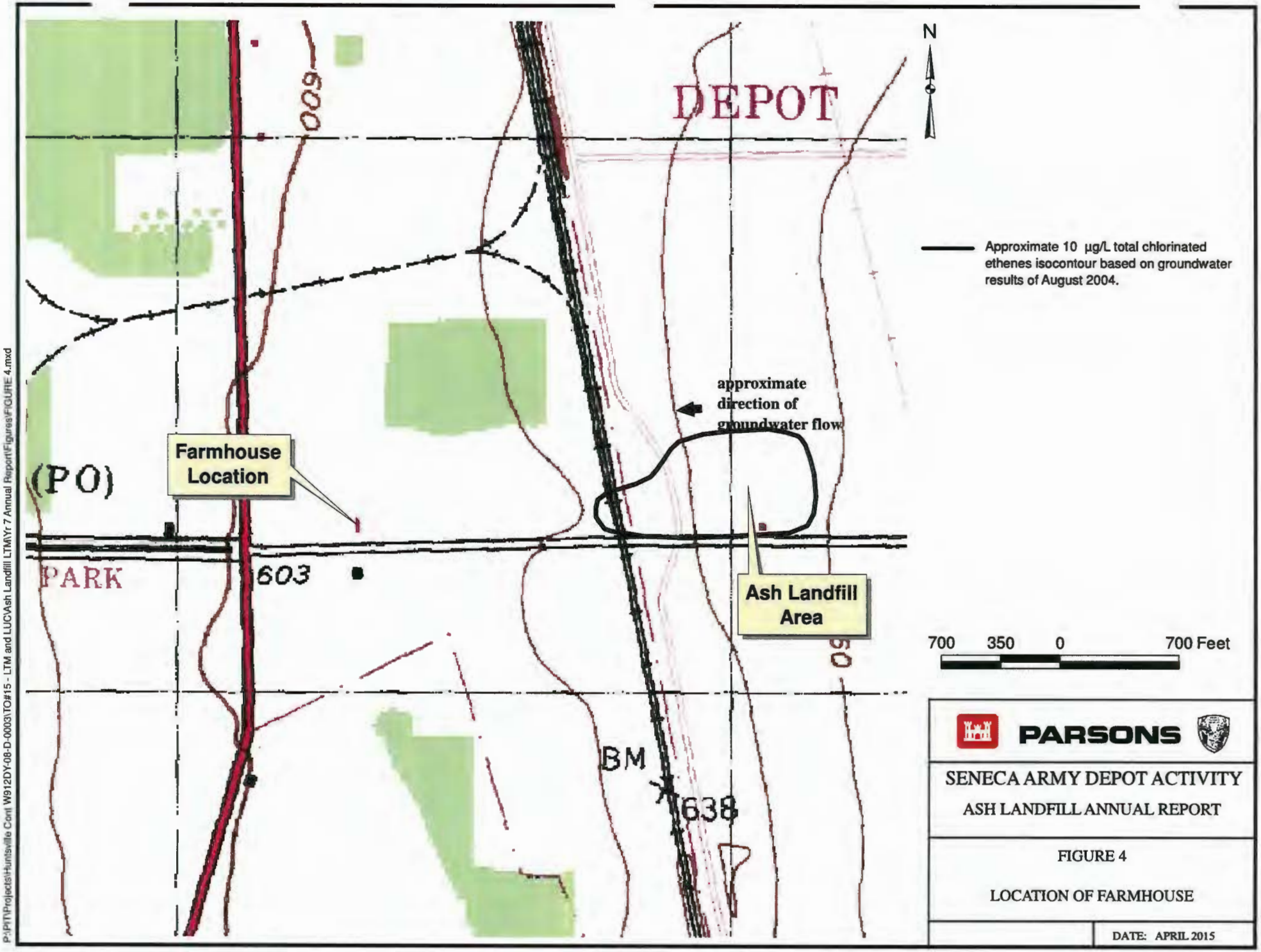
CLIENT/PROJECT TITLE
SENECA ARMY DEPOT
ASH LANDFILL
ASH LANDFILL ANNUAL REPORT

DEPT. ENVIRONMENTAL ENGINEERING | Dwg. No.

FIGURE 3
ASH LANDFILL
HISTORIC SITE MAP

SCALE | DATE MARCH 2015 | REV

FILE: P:\PM\PROJECTS\...\ALLE CONT W912DY-08-D-0003\TO#15 - LTM AND LI\ASH LANDFILL LTM\YR 8 ANNUAL REPORT\DRAFT\FIGURES\FIGURE 3.DWG, 3/18/2015 04:37:40 PM



PARSONS

SENECA ARMY DEPOT ACTIVITY

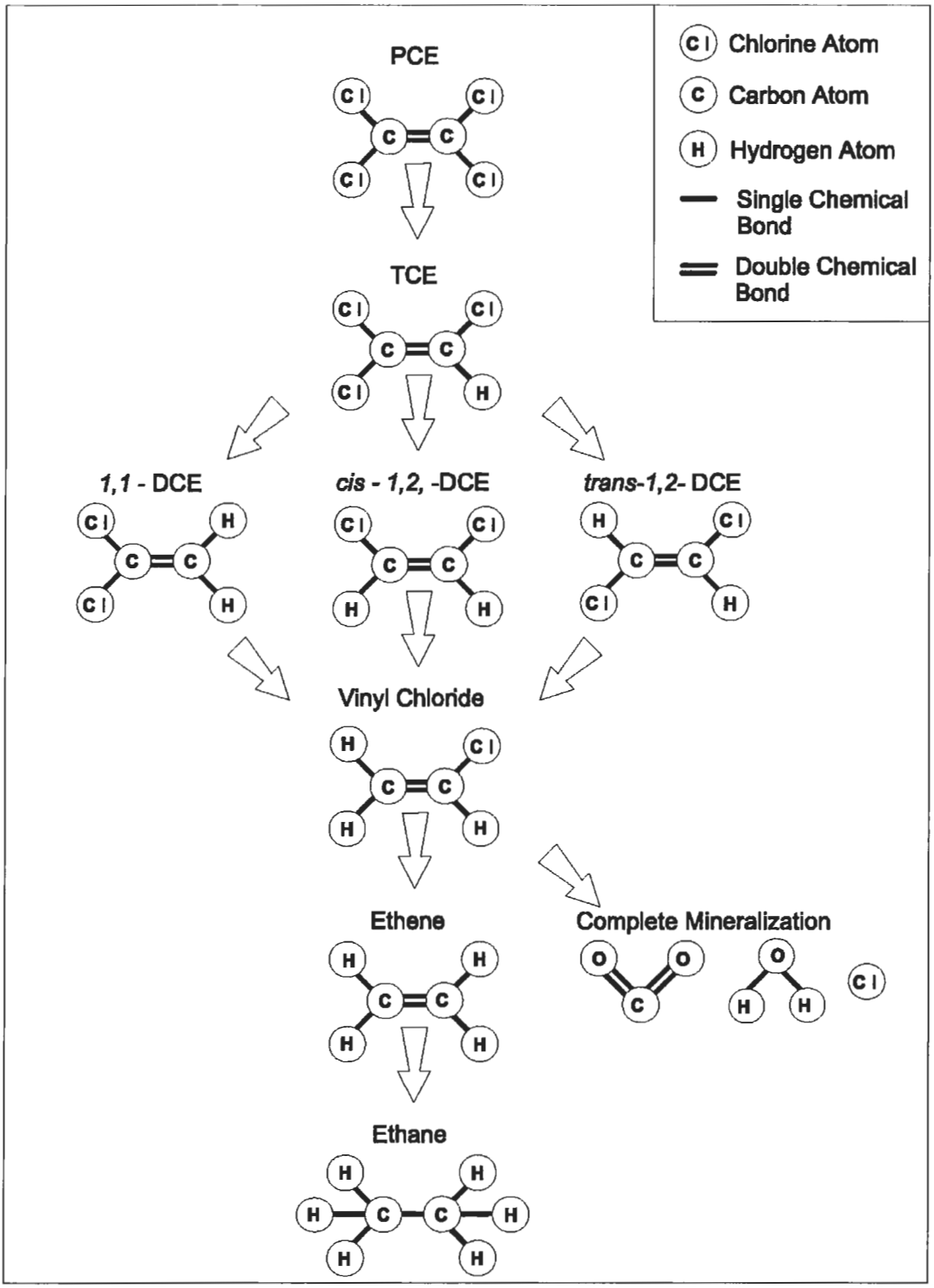
ASH LANDFILL ANNUAL REPORT

FIGURE 4

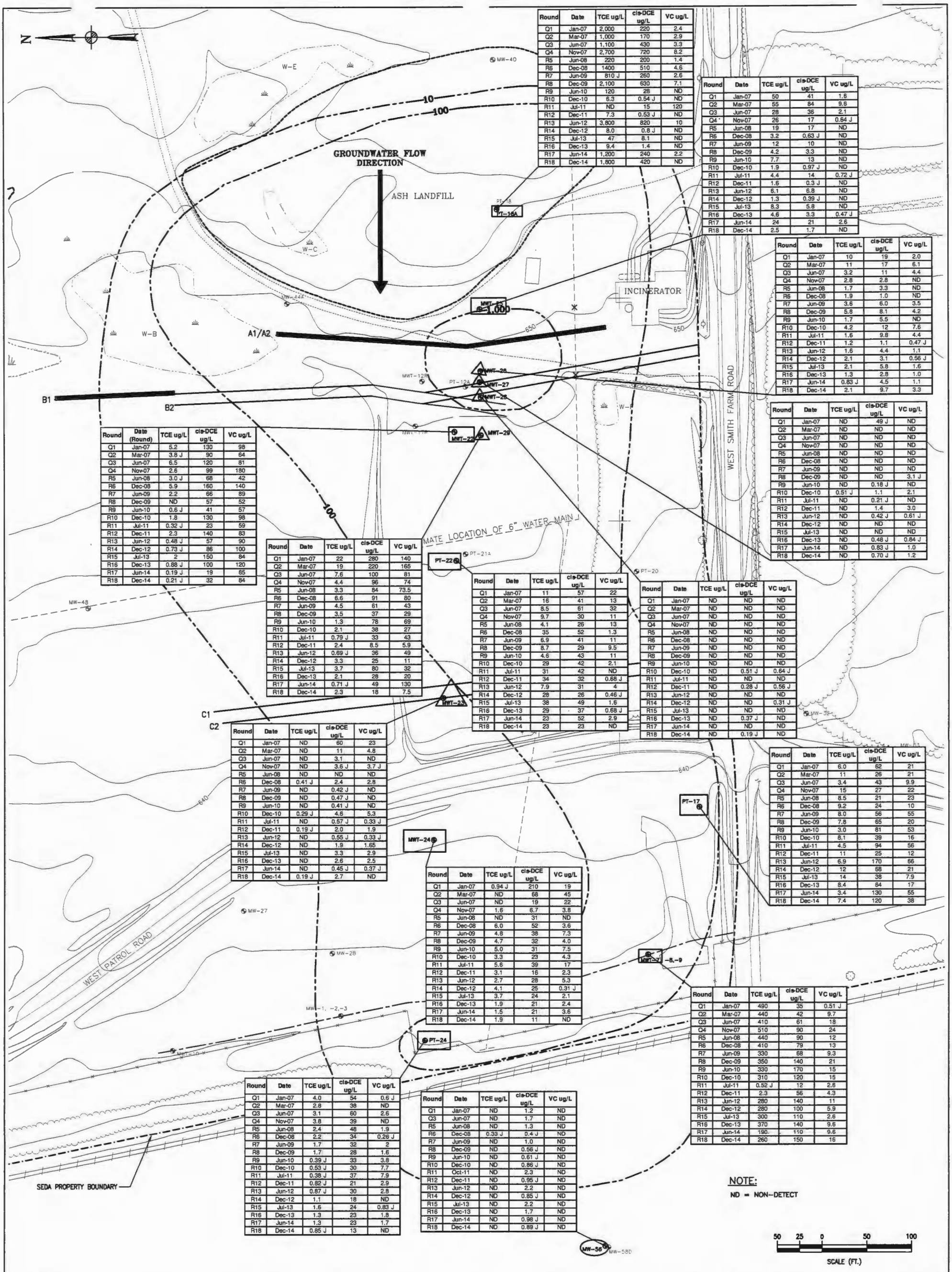
LOCATION OF FARMHOUSE

DATE: APRIL 2015

Figure 5
Reductive Dechlorination of Chlorinated Ethenes
Ash Landfill Annual Report
Seneca Army Depot Activity



(USEPA, 1998)



Round	Date	TCE ug/L	cis-DCE ug/L	VC ug/L
Q1	Jan-07	2,000	220	2.4
Q2	Mar-07	1,000	170	2.9
Q3	Jun-07	1,100	430	3.3
Q4	Nov-07	2,700	720	8.2
R5	Jun-08	220	200	1.4
R6	Dec-08	1400	510	4.6
R7	Jun-09	810 J	260	2.6
R8	Dec-09	2,100	630	7.1
R9	Jun-10	120	28	ND
R10	Dec-10	6.3	0.54 J	ND
R11	Jul-11	ND	15	120
R12	Dec-11	7.3	0.53 J	ND
R13	Jun-12	3,800	820	10
R14	Dec-12	8.0	0.8 J	ND
R15	Jul-13	47	8.1	ND
R16	Dec-13	9.4	1.4	ND
R17	Jun-14	1,200	240	2.2
R18	Dec-14	1,800	420	ND

Round	Date	TCE ug/L	cis-DCE ug/L	VC ug/L
Q1	Jan-07	50	41	1.6
Q2	Mar-07	55	84	9.6
Q3	Jun-07	28	36	2.1
Q4 *	Nov-07	26	17	0.64 J
R5	Jun-08	19	17	ND
R6	Dec-08	3.2	0.63 J	ND
R7	Jun-09	12	10	ND
R8	Dec-09	4.2	3.3	ND
R9	Jun-10	7.7	13	ND
R10	Dec-10	1.9	0.97 J	ND
R11	Jul-11	4.4	14	0.72 J
R12	Dec-11	1.6	0.3 J	ND
R13	Jun-12	6.1	6.8	ND
R14	Dec-12	1.3	0.39 J	ND
R15	Jul-13	8.3	5.8	ND
R16	Dec-13	4.6	3.3	0.47 J
R17	Jun-14	24	21	2.6
R18	Dec-14	2.5	1.7	ND

Round	Date	TCE ug/L	cis-DCE ug/L	VC ug/L
Q1	Jan-07	10	19	2.0
Q2	Mar-07	11	17	6.1
Q3	Jun-07	3.2	11	4.4
Q4	Nov-07	2.8	2.8	ND
R5	Jun-08	1.7	3.3	ND
R6	Dec-08	1.9	1.0	ND
R7	Jun-09	3.6	6.0	3.5
R8	Dec-09	5.8	8.1	4.2
R9	Jun-10	1.7	5.5	ND
R10	Dec-10	4.2	12	7.6
R11	Jul-11	1.6	9.8	4.4
R12	Dec-11	1.2	1.1	0.47 J
R13	Jun-12	1.6	4.4	1.1
R14	Dec-12	2.1	3.1	0.56 J
R15	Jul-13	2.1	5.8	1.6
R16	Dec-13	1.3	2.8	1.0
R17	Jun-14	0.83 J	4.5	1.1
R18	Dec-14	2.1	9.7	3.3

Round	Date	TCE ug/L	cis-DCE ug/L	VC ug/L
Q1	Jan-07	ND	49 J	ND
Q2	Mar-07	ND	ND	ND
Q3	Jun-07	ND	ND	ND
Q4	Nov-07	ND	ND	ND
R5	Jun-08	ND	ND	ND
R6	Dec-08	ND	ND	ND
R7	Jun-09	ND	ND	ND
R8	Dec-09	ND	ND	3.1 J
R9	Jun-10	ND	0.18 J	ND
R10	Dec-10	0.51 J	1.1	2.1
R11	Jul-11	ND	0.21 J	ND
R12	Dec-11	ND	1.4	3.0
R13	Jun-12	ND	0.42 J	0.61 J
R14	Dec-12	ND	ND	ND
R15	Jul-13	ND	ND	ND
R16	Dec-13	ND	0.48 J	0.84 J
R17	Jun-14	ND	0.83 J	1.0
R18	Dec-14	ND	0.70 J	1.2

Round	Date (Round)	TCE ug/L	cis-DCE ug/L	VC ug/L
Q1	Jan-07	5.2	130	98
Q2	Mar-07	3.8 J	90	64
Q3	Jun-07	6.5	120	81
Q4	Nov-07	2.6	99	180
R5	Jun-08	3.0 J	68	42
R6	Dec-08	5.9	160	140
R7	Jun-09	2.2	66	89
R8	Dec-09	ND	57	52
R9	Jun-10	0.6 J	41	57
R10	Dec-10	1.8	130	98
R11	Jul-11	0.32 J	23	59
R12	Dec-11	2.3	140	83
R13	Jun-12	0.48 J	57	90
R14	Dec-12	0.73 J	86	100
R15	Jul-13	2	150	84
R16	Dec-13	0.88 J	100	120
R17	Jun-14	0.19 J	19	65
R18	Dec-14	0.21 J	32	84

Round	Date	TCE ug/L	cis-DCE ug/L	VC ug/L
Q1	Jan-07	22	280	140
Q2	Mar-07	19	220	165
Q3	Jun-07	7.6	100	81
Q4	Nov-07	4.4	96	74
R5	Jun-08	3.3	84	73.5
R6	Dec-08	6.6	91	80
R7	Jun-09	4.5	61	43
R8	Dec-09	3.5	37	29
R9	Jun-10	1.3	78	69
R10	Dec-10	2.1	38	27
R11	Jul-11	0.79 J	33	43
R12	Dec-11	2.4	8.5	5.9
R13	Jun-12	0.69 J	36	49
R14	Dec-12	3.3	25	11
R15	Jul-13	3.7	80	32
R16	Dec-13	2.1	28	20
R17	Jun-14	0.71 J	49	130
R18	Dec-14	2.3	18	7.5

Round	Date	TCE ug/L	cis-DCE ug/L	VC ug/L
Q1	Jan-07	11	57	22
Q2	Mar-07	16	41	13
Q3	Jun-07	8.5	61	32
Q4	Nov-07	9.7	30	11
R5	Jun-08	4.1	26	13
R6	Dec-08	35	52	1.3
R7	Jun-09	6.9	41	11
R8	Dec-09	8.7	29	9.5
R9	Jun-10	4.6	43	11
R10	Dec-10	29	42	2.1
R11	Jul-11	31	42	ND
R12	Dec-11	34	32	0.68 J
R13	Jun-12	7.9	31	4
R14	Dec-12	28	26	0.46 J
R15	Jul-13	38	49	1.6
R16	Dec-13	29	37	0.68 J
R17	Jun-14	23	52	2.9
R18	Dec-14	23	23	ND

Round	Date	TCE ug/L	cis-DCE ug/L	VC ug/L
Q1	Jan-07	ND	ND	ND
Q2	Mar-07	ND	ND	ND
Q3	Jun-07	ND	ND	ND
Q4	Nov-07	ND	ND	ND
R5	Jun-08	ND	ND	ND
R6	Dec-08	ND	ND	ND
R7	Jun-09	ND	ND	ND
R8	Dec-09	ND	ND	ND
R9	Jun-10	ND	ND	ND
R10	Dec-10	ND	0.51 J	0.64 J
R11	Jul-11	ND	ND	ND
R12	Dec-11	ND	0.28 J	0.56 J
R13	Jun-12	ND	ND	ND
R14	Dec-12	ND	ND	0.31 J
R15	Jul-13	ND	ND	ND
R16	Dec-13	ND	0.37 J	ND
R17	Jun-14	ND	ND	ND
R18	Dec-14	ND	0.19 J	ND

Round	Date	TCE ug/L	cis-DCE ug/L	VC ug/L
Q1	Jan-07	ND	60	23
Q2	Mar-07	ND	11	4.8
Q3	Jun-07	ND	3.1	ND
Q4	Nov-07	ND	3.6 J	3.7 J
R5	Jun-08	ND	ND	ND
R6	Dec-08	0.41 J	2.4	2.8
R7	Jun-09	ND	0.42 J	ND
R8	Dec-09	ND	0.47 J	ND
R9	Jun-10	ND	0.41 J	ND
R10	Dec-10	0.29 J	4.6	5.3
R11	Jul-11	ND	0.57 J	0.33 J
R12	Dec-11	0.19 J	2.0	1.9
R13	Jun-12	ND	0.55 J	0.33 J
R14	Dec-12	ND	1.9	1.65
R15	Jul-13	ND	3.3	2.9
R16	Dec-13	ND	2.6	2.5
R17	Jun-14	ND	0.45 J	0.37 J
R18	Dec-14	0.19 J	2.7	ND

Round	Date	TCE ug/L	cis-DCE ug/L	VC ug/L
Q1	Jan-07	6.0	62	21
Q2	Mar-07	11	26	21
Q3	Jun-07	3.4	43	9.9
Q4	Nov-07	15	27	22
R5	Jun-08	8.5	21	23
R6	Dec-08	9.2	24	10
R7	Jun-09	8.0	56	55
R8	Dec-09	7.8	65	20
R9	Jun-10	3.0	81	53
R10	Dec-10	8.1	39	16
R11	Jul-11	4.5	94	56
R12	Dec-11	11	25	12
R13	Jun-12	6.9	170	66
R14	Dec-12	12	68	21
R15	Jul-13	14	38	7.9
R16	Dec-13	8.4	64	17
R17	Jun-14	3.4	130	55
R18	Dec-14	7.4	120	38

Round	Date	TCE ug/L	cis-DCE ug/L	VC ug/L
Q1	Jan-07	0.94 J	210	19
Q2	Mar-07	ND	68	45
Q3	Jun-07	ND	19	22
Q4	Nov-07	1.6	6.7	3.8
R5	Jun-08	ND	31	ND
R6	Dec-08	6.0	52	3.6
R7	Jun-09	4.8	38	7.3
R8	Dec-09	4.7	32	4.0
R9	Jun-10	5.0	31	7.5
R10	Dec-10	3.3	23	4.3
R11	Jul-11	5.6	39	17
R12	Dec-11	3.1	16	2.3
R13	Jun-12	2.7	28	5.3
R14	Dec-12	4.1	25	0.31 J
R15	Jul-13	3.7	24	2.1
R16	Dec-13	1.9	21	2.4
R17	Jun-14	1.5	21	3.6
R18	Dec-14	1.9	11	ND

Round	Date	TCE ug/L	cis-DCE ug/L	VC ug/L
Q1	Jan-07	490	35	0.51 J
Q2	Mar-07	440	42	9.7
Q3	Jun-07	410	61	18
Q4	Nov-07	510	90	24
R5	Jun-08	440	90	12
R6	Dec-08	410	79	13
R7	Jun-09	330	68	9.3
R8	Dec-09	350	140	21
R9	Jun-10	330	170	15
R10	Dec-10	310	120	15
R11	Jul-11	0.52 J	12	2.6
R12	Dec-11	2.3	56	4.3
R13	Jun-12	280	140	11
R14	Dec-12	280	100	5.9
R15	Jul-13	300	110	2.6
R16	Dec-13	370	140	9.6
R17	Jun-14	190	110	9.6
R18	Dec-14	260	150	16

Round	Date	TCE ug/L	cis-DCE ug/L	VC ug/L
Q1	Jan-07	4.0	54	0.6 J
Q2	Mar-07	2.8	38	ND
Q3	Jun-07	3.1	60	2.6
Q4	Nov-07	3.8	39	ND
R5	Jun-08	2.4	48	1.9
R6	Dec-08	2.2	34	0.26 J
R7	Jun-09	1.7	32	2
R8	Dec-09	1.7	28	1.6
R9	Jun-10	0.39 J	33	3.8
R10	Dec-10	0.53 J	30	7.7
R11	Jul-11	0.38 J	37	7.9
R12	Dec-11	0.82 J	21	2.9
R13	Jun-12	0.87 J	30	2.8
R14	Dec-12	1.1	18	ND
R15	Jul-13	1.6	24	0.83 J
R16	Dec-13	1.3	23	1.8
R17	Jun-14	1.3	23	1.7
R18	Dec-14	0.85 J	13	ND

Round	Date	TCE ug/L	cis-DCE ug/L	VC ug/L
Q1	Jan-07	ND	1.2	ND
Q3	Jun-07	ND	1.7	ND
R5	Jun-08	ND	1.3	ND
R6	Dec-08	0.33 J	0.4 J	ND
R7	Jun-09	ND	1.0	ND
R8	Dec-09	ND	0.56 J	ND
R9	Jun-10	ND	0.61 J	ND
R10	Dec-10	ND	0.86 J	ND
R11	Oct-11	ND	2.3	ND
R12	Dec-11	ND	0.95 J	ND
R13	Jun-12	ND	2.2	ND
R14	Dec-12	ND	0.85 J	ND
R15	Jul-13	ND	2.2	ND
R16	Dec-13	ND	1.7	ND
R17	Jun-14	ND	0.98 J	ND
R18	Dec-14	ND	0.89 J	ND

NOTE:

ND = NON-DETECT

50 25 0 50 100

SCALE (FT.)

LEGEND:

- PAVED ROAD
- DIRT ROAD
- GROUND CONTOUR AND ELEVATION
- TREE
- WETLAND & DESIGNATION
- MONITORING WELL AND DESIGNATION
- RAILROAD TRACKS
- BRUSH
- CHAIN LINK FENCE
- UTILITY POLE
- APPROXIMATE LOCATION OF FIRE HYDRANT
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- SURVEY MONUMENT
- APPROXIMATE LOCATION OF WATER MAIN
- PILOT STUDY BIOWALL (2005)
- SINGLE BIOWALL (2006)
- DOUBLE-WIDE BIOWALL (2006)
- ZERO VALENT IRON WALL (1998)
- GROUNDWATER ISOCONTOUR (UG/L) BASED ON JANUARY 2000 DATA
- OFF-SITE PERFORMANCE MONITORING WELL IN L.T.M. PROGRAM
- ON-SITE PLUME PERFORMANCE MONITORING WELL IN L.T.M. PROGRAM
- BIOWALL PROCESS MONITORING WELL IN L.T.M. PROGRAM

PARSONS

CLIENT/PROJECT TITLE

SENECA ARMY DEPOT

ASH LANDFILL

ASH LANDFILL ANNUAL REPORT

DEPT. ENVIRONMENTAL ENGINEERING | Dwg. No.

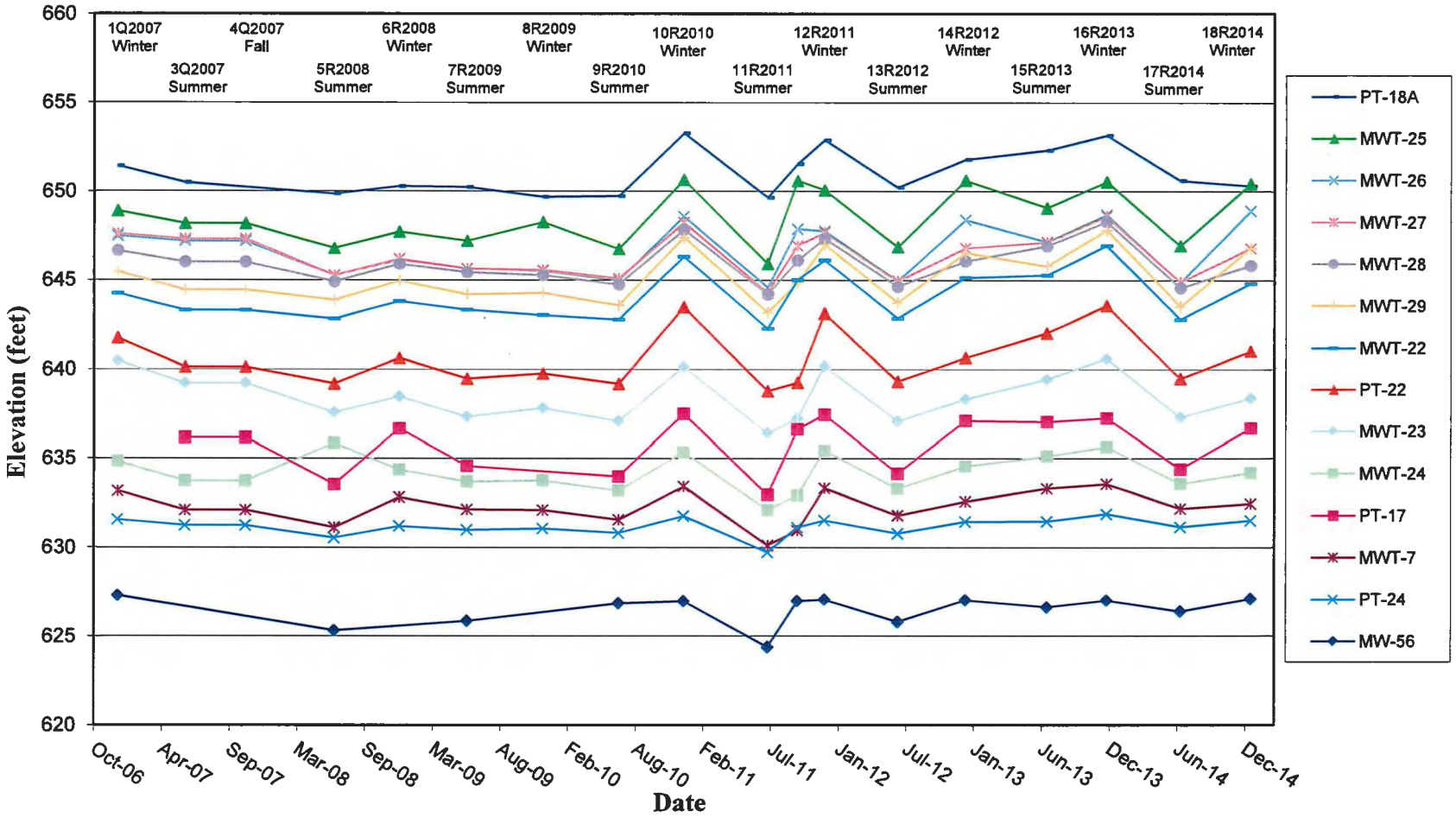
FIGURE 6

CHLORINATED ETHENES CONCENTRATIONS IN GROUNDWATER

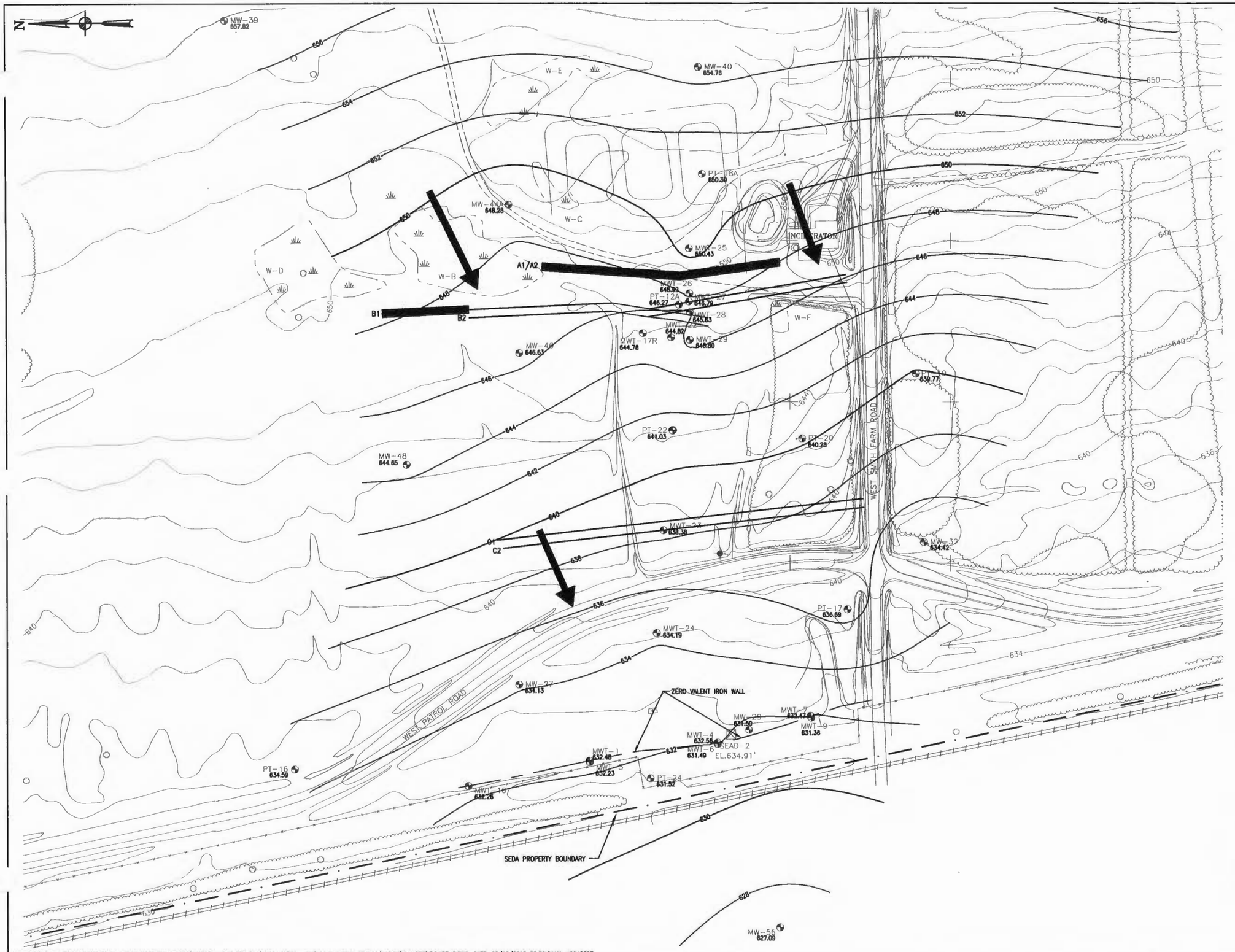
SCALE | DATE MARCH 2015 | REV -

FILE: P:\PIT\PROJECTS\HUNTSVILLE CONT W912DY-08-D-0003\TO#15 - LTM AND LUC\ASH LANDFILL LTM\YR 8 ANNUAL REPORT\DRAFT\FIGURES\FIGURE 6.DWG, DATE: 03/18/2015 04:45:37PM, p0018397

Figure 7
Groundwater Elevations
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity



Notes: Groundwater levels were measured on: December 12-15, 2006; Jun 4, 2007; Nov 7, 2007; Jun 23, 2008; Dec 23, 2008; Jun 1, 2009; Dec 14, 2009; Jun 28, 2010; Dec 13, 2010; Dec 12, 2011; Jun 18, 2012; Dec 10, 2012; Jul 8, 2013; Dec 9,2013; Jun 17, 2014; and Dec 15, 2014.
In Round 11, Groundwater levels were collected on July 18, 2011, and again on Oct 3, 2011 when Parsons returned to sample MW-56. Groundwater elevations were not measured at well MW-56 during 3Q2007, 4Q2007, 6R2008, or 8R2009; at PT-17 during 1Q2007 or 8R2008; or at PT-18A during 4Q2007. Groundwater levels were not recorded during 2Q2007.



LEGEND:

- PAVED ROAD
- DIRT ROAD
- GROUND CONTOUR AND ELEVATION
- TREE
- WETLAND & DESIGNATION
- MONITORING WELL AND DESIGNATION
- RAILROAD TRACKS
- BRUSH
- CHAIN LINK FENCE
- UTILITY POLE
- APPROXIMATE LOCATION OF FIRE HYDRANT
- FUEL OR UNDERGROUND STORAGE TANK
- SURVEY MONUMENT
- ABANDONED MONITORING WELL
- APPROXIMATE LOCATION OF WATER MAIN
- PILOT STUDY BIOWALL (2005)
- SINGLE BIOWALL (2006)
- DOUBLE-WIDE BIOWALL (2006)
- ZERO VALENT IRON WALL (1998)
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION

70 0 70 140
(FEET)

PARSONS

CLIENT/PROJECT TITLE

SENECA ARMY DEPOT
ASH LANDFILL
ANNUAL REPORT

DEPT. ENVIRONMENTAL ENGINEERING | Dwg. No.

FIGURE 8
ASH LANDFILL GROUNDWATER CONTOURS & GROUNDWATER FLOW DIRECTION DEC. 2014

SCALE | DATE MARCH 2015 | REV –

FILE: P:\PIT\PROJECTS\HUNTSVILLE CONT W912DY-08-D-0003\TO#15 - LTM AND LUC\ASH LANDFILL LTM\YR 8 ANNUAL REPORT\DRAFT\FIGURES\FIGURE 8.DWG, DATE: 03/19/2015 09:39:31AM, p0018397

Figure 9A
Concentrations of VOCs Along the Biowalls - Quarter 1, 2007
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

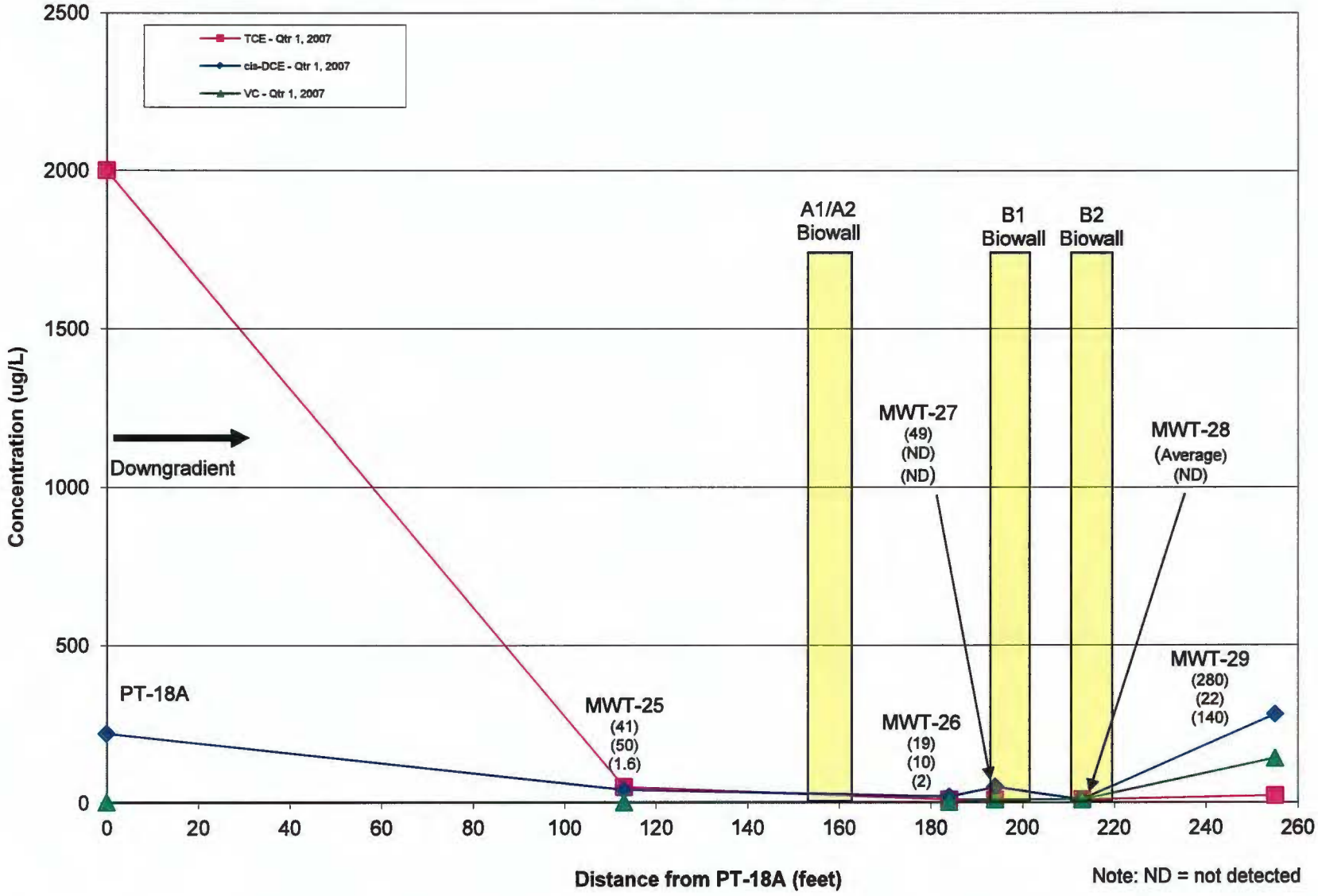


Figure 9C
Concentrations of VOCs Along the Biowalls - Quarter 3, 2007
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

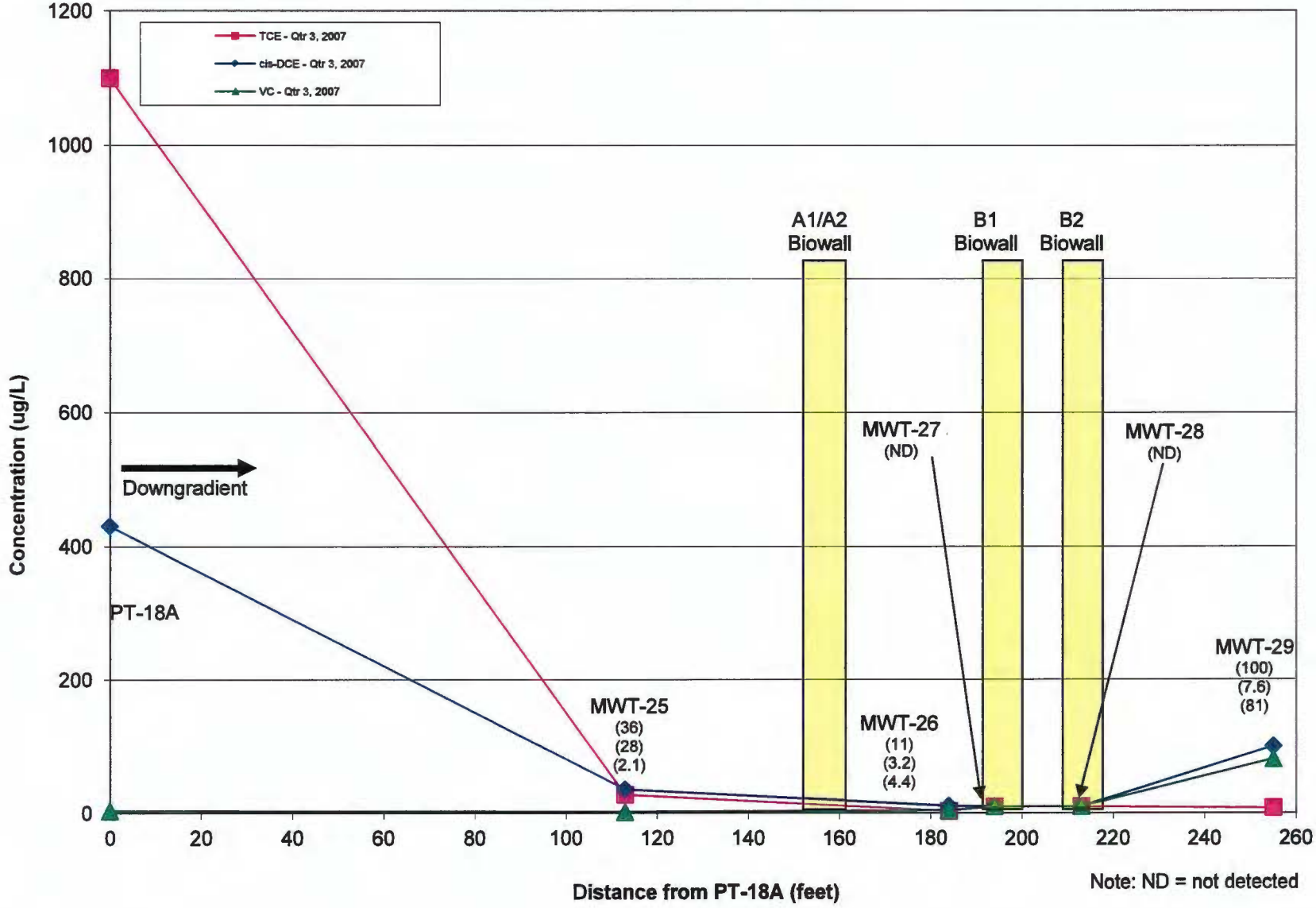


Figure 9E
Concentrations of VOCs Along the Biowalls - Round 5, 2008
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

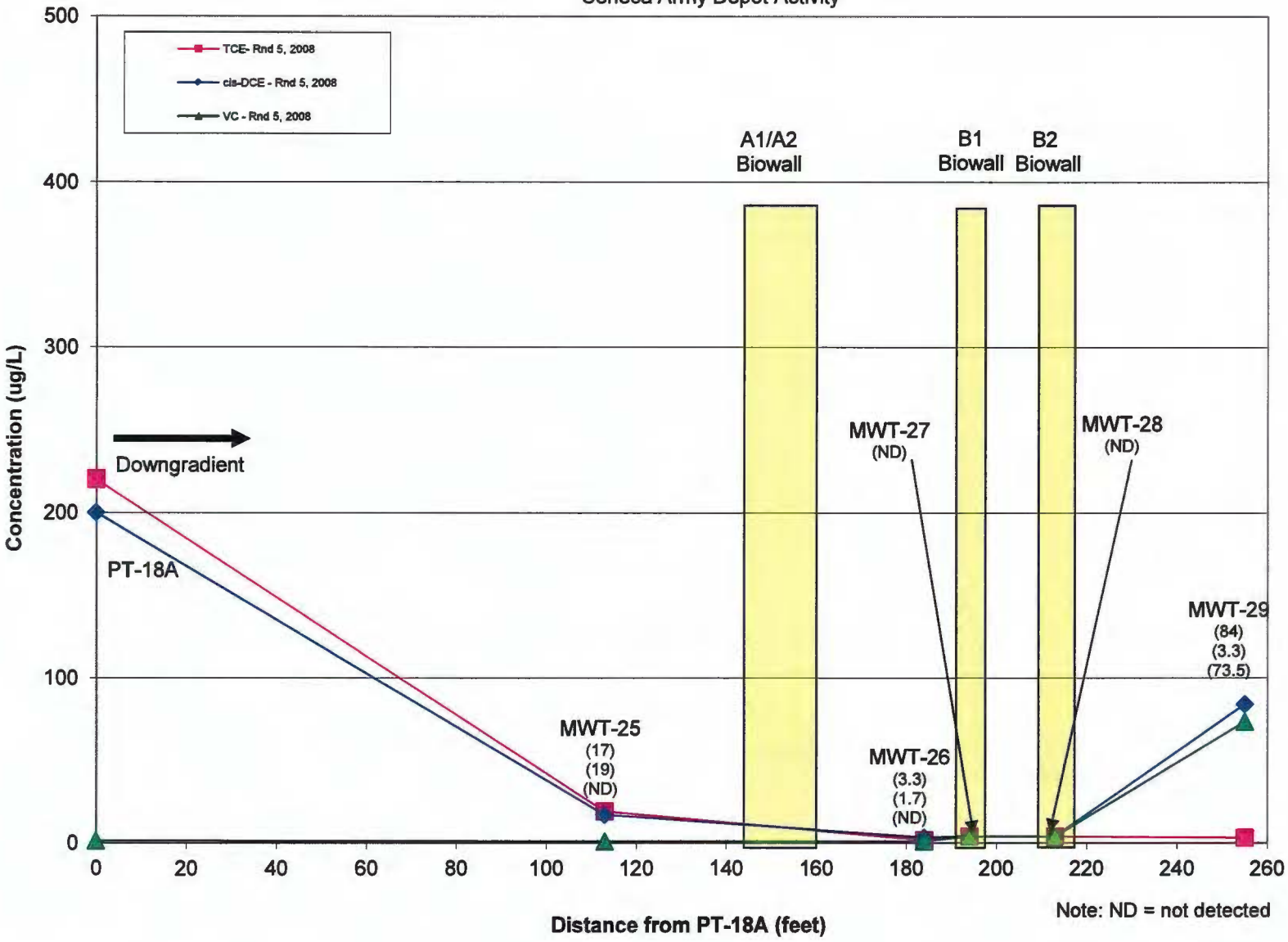


Figure 9G
Concentrations of VOCs Along the Biowalls - Round 7, 2009
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

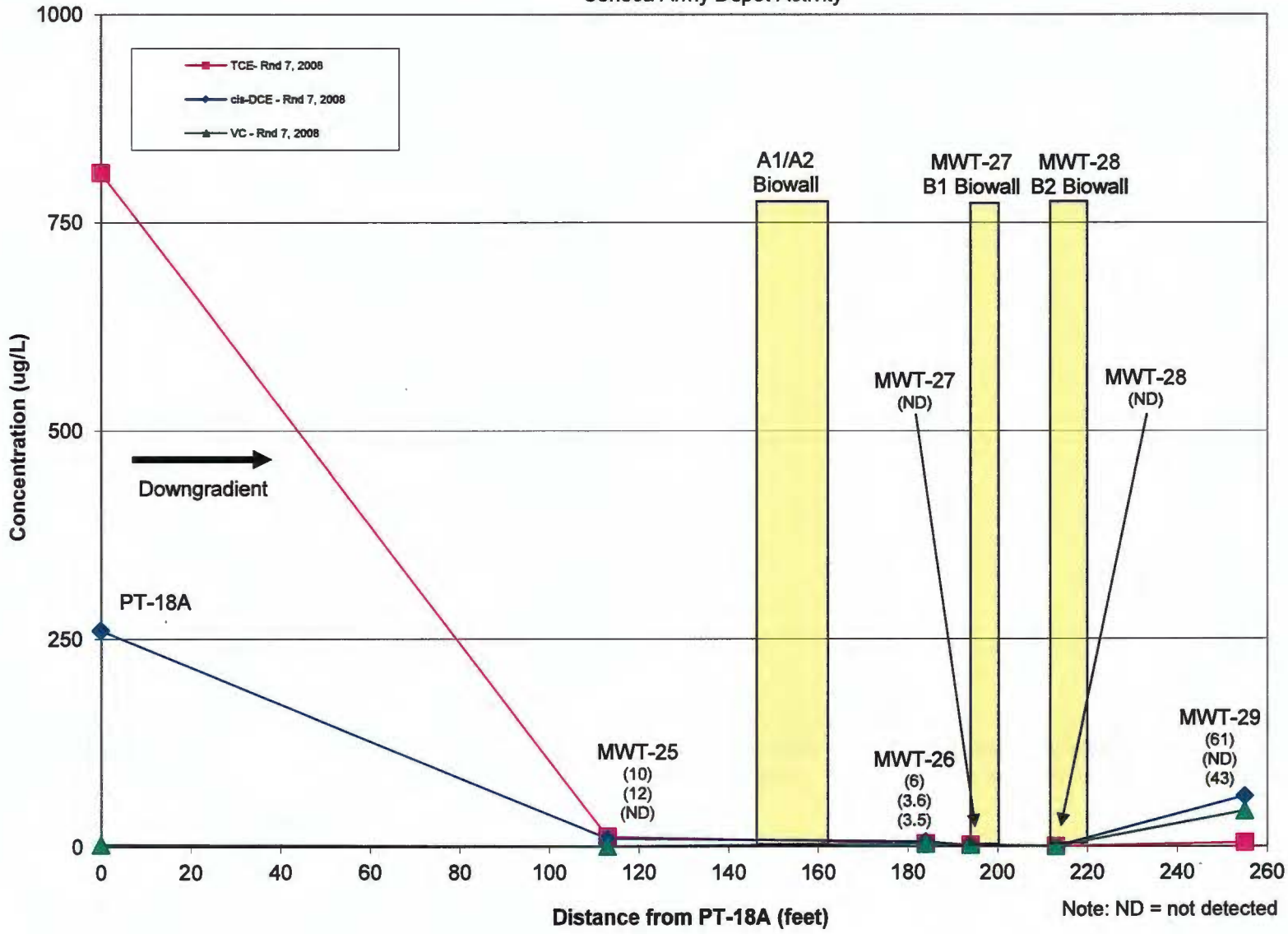


Figure 9I
Concentrations of VOCs Along the Biowalls - Round 9, 2010
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

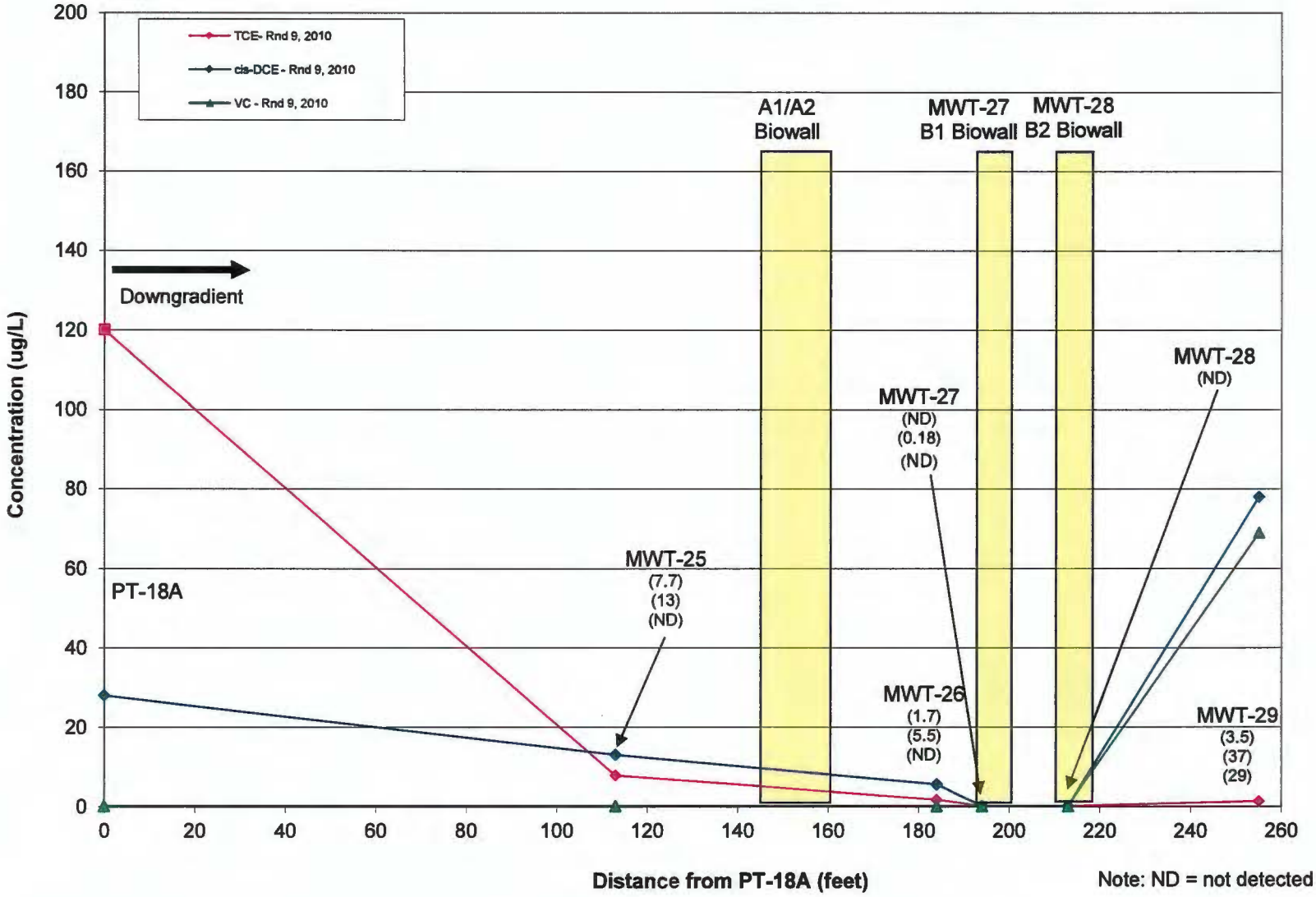
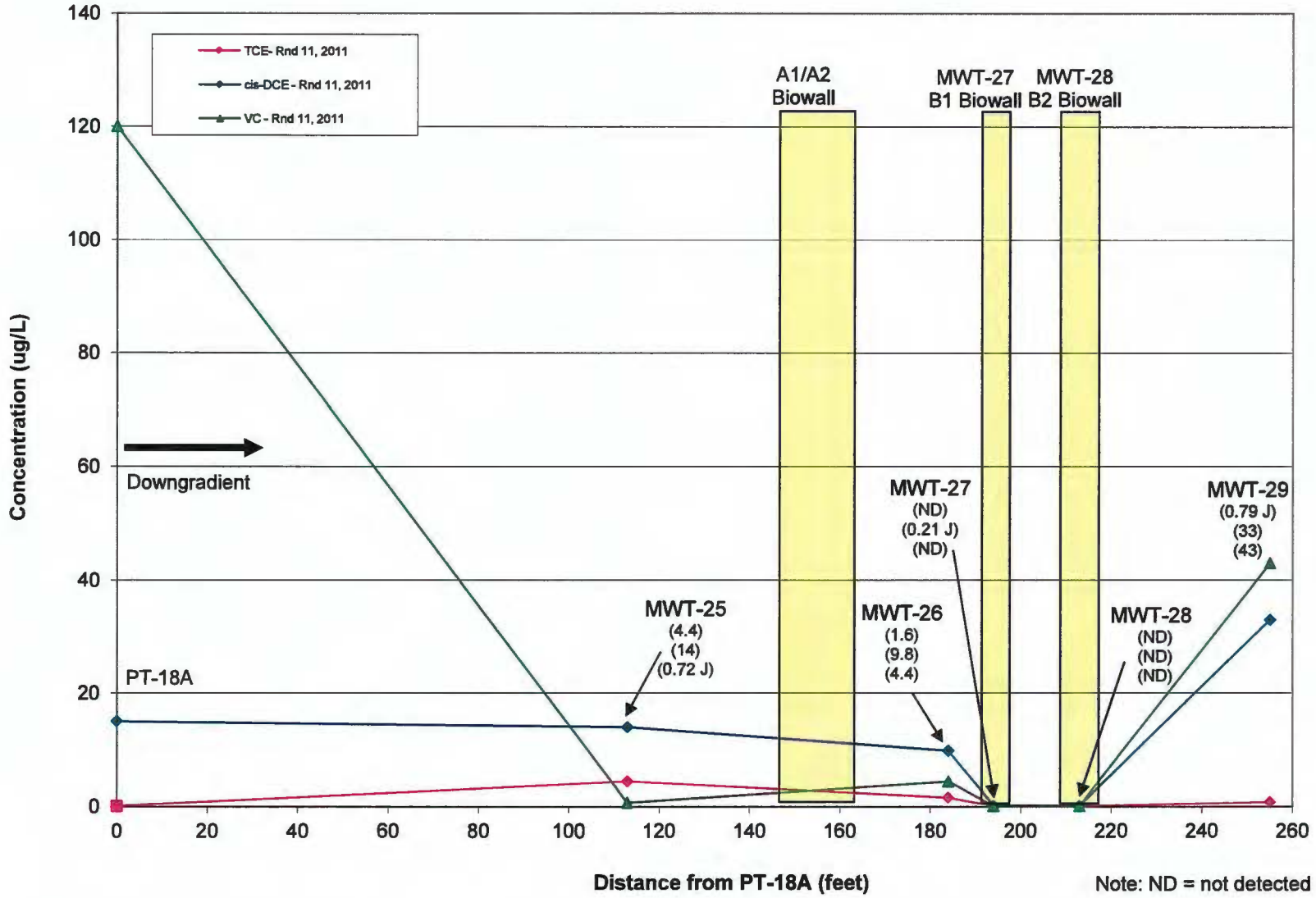
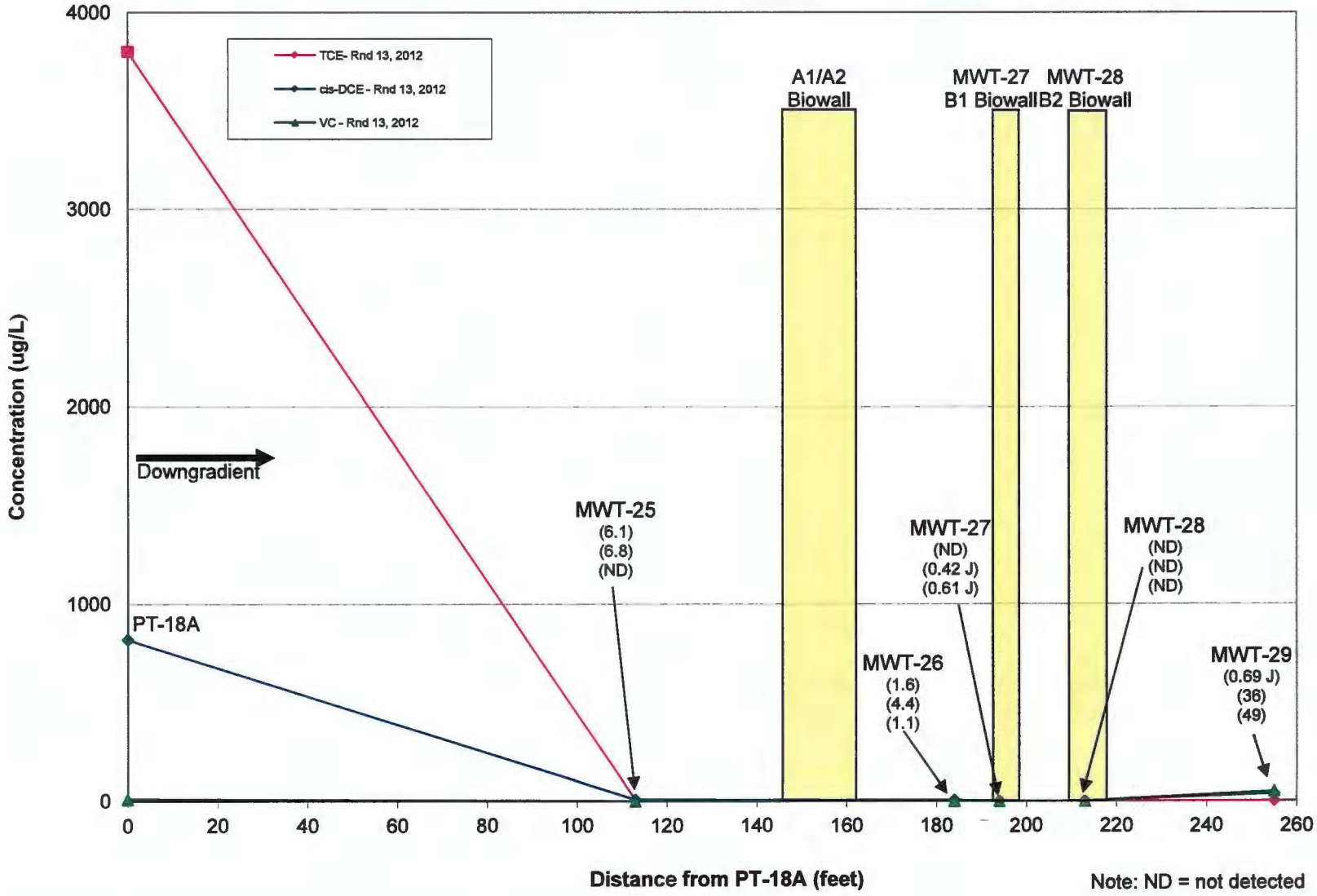


Figure 9K
Concentrations of VOCs Along the Biowalls - Round 11, 2011
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity



P:\PIT\Projects\Huntsville Cont W912DY-08-D-0003\TO#15 - LTM and LUC\Ash Landfill LTM\Yr 8 Annual Report\Draft\Figures\Figure 9 Biowall Conc.xls 2/26/2015

Figure 9M
Concentrations of VOCs Along the Biowalls - Round 13, 2012
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity



P:\PIT\Projects\Huntsville Cont W912DY-08-D-0003\TO#15 - LTM and LUC\Ash Landfill LTM\Yr 8 Annual Report\Draft\Figures\Figure 9 Biowall Conc.xls

2/26/2015

Figure 9O
Concentrations of VOCs Along the Biowalls - Round 15, 2013
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

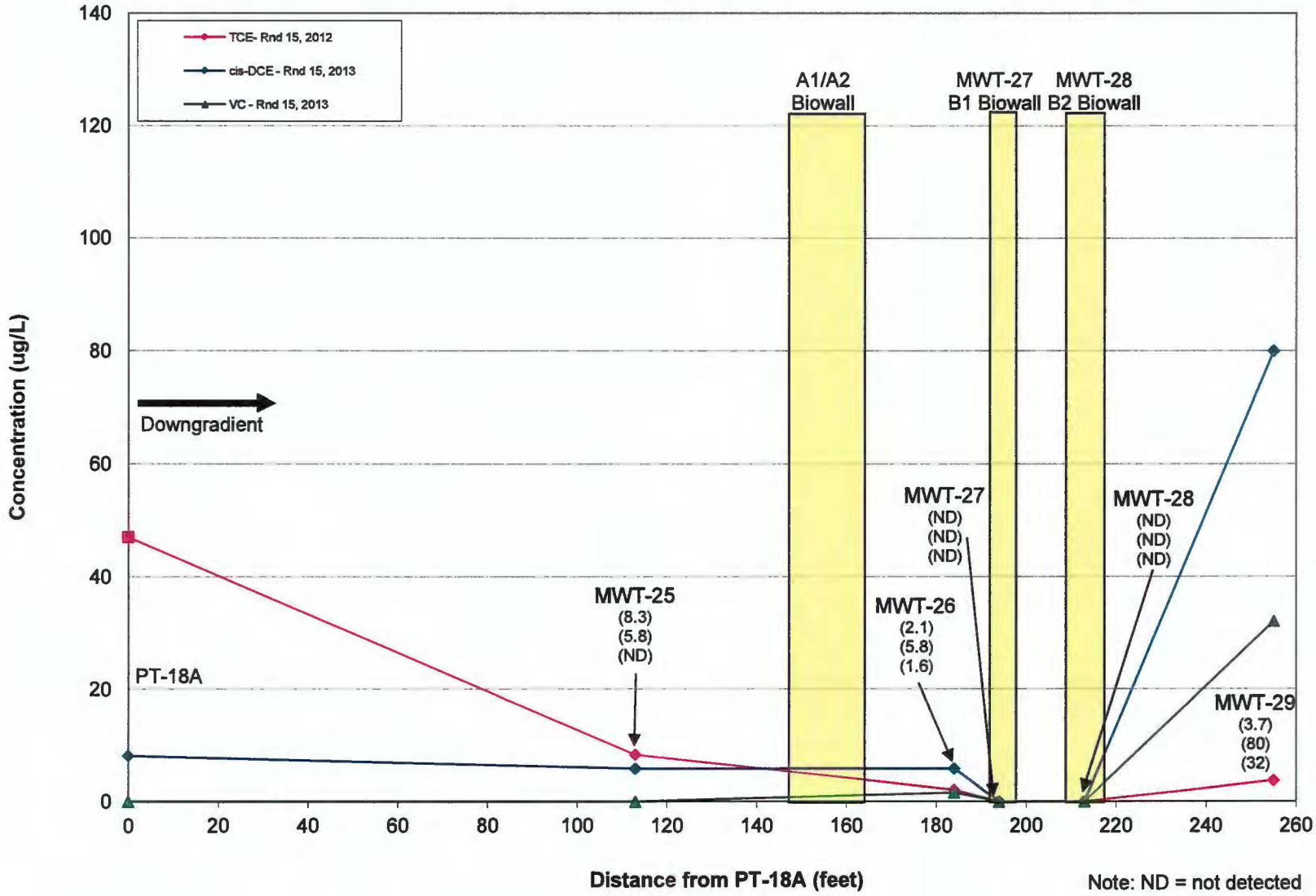
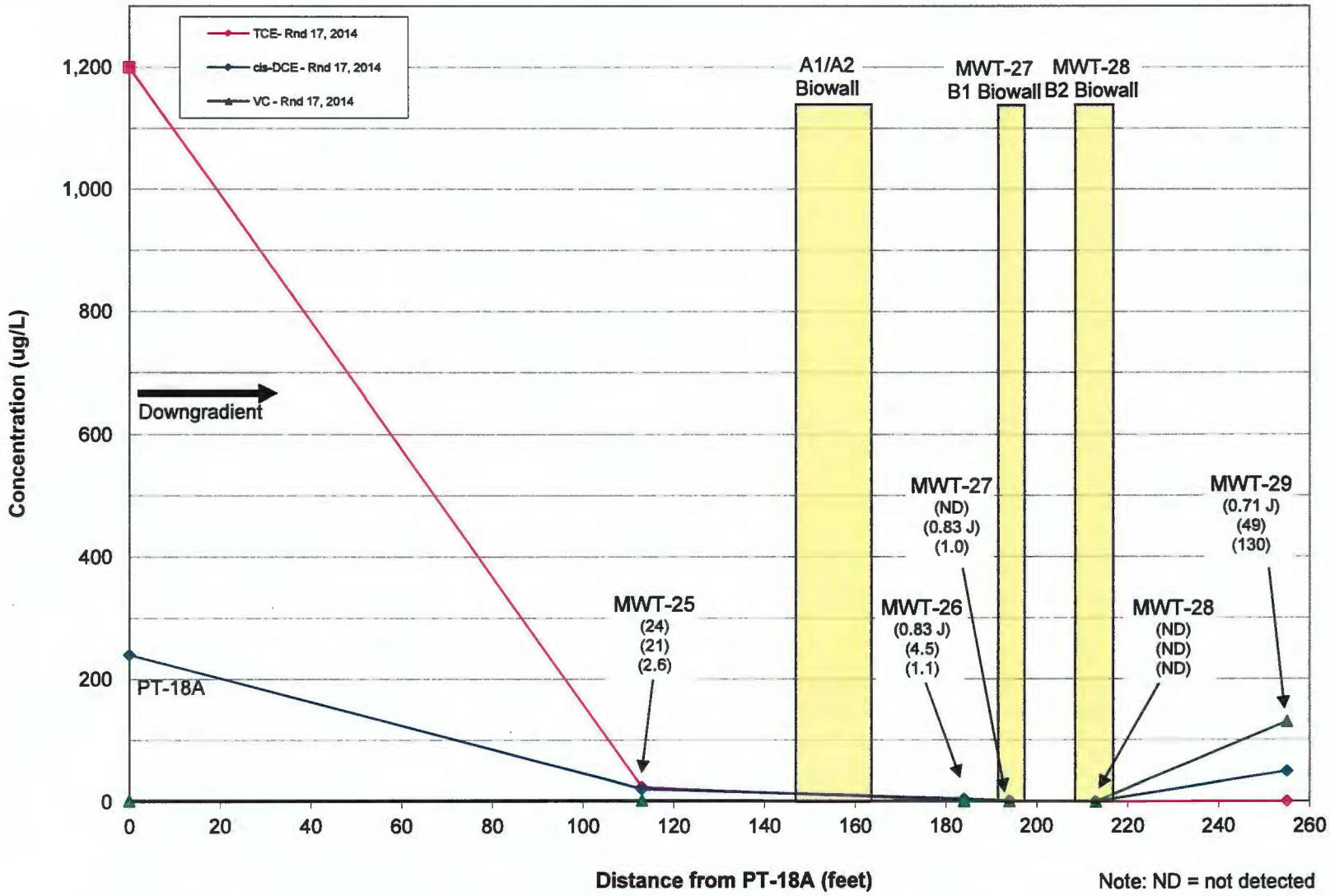
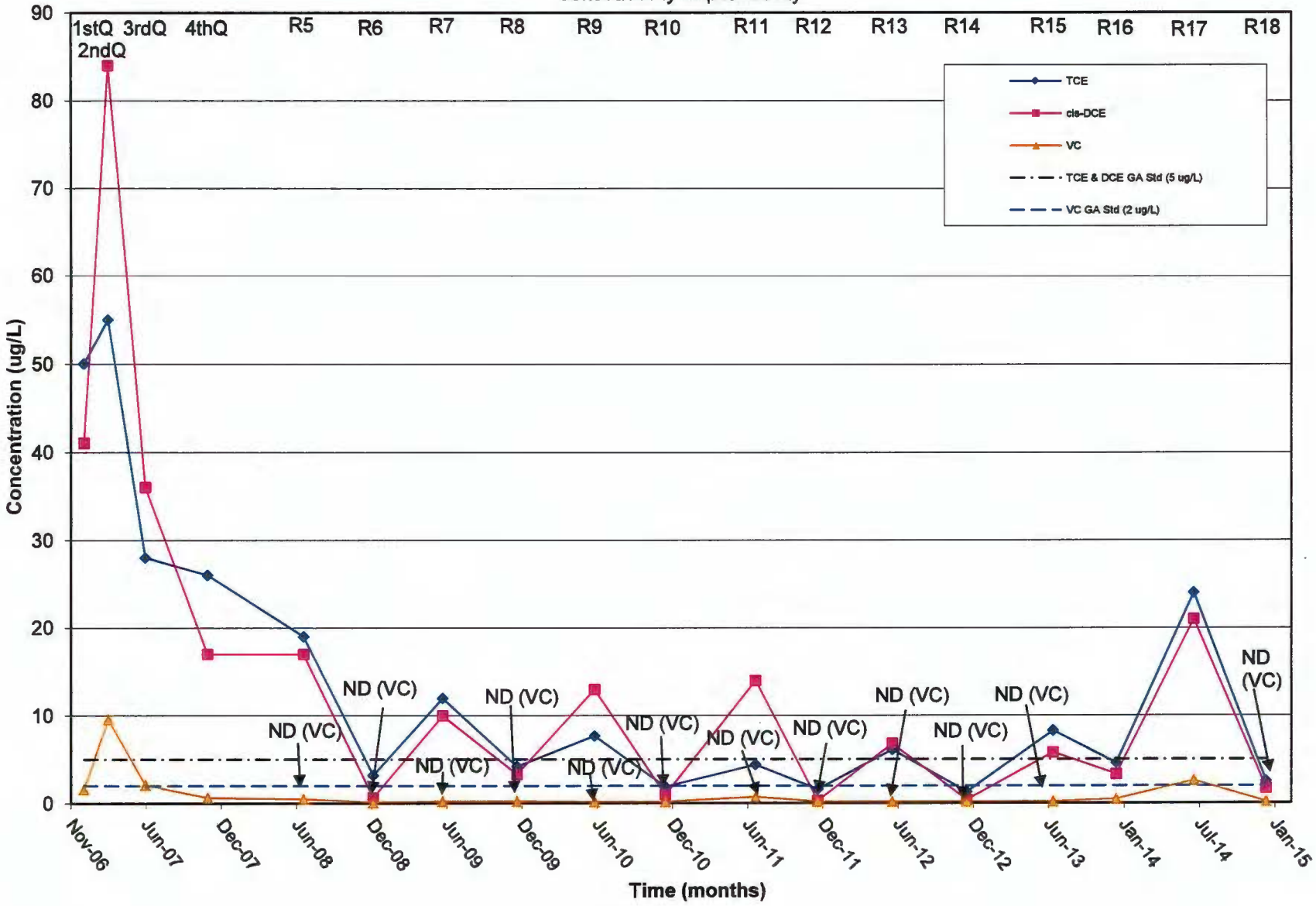


Figure 9Q
Concentrations of VOCs Along the Biowalls - Round 17, 2014
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity



P:\PIT\Projects\Huntsville Cont W912DY-08-D-0003\TO#15 - LTM and LUC\Ash Landfill LTM\Yr 8 Annual Report\Draft\Figures\Figure 9 Biowall Conc.xls 2/26/2015

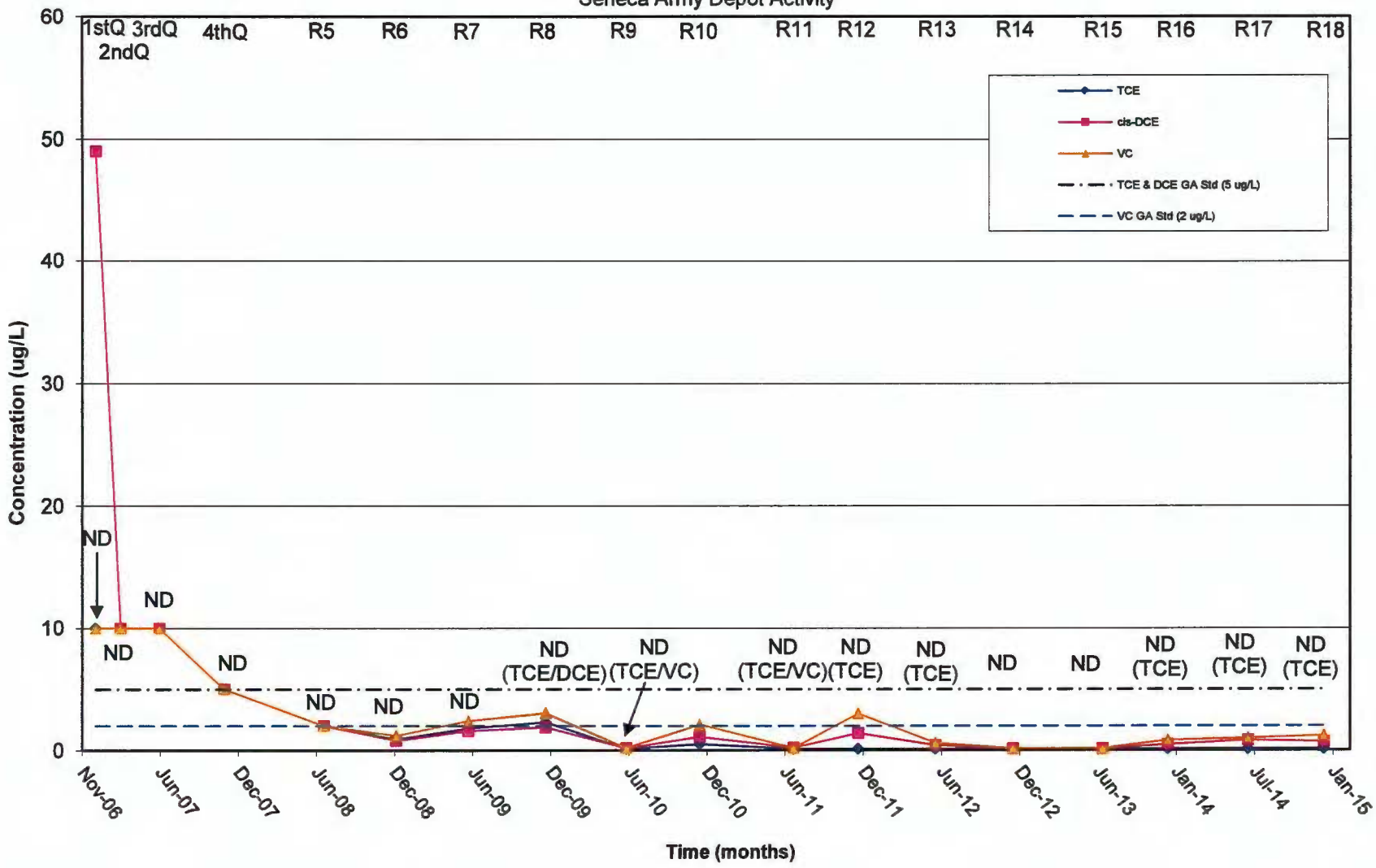
Figure 10A
Concentrations of Chlorinated Organics Over Time at MWT-25
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity



Note:
ND = not detected.

P:\PIT\Projects\Huntsville Cont W912DY-08-D-0003\TO#15 - LTM and LUC\Ash Landfill LTM\Yr 8 Annual Report\Draft\Figures\Figure 10 Well Conc vs Time.xls MWT-25 1/22/2015

Figure 10C
Concentrations of Chlorinated Organics Over Time at MWT-27
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity



Note:
Round 3, Round 6, Round 8, Round 11, Round 15, and Round 18 data is the average of the sample and its duplicate.
ND = not detected.

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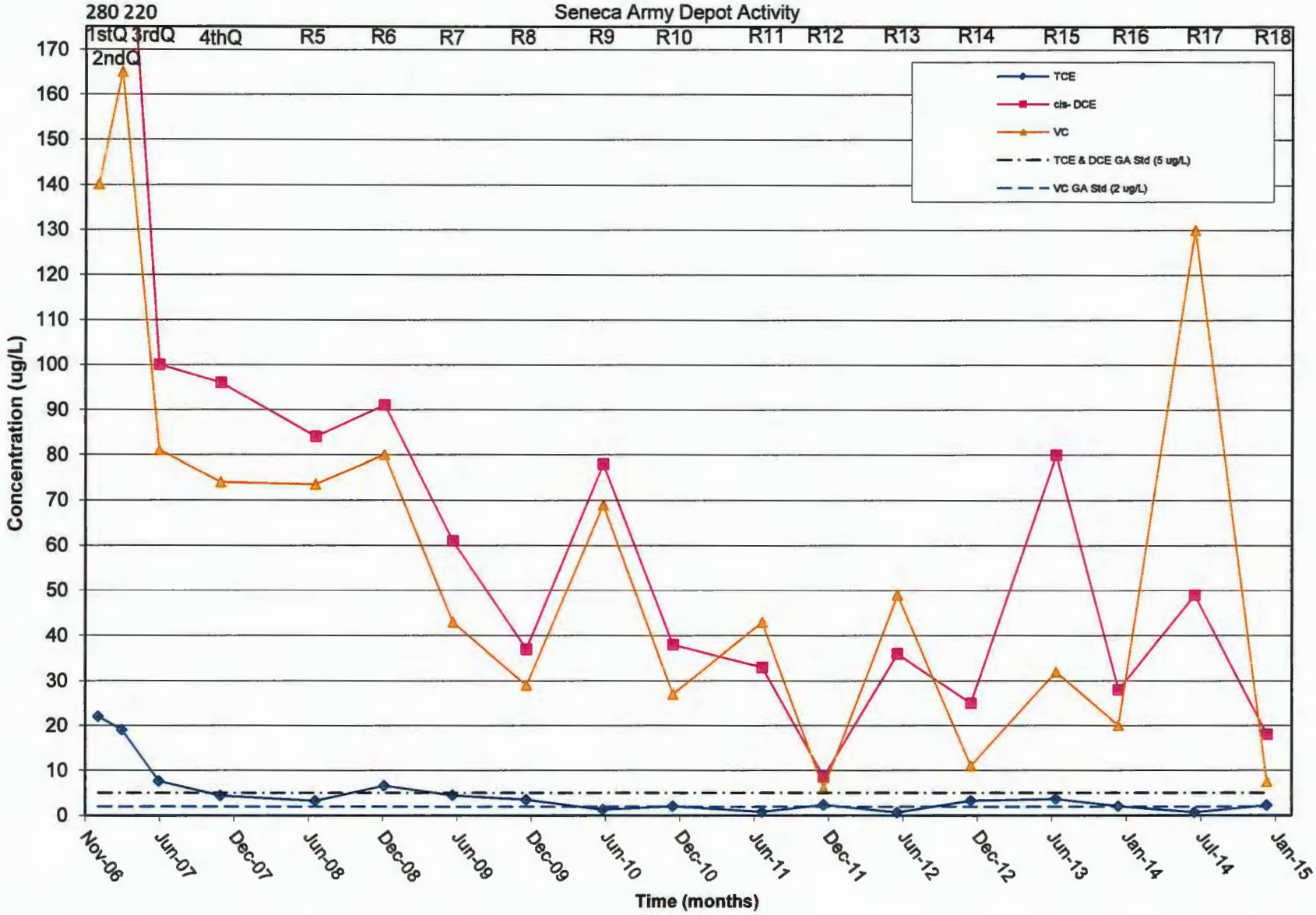
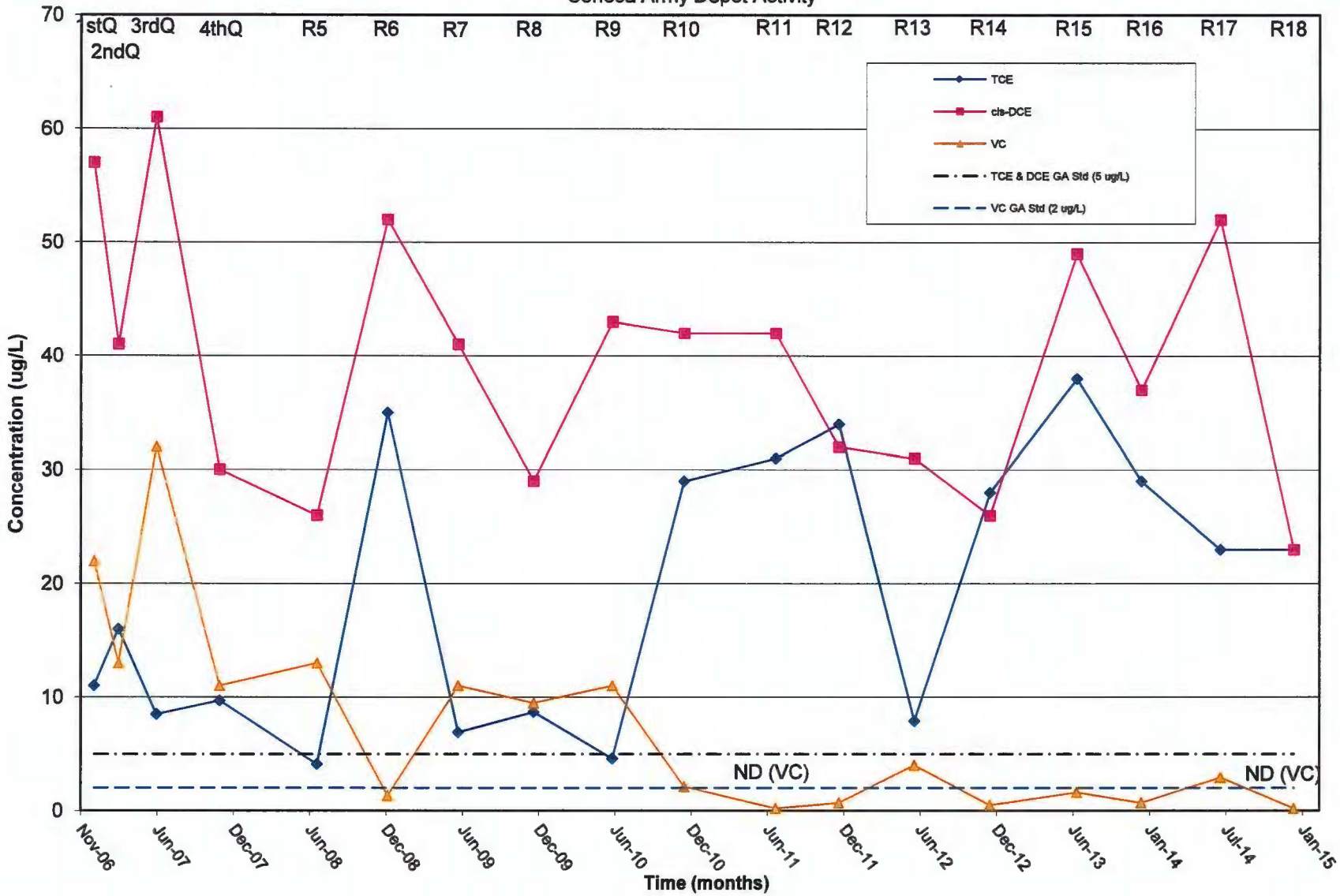
Figure 10E
Concentrations of Chlorinated Organics Over Time at MWT-29
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity



Note:
Round 2 and Round 5 data is the average of the sample and its duplicate.
cis-DCE concentrations in quater 1 and 2 were 280 and 220 ug/L, respectively.

P:\PIT\Projects\Huntsville Cont W912DY-08-D-0003\TO#15 - LTM and LUC\Ash Landfill LTM\Yr 8 Annu

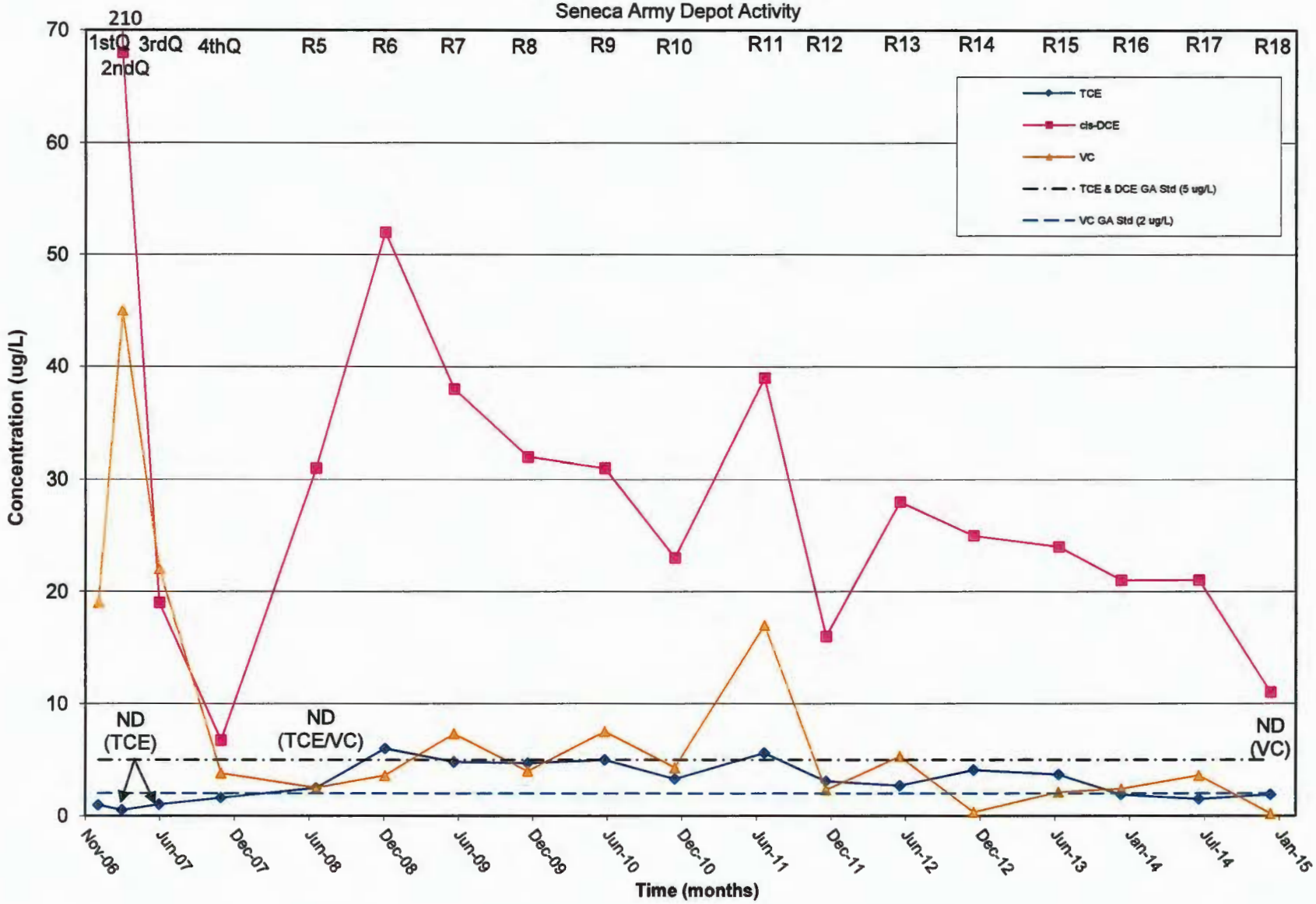
Figure 10G
Concentrations of Chlorinated Organics Over Time at PT-22
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity



Note:
ND= not detected.

P:\PIT\Projects\Huntsville Cont W912DY-08-D-0003\TO#15 - LTM and LUC\Ash Landfill LTM\Yr 8 Annual Report\Draft\Figures\Figure 10 Well Conc vs Time.xls PT-22 1/22/2015

Figure 10I
Concentrations of Chlorinated Organics Over Time at MWT-24
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity



Note:
cis-DCE concentration in quarter 1 was 210 ug/L.
ND = not detected.

P:\PIT\Projects\Huntsville Cont W912DY-08-D-0003\TO#15 - LTM and LUC\Ash Landfill LTM\Yr 8 Annual Report\Draft\Figures\Figure 10 Well Conc vs Time.xls MWT-24 1/22/2015

Fig. 11A
Historic Concentrations of Chlorinated Organics at PT-18A
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

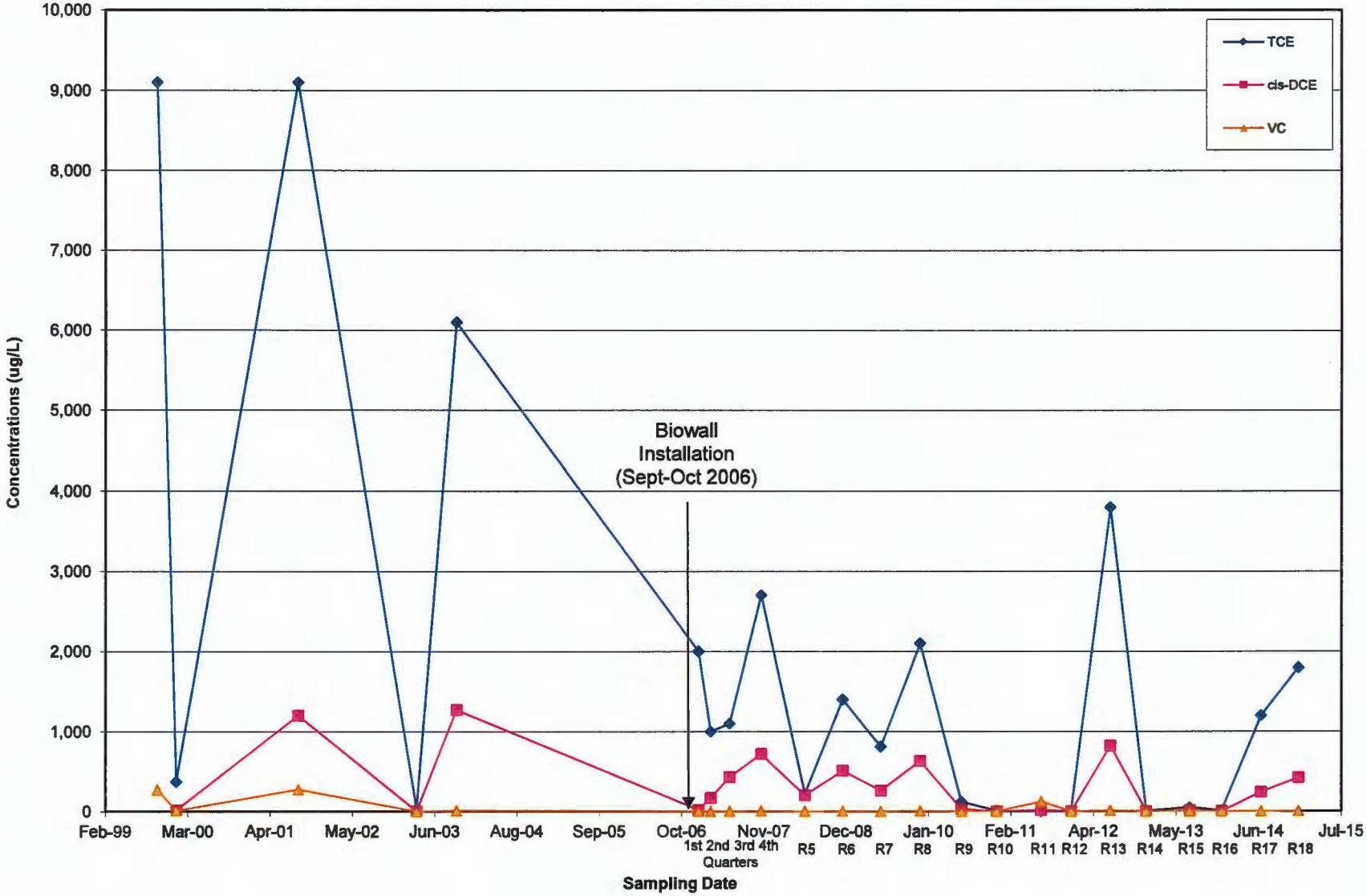
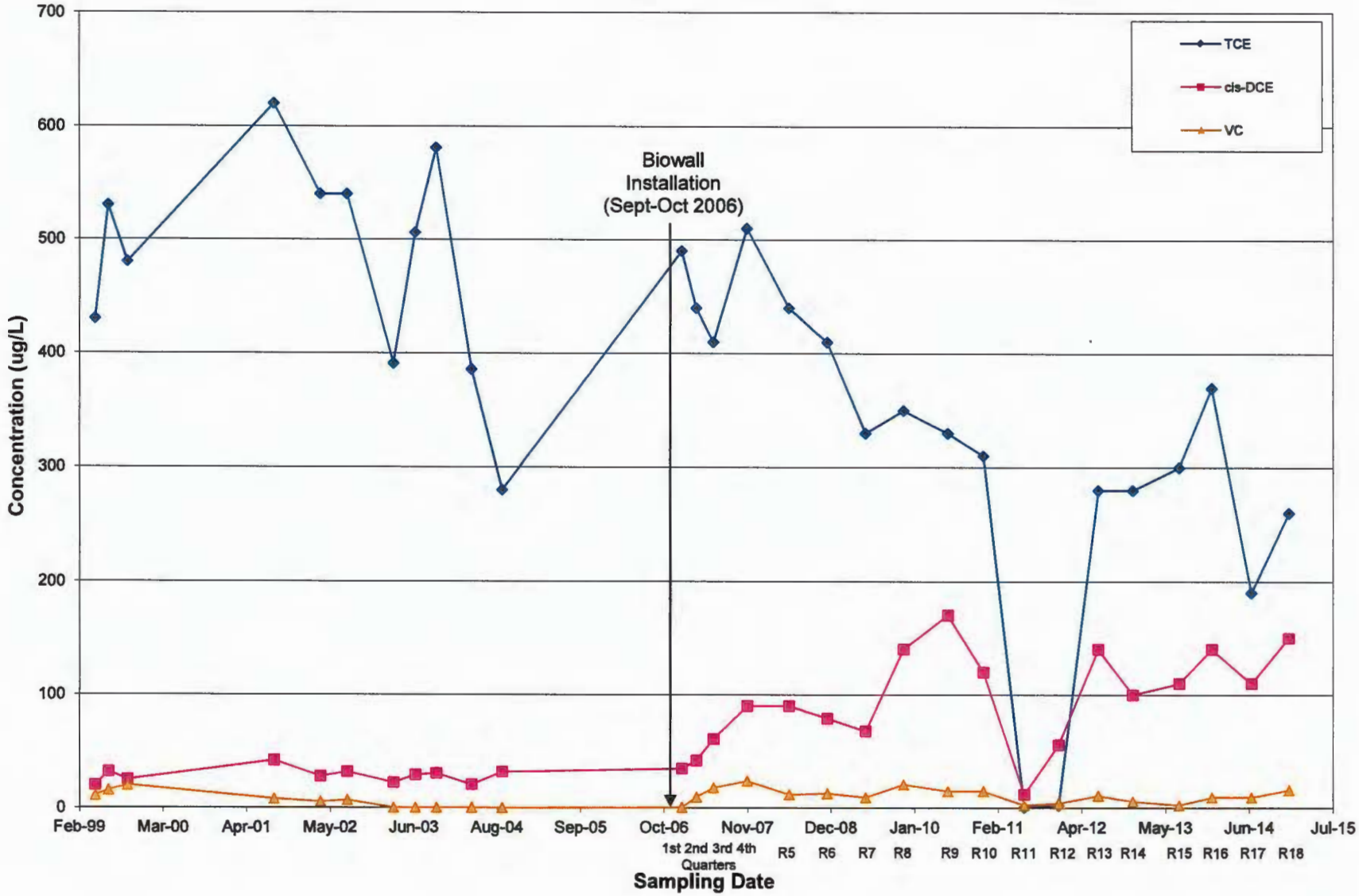
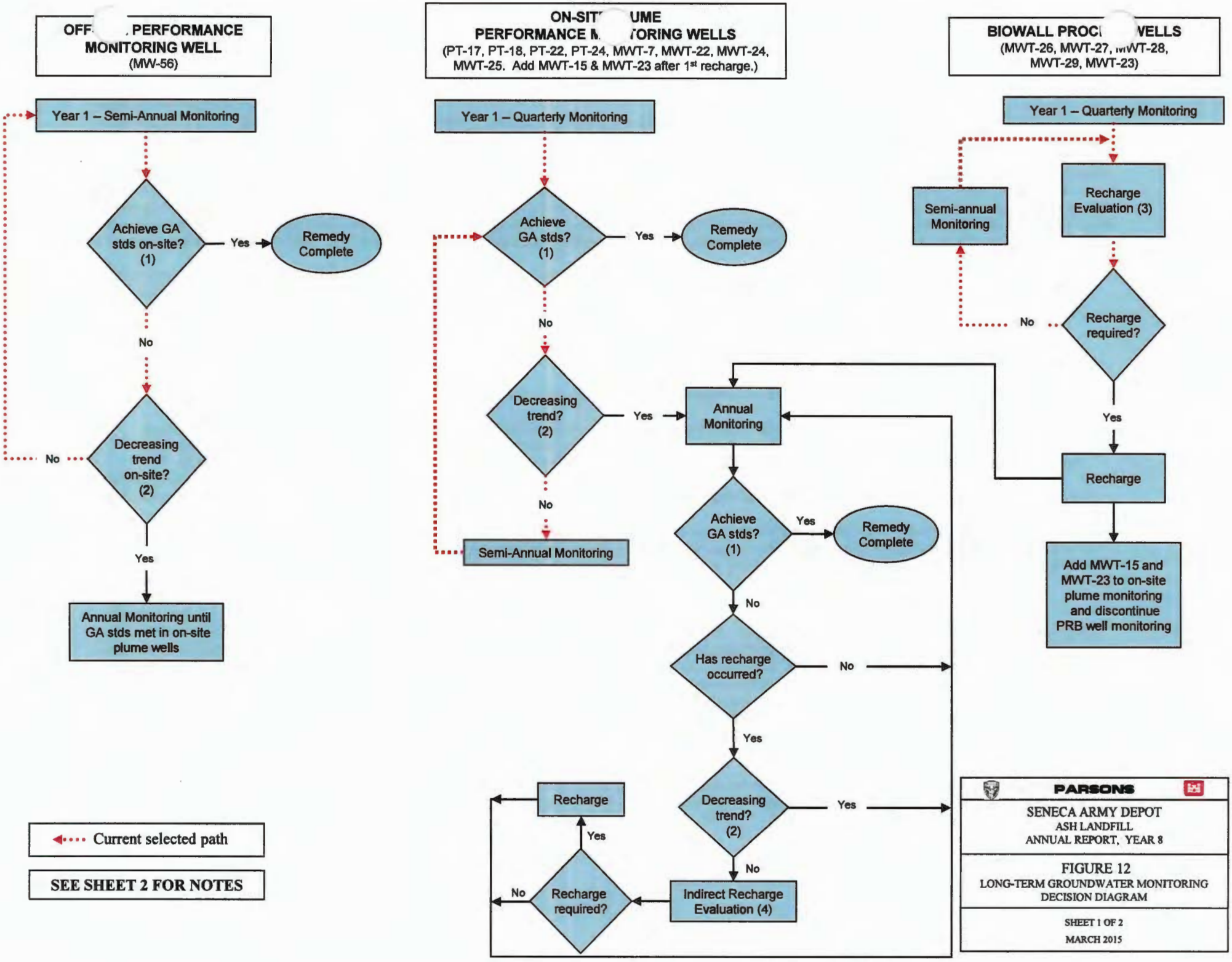


Figure 11C
Historic Concentrations of Chlorinated Organics at MWT-7
Ash Landfill Annual Report, Year 7
Seneca Army Depot Activity




OFF PERFORMANCE MONITORING WELL
(MW-56)
Year 1 – Semi-Annual Monitoring
Achieve GA stds on-site? (1)
Yes
Remedy Complete
No
Decreasing trend on-site? (2)
No
Yes
Annual Monitoring until GA stds met in on-site plume wells
ON-SIT UME PERFORMANCE M TORING WELLS
(PT-17, PT-18, PT-22, PT-24, MWT-7, MWT-22, MWT-24, MWT-25. Add MWT-15 & MWT-23 after 1st recharge.)
Year 1 – Quarterly Monitoring
Achieve GA stds? (1)
Yes
Remedy Complete
No
Decreasing trend? (2)
Yes
No
Semi-Annual Monitoring
Annual Monitoring
Achieve GA stds? (1)
Yes
Remedy Complete
No
Has recharge occurred?
No
Yes
Decreasing trend? (2)
Yes
No
Indirect Recharge Evaluation (4)
Recharge required?
No
Yes
Recharge
BIOWALL PROC VELLS
(MWT-26, MWT-27, MWT-28, MWT-29, MWT-23)
Year 1 – Quarterly Monitoring
Semi-annual Monitoring
Recharge Evaluation (3)
Recharge required?
No
Yes
Recharge
Add MWT-15 and MWT-23 to on-site plume monitoring and discontinue PRB well monitoring
Current selected path
SEE SHEET 2 FOR NOTES
PARSONS
SENECA ARMY DEPOT
ASH LANDFILL
ANNUAL REPORT, YEAR 8
FIGURE 12
LONG-TERM GROUNDWATER MONITORING DECISION DIAGRAM
SHEET 1 OF 2
MARCH 2015

APPENDICES

Appendix A Field Forms for 17R2014 and 18R2014
Appendix B Complete Groundwater Data
Appendix C Regression Plots

APPENDIX A

FIELD FORMS FOR 17R2014 and 18R2014

GROUNDWATER ELEVATION REPORT

SENECA ARMY DEPOT ACTIVITY	PARSONS	DATE: 6/17/2014
PROJECT: Ash Landfill LTM - Round ~~16~~ 17		PROJECT NO:
LOCATION: Seneca Army Depot, Romulus, NY		INSPECTOR: BBO / SD

MONITORING EQUIPMENT:

INSTRUMENT	DECTECTOR	BGD	TIME	REMARKS

WATER LEVEL INDICATOR:

INSTRUMENT	CORRECTION FACTOR
Pine 14043	

COMMENTS:

checked 3 times

Monitoring Well	Well Depth (rel. TOC) (ft)	Depth to Water (rel. TOC) (ft)	Well Depth (rel. TOC) (ft)	Time at Check (military)	Well Condition (Fair / Bad) [circle]	Well Status / Comments (Lock?, Well #?, Surface Disturbance?, Riser marked?, Condition of: riser, concrete, protective casing, etc.)
PT-12A	13.38	7.49	12.63	1041	(F) / B	Lock tough to open, no well cap
PT-16	11.04	4.42	11.02	956	(F) / B	
PT-17	~~11.65~~	5.74	7.54	1112	F / B	Ants in well cap, Plank grooving in flush vault
PT-18A	12.85	8.44	12.79	1056	(F) / B	
PT-19	11.70	5.49	11.65	901	F / (B)	Lock rusty & Lid hinge rust
PT-20	11.80	7.89	11.78	1017	(F) / B	Ant nest on well cap, Bush around well
PT-22	11.81	9.13	11.92	1013	(F) / B	Yellow box, lock rusted to Lid holes
PT-24	11.88	5.24	11.85	1131	(F) / B	Non-Master Lock
MW-27 (near road)	10.54	6.96	10.50	942	(F) / B	Bush/Tree growth around it
MW-29 (Bush)	10.54	5.99	10.50	921	(F) / B	PVC lifted, difficult to [illegible] lid open
MW-32	10.37	8.44	10.37	1407	(F) / B	Ants
MW-39	11.89	3.18	11.90	841	F / (B)	Ants, Lid hinge rusted off
MW-40	14.71	6.10	14.68	853	(F) / B	Lock rusted, need oil
MW-44A	12.48	6.42	12.48	1053	F / B	Bush poking on well Metal top
MW-46	11.45	7.03	11.44	1021	(F) / B	Lock rusty hard to unlock, Miss well cap
MW-48	11.50	5.80	11.55	1026	(F) / B	
MW-56	6.88	4.12	6.50	1113	(F) / B	USGS Probe well
MW-60	~~8.50~~	3.72	10.00	827	F / (B)	PVC tub lifted unable to open, ~~[illegible]~~ lock
MWT-1	10.13	4.98	10.10	935	(F) / B	
MWT-3	10.13	5.23	10.09	936	(F) / B	ants, silt on tip of probe
MWT-~~4~~6	~~12.43~~ → 12.43	6.17	12.48	926	(F) / B	ant nest West of ZVI
MWT-~~6~~4	12.65	5.48	12.47	925	(F) / B	Lock rusty, need oil East of ZVI
MWT-7	13.64	6.15	13.65	915	(F) / B	
MWT-9	14.14	6.78	14.15	917	(F) / B	Bush grows over well
MWT-10	9.00	5.85	8.96	940	(F) / B	lock a little rusty
MWT-17R	11.4	7.87	11.36	1031	(F) / B	Pilot Biowall, North end, no well cap
MWT-22	14.9	7.85	14.85	1032	F / B	Pilot Biowall, South end
MWT-23	13.7	9.48	13.76	1005	(F) / B	Cwall
MWT-24	13	7.98	12.95	948	(F) / B	Bee's, PVC lifted, barely opened lid
MWT-25	13.25	7.55	13.19	1048	(F) / B	~~PVC lifted, very~~
MWT-26	13.22	7.33	13.17	1037	(F) / B	lock tough to open
MWT-27	12.9	8.12	12.73	1245	(F) / B	Lock tough to open, lid barely open
MWT-28	12.85	8.12	12.80	1034	(F) / B	
MWT-29	13.1	8.31	13.07	1033	(F) / B	

Margin notes: btw nut 7 & 6 (beside MW-32/MW-39); Cut well top 2.75 inch removed (beside MW-60); flipped (beside MWT-6/MWT-4)

MW-60 feels like soft bottom
Stickup height 1.9' above ground surface

SAMPLING RECORD - GROUNDWATER

SENECA ARMY DEPOT ACTIVITY	PARSONS	WELL #: MWT 26

PROJECT: Ash Landfill LTM Groundwater Sampling - Round 17
LOCATION: ROMULUS, NY

DATE: 6/19/14
INSPECTORS: D. Illman
PUMP #: 8135
SAMPLE ID #: ALBW2020306

WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)

TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND VELOCITY (APPRX)	WIND (FROM) DIRECTION (0 - 360)	GROUND / SITE SURFACE CONDITIONS	MONITORING INSTRUMENT	MONITORING DETECTOR
							OVM-580	PID

WELL VOLUME CALCULATION FACTORS

DIAMETER (INCHES):	0.25	1	2	3	4	6
GALLONS / FOOT:	0.0026	0.041	0.163	0.367	0.654	1.47
LITERS/FOOT	0.010	0.151	0.617	1.389	2.475	5.564

ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]

HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)	DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC. COND
	13.17					

DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)	DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME
		7.36			

RADIATION SCREENING DATA	PUMP PRIOR TO SAMPLING (cps)		PUMP AFTER SAMPLING (cps)	

MONITORING DATA COLLECTED DURING PURGING OPERATIONS — Hach

TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (umhos) Horiba	pH Horiba	ORP (mV) Horiba	TURBIDITY (NTU)
1205	10.08	110	3 gal	1.7	12.0	1.64	6.83	77	4.72
1210	10.17	108		1.7	12.0	1.64	6.82	81	5.44
1215	10.28	108	IN % →	1.5	11.9	1.65	6.81	83	6.01
1220	10.42	108	start mg/L			1.66	6.82	85	7.26
1225	10.56	108		0.26	11.9	1.68	6.81	84	15.4
1230	10.64	108	3.5 gal	0.21	11.7	1.69	6.78	68	17.7
1235	10.76	108		0.19	11.6	1.71	6.78	56	15.0
1240	10.83	108			11.7	1.72	6.78	62	17.8
1245	10.96	108	4 gal	0.36 ?	11.8	1.72	6.80	61	17.5
1250		collect	sample						

Mn^{2+} = 1.2 mg/L Hach Test
Fe^{2+} = 0.04 mg/L Hach Test

SAMPLING RECORD - GROUNDWATER

SENECA ARMY DEPOT ACTIVITY	PARSONS	WELL #: MW-27

PROJECT: Ash Landfill LTM Groundwater Sampling - Round 17
LOCATION: ROMULUS, NY

DATE: 6/19/14
INSPECTORS: BBO
PUMP #: 9201
SAMPLE ID #: ALBW20307

WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)

TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND VELOCITY (APPRX)	WIND (FROM) DIRECTION (0 - 360)	GROUND / SITE SURFACE CONDITIONS	MONITORING INSTRUMENT	MONITORING DETECTOR
1245	73.	Sunny Scattered clouds		5-15	W→E		OVM-580	PID

WELL VOLUME CALCULATION FACTORS

DIAMETER (INCHES):	0.25	1	2	3	4	6
GALLONS / FOOT:	0.0026	0.041	0.163	0.367	0.654	1.47
LITERS/FOOT	0.010	0.151	0.617	1.389	2.475	5.564

ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]

	DEPTH TO POINT OF WELL (TOC)	DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC. COND
HISTORIC DATA						

	PID READING (OPENING WELL)	DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME
DATA COLLECTED AT WELL SITE					

RADIATION SCREENING DATA	PUMP PRIOR TO SAMPLING (cps)		PUMP AFTER SAMPLING (cps)	

MONITORING DATA COLLECTED DURING PURGING OPERATIONS

TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (umhos)	pH	ORP (mV)	TURBIDITY (NTU)
1246	8.76		~3.5 gal	0.52	11.9	2.09	6.53	-77	18.5
1256		Samples Collect				Fe^{+}:	3.30	mg/L overlimit	
		filled bottles				Mn:	22.0	mg/L overlimit	
		- 3x VOC VOAs							
		- 2x MEE VOAs	air bubble	pee		size in both vials			
		- 3x TOC VOAs							
		- 1x Plastic							
			~4 gals	total purge					

SAMPLING RECORD - GROUNDWATER

SENECA ARMY DEPOT ACTIVITY	PARSONS	WELL #: MWT-29

PROJECT: Ash Landfill LTM Groundwater Sampling - Round 17
LOCATION: ROMULUS, NY

DATE: 6/19/14
INSPECTORS: BBO
PUMP #: 13209
SAMPLE ID #: ALBCW20309

WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)

TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND VELOCITY (APPRX)	WIND (FROM) DIRECTION (0 - 360)	GROUND / SITE SURFACE CONDITIONS	MONITORING INSTRUMENT	MONITORING DETECTOR
1529	76	sunny clear		10-15	V→E	dry	OVM-580	PID

WELL VOLUME CALCULATION FACTORS

DIAMETER (INCHES):	0.25	1	2	3	4	6
GALLONS / FOOT:	0.0026	0.041	0.163	0.367	0.654	1.47
LITERS/FOOT	0.010	0.151	0.617	1.389	2.475	5.564

ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]
1 well vol = 0.77 gal 3x well = 2.3 gal

HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)	DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC. COND
	13.07'					

DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)	DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME
		8.36			

RADIATION SCREENING DATA	PUMP PRIOR TO SAMPLING (cps)		PUMP AFTER SAMPLING (cps)	

MONITORING DATA COLLECTED DURING PURGING OPERATIONS

TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (umhos)	pH	ORP (mV)	TURBIDITY (NTU)
1534	[illegible]	Pump	4 YSI in the	well	Replaced Air/Water lines.				
1552		Pump	Started						
1601	8.58	108		0.33	11.0	1.53	6.79	-23	8.93
1606	8.64			0.31	10.9	1.57	6.69	-25	4.34
1611	8.78	110		0.31	10.9	1.58	6.62	-24	2.61
1616	8.94	94		0.23	11.1	1.56	6.70	-30	2.65
1621	9.04	112		0.19	11.1	1.49	6.67	-28	2.14
1626	9.20	100	~0.8 gal	0.19	11.0	1.46	6.67	-27	1.65
1631	9.32	96	~1.0 gal	0.19	11.0	1.49	6.66	-27	1.75
1636	9.41	104		0.19	10.9	1.51	6.62	-26	0.84
1641	9.62		~	0.20	10.9	1.55	6.61	-27	1.07
1646	9.72	88	~1.5 gals	0.22	10.9	1.56	6.61	-27	0.88
1651	9.84		~1.9 gals	0.13	10.9	1.57	6.60	-26	1.27
1656	9.96	98	~2.0 gals	0.13	10.8	1.59	6.62	-28	0.93
1701	10.08	98		0.14	10.8	1.59	6.61	-28	0.87
1706	10.20	90	~2.25 gals	0.13	10.7	1.60	6.59	-28	0.96
			~2.6 gals	total purge					
1720		Samples	Collected				Hach	Test Kit	
		3x VOAs for VOC					Fe:	3.30 mg/L	over limit
		2x VOAs for MEE					Mn:	7.9 mg/L	
		3x VOAs Amber for	TOC						
		1x Plastic Sulfate							

SAMPLING RECORD - GROUNDWATER

SENECA ARMY DEPOT ACTIVITY	PARSONS	WELL #: PT 24

PROJECT: Ash Landfill LTM Groundwater Sampling - Round 17
LOCATION: ROMULUS, NY

DATE: 6/20/14
INSPECTORS: D. Ilman
PUMP #: ~~13269~~ 8238
SAMPLE ID #: ALB 20298

WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)

TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND VELOCITY (APPRX)	WIND (FROM) DIRECTION (0 - 360)	GROUND / SITE SURFACE CONDITIONS

MONITORING INSTRUMENT	MONITORING DETECTOR
OVM-580	PID

WELL VOLUME CALCULATION FACTORS

DIAMETER (INCHES):	0.25	1	2	3	4	6
GALLONS / FOOT:	0.0026	0.041	0.163	0.367	0.654	1.47
LITERS/FOOT	0.010	0.151	0.617	1.389	2.475	5.564

ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]

HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)	DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC. COND
	11.86 Ft					

DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)	DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME
		5.29			

RADIATION SCREENING DATA	PUMP PRIOR TO SAMPLING (cps)		PUMP AFTER SAMPLING (cps)	
	YSI 85	3217		

MONITORING DATA COLLECTED DURING PURGING OPERATIONS

TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (umhos)	pH	ORP (mV)	TURBIDITY (NTU)
1410	5.29		Start Pump AT	14.20		HORIBA U52		155.04	HACH 2100P 11638
1425	5.32	140		0.36	10.8	0.919	7.28	-46	
1430	5.32	124		0.30	10.8	0.933	7.21	-51	3.17
1435	5.32	140		0.18	11.0	0.930	7.07	-51	13.1
1440	5.32	140		0.11	11.2	0.916	7.01	-40	5.38
1445	5.32	160		0.10	11.2	0.917	7.00	-28	3.19
1450	5.32	156		0.08	11.3	0.923	6.95	-34	2.64
1455	5.32	156		0.07	11.3	0.925	6.99	-8	2.98
1500	5.32	162		0.06	11.3	0.927	6.94	0	1.95
1505	5.32	162		0.06	11.3	0.926	6.95	3	2.52
1510	5.32	160	2 gal	0.06	11.3	0.929	6.93	6	2.14
1515	5.32	160		0.05	11.3	0.931	6.95	7	1.66
1520	5.32	160		0.06	11.3	0.930	6.95	10	0.99
1525	5.32	160		0.05	11.2	0.932	6.91	11	1.08
1530	5.32	160		0.05	11.3	0.933	6.90	15	0.81
1535	5.32	160		0.05	11.3	0.935	6.90	16	1.03
1540	5.32	160	3.5 gal	0.05	11.3	0.934	6.92	15	0.94
1545	5.32	160		0.05	11.3	0.936	6.93	21	0.98
1550	5.32	160		0.04	11.3	0.935	6.93	20	0.94
1555	5.32	160		0.04	11.3	0.934	6.93	19	0.93
1600	5.32	160	4.25 gal	0.05	11.3	0.935	6.93	18	1.12

COLLECT SAMPLE 1605 for VOC's

SAMPLING RECORD - GROUNDWATER

SENECA ARMY DEPOT ACTIVITY	PARSONS	WELL #: MW-7

PROJECT: Ash Landfill LTM Groundwater Sampling - Round 17
LOCATION: ROMULUS, NY

DATE: 6/20/14
INSPECTORS: BDO
PUMP #: 8135
SAMPLE ID #: ALDW20299

WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)

TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND (FROM) VELOCITY (APPRX)	WIND (FROM) DIRECTION (0 - 360)	GROUND / SITE SURFACE CONDITIONS	MONITORING INSTRUMENT	MONITORING DETECTOR
							OVM-580	PID

WELL VOLUME CALCULATION FACTORS

DIAMETER (INCHES):	0.25	1	2	3	4	6
GALLONS / FOOT:	0.0026	0.041	0.163	0.367	0.654	1.47
LITERS/FOOT	0.010	0.151	0.617	1.389	2.475	5.564

ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]

1 Well Vol = 1.2 gal 3 x Wells: 3.6 gal

HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)	DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC. COND
	13.65'					

DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)	DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME
		6.27'			

RADIATION SCREENING DATA	PUMP PRIOR TO SAMPLING (cps)		PUMP AFTER SAMPLING (cps)	

MONITORING DATA COLLECTED DURING PURGING OPERATIONS — Hach

TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	YSI DISSOLVED OXYGEN (mg/L)	YSI TEMP (°C)	SPEC. COND Horiba umhos	Horiba pH	Horiba ORP (mV)	TURBIDITY (NTU)
1030		Re-started pump.		~1.88					
1041				2.11					
1047				2.05	10.3				
1054				1.87	10.1				
1109	6.37			1.79	9.8	0.830	6.50	173	44.1
1115	6.38	102		1.08	9.7	0.854	6.40	141	35.9
1119	6.39	104		1.08	9.7	0.865	6.44	126	33.6
1124	6.41			0.80	9.6	0.884	6.38	113	29.1
1129	6.40	106	~0.9 gal	0.69	9.5	0.894	6.38	104	17.4
1134	6.40			0.71	9.5	0.904	6.31	102	11.9
1139	6.40	96	~1.1 gal	0.54	9.5	0.911	6.35	91	7.29
1144	6.40			0.55	9.4	0.917	6.34	85	7.42
1149	6.40	104	~1.75 gal	0.61	9.4	0.923	6.29	83	5.30
1154	6.39			0.57	9.4	0.927	6.36	73	4.57
1159	6.39	100	~2.0 gal	0.46	9.4	0.931	6.29	73	4.43
1204	6.39			0.52	9.4	0.934	6.35	68	3.63
1209	6.39	90	~2.3 gal	0.57	9.4	0.937	6.34	66	3.39
1214	6.38	90		0.52	9.4	0.939	6.36	62	2.84
1219	6.38	92	~2.75 gal	0.55	9.4	0.942	6.33	63	2.20
1224	6.39			0.55	9.4	0.944	6.33	62	2.41
1229	6.39		~2.9 gal	0.55	9.4	0.946	6.26	63	3.16

1237 Samples Collected Hach Test Fe²⁺: 0.0 mg/L checked twice; Mn: 0.6 mg/L

~3.0 gal Total Purge 6x VOAs for VOC 3x VOAs Amber for TOC 1x Plastic for Sulfate 2x VOAs for MEE, one vial had tiny air bubble, smaller than pea

SAMPLING RECORD - GROUNDWATER

SENECA ARMY DEPOT ACTIVITY	PARSONS	WELL #: PT-22

PROJECT: Ash Landfill LTM Groundwater Sampling - Round 17
LOCATION: ROMULUS, NY

DATE: ~~6/20~~ 6/21/14
INSPECTORS: BBO
PUMP #: 13209
SAMPLE ID #: ALBW20297

WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)

TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND VELOCITY (APPRX)	WIND (FROM) DIRECTION (0 - 360)	GROUND / SITE SURFACE CONDITIONS	MONITORING INSTRUMENT	MONITORING DETECTOR
1317	82	Sunny thin clouds		5-10	W→E		OVM-580	PID

WELL VOLUME CALCULATION FACTORS

DIAMETER (INCHES):	0.25	1	2	3	4	6
GALLONS / FOOT:	0.0026	0.041	0.163	0.367	0.654	1.47
LITERS/FOOT	0.010	0.151	0.617	1.389	2.475	5.564

ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]
1 Well Vol = 0.44 gal 3x Well = 1.33 gal

HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)	DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC. COND
	11.92'					

DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)	DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME
		9.21'			

RADIATION SCREENING DATA	PUMP PRIOR TO SAMPLING (cps)		PUMP AFTER SAMPLING (cps)	

MONITORING DATA COLLECTED DURING PURGING OPERATIONS

TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (mS/cm)	pH	ORP (mV)	TURBIDITY (NTU)
Equipment Used				YSI 550	YSI	Horiba	Horiba	Horiba	Hach
1328	9.67	Bladder pump 1 YSI in the well							
1329		Pump Started							
1340	9.58	100		0.37	10.7	0.985	6.82	22	5.49
1345	9.73			0.48	10.5	0.988	6.77	20	4.49
1350	9.81	90		0.41	10.4	1.01	6.74	27	3.40
1355	9.91	102	~0.5 gals	0.58	10.3	1.02	6.73	32	2.46
1400	10.02			0.46	10.3	1.02	6.72	41	1.60
1405	10.20	55	~1.0 gals	1.18	10.2	1.02	6.72	52	2.03
1410		96		1.32	10.2	1.04	6.73	55	3.17
1415	10.30			1.44	10.2	1.04	6.73	57	4.02
1420	10.41	106	~1.2 gals	1.48	10.1	1.04	6.73	60	3.10
1425 1430	10.65			DO Probe expired		1.04	6.73	63	2.05
1430	ND		~1.75 gals			1.05	6.74	61	2.42
			~2.0 gals	total purge					
1433		Samples Collected		3x VOAs for		VOC			

SAMPLING RECORD - GROUNDWATER

SENECA ARMY DEPOT ACTIVITY	PARSONS	WELL #: MW-24

PROJECT: Ash Landfill LTM Groundwater Sampling - Round 17
LOCATION: ROMULUS, NY

DATE: 6/20/14
INSPECTORS: D. Tuman
PUMP #: 14968
SAMPLE ID #: ALBW 20301

WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)

TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND VELOCITY (APPRX)	WIND (FROM) DIRECTION (0 - 360)	GROUND / SITE SURFACE CONDITIONS

MONITORING INSTRUMENT	MONITORING DETECTOR
OVM-580	PID

WELL VOLUME CALCULATION FACTORS

DIAMETER (INCHES):	0.25	1	2	3	4	6
GALLONS / FOOT:	0.0026	0.041	0.163	0.367	0.654	1.47
LITERS/FOOT	0.010	0.151	0.617	1.389	2.475	5.564

ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]

HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)	DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC. COND
	12.9 ft					

DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)	DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME
		8.19 ft			

RADIATION SCREENING DATA	PUMP PRIOR TO SAMPLING (cps)		PUMP AFTER SAMPLING (cps)	

MONITORING DATA COLLECTED DURING PURGING OPERATIONS

TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (mS/cm)	pH	ORP (mV)	TURBIDITY (NTU)
Equipment Used				YSI 85 3217	—	Horiba U52 15504	—	—	HACH 2100P 11638
1:38	8.18		START PUMP						
1:45	8.32	130		0.27	10.9	1.21	7.10	-1	
1:50	8.32	132		0.21	10.8	1.20	7.09	-15	0.91
1:55	8.32	130		0.23	11.0	1.20	7.09	-15	54.6
2:00	8.32	122		0.15	11.0	1.20	7.02	-12	29.3
2:05	8.32	122		0.13	11.0	1.21	7.10	-11	16.3
210	8.32	122		0.10	10.9	1.21	7.14	-14	10.6
215	8.32	122	1.25 gal	0.11	10.9	1.21	7.17	-13	10.1
220	8.32	122		0.11	10.9	1.21	7.10	-7	9.19
225	8.32	122		0.11	10.9	1.21	7.11	-9	7.98
230	8.32	122		0.12	11.0	1.21	7.10	-10	8.05
235	8.33	122		0.12	11.0	1.21	7.13	-4	7.98
240	8.33	138		0.11	11.0	1.21	7.13	-2	8.10
245	8.33	142		0.11	11.0	1.21	7.08	-1	8.60
250	8.33	140	2.75	0.10	11.0	1.21	7.09	-2	8.13
255	8.33	140		0.10	11.0	1.21	7.11	+6	8.42
300	8.33	140	3.00	0.11	11.0	1.21	7.09	6	8.88
305	8.33	140		0.10	11.0	1.21	7.07	8	8.12
310	8.33	140		0.11	11.0	1.21	7.06	10	7.27
315	8.33	140		0.09	11.0	1.21	6.97	13	7.74
320	8.33	140	4 gal	0.10	11.0	1.21	7.09	9	8.74

SAMPLING RECORD - GROUNDWATER

SENECA ARMY DEPOT ACTIVITY	PARSONS	WELL #: MW-25

PROJECT: Ash Landfill LTM Groundwater Sampling - Round 17
LOCATION: ROMULUS, NY

DATE: 6/21/14
INSPECTORS: Dillman
PUMP #: 9201
SAMPLE ID #: ALBW 20302

WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)

TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND VELOCITY (APPRX)	WIND (FROM) DIRECTION (0 - 360)	GROUND / SITE SURFACE CONDITIONS

MONITORING

INSTRUMENT	DETECTOR
OVM-580	PID

WELL VOLUME CALCULATION FACTORS

DIAMETER (INCHES):	0.25	1	2	3	4	6
GALLONS / FOOT:	0.0026	0.041	0.163	0.367	0.654	1.47
LITERS/FOOT	0.010	0.151	0.617	1.389	2.475	5.564

ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]

HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)	DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC. COND
	13.20					

DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)	DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME
		7.64			

RADIATION SCREENING DATA	PUMP PRIOR TO SAMPLING (cps)		PUMP AFTER SAMPLING (cps)	

MONITORING DATA COLLECTED DURING PURGING OPERATIONS

TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (mS/cm)	pH	ORP (mV)	TURBIDITY (NTU)
Equipment Used				03217		HORIBA U-52	155104		HACH 2100P 11638
Start Pump 9.55				YSI 85					
10:00	Tube leaking - Replace								
10:06	Restart Pump								
10:10	8.05	140		0.43	11.0	1.41	7.04	-1	
10:15	8.20	112		0.62	11.1	1.38	6.99	-21	
10:20	8.25	112		0.67	11.2	1.33	7.11	-22	
10:25	8.33	116		0.52	11.2	1.29	7.15	-12	7.45
10:30	8.60	100		0.37	11.2	1.28	7.21	-2	6.28
10:35	8.69	102		0.36	11.1	1.28	7.27	4	3.70
10:40	8.88	100		0.33	11.1	1.30	7.27	8	3.41
10:45	9.03	108	1.3 gal	0.31	11.1	1.31	7.36	12	2.78
10:50	9.23	108		0.31	11.0	1.33	7.22	15	2.18
10:55	9.34	108		0.27	11.0	1.34	7.24	16	2.51
11:00	9.53	100		0.19	10.9	1.35	7.26	15	2.05
11:05	9.65	100		0.17	10.9	1.35	7.29	12	2.08
11:10	9.76	90		0.14	10.8	1.35	7.33	9	2.03
11:15	9.91	94	2.00 gal	0.16	10.8	1.37	7.43	3	1.68
11:20	10.05	120		0.15	10.8	1.38	7.35	0	1.36
11:25	10.18	122		0.14	10.7	1.39	7.28	-5	1.28
11:30	10.30	106		0.10	10.6	1.41	7.36	-15	1.17
11:35	10.45	106		0.11	10.6	1.41	7.33	-15	1.34

SAMPLING RECORD - GROUNDWATER

SENECA ARMY DEPOT ACTIVITY	PARSONS	WELL #: PT-18A

PROJECT: Ash Landfill LTM Groundwater Sampling - Round 17
LOCATION: ROMULUS, NY

DATE: ~~BBO~~ 6/21/14
INSPECTORS: BBO
PUMP #: 9500
SAMPLE ID #: ALBW 20296

WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)

TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND VELOCITY (APPRX)	WIND (FROM) DIRECTION (0 - 360)	GROUND / SITE SURFACE CONDITIONS
1055	76	sunny		0-5	N→S	

MONITORING	
INSTRUMENT	DETECTOR
OVM-580	PID

WELL VOLUME CALCULATION FACTORS

DIAMETER (INCHES):	0.25	1	2	3	4	6
GALLONS / FOOT:	0.0026	0.041	0.163	0.367	0.654	1.47
LITERS/FOOT	0.010	0.151	0.617	1.389	2.475	5.564

ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]
1 well Vol = 0.69 gal 3 x Well = 2.06 gals

HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)	DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC. COND
	12.79'					

DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)	DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME
		8.58'			

RADIATION SCREENING DATA	PUMP PRIOR TO SAMPLING (cps)		PUMP AFTER SAMPLING (cps)	

MONITORING DATA COLLECTED DURING PURGING OPERATIONS

TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (mS/cm)	pH	ORP (mV)	TURBIDITY (NTU)
Equipment Used				~~YSI 550~~	YSI	Horiba	Horiba	Horiba	Hach
1110	8.40	Bladder pump & YSI in the well							
1110		Pump	Started						
1123	8.70	90		0.57	10.9	1.25	6.99	4	6.72
1128	8.78	94		0.62	10.8	1.26	6.96	-4	6.58
1133	8.92	102		0.71	10.8	1.26	6.93	-3	4.66
1138	9.12	102		0.73	10.9	1.26	6.96	1	4.34
1143	9.18			0.60	10.8	1.26	6.95	9	2.91
1148	9.27	102	~0.5 gals	0.42	10.8	1.25	6.94	20	2.00
1153	9.34			0.37	10.7	1.25	6.95	28	1.79
1158	9.36	94		0.26	10.7	1.25	6.94	35	1.39
1203	9.40		~1.0 gals	0.21	10.6	1.25	6.94	43	1.18
1208	9.49	98		0.19	10.6	1.24	6.94	50	1.05
1213	9.53			0.16	10.6	1.23	6.93	56	1.33
1218	9.58		~1.6 gals	0.15	10.5	1.22	6.94	61	1.38
1223	9.63	108		0.15	10.5	1.21	6.96	67	0.89
1228	9.69			0.14	10.5	1.20	6.95	69	0.85
1233			~2.1 gals	0.15	10.5	1.20	6.96	72	0.94
1238	9.75	110		0.15	10.5	1.20	6.94	75	0.87
1243	9.78			0.15	10.5	1.20	6.95	76	0.77
			~2.6 gals	total Purge					
1257	Samples Collected 3 VOAs for VOC								

SAMPLING RECORD - GROUNDWATER

SENECA ARMY DEPOT ACTIVITY	PARSONS	WELL #: ~~#~~ MW-40

PROJECT: Ash Landfill LTM Groundwater Sampling - Round 17
LOCATION: ROMULUS, NY

DATE: 6/22/14
INSPECTORS: BBO CSD
PUMP #: Peristaltic Pump
SAMPLE ID #: ALBW20310

WEATHER / FIELD CONDITIONS CHECKLIST (RECORD MAJOR CHANGES)

TIME (24 HR)	TEMP (APPRX)	WEATHER (APPRX)	REL. HUMIDITY (GEN)	WIND VELOCITY (APPRX)	WIND (FROM) DIRECTION (0 - 360)	GROUND / SITE SURFACE CONDITIONS	MONITORING INSTRUMENT	MONITORING DETECTOR
1154	72	Sunny		0-5	NW-SE		OVM-580	PID

WELL VOLUME CALCULATION FACTORS

DIAMETER (INCHES):	0.25	1	2	3	4	6
GALLONS / FOOT:	0.0026	0.041	0.163	0.367	0.654	1.47
LITERS/FOOT	0.010	0.151	0.617	1.389	2.475	5.564

ONE WELL VOLUME (GAL) = [(POW - STABILIZED WATER LEVEL) X WELL DIAMETER FACTOR (GAL/FT)]
1x Well Vol = 1.37 gal 3x Well = 4.1 gal

HISTORIC DATA	DEPTH TO POINT OF WELL (TOC)	DEPTH TO TOP OF SCREEN (TOC)	SCREEN LENGTH (FT)	WELL DEVELOPMENT TURBIDITY	WELL DEVELOPMENT pH	WELL DEVELOPMENT SPEC. COND
	14.68'					

DATA COLLECTED AT WELL SITE	PID READING (OPENING WELL)	DEPTH TO STATIC WATER LEVEL (TOC)	DEPTH TO STABILIZED WATER LEVEL (TOC)	DEPTH TO PUMP INTAKE (TOC)	PUMPING START TIME
		6.28'			

RADIATION SCREENING DATA	PUMP PRIOR TO SAMPLING (cps)		PUMP AFTER SAMPLING (cps)	

MONITORING DATA COLLECTED DURING PURGING OPERATIONS

TIME (min)	WATER LEVEL	PUMPING RATE (ml/min)	CUMULATIVE VOL (GALLONS)	DISSOLVED OXYGEN (mg/L)	TEMP (C)	SPEC. COND (umhos)	pH	ORP (mV)	TURBIDITY (NTU)
Equipment	Used			YSI 85	YSI	Horiba	Horiba	Horiba	Hach
1158	6.28	YSI	in the well						
1204	6.18	Pump	Started						
1210	7.64	116		2.85	9.6	0.726	7.33	34	5.63
1215	7.95			2.92	9.5	0.710	7.32	39	4.41
1220	7.96			2.90	9.8	0.707	7.31	44	4.62
1225	7.97			2.96	9.9	0.704	7.32	47	3.70
1230				3.12	9.9	0.707	7.31	50	4.38
1235	7.98			3.31	10.6	0.713	7.32	53	3.52
1240				3.46	10.0	0.722	7.34	54	2.77
1245	7.96		~1.1 gals	3.46	10.0	0.715	7.36	54	3.11
1250				3.56	10.1	0.699	7.37	55	2.68
1255	7.97			3.62	10.1	0.717	7.37	57	2.34
1300				3.65	10.1	0.709	7.38	58	2.48
1305	7.98		~1.75 gals	3.75	10.1	0.703	7.38	59	2.05
1310				3.76	10.1	0.713	7.37	60	1.73
			~2.25 gals	Total purge					
1315		Collected Hach Samples				Fe+;	0.0	mg/L checked twice	
						Mn;	1.0 mg/L		

GROUNDWATER ELEVATION REPORT

SENECA ARMY DEPOT ACTIVITY	PARSONS	DATE: 12/15/2014
PROJECT: Ash Landfill LTM - Round 18		PROJECT NO:
LOCATION: Seneca Army Depot, Romulus, NY		INSPECTOR: T.Belanger/ S. Dillman

MONITORING EQUIPMENT:

INSTRUMENT	DECTECTOR	BGD	TIME	REMARKS

WATER LEVEL INDICATOR:

INSTRUMENT	CORRECTION FACTOR
Pine 14043	—
HERON DIPPER - T	
A01584	

COMMENTS: OVERCAST, MID 30s, NO WIND, 2-3" SNOW ON GROUND

Monitoring Well	Historic Well Depth (rel. TOC) (ft)	Depth to Water (rel. TOC) (ft)	Well Depth (rel. TOC) (ft)	depth of water	Time at Check (military)	Well Condition (Fair / Bad) [circle]	Well Status / Comments (Lock?, Well #?, Surface Disturbance?, Riser marked?, Condition of riser, concrete, protective casing, etc.)
PT-12A	12.62	5.88	12.63 ~~12.62~~	12.63	1323	(F) / B	ok MISSING WELL CAP, [illegible]
PT-16	11.00	2.92	11.01 ~~11.02~~	11.02	1315	(F) / B	ok
PT-17	7.52	3.45	7.50 7.54	7.54	1220	F / (B)	MISSING ~~[illegible]~~ MANHOLE COVER, SLIGHT HEAVE
PT-18A	12.78	8.75	12.79 12.79	12.79	1406	(F) / B	ok
PT-19	11.63	5.49	11.63 11.65	11.65	1210	(F) / B	ok. LOCK STIFF
PT-20	11.63	7.00	11.76 11.78	11.78	1333	(F) / B	ok, SMALL SHRUB
PT-22	11.90	7.58	11.91 11.92	11.92	1320	(F) / B	ok
PT-24	11.86	4.85	11.85 11.85	11.85	1242	(F) / B	ok.
MW-27	10.48	5.19	10.48 10.50	10.50	1248	(F) / B	OK. LARGE BUSH ~~[illegible]~~
MW-29	10.37	5.21	10.47 10.50	10.50	1230	(F) / B	OK. ~~[illegible]~~ TOP HARD TO SWING, LOOSE STICKUP.
MW-32	10.37	7.26	10.36 10.37	10.37	1215	(F) / B	OK. NO ISSUES
MW-39	11.90	1.72	11.90 11.90	11.90	1257	(F) / B	ok. HINGE BROKEN ON CASING
MW-40	14.68	4.54	14.68 14.68	14.68	1405	(F) / B	ok.
MW-44A	12.41	5.57	12.41 12.48	12.48	1350	(F) / B	ok. BUSHES SURROUND WELL
MW-46	11.43	3.78	11.43 11.44	11.44	1550	(F) / B	LOCK SEIZED. WD-40 OPENED. NO WELL CAP
MW-48	11.38	3.67	11.55 11.55	11.55	1340	(F) / B	OK. SMALL BUSHES SURROUND WELL
MW-56	6.48	3.42	6.50 6.50	6.50	1630	(F) / B	ok. ~~[illegible]~~
MW-60	10.20	1.94	10.04 10.00 10.04	10.00	1130	(F) / B	MOUSE HOUSE. LOCK OK, WELL CAP ON
MWT-1	10.09	4.76	10.09 10.10	10.10	1244	(F) / B	ok
MWT-3	10.08	5.08	10.08 10.09	10.09	1246	(F) / B	ok
MWT-4	12.45	5.12	12.46 12.47	12.47	1235	(F) / B	ok.
MWT-6	12.45	6.10	12.48 12.48	12.48	1240	(F) / B	ok
MWT-7	13.66	5.87	13.64 13.65	13.65	1225	(F) / B	ok.
MWT-9	13.98	6.72	14.14 14.15	14.15	1300	(F) / B	ok. BUSH. 1" DIA
MWT-10	8.97	3.81	9.00 8.96	8.96	1250	(F) / B	ok
MWT-17R	11.38	5.50	11.35 11.36	11.36	1410	(F) / B	ok. NO CASING STICKUP JUST PVC NO WELL CAP
MWT-22	14.83	5.84	14.84 14.85	14.85	1327	(F) / B	ok, NO CASING STICKUP
MWT-23	13.65	8.39	13.76 13.76	13.76	1254	(F) / B	ok
MWT-24	12.91	7.37	12.94 12.95	12.95	1252	(F) / B	ok
MWT-25	13.16	4.08	13.17 13.19	13.19	1408	(F) / B	ok
MWT-26	13.13	3.27	13.16 13.17	13.17	1318	(F) / B	ok
MWT-27	12.70	6.20	12.72 12.73	12.73	1320	(F) / B	ok. PVC CASING STICKING UP HIGHER THAN NORM
MWT-28	12.79	6.86	12.79 12.80	12.80	1321	(F) / B	ok
MWT-29	12.99	5.02	13.07 (13.07)	13.07	1325	(F) / B	ok. LOCKED GOOD

[illegible] 3.87 5.19 3.92

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
					COUNT/ VOLUME	TYPE			
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

HORIBA 23066
HACH 12358
HERON 18074
YSI 95 6122
HACH color 19031

IDW INFORMATION:

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
					COUNT/ VOLUME	TYPE			
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

HORIBA 19276 121389 HACH color 005650

YSI 003217

HACH TURB 15613

IDW INFORMATION:

Ash GW SAMPLING RECORD

	SAMPLING ORDER		PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
					COUNT/ VOLUME	TYPE			
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

HORIBA # 19276 / 21389 HACH COLOR 005650

75185 003217

HACH TURB 15613

IDW INFORMATION:

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
					COUNT/ VOLUME	TYPE			
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

HYRIBA 23066

YSI 85 6122

HACH TURB 12358

HACH COND 19031

IDW INFORMATION:

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES COUNT/ VOLUME	BOTTLES TYPE	SAMPLE NUMBER	TIME	CHECKED BY/ DATE
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA	ALBW20315	1350	
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA	↓		
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)				0.00 mg/L	field	FIELD	1415 ~~0700~~	
6	Mn+ (HACH)				0.7 mg/L	field	FIELD	1485	
7									

COMMENTS: (QA/QC?)

NO QA-QC

IDW INFORMATION:

HORIBA 19276/213899 HACH COLOR 005650

YSI 85 003217

HACH 2100P DUBB 15613

1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

HORIBA 23066

YSI 85 6122

HACH HRB 12358

HACH COND 19031

IDW INFORMATION:

1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

Horiba 23066

YSI 6122

Hach T 12358

IDW INFORMATION:

1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

IDW INFORMATION:

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
					COUNT/ VOLUME	TYPE			
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

IDW INFORMATION:

ITURBA 23066

YSI 85 6122

HACH TURB 12358

HACH COLOR 19031

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/
					COUNT/ VOLUME	TYPE			DATE
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

IDW INFORMATION:

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
					COUNT/ VOLUME	TYPE			
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

IDW INFORMATION:

ITURBA 19276 / Z1389

YSI BS 003217

HACH TURB 15613

HACH COND 005650

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES COUNT/ VOLUME	BOTTLES TYPE	SAMPLE NUMBER	TIME	CHECKED BY/ DATE
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

HUR.BA 19276 HACH TURB 15613

YS185 003217

IDW INFORMATION:

HUR.BA 19276/21389

YS185 003217

HACH 2100P 15613

HACH COND 005650

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
					COUNT/ VOLUME	TYPE			
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

Horiba 23066

YSI 6122

Hach TNRS 12358

IDW INFORMATION:

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
					COUNT/ VOLUME	TYPE			
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

HORIBA 23066
HACH 12358
HERON 18074
YSI 85 6122
HACH COLOR 19031

IDW INFORMATION:

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
					COUNT/ VOLUME	TYPE			
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

IDW INFORMATION:

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
					COUNT/ VOLUME	TYPE			
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

IDW INFORMATION:

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
					COUNT/ VOLUME	TYPE			
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

HORIBA 23066

YSI 85 6122

HACH TURB 12358

IDW INFORMATION:

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
					COUNT/ VOLUME	TYPE			
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

IDW INFORMATION:

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
					COUNT/ VOLUME	TYPE			
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

HORIBA 19276

YSI 85 003217

HACH TURB 15613

EDW INFORMATION:

HORIBA SCREEN 19276 / BODY 21389

YSI 85 003217

HACH 2100P 15C13

HACH COLOR 005650

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES COUNT/ VOLUME	BOTTLES TYPE	SAMPLE NUMBER	TIME	CHECKED BY/ DATE
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

~~IDW~~ INFORMATION:

HORIBA 19276/21389
YSI 85 003217
HACH 2100 P TURBI 15613
HACH COLOR 005650

Ash GW SAMPLING RECORD

SAMPLING ORDER			PRESERVATIVES		BOTTLES		SAMPLE NUMBER	TIME	CHECKED BY/ DATE
					COUNT/ VOLUME	TYPE			
1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

IDW INFORMATION:

1	VOC 8260B		4 deg. C	HCL	3/ 40 ml	VOA			
2	MEE (RSK-175)		4 deg. C	HCL	2/ 40 ml	VOA			
3	TOC (9060A)		4 deg. C	HCL	3/ 40 ml	VOA			
4	Sulfate (EPA 300.1)		4 deg. C		1 x 250 mL	HDPE			
5	Fe+ (HACH)					field			
6	Mn+ (HACH)					field			
7									

COMMENTS: (QA/QC?)

HANNA 23066

YSI 85 6122

HACH TURB 12358

HACH COND 19031

IDW INFORMATION:

APPENDIX B

COMPLETE GROUNDWATER DATA

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								PT-18A	PT-18A	PT-18A	PT-18A	PT-18A	PT-18A	PT-18A
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20059	ALBW20074	ALBW20088	ALBW20103	ALBW20117	ALBW20132	ALBW20147
Sample Date								1/3/2007	3/17/2007	6/5/2007	11/15/2007	6/24/2008	12/12/2008	6/4/2009
QC Type								SA	SA	SA	SA	SA	SA	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								1	2	3	4	5	6	7
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	1 U	1 U	1 U	1 U	1 U	0.26 UJ	0.26 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	1 U	1 U	1 U	1 U	1 U	0.21 U	0.21 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	1 U	1 U	1 UJ	1 U	1 UJ	0.31 U	0.31 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	1 U	1 U	1 U	1 U	1 U	0.23 U	0.23 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	1 U	1 U	1 U	1 U	1 U	0.75 U	0.75 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.64 J	0.73 J	1.4	2.1	1 U	1.3	0.8 J
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	1 U	1 U	1 U	1 U	1 U	0.41 U	0.41 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	1 U	1 U	1 U	1 U	1 U	0.17 U	0.17 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1 U	1 U	1 U	1 U	1 U	0.2 U	0.2 U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	1 U	1 U	1 U	1 U	1 U	0.21 U	0.21 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	1 U	1 U	1 U	1 U	1 U	0.14 U	0.14 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1 U	1 U	1 U	1 U	1 U	0.16 U	0.16 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1 U	1 U	1 U	1 U	1 U	0.16 U	0.16 U
Acetone	UG/L	2600	17%			45	262	5 U	2 J	7	5 U	5 U	1.3 U	1.3 UJ
Benzene	UG/L	0.48	2%	1	0	5	268	1 U	1 U	1 U	1 U	1 U	0.16 U	0.16 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	1 U	1 U	1 U	1 U	1 U	0.38 U	0.39 U
Bromoform	UG/L	0	0%	80	0	0	268	1 U	1 U	1 U	1 U	1 U	0.26 U	0.26 U
Carbon disulfide	UG/L	0	0%			0	268	1 U	1 U	1 U	1 U	1 U	0.19 U	0.19 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	1 U	1 U	1 U	1 U	1 U	0.27 UJ	0.27 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	1 U	1 U	1 U	1 U	1 U	0.18 U	0.32 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	1 U	1 U	1 U	1 U	1 U	0.32 U	0.32 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1 U	1 U	1 U	1 U	1 UJ	0.32 U	0.32 U
Chloroform	UG/L	71	8%	7	7	22	268	.27	13 U	[illegible]	[illegible]	1 U	2.2	.4
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	220	120	1400	220	200	830	380
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	1 U	1 U	1 U	1 U	1 U	0.36 U	0.36 U
Cyclohexane	UG/L	0.3	0%			1	268	1 U	1 U	1 U	1 U	1 U	0.22 U	0.53 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	1 U	1 U	1 U	1 U	1 U	0.28 UJ	0.29 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	1 U	1 U	1 U	1 U	1 U	0.18 U	0.18 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	1 U	1 U	1 U	1 U	1 U	0.19 U	0.19 U
Methyl Acetate	UG/L	6	1%			2	253	1 U	1 UJ	1 U	1 U	1 UJ	0.17 U	0.17 U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	1 U	1 U	1 U	1 U	1 UJ	0.28 U	0.28 U
Methyl butyl ketone	UG/L	0	0%			0	268	5 U	5 U	5 U	5 UJ	5 UJ	1.2 U	1.2 U
Methyl chloride	UG/L	0	0%	5	0	0	268	1 U	1 U	1 U	1 U	1 UJ	0.34 U	0.35 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	1 U	1 U	1 U	1 U	1 U	0.22 U	0.5 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	5 U	5 U	5 U	5 U	5 UJ	1.3 U	1.3 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	5 U	5 U	5 U	5 U	5 UJ	0.91 U	0.91 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	1 U	1 U	1 U	1 U	1 U	0.16 U	0.16 U
Methylene chloride	UG/L	18	4%	5	7	12	268	1 UJ	1 U	1 U	1 U	1 U	0.44 UJ	0.44 U
Styrene	UG/L	0	0%	5	0	0	268	1 U	1 U	1 U	1 U	1 U	0.18 U	0.18 U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Seneca Army Depot Activity

Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								PT-18A	PT-18A	PT-18A	PT-18A	PT-18A	PT-18A	PT-18A
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20162	ALBW20177	ALBW20192	ALBW20207	ALBW20222	ALBW20237	ALBW20252
Sample Date								12/17/2009	7/1/2010	12/19/2010	7/22/2011	12/15/2011	6/21/2012	12/12/2012
QC Type								SA	SA	SA	SA	SA	SA	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								8	9	10	11	12	13	14
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	1.1 U	0.5 U	0.5 U	15	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.85 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	1.2 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.92 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	1.5 U	0.25 U	0.25 U	62	0.25 U	0.25 U	0.25 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	2 J	0.11 U	0.11 U	1.5	0.11 U	2.6	0.11 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	1.6 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	1.6 U	0.44 U	0.44 U	0.44 UJ	0.44 U	0.44 U	0.44 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.66 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.81 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.86 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 UJ	0.1 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	1.3 U	0.13 U	0.13 U	0.29 J	0.13 U	0.13 U	0.13 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1.4 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1.6 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Acetone	UG/L	2500	17%			45	262	5.4 U	5 U	5 UJ	8.1 J	5 UJ	5 U	5 U
Benzene	UG/L	0.48	2%	1	0	5	268	1.8 U	0.25 U	0.25 U	0.38 J	0.25 U	0.48 J	0.25 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	1.5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Bromoform	UG/L	0	0%	80	0	0	268	1 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
Carbon disulfide	UG/L	0	0%			0	268	0.78 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	1.1 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	1.3 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	1.3 U	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1.3 UJ	1 U	1 U	1 U	1 UJ	1 U	1 U
Chloroform	UG/L	71	8%	7	7	22	268	3.1 J	2.1	0.27 J	0.14 U	0.14 U	71	0.14 U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	630	28	0.54 J	15	0.53 J	820	0.8 J
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	1.4 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Cyclohexane	UG/L	0.3	0%			1	268	2.1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.3 J	0.25 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	1.1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.3 J	0.25 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.74 U	0.11 U	0.11 U	9.2	0.11 U	0.11 U	0.11 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.77 U	0.1 U	0.1 U	0.1 J	0.1 U	0.1 U	0.1 U
Methyl Acetate	UG/L	6	1%			2	253	2 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 UR	0.19 UJ
Methyl bromide	UG/L	2.1	0%	5	0	1	262	1.1 UJ	0.8 U	0.8 UJ	0.8 UJ	0.8 UJ	0.8 UJ	0.8 UJ
Methyl butyl ketone	UG/L	0	0%			0	268	5 U	1 U	1 U	1 U	1 UJ	1 U	1 U
Methyl chloride	UG/L	0	0%	5	0	0	268	1.4 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 UJ	0.33 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	2 U	0.1 U	0.1 U	0.17 J	0.1 U	0.1 U	0.1 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	5.3 U	1 U	1 U	5.1 J	1 U	1 U	1 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	3.6 U	1 U	1 U	1.9 J	1 U	1 U	1 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.64 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Methylene chloride	UG/L	18	4%	5	7	12	268	1.8 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	UG/L	0	0%	5	0	0	268	0.74 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
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Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								PT-18A	PT-18A	PT-18A	PT-18A	MWT-25	MWT-25	MWT-25
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20265A	ALBW20280	ALBW20296	ALBW20312	ALBW20064	ALBW20079	ALBW20093
Sample Date								7/11/2013	12/13/2013	6/21/2014	12/19/2014	1/3/2007	3/17/2007	6/6/2007
QC Type								SA	SA	SA	SA	SA	SA	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								15	16	17	18	1	2	3
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5 U	0.5 U	0.5 U	10 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18 U	0.18 U	0.18 U	3.6 U	1 U	1 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5 U	0.5 U	0.5 U	10 U	1 U	1 U	1 UJ
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13 U	0.13 U	0.13 U	2.6 U	1 U	1 U	1 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25 U	0.25 U	0.25 U	5 U	1 U	1 U	1 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11 U	0.11 U	0.77 J	2.2 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	0.25 U	0.25 U	5 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44 U	0.44 U	0.44 U	8.8 U	1 U	1 U	1 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25 U	0.25 U	0.25 U	5 U	1 U	1 U	1 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21 U	0.21 U	0.21 U	4.2 U	1 U	1 U	1 U
1,2-Dichloroethane	UG/L	5.8	16%	0.6	34	42	268	0.1 U	0.1 U	0.1 U	2 U	1 U	1 U	1 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13 U	0.13 U	0.13 U	2.6 U	1 U	1 U	1 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25 U	0.25 U	0.25 U	5 U	1 U	1 U	1 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28 U	0.28 U	0.28 U	5.6 U	1 U	1 U	1 U
Acetone	UG/L	2600	17%			45	262	5 U	5 U	5 U	100 U	5 U	5 U	4.5 J
Benzene	UG/L	0.48	2%	1	0	5	268	0.25 U	0.25 U	0.25 U	5 U	1 U	1 U	1 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25 U	0.25 U	0.25 U	5 U	1 U	1 U	1 U
Bromoform	UG/L	0	0%	80	0	0	268	0.5 U	0.5 U	0.5 U	10 U	1 U	1 U	1 U
Carbon disulfide	UG/L	0	0%			0	268	0.6 U	0.6 U	0.6 U	12 U	1 U	1 U	1 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5 U	0.5 U	0.5 U	10 U	1 U	1 U	1 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	0.25 U	0.25 U	5 U	1 U	1 U	1 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1 U	0.1 U	0.1 U	2 U	1 U	1 U	1 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	2 U	2 U	2 U	40 U	1 U	1 U	1 U
Chloroform	UG/L	71	8%	7	7	22	268	0.62 J	0.14 U	[illegible]	[illegible]	1 U	1 U	1 U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	.81	1.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11 U	0.11 U	0.11 U	2.2 U	1 U	1 U	1 U
Cyclohexane	UG/L	0.3	0%			1	268	0.25 U	0.25 U	0.25 U	5 U	1 U	1 U	1 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25 U	0.25 UJ	0.25 U	5 U	1 U	1 U	1 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11 U	0.11 U	0.11 U	2.2 U	1 U	1 U	1 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1 U	0.1 U	0.1 U	2 U	1 U	1 U	1 U
Methyl Acetate	UG/L	6	1%			2	253	0.19 U	0.19 U	0.19 U	3.8 U	1 U	1 UJ	1 U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	2 U	2 UJ	2 U	40 U	1 U	1 U	1 U
Methyl butyl ketone	UG/L	0	0%			0	268	1 U	1 U	1 U	20 U	5 U	5 U	5 U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33 UJ	0.33 U	0.33 U	6.6 U	1 U	1 U	1 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1 U	0.1 U	0.1 U	2 U	1 U	1 U	1 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1 U	1 U	1 U	20 U	5 U	5 U	5 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1 U	1 U	1 U	20 U	5 U	5 U	5 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2 U	0.2 U	0.2 U	4 U	1 U	1 U	1 U
Methylene chloride	UG/L	18	4%	5	7	12	268	1 U	1 U	1 U	20 U	1 U	1 U	1 U
Styrene	UG/L	0	0%	5	0	0	268	0.11 U	0.11 U	0.11 U	2.2 U	1 U	1 U	1 U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								MWT-25	MWT-25	MWT-25	MWT-25	MWT-25	MWT-25	MWT-25
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20108	ALBW20123	ALBW20138	ALBW20153	ALBW20168	ALBW20183	ALBW20198
Sample Date								11/15/2007	6/24/2008	12/15/2008	6/3/2009	12/17/2009	6/30/2010	12/19/2010
QC Type								SA	SA	SA	SA	SA	SA	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								4	5	6	7	8	9	10
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	1 U	1 U	0.26 U	0.26 U	0.26 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	1 U	1 U	0.21 U	0.21 U	0.21 U	0.18 U	0.18 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	1 U	1 UJ	0.31 U	0.31 U	0.31 U	0.5 UJ	0.5 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	1 U	1 U	0.23 U	0.23 U	0.23 U	0.13 U	0.13 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	1 U	1 U	0.75 U	0.75 U	0.38 U	0.25 U	0.25 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	1 U	1 U	0.29 U	0.29 U	0.29 U	0.11 U	0.11 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	1 U	1 U	0.41 U	0.41 U	0.41 U	0.25 U	0.25 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	1 U	1 UJ	1 UJ	1 UJ	0.39 U	0.44 U	0.44 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	1 U	1 U	0.17 U	0.17 U	0.17 U	0.25 U	0.25 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1 U	1 U	0.2 U	0.2 U	0.2 U	0.21 U	0.21 U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	1 U	1 U	0.21 U	0.21 U	0.21 U	0.1 U	0.1 U
1,2-Dichloropropene	UG/L	0.29	0%	1	0	1	268	1 U	1 U	0.14 U	0.14 U	0.32 U	0.13 U	0.13 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1 U	1 U	0.16 U	0.16 U	0.36 U	0.25 U	0.25 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1 U	1 U	0.18 U	0.18 U	0.39 U	0.28 U	0.28 U
Acetone	UG/L	2600	17%			45	262	5 U	5 U	1.3 U	1.3 U	1.3 U	5 U	5 UJ
Benzene	UG/L	0.48	2%	1	0	5	268	1 U	1 U	0.16 U	0.16 U	0.41 U	0.25 U	0.25 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	1 U	1 U	0.38 U	0.39 U	0.39 U	0.25 U	0.25 U
Bromoform	UG/L	0	0%	80	0	0	268	1 U	1 U	0.26 U	0.26 UJ	0.26 U	0.5 U	0.5 U
Carbon disulfide	UG/L	0	0%			0	268	1 U	1 U	0.19 U	0.19 UJ	0.19 U	0.6 U	0.6 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	1 U	1 U	0.27 U	0.27 U	0.27 U	0.5 U	0.5 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	1 U	1 U	0.18 U	0.32 U	0.32 U	0.25 U	0.25 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	1 U	1 U	0.32 U	0.32 U	0.32 U	0.1 U	0.1 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1 U	1 UJ	0.32 U	0.32 U	0.32 U	1 U	1 UJ
Chloroform	UG/L	71	8%	7	7	22	268	1 U	1 U	0.34 U	0.34 U	0.34 U	0.14 U	0.14 U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	[redacted]	[redacted]	0.63 J	10	3.3	13	0.97 J
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	1 U	1 U	0.38 U	0.38 U	0.38 U	0.11 U	0.11 U
Cyclohexane	UG/L	0.3	0%			1	268	1 U	1 U	0.22 U	0.53 U	0.53 U	0.25 U	0.25 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	1 U	1 U	0.28 U	0.29 U	0.29 U	0.25 U	0.25 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	1 U	1 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	1 U	1 U	0.19 U	0.19 U	0.19 U	0.1 U	0.1 U
Methyl Acetate	UG/L	6	1%			2	253	1 UJ	1 UJ	0.17 U	0.17 UJ	0.5 U	0.19 UJ	0.19 U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	1 U	1 UJ	0.28 U	0.28 U	0.28 UR	0.8 UJ	0.8 U
Methyl butyl ketone	UG/L	0	0%			0	268	5 UJ	5 UJ	1.2 U	1.2 U	1.2 U	1 UJ	1 U
Methyl chloride	UG/L	0	0%	5	0	0	268	1 U	1 UJ	0.34 U	0.35 U	0.35 U	0.33 U	0.33 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	1 U	1 U	0.22 U	0.5 U	0.5 U	0.1 U	0.1 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	5 U	5 UJ	1.3 U	1.3 U	1.3 U	1 U	1 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	5 U	5 UJ	0.91 U	0.91 U	0.91 U	1 U	1 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	1 U	1 U	0.16 U	0.16 U	0.16 U	0.2 U	0.2 U
Methylene chloride	UG/L	18	4%	5	7	12	268	1 U	1 U	0.44 UJ	0.44 U	0.44 U	1 U	1 U
Styrene	UG/L	0	0%	5	0	0	268	1 U	1 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Seneca Army Depot Activity

Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								MWT-25	MWT-25	MWT-25	MWT-25	MWT-25	MWT-25	MWT-25
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20213	ALBW20228	ALBW20243	ALBW20258	ALBW20271	ALBW20286	ALBW20302
Sample Date								7/20/2011	12/15/2011	6/21/2012	12/12/2012	7/11/2013	12/13/2013	6/21/2014
QC Type								SA	SA	SA	SA	SA	SA	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								11	12	13	14	15	16	17
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethene	UG/L	5.6	16%	0.6	34	42	268	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Acetone	UG/L	2600	17%			45	262	21 J	5 UJ	5 UJ	5 U	5 U	5 U	5 U
Benzene	UG/L	0.48	2%	1	0	5	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Bromoform	UG/L	0	0%	80	0	0	268	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	UG/L	0	0%			0	268	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1 UJ	1 UJ	1 UJ	1 U	2 U	2 U	2 U
Chloroform	UG/L	71	8%	7	7	22	268	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	168	235	268	[illegible]	0.3 J	[illegible]	0.39 J	[illegible]	3.3	2[illegible]
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Cyclohexane	UG/L	0.3	0%			1	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 UJ	0.25 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Methyl Acetate	UG/L	6	1%			2	253	0.19 UJ	0.19 U	0.19 UR	0.19 UJ	0.19 U	0.19 U	0.19 U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.8 UJ	0.8 UJ	0.8 UJ	0.8 UJ	2 U	2.1 J	2 U
Methyl butyl ketone	UG/L	0	0%			0	268	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33 U	0.33 U	0.33 U	0.33 U	0.33 UJ	0.33 U	0.33 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Methylene chloride	UG/L	18	4%	5	7	12	268	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U
Styrene	UG/L	0	0%	5	0	0	268	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								MWT-25	MWT-26	MWT-26	MWT-26	MWT-26	MWT-26	MWT-26
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20318	ALBW20066	ALBW20081	ALBW20095	ALBW20111	ALBW20126	ALBW20141
Sample Date								12/19/2014	1/3/2007	3/17/2007	6/5/2007	11/15/2007	6/24/2008	12/15/2008
QC Type								SA	SA	SA	SA	SA	SA	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								18	1	2	3	4	5	6
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5 U	1 U	1 U	1 U	1 U	1 U	0.26 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18 U	1 U	1 U	1 U	1 U	1 U	0.21 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5 U	1 U	1 U	1 UJ	1 U	1 U	0.31 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13 U	1 U	1 U	1 U	1 U	1 U	0.23 U
1,1-Dichloroethene	UG/L	62	13%	5	1	34	268	0.25 U	1 U	1 U	1 U	1 U	1 U	0.75 U
1,1-Dichloroethane	UG/L	2.6	12%	5	0	33	268	0.11 U	1 U	1 U	1 U	1 U	1 U	0.29 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	1 U	1 U	1 U	1 U	1 U	0.41 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25 U	1 U	1 U	1 U	1 U	1 U	0.17 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21 U	1 U	1 U	1 U	1 U	1 U	0.2 U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1 U	1 U	1 U	1 U	1 U	1 U	0.21 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13 U	1 U	1 U	1 U	1 U	1 U	0.14 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25 U	1 U	1 U	1 U	1 U	1 U	0.16 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28 U	1 U	1 U	1 U	1 U	1 U	0.16 U
Acetone	UG/L	2600	17%			45	262	5 U	5 U	17	5 U	5 U	5 U	1.3 U
Benzene	UG/L	0.48	2%	1	0	5	268	0.25 U	1 U	1 U	1 U	1 U	1 U	0.16 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25 U	1 U	1 U	1 U	1 U	1 U	0.38 U
Bromoform	UG/L	0	0%	80	0	0	268	0.5 U	1 U	1 U	1 U	1 U	1 U	0.26 U
Carbon disulfide	UG/L	0	0%			0	268	0.6 U	1 U	1 U	1 U	1 U	1 U	0.19 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5 U	1 U	1 U	1 U	1 U	1 U	0.27 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	1 U	1 U	1 U	1 U	1 U	0.18 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1 U	1 U	1 U	1 U	1 U	1 U	0.32 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	2 U	1 U	1 U	1 U	1 U	1 UJ	0.32 U
Chloroform	UG/L	71	8%	7	7	22	268	0.14 U	1 U	1 U	1 U	1 U	1 U	0.34 U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	1.7	[illegible]	[illegible]	28	2.8	3.3	1
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11 U	1 U	1 U	1 U	1 U	1 U	0.36 U
Cyclohexane	UG/L	0.3	0%			1	268	0.25 U	1 U	1 U	1 U	1 U	1 U	0.22 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25 U	1 U	1 U	1 U	1 U	1 U	0.28 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11 U	1 U	1 U	1 U	1 U	1 U	0.18 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1 U	1 U	1 U	1 U	1 U	1 U	0.19 U
Methyl Acetate	UG/L	6	1%			2	253	0.19 U	1 U	1 UJ	1 U	1 UJ	1 UJ	0.17 U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	2 U	1 U	1 U	1 U	1 U	1 UJ	0.28 U
Methyl butyl ketone	UG/L	0	0%			0	268	1 U	5 U	5 U	5 U	5 UJ	5 UJ	1.2 U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33 U	1 U	1 U	1 U	1 U	1 U	0.34 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1 U	1 U	1 U	1 U	1 U	1 U	0.22 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1 U	5 U	15	5 U	5 U	5 U	1.3 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1 U	5 U	5 U	5 U	5 U	5 U	0.91 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2 U	1 U	1 U	1 U	1 U	1 U	0.16 U
Methylene chloride	UG/L	18	4%	5	7	12	268	1 U	1 U	1 U	1 U	1 U	1 U	0.44 UJ
Styrene	UG/L	0	0%	5	0	0	268	0.11 U	1 U	1 U	1 U	1 U	1 U	0.18 U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								MWT-26	MWT-26	MWT-26	MWT-26	MWT-26	MWT-26	MWT-26
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20156	ALBW20171	ALBW20186	ALBW20202	ALBW20216	ALBW20232	ALBW20246
Sample Date								6/3/2009	12/17/2009	6/29/2010	12/19/2010	7/20/2011	12/15/2011	6/20/2012
QC Type								SA	SA	SA	SA	SA	SA	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								7	8	9	10	11	12	13
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.26 U	0.26 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.21 U	0.21 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.31 U	0.31 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.23 U	0.23 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.75 U	0.38 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.29 U	0.29 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.41 U	0.41 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	1 UJ	0.39 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.17 U	0.17 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.2 U	0.2 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	UG/L	5.8	16%	0.6	34	42	268	0.21 U	0.21 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 UJ
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.14 U	0.32 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.16 U	0.36 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.16 U	0.39 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Acetone	UG/L	2600	17%			45	262	1.3 U	1.3 U	5 U	5 UJ	5 UR	5 UJ	5 UJ
Benzene	UG/L	0.48	2%	1	0	5	268	0.16 U	0.41 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.39 U	0.39 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 UJ
Bromoform	UG/L	0	0%	80	0	0	268	0.26 UJ	0.26 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	UG/L	0	0%			0	268	0.19 UJ	0.19 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.27 U	0.27 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.32 U	0.32 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.32 U	0.32 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chloroethene	UG/L	1.1	3%	5	0	7	268	0.32 U	0.32 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Chloroform	UG/L	71	8%	7	7	22	268	0.34 U	0.34 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	6	36	6.5	12	9.5	1.1	4.4
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.36 U	0.36 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Cyclohexane	UG/L	0.3	0%			1	268	0.53 U	0.53 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.29 U	0.29 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.19 U	0.19 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Methyl Acetate	UG/L	6	1%			2	253	0.17 UJ	0.5 U	0.19 U	0.19 U	0.19 UJ	0.19 U	0.19 UR
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.28 U	0.28 UJ	0.8 UJ	0.8 U	0.8 UJ	0.8 UJ	0.8 UJ
Methyl butyl ketone	UG/L	0	0%			0	268	1.2 U	1.2 U	1 U	1 U	1 UJ	1 UJ	1 UJ
Methyl chloride	UG/L	0	0%	5	0	0	268	0.35 U	0.35 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1.3 U	1.3 U	1 U	1 U	1 U	1 U	1 UJ
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	0.91 U	0.91 U	1 U	1 U	1 U	1 U	1 UJ
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.16 U	0.16 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Methylene chloride	UG/L	18	4%	5	7	12	268	0.44 U	0.44 U	1 U	1 U	1 U	1 U	1 U
Styrene	UG/L	0	0%	5	0	0	268	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								MWT-26		MWT-26		MWT-26		MWT-26		MWT-26		MWT-27		MWT-27		MWT-27	
Matrix								GW		GW		GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20262		ALBW20274		ALBW20289		ALBW20306		ALBW20321		ALBW20067		ALBW20082			
Sample Date								12/14/2012		7/11/2013		12/14/2013		6/19/2014		12/17/2014		1/3/2007		3/16/2007			
QC Type								SA		SA		SA		SA		SA		SA		SA			
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM			
Sample Round								14		15		16		17		18		1		2			
Filtered								Total		Total		Total		Total		Total		Total		Total			
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual		
Volatile Organic Compounds																							
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	20	UJ	20	U		
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	20	UJ	20	U		
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	20	UJ	20	U		
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	20	UJ	20	U		
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	20	UJ	20	U		
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	20	UJ	20	U		
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	20	UJ	20	U		
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	20	UJ	20	U		
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	20	UJ	20	U		
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	20	UJ	20	U		
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	20	UJ	20	U		
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	20	UJ	20	U		
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	20	UJ	20	U		
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	20	UJ	20	U		
Acetone	UG/L	2600	17%			45	262	5	U	5	U	5	UJ	5	U	5	U	2,000	J	1,300			
Benzene	UG/L	0.48	2%	1	0	5	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	20	UJ	20	U		
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	20	UJ	20	U		
Bromoform	UG/L	0	0%	80	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	20	UJ	20	U		
Carbon disulfide	UG/L	0	0%			0	268	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	20	UJ	20	U		
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U	20	UJ	20	U		
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	20	UJ	20	U		
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	20	UJ	20	U		
Chloroethane	UG/L	1.1	3%	5	0	7	268	1	U	2	U	2	U	2	U	2	U	20	UJ	20	U		
Chloroform	UG/L	71	8%	7	7	22	268	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	20	UJ	20	U		
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	3.1		68		2.8		4.5		9.7		49	J	20	U		
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	20	UJ	20	U		
Cyclohexane	UG/L	0.3	0%			1	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	20	UJ	20	U		
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	20	UJ	20	U		
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	20	UJ	20	U		
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	20	UJ	20	U		
Methyl Acetate	UG/L	6	1%			2	253	0.19	UJ	0.19	U	0.19	U	0.19	U	0.19	U	20	UJ	20	UJ		
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.8	UJ	2	U	2	U	2	UJ	2	U	20	UJ	20	U		
Methyl butyl ketone	UG/L	0	0%			0	268	1	U	1	U	1	U	1	U	1	U	100	UJ	100	U		
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33	U	0.33	UJ	0.33	U	0.33	U	0.33	U	20	UJ	20	U		
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	20	UJ	20	U		
Methyl ethyl ketone	UG/L	4900	8%			22	268	1	U	1	U	1	U	1	U	1	U	4,100	J	2,200			
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1	U	1	U	1	U	1	U	1	U	100	UJ	100	U		
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	20	UJ	20	U		
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	1	U	1	U	1	U	1	U	18	J	20	U		
Styrene	UG/L	0	0%	5	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	20	UJ	20	U		

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area							ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID							MWT-27	MWT-27	MWT-27	MWT-27	MWT-27	MWT-27	MWT-27
Matrix							GW	GW	GW	GW	GW	GW	GW
Sample ID							ALBW20096	ALBW20097	ALBW20112	ALBW20127	ALBW20142	ALBW20143	ALBW20157
Sample Date							6/5/2007	6/5/2007	11/15/2007	6/24/2008	12/15/2008	12/15/2008	6/3/2009
QC Type							SA	DU	SA	SA	SA	DU	SA
Study ID							LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round							3	3	4	5	6	6	7
Filtered							Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	20 U	20 U	10 U	4 U	2.6 UJ	2.6 UJ	2.6 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	20 U	20 U	10 U	4 U	2.1 UJ	2.1 UJ	2.1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	20 UJ	20 UJ	10 U	4 U	3.1 UJ	3.1 UJ	3.1 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	20 U	20 U	10 U	4 U	2.3 UJ	2.3 UJ	2.3 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	20 U	20 U	10 U	4 U	7.5 U	7.5 U	7.5 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	20 U	20 U	10 U	4 U	2.9 U	2.9 U	2.9 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	20 U	20 U	10 U	4 U	4.1 UJ	4.1 UJ	4.1 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	20 U	20 U	10 U	4 U	10 UJ	10 UJ	10 UJ
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	20 U	20 U	10 U	4 U	1.7 UJ	1.7 UJ	1.7 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	20 U	20 U	10 U	4 U	2 U	2 U	2 U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	20 U	20 U	10 U	4 U	2.1 U	2.1 U	2.1 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	20 U	20 U	10 U	4 U	1.4 U	1.4 U	1.4 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	20 U	20 U	10 U	4 U	1.6 U	1.6 U	1.6 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	20 U	20 U	10 U	4 U	1.6 U	1.6 U	1.6 U
Acetone	UG/L	2600	17%			45	262	1,300	1,300	30 J	20 U	26 J	13 UJ	13 U
Benzene	UG/L	0.48	2%	1	0	5	268	20 U	20 U	10 U	4 U	1.6 U	1.6 U	1.6 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	20 U	20 U	10 U	4 U	3.8 U	3.8 U	3.9 U
Bromoform	UG/L	0	0%	80	0	0	268	20 U	20 U	10 U	4 U	2.6 UJ	2.6 UJ	2.6 UJ
Carbon disulfide	UG/L	0	0%			0	268	20 U	20 U	10 U	4 U	1.9 U	1.9 U	1.9 UJ
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	20 U	20 U	10 U	4 U	2.7 UJ	2.7 UJ	2.7 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	20 U	20 U	10 U	4 U	1.8 U	1.8 U	3.2 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	20 U	20 U	10 U	4 U	3.2 U	3.2 U	3.2 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	20 U	20 U	10 U	4 UJ	3.2 U	3.2 U	3.2 U
Chloroform	UG/L	71	8%	7	7	22	268	20 U	20 U	10 U	4 U	3.4 U	3.4 U	3.4 U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	20 U	20 U	10 U	4 U	1.6 U	1.6 U	1.6 U
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	20 U	20 U	10 U	4 U	3.6 U	3.6 U	3.6 U
Cyclohexane	UG/L	0.3	0%			1	268	20 U	20 U	10 U	4 U	2.2 UJ	2.2 UJ	5.3 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	20 U	20 U	10 U	4 U	2.8 U	2.8 U	2.9 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	20 U	20 U	10 U	4 U	1.8 U	1.8 U	1.8 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	20 U	20 U	10 U	4 U	1.9 U	1.9 U	1.9 U
Methyl Acetate	UG/L	6	1%			2	253	20 U	20 U	10 UJ	4 UJ	1.7 UJ	1.7 UJ	1.7 UJ
Methyl bromide	UG/L	2.1	0%	5	0	1	262	20 U	20 U	10 U	4 UJ	2.8 U	2.8 U	2.8 U
Methyl butyl ketone	UG/L	0	0%			0	268	100 U	100 U	50 UJ	20 UJ	12 U	12 U	12 U
Methyl chloride	UG/L	0	0%	5	0	0	268	20 U	20 U	10 U	4 U	3.4 U	3.4 U	3.5 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	20 U	20 U	10 U	4 U	2.2 UJ	2.2 UJ	5 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1,800	1,700	50 U	20 U	13 UJ	13 UJ	13 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	100 U	100 U	50 U	20 U	9.1 UJ	9.1 UJ	9.1 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	20 U	20 U	10 U	4 U	1.6 UJ	1.6 UJ	1.6 U
Methylene chloride	UG/L	18	4%	5	7	12	268	11 J	13 J	10 U	4 U	4.4 UJ	4.4 UJ	4.4 U
Styrene	UG/L	0	0%	5	0	0	268	20 U	20 U	10 U	4 U	1.8 U	1.8 U	1.8 U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								MWT-27	MWT-27	MWT-27	MWT-27	MWT-27	MWT-27	MWT-27
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20172	ALBW20173	ALBW20187	ALBW20203	ALBW20217	ALBW20218	ALBW20233
Sample Date								12/16/2009	12/16/2009	6/29/2010	12/18/2010	7/20/2011	7/20/2011	12/14/2011
QC Type								SA	DU	SA	SA	SA	DU	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								8	8	9	10	11	11	12
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	1.3 U	1.3 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	1.1 U	1.1 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	1.5 U	1.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	1.2 U	1.2 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	1.9 U	1.9 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	1.5 U	1.5 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	2 U	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	2 U	2 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.83 U	0.83 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1 U	1 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	1.1 U	1.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	1.6 U	1.6 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1.8 U	1.8 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	2 U	2 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Acetone	UG/L	2600	17%			45	262	6.7 U	6.7 U	11 J	5 UJ	5 UR	5.6 J	5 U
Benzene	UG/L	0.48	2%	1	0	5	268	2 U	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.26 J
Bromodichloromethane	UG/L	0	0%	80	0	0	268	1.9 U	1.9 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Bromoform	UG/L	0	0%	80	0	0	268	1.3 U	1.3 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	UG/L	0	0%			0	268	0.97 U	0.97 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	1.3 U	1.3 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	1.6 U	1.6 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	1.6 U	1.6 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1.6 U	1.6 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U
Chloroform	UG/L	71	8%	7	7	22	268	1.7 U	1.7 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	1.9 U	1.9 U	0.18 J	1.1	0.15 J	0.27 J	1.4
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	1.8 U	1.8 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Cyclohexane	UG/L	0.3	0%			1	268	2.7 U	2.7 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	1.4 U	1.4 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.92 U	0.92 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.96 U	0.96 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Methyl Acetate	UG/L	6	1%			2	253	2.5 U	2.5 U	0.19 UJ	0.19 U	0.19 UJ	0.19 UJ	0.19 U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	1.4 U	1.4 U	0.8 UJ	0.8 U	0.8 UJ	0.8 UJ	0.8 UJ
Methyl butyl ketone	UG/L	0	0%			0	268	6.2 U	6.2 U	1 UJ	1 U	1 UJ	1 UJ	1 U
Methyl chloride	UG/L	0	0%	5	0	0	268	1.7 U	1.7 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 UJ
Methyl cyclohexane	UG/L	0.17	0%			1	268	2.5 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	6.6 U	6.6 U	1 U	1 U	1 U	1 U	1 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	4.5 U	4.5 U	1 U	1 U	1 U	1 U	1 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.8 U	0.8 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Methylene chloride	UG/L	18	4%	5	7	12	268	2.2 U	2.2 U	1 U	1 U	1 U	1 U	1 U
Styrene	UG/L	0	0%	5	0	0	268	0.92 U	0.92 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Seneca Army Depot Activity

Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								MWT-27	MWT-27	MWT-27	MWT-27	MWT-27	MWT-27	MWT-27
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20247	ALBW20265	ALBW20275	ALBW20276	ALBW20290	ALBW20307	ALBW20322
Sample Date								6/20/2012	12/14/2012	7/11/2013	7/11/2013	12/12/2013	6/19/2014	12/17/2014
QC Type								SA	SA	DU	SA	SA	SA	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								13	14	15	15	16	17	18
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18 U	0.18 U	0.18 UJ	0.18 U	0.18 U	0.18 U	0.18 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13 U	0.13 U	0.13 UJ	0.13 U	0.13 U	0.13 U	0.13 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11 U	0.11 U	0.11 UJ	0.11 U	0.11 U	0.11 U	0.11 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44 U	0.44 U	0.44 UJ	0.44 U	0.44 U	0.44 U	0.44 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21 U	0.21 U	0.21 UJ	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1 UJ	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13 U	0.13 U	0.13 UJ	0.13 U	0.13 U	0.13 U	0.13 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28 U	0.28 U	0.28 UJ	0.28 U	0.28 U	0.28 U	0.28 U
Acetone	UG/L	2600	17%			45	262	5 UJ	10 J	5 U	25 U	5 U	8.5 J	9.8 J
Benzene	UG/L	0.48	2%	1	0	5	268	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.27 J
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25 UJ	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U
Bromoform	UG/L	0	0%	80	0	0	268	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	UG/L	0	0%			0	268	0.6 U	0.6 U	0.6 UJ	0.6 U	0.6 U	0.6 U	0.6 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1 UJ	1 U	2 UJ	2 U	2 U	2 U	2 U
Chloroform	UG/L	71	8%	7	7	22	268	0.14 U	0.14 U	0.14 UJ	0.14 U	0.14 U	0.14 U	0.14 U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	0.42 J	0.15 U	0.15 UJ	0.15 U	0.48 J	0.83 J	0.76 J
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11 U	0.11 U	0.11 UJ	0.11 U	0.11 U	0.11 U	0.11 U
Cyclohexane	UG/L	0.3	0%			1	268	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25 U	0.25 U	0.25 UJ	0.25 U	0.25 UJ	0.25 U	0.25 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11 U	0.11 U	0.11 UJ	0.11 U	0.11 U	0.11 U	0.11 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Methyl Acetate	UG/L	6	1%			2	253	0.19 UR	0.19 UJ	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.8 UJ	0.8 UJ	2 UJ	2 U	2 UJ	2 UJ	2 U*
Methyl butyl ketone	UG/L	0	0%			0	268	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33 U	0.33 U	0.33 UJ	0.33 UJ	0.33 U	0.33 U	0.33 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1 U	0.1 U	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 U	0.2 U	0.2 U
Methylene chloride	UG/L	18	4%	5	7	12	268	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U
Styrene	UG/L	0	0%	5	0	0	268	0.11 U	0.11 U	0.11 UJ	0.11 U	0.11 U	0.11 U	0.11 U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Seneca Army Depot Activity

Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								MWT-27	MWT-28	MWT-28	MWT-28	MWT-28	MWT-28	MWT-28
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20323	ALBW20068	ALBW20069	ALBW20083	ALBW20098	ALBW20113	ALBW20128
Sample Date								12/17/2014	1/3/2007	1/3/2007	3/16/2007	6/5/2007	11/15/2007	6/25/2008
QC Type								DU	SA	DU	SA	SA	SA	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								18	1	1	2	3	4	5
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5 U	20 UJ	20 UJ	20 U	20 UJ	5 U	4 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Acetone	UG/L	2600	17%			45	262	16	2,500 J	2,500 J	170	520	25 U	20 U
Benzene	UG/L	0.48	2%	1	0	5	268	0.26 J	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Bromoform	UG/L	0	0%	80	0	0	268	0.5 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Carbon disulfide	UG/L	0	0%			0	268	0.6 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	2 U	20 UJ	20 UJ	20 U	20 U	5 U	4 UJ
Chloroform	UG/L	71	8%	7	7	22	268	0.14 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	0.63 J	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Cyclohexane	UG/L	0.3	0%			1	268	0.25 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Ethyl benzene	UG/L	9.2	7%	5	1	18	268	0.11 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Methyl Acetate	UG/L	6	1%			2	253	0.19 U	20 UJ	20 UJ	20 UJ	20 U	5 UJ	4 UJ
Methyl bromide	UG/L	2.1	0%	5	0	1	262	2 U*	20 UJ	20 UJ	20 U	20 U	5 U	4 UJ
Methyl butyl ketone	UG/L	0	0%			0	268	1 U	100 UJ	100 UJ	100 U	100 U	25 UJ	20 UJ
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1 U	4,900 J	4,900 J	180	510	25 U	20 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1 U	100 UJ	100 UJ	100 U	100 U	25 U	20 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U
Methylene chloride	UG/L	18	4%	5	7	12	268	1 U	13 J	56 J	20 U	9.3 J	5 U	4 U
Styrene	UG/L	0	0%	5	0	0	268	0.11 U	20 UJ	20 UJ	20 U	20 U	5 U	4 U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								MWT-28	MWT-28	MWT-28	MWT-28	MWT-28	MWT-28	MWT-28
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20144	ALBW20158	ALBW20159	ALBW20174	ALBW20188	ALBW20189	ALBW20204
Sample Date								12/15/2008	6/3/2009	6/3/2009	12/18/2009	6/29/2010	6/29/2010	12/18/2010
QC Type								SA	SA	DU	SA	SA	DU	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								6	7	7	8	9	9	10
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	2.6 U	0.26 U	0.26 U	1.3 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	2.1 U	0.21 U	0.21 U	1.1 U	0.18 U	0.18 U	0.18 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	3.1 U	0.31 U	0.31 U	1.5 UJ	0.5 UJ	0.5 UJ	0.5 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	2.3 U	0.23 U	0.23 U	1.2 U	0.13 U	0.13 U	0.13 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	7.5 U	0.75 U	0.75 U	1.9 U	0.25 U	0.25 U	0.25 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	2.9 U	0.29 U	0.29 U	1.5 U	0.11 U	0.11 U	0.11 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	4.1 U	0.41 U	0.41 U	2 U	0.25 U	0.25 U	0.25 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	10 UJ	1 UJ	1 UJ	2 U	0.44 U	0.44 U	0.44 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	1.7 U	0.17 U	0.17 U	0.83 U	0.25 U	0.25 U	0.25 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	2 U	0.2 U	0.2 U	1 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	2.1 U	0.21 U	0.21 U	1.1 U	0.1 U	0.1 U	0.1 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	1.4 U	0.14 U	0.14 U	1.6 U	0.13 U	0.13 U	0.13 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1.6 U	0.16 U	0.16 U	1.8 U	0.25 U	0.25 U	0.25 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1.6 U	0.16 U	0.16 U	2 U	0.28 U	0.28 U	0.28 U
Acetone	UG/L	2600	17%			45	262	13 U	1.9 J	1.9 J	6.7 U	6.2 J	5.9 J	5 UJ
Benzene	UG/L	0.48	2%	1	0	5	268	1.6 U	0.16 U	0.16 U	2 U	0.25 U	0.25 U	0.25 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	3.8 U	0.39 U	0.39 U	1.9 U	0.25 U	0.25 U	0.25 U
Bromoform	UG/L	0	0%	80	0	0	268	2.6 U	0.26 UJ	0.26 UJ	1.3 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	UG/L	0	0%			0	268	1.9 U	0.19 UJ	0.19 UJ	0.97 U	0.6 U	0.6 U	0.6 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	2.7 U	0.27 U	0.27 U	1.3 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	1.8 U	0.32 U	0.32 U	1.6 U	0.25 U	0.25 U	0.25 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	3.2 U	0.32 U	0.32 U	1.6 U	0.1 U	0.1 U	0.1 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	3.2 U	0.32 U	0.32 U	1.6 UJ	1 U	1 U	1 U
Chloroform	UG/L	71	8%	7	7	22	268	3.4 U	0.34 U	0.34 U	1.7 U	0.14 U	0.14 U	0.14 U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	1.6 U	0.16 U	0.16 U	1.9 U	0.15 U	0.15 U	0.51 J
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	3.6 U	0.36 U	0.36 U	1.8 U	0.11 U	0.11 U	0.11 U
Cyclohexane	UG/L	0.3	0%			1	268	2.2 U	0.53 U	0.53 U	2.7 U	0.25 U	0.25 U	0.25 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	2.8 U	0.29 U	0.29 U	1.4 U	0.25 U	0.25 U	0.25 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	1.8 U	0.18 U	0.18 U	0.92 U	0.17 J	0.17 J	0.11 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	1.9 U	0.19 U	0.19 U	0.96 U	0.1 U	0.1 U	0.1 U
Methyl Acetate	UG/L	6	1%			2	253	1.7 U	0.17 UJ	0.17 UJ	2.5 U	0.19 UJ	0.19 UJ	0.19 U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	2.8 U	0.28 U	0.28 U	1.4 UJ	0.8 UJ	0.8 UJ	0.8 UJ
Methyl butyl ketone	UG/L	0	0%			0	268	12 U	1.2 U	1.2 U	6.2 U	1 UJ	1 UJ	1 U
Methyl chloride	UG/L	0	0%	5	0	0	268	3.4 U	0.35 U	0.35 U	1.7 U	0.33 U	0.33 U	0.33 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	2.2 U	0.5 U	0.5 U	2.5 U	0.1 U	0.1 U	0.1 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	13 U	1.3 U	1.3 U	6.6 U	1 U	1 U	1 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	9.1 U	0.91 U	0.91 U	4.5 U	1 U	1 U	1 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	1.6 U	0.16 U	0.16 U	0.8 U	0.2 U	0.2 U	0.2 U
Methylene chloride	UG/L	18	4%	5	7	12	268	4.4 UJ	0.44 U	0.44 U	2.2 U	1 U	1 U	1 U
Styrene	UG/L	0	0%	5	0	0	268	1.8 U	0.18 U	0.18 U	0.92 U	0.11 U	0.11 U	0.11 U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area							ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID							MWT-28	MWT-28	MWT-28	MWT-28	MWT-28	MWT-28	MWT-28
Matrix							GW	GW	GW	GW	GW	GW	GW
Sample ID							ALBW20219	ALBW20234	ALBW20248	ALBW20249	ALBW20264	ALBW20277	ALBW20291
Sample Date							7/19/2011	12/14/2011	6/20/2012	6/20/2012	12/14/2012	7/11/2013	12/14/2013
QC Type							SA	SA	SA	DU	SA	SA	SA
Study ID							LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round							11	12	13	13	14	15	16
Filtered							Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1 U	0.1 U	0.1 UJ	0.1 UJ	0.1 U	0.1 U	0.1 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Acetone	UG/L	2600	17%			45	262	5 UR	5 U	5 UJ	5 UJ	5 U	5 U	5 UJ
Benzene	UG/L	0.48	2%	1	0	5	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25 U	0.25 U	0.25 UJ	0.25 UJ	0.25 U	0.25 U	0.25 U
Bromoform	UG/L	0	0%	80	0	0	268	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	UG/L	0	0%			0	268	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1 UJ	1 U	1 UJ	1 UJ	1 U	2 U	2 U
Chloroform	UG/L	71	8%	7	7	22	268	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Cis-1,2-Dichloroethene	UG/L	820	68%	5	166	235	268	0.15 U	0.28 J	0.15 U	0.15 U	0.15 U	0.15 U	0.39 J
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Cyclohexane	UG/L	0.3	0%			1	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11 U	0.11 U	0.11 J	0.13 J	0.12 J	0.11 U	0.11 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Methyl Acetate	UG/L	6	1%			2	253	0.19 UJ	0.19 U	0.19 UR	0.19 UR	0.19 UJ	0.19 U	0.19 U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.8 UJ	0.8 UJ	0.8 UJ	0.8 UJ	0.8 UJ	2 U	2 U
Methyl butyl ketone	UG/L	0	0%			0	268	1 UJ	1 U	1 UJ	1 UJ	1 U	1 U	1 U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33 U	0.33 UJ	0.33 U	0.33 U	0.33 U	0.33 UJ	0.33 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Methylene chloride	UG/L	18	4%	5	7	12	268	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	UG/L	0	0%	5	0	0	268	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area							ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID							MWT-28	MWT-28	MWT-28	MWT-29	MWT-29	MWT-29	MWT-29
Matrix							GW	GW	GW	GW	GW	GW	GW
Sample ID							ALBW20292	ALBW20308	ALBW20324	ALBW20070	ALBW20084	ALBW20085	ALBW20099
Sample Date							12/14/2013	6/19/2014	12/17/2014	1/3/2007	3/16/2007	3/16/2007	6/5/2007
QC Type							DU	SA	SA	SA	SA	DU	SA
Study ID							LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round							16	17	18	1	2	2	3
Filtered							Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5 U	0.5 U	0.5 U	2 U	5 U	4 U	2 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18 U	0.18 U	0.18 U	2 U	5 U	4 U	2 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5 U	0.5 U	0.5 U	2 U	5 U	4 U	2 UJ
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13 U	0.13 U	0.13 U	2 U	5 U	4 U	2 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25 U	0.25 U	0.25 U	2 U	5 U	4 U	2 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11 U	0.11 U	0.11 U	2 U	5 U	4 U	2 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	0.25 U	0.25 U	2 U	5 U	4 U	2 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44 U	0.44 U	0.44 U	2 U	5 U	4 U	2 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25 U	0.25 U	0.25 U	2 U	5 U	4 U	2 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21 U	0.21 U	0.21 U	2 U	5 U	4 U	2 U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1 U	0.1 U	0.1 U	2 U	5 U	4 U	2 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13 U	0.13 U	0.13 U	2 U	5 U	4 U	2 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25 U	0.25 U	0.25 U	2 U	5 U	4 U	2 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28 U	0.28 U	0.28 U	2 U	5 U	4 U	2 U
Acetone	UG/L	2600	17%			45	262	5 UJ	5 U	5 U	10 U	15 J	14 J	5.7 J
Benzene	UG/L	0.48	2%	1	0	5	268	0.25 U	0.25 U	0.25 U	2 U	5 U	4 U	2 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25 U	0.25 U	0.25 U	2 U	5 U	4 U	2 U
Bromoform	UG/L	0	0%	80	0	0	268	0.5 U	0.5 U	0.5 U	2 U	5 U	4 U	2 U
Carbon disulfide	UG/L	0	0%			0	268	0.6 U	0.6 U	0.6 U	2 U	5 U	4 U	2 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5 U	0.5 UJ	0.5 U	2 U	5 U	4 U	2 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	0.25 U	0.25 U	2 U	5 U	4 U	2 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1 U	0.1 U	0.1 U	2 U	5 U	4 U	2 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	2 U	2 U	2 U	2 U	5 U	4 U	2 U
Chloroform	UG/L	71	8%	7	7	22	268	0.14 U	0.14 U	0.14 U	2 U	5 U	4 U	2 U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	0.35 J	0.15 U	0.19 J	220	220	220	280
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11 U	0.11 U	0.11 U	2 U	5 U	4 U	2 U
Cyclohexane	UG/L	0.3	0%			1	268	0.25 U	0.25 U	0.25 U	2 U	5 U	4 U	2 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25 U	0.25 U	0.25 U	2 U	5 U	4 U	2 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11 U	0.11 U	0.11 U	2 U	5 U	4 U	2 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1 U	0.1 U	0.1 U	2 U	5 U	4 U	2 U
Methyl Acetate	UG/L	6	1%			2	253	0.19 UJ	0.19 U	0.19 U	2 U	5 UJ	4 UJ	2 U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	2 UJ	2 UJ	2 U*	2 U	5 U	4 U	2 U
Methyl butyl ketone	UG/L	0	0%			0	268	1 U	1 U	1 U	10 U	25 U	20 U	10 U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33 U	0.33 U	0.33 U	2 U	5 U	4 U	2 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1 U	0.1 U	0.1 U	2 U	5 U	4 U	2 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1 U	1 U	1 U	10 U	25 U	20 U	10 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1 U	1 U	1 U	10 U	25 U	20 U	10 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2 U	0.2 U	0.2 U	2 U	5 U	4 U	2 U
Methylene chloride	UG/L	18	4%	5	7	12	268	1 U	1 U	1 U	2 U	2.5 J	4 U	2 U
Styrene	UG/L	0	0%	5	0	0	268	0.11 U	0.11 U	0.11 U	2 U	5 U	4 U	2 U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								MWT-29	MWT-29	MWT-29	MWT-29	MWT-29	MWT-29	MWT-29
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20114	ALBW20129	ALBW20130	ALBW20145	ALBW20160	ALBW20175	ALBW20190
Sample Date								11/14/2007	6/25/2008	6/25/2008	12/15/2008	6/3/2009	12/16/2009	6/30/2010
QC Type								SA	SA	DU	SA	SA	SA	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								4	5	5	6	7	8	9
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	1 U	1 U	1 U	0.26 UJ	0.28 U	0.26 U	0.5 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	1 U	1 U	1 U	0.21 UJ	0.21 U	0.21 U	0.18 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	1 U	1 U	1 U	0.31 UJ	0.31 U	0.31 U	0.5 UJ
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	1 U	1 U	1 U	0.23 UJ	0.23 U	0.23 U	0.13 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	1 U	1 U	1 U	0.75 U	0.75 U	0.38 U	0.25 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	1 U	1 U	1 U	0.29 U	0.29 U	0.29 U	0.26 J
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	1 U	1 U	1 U	0.41 UJ	0.41 U	0.41 U	0.25 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	1 U	1 U	1 U	1 UJ	1 UJ	0.39 U	0.44 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	1 U	1 U	1 U	0.17 UJ	0.17 U	0.17 U	0.25 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1 U	1 U	1 U	0.2 U	0.2 U	0.2 U	0.21 U
1,2-Dichloroethane	UG/L	5.8	16%	0.6	34	42	268	1 U	1 U	1 U	0.21 U	0.21 U	0.21 U	0.1 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	1 U	1 U	1 U	0.14 U	0.14 U	0.32 U	0.13 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1 U	1 U	1 U	0.16 U	0.16 U	0.38 U	0.25 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1 U	1 U	1 U	0.16 U	0.16 U	0.39 U	0.28 U
Acetone	UG/L	2600	17%			45	262	5 U	5 U	5 U	1.3 UJ	1.3 U	1.3 U	5 U
Benzene	UG/L	0.48	2%	1	0	5	268	1 U	1 U	1 U	0.16 U	0.16 U	0.41 U	0.25 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	1 U	1 U	1 U	0.38 U	0.39 U	0.39 U	0.25 U
Bromoform	UG/L	0	0%	80	0	0	268	1 U	1 U	1 U	0.26 UJ	0.26 UJ	0.26 U	0.5 U
Carbon disulfide	UG/L	0	0%			0	268	1 U	1 U	1 U	0.19 U	0.19 UJ	0.19 U	0.8 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	1 U	1 U	1 U	0.27 UJ	0.27 U	0.27 U	0.5 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	1 U	1 U	1 U	0.18 U	0.32 U	0.32 U	0.25 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	1 U	1 U	1 U	0.32 U	0.32 U	0.32 U	0.1 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1 U	1 UJ	1 UJ	0.32 U	0.32 U	0.32 U	1 U
Chloroform	UG/L	71	8%	7	7	22	268	1 U	1 U	1 U	0.34 U	0.34 U	0.34 U	0.14 U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	96	83	69	[illegible]	61	37	78
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	1 U	1 U	1 U	0.36 U	0.36 U	0.36 U	0.11 U
Cyclohexane	UG/L	0.3	0%			1	268	1 U	1 U	1 U	0.22 UJ	0.53 U	0.53 U	0.25 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	1 U	1 U	1 U	0.26 U	0.29 U	0.29 U	0.25 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	1 U	1 U	1 U	0.18 U	0.18 U	0.18 U	0.11 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	1 U	1 U	1 U	0.19 U	0.19 U	0.19 U	0.1 U
Methyl Acetate	UG/L	6	1%			2	253	1 UJ	1 UJ	1 UJ	0.17 UJ	0.17 UJ	0.5 U	0.19 UJ
Methyl bromide	UG/L	2.1	0%	5	0	1	262	1 U	1 UJ	1 UJ	0.28 U	0.28 U	0.28 U	0.8 UJ
Methyl butyl ketone	UG/L	0	0%			0	268	5 UJ	5 UJ	5 UJ	1.2 U	1.2 U	1.2 U	1 UJ
Methyl chloride	UG/L	0	0%	5	0	0	268	1 U	1 U	1 U	0.34 U	0.35 U	0.35 U	0.33 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	1 U	1 U	1 U	0.22 UJ	0.5 U	0.5 U	0.1 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	5 U	5 U	5 U	1.3 UJ	1.3 U	1.3 U	1 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	5 U	5 U	5 U	0.91 UJ	0.91 U	0.91 U	1 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	1 U	1 U	1 U	0.16 UJ	0.16 U	0.16 U	0.2 U
Methylene chloride	UG/L	18	4%	5	7	12	268	1 U	1 U	1 U	0.44 UJ	0.44 U	0.44 U	1 U
Styrene	UG/L	0	0%	5	0	0	268	1 U	1 U	1 U	0.18 U	0.18 U	0.18 U	0.11 U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								MWT-29		MWT-29		MWT-29		MWT-29		MWT-29		MWT-29		MWT-29		MWT-29	
Matrix								GW		GW		GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20205		ALBW20220		ALBW20235		ALBW20250		ALBW20263		ALBW20278		ALBW20293			
Sample Date								12/19/2010		7/20/2011		12/14/2011		6/20/2012		12/13/2012		7/10/2013		12/12/2013			
QC Type								SA		SA		SA		SA		SA		SA		SA			
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM			
Sample Round								10		11		12		13		14		15		16			
Filtered								Total		Total		Total		Total		Total		Total		Total			
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual		
Volatile Organic Compounds																							
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U		
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U		
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U		
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U		
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U		
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.4	J	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U		
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U		
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U		
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U		
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U		
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1	U	0.1	U	0.1	U	0.1	UJ	0.1	U	0.1	U	0.1	U		
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U		
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U		
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U		
Acetone	UG/L	2600	17%			45	262	5	UJ	5	UR	5	U	5	UJ	5	U	5	U	5	U		
Benzene	UG/L	0.48	2%	1	0	5	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U		
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25	U	0.25	U	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U		
Bromoform	UG/L	0	0%	80	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U		
Carbon disulfide	UG/L	0	0%			0	268	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U		
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U		
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U		
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Chloroethane	UG/L	1.1	3%	5	0	7	268	1	U	1	UJ	1	U	1	UJ	1	U	2	U	2	U		
Chloroform	UG/L	71	8%	7	7	22	268	0.14	J	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U		
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	38		33		63		36		25		80		28			
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U		
Cyclohexane	UG/L	0.3	0%			1	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U		
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	UJ		
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U		
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Methyl Acetate	UG/L	6	1%			2	253	0.19	U	0.19	UJ	0.19	U	0.19	UR	0.19	UJ	0.19	U	0.19	U		
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.8	UJ	0.8	UJ	0.8	UJ	0.8	UJ	0.8	UJ	2	U	2	UJ		
Methyl butyl ketone	UG/L	0	0%			0	268	1	U	1	UJ	1	U	1	UJ	1	U	1	U	1	U		
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33	U	0.33	U	0.33	UJ	0.33	U	0.33	U	0.33	U	0.33	U		
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Methyl ethyl ketone	UG/L	4900	8%			22	268	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U		
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1	U	1	U	1	U	1	UJ	1	U	1	UJ	1	U		
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	1	U	1	U	1	U	1	U	1	U	1	U		
Styrene	UG/L	0	0%	5	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U		

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								MWT-29	MWT-29	MWT-29	MWT-22	MWT-22	MWT-22	MWT-22
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20309	ALBW20309RA	ALBW20325	ALBW20071	ALBW20075	ALBW20100	ALBW20115
Sample Date								6/19/2014	6/19/2014	12/17/2014	1/4/2007	3/17/2007	6/6/2007	11/14/2007
QC Type								SA	SA	SA	SA	SA	SA	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								17	17	18	1	2	3	4
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5 U		0.5 U	2 U	4 U	1 U	1 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18 U		0.18 U	2 U	4 U	1 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5 U		0.5 U	2 U	4 U	1 UJ	1 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13 U		0.13 U	2 U	4 U	1 U	1 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25 U		0.25 U	2 U	4 U	1 U	1 U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.13 J		0.11 U	2 U	4 U	1 U	1 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U		0.25 U	2 U	4 U	1 U	1 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44 U		0.44 U	2 U	4 U	1 U	1 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25 U		0.25 U	2 U	4 U	1 U	1 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21 U		0.21 U	2 U	4 U	1 U	1 U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1 U		0.1 U	2 U	4 U	1 U	1 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13 U		0.13 U	2 U	4 U	1 U	1 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25 U		0.25 U	2 U	4 U	1 U	1 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28 U		0.28 U	2 U	4 U	1 U	1 U
Acetone	UG/L	2600	17%			45	262	5 U		5 U	10 U	18 J	38	5 U
Benzene	UG/L	0.48	2%	1	0	5	268	0.25 U		0.25 U	2 U	4 U	1 U	1 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25 U		0.25 U	2 U	4 U	1 U	1 U
Bromoform	UG/L	0	0%	80	0	0	268	0.5 U		0.5 U	2 U	4 U	1 U	1 U
Carbon disulfide	UG/L	0	0%			0	268	0.6 U		0.6 U	2 U	4 U	1 U	1 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5 UJ		0.5 U	2 U	4 U	1 U	1 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U		0.25 U	2 U	4 U	1 U	1 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1 U		0.1 U	2 U	4 U	1 U	1 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	2 U		2 U	2 UJ	4 U	1 U	1 U
Chloroform	UG/L	71	8%	7	7	22	268	0.14 U		0.14 U	2 U	4 U	1 U	1 U
Cis-1,2-Dichloroethene	UG/L	820	58%	5	166	235	268	49		38	130	90	120	95
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11 U		0.11 U	2 U	4 U	1 U	1 U
Cyclohexane	UG/L	0.3	0%			1	268	0.25 U		0.25 U	2 U	4 U	1 U	1 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25 U		0.25 U	2 U	4 U	1 U	1 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11 U		0.11 U	2 U	4 U	1 U	1 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1 U		0.1 U	2 U	4 U	1 U	1 U
Methyl Acetate	UG/L	6	1%			2	253	0.19 U		0.19 U	2 U	4 UJ	1 U	1 UJ
Methyl bromide	UG/L	2.1	0%	5	0	1	262	2 UJ		2 U*	2 U	4 U	1 U	1 U
Methyl butyl ketone	UG/L	0	0%			0	268	1 U		1 U	10 U	20 U	5 U	5 UJ
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33 U		0.33 U	2 U	4 U	1 U	1 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1 U		0.1 U	2 U	4 U	1 U	1 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1 U		1 U	6 J	20 U	5 U	5 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1 U		1 U	10 U	20 U	5 U	5 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2 U		0.2 U	2 U	4 U	1 U	1 U
Methylene chloride	UG/L	18	4%	5	7	12	268	1 U		1 U	1.2 J	4 U	1 U	1 U
Styrene	UG/L	0	0%	5	0	0	268	0.11 U		0.11 U	2 U	4 U	1 U	1 U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								MWT-22		MWT-22		MWT-22		MWT-22		MWT-22		MWT-22	
Matrix								GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20121		ALBW20136		ALBW20151		ALBW20166		ALBW20181		ALBW20196		ALBW20211	
Sample Date								6/25/2008		12/15/2008		6/3/2009		12/16/2009		7/1/2010		12/17/2010		7/20/2011	
QC Type								SA		SA		SA		SA		SA		SA		SA	
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM	
Sample Round								5		6		7		8		9		10		11	
Filtered								Total		Total		Total		Total		Total		Total		Total	
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	5	U	1.3	UJ	0.26	U	1.3	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	5	U	1	UJ	0.21	U	1.1	U	0.18	U	0.18	U	0.18	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	5	UJ	1.6	UJ	0.31	U	1.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	5	U	1.2	UJ	0.23	U	1.2	U	0.13	U	0.13	U	0.13	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	5	U	3.8	U	0.75	U	1.9	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	5	U	1.4	U	0.29	U	1.5	U	0.12	J	0.68	J	0.11	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	5	U	2	UJ	0.41	U	2	U	0.25	U	0.25	U	0.25	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	5	UJ	5	UJ	1	UJ	2	U	0.44	U	0.44	U	0.44	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	5	U	0.85	UJ	0.17	U	0.83	U	0.25	U	0.25	U	0.25	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	5	U	1	U	0.2	U	1	U	0.21	U	0.21	U	0.21	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	5	U	1	U	0.21	U	1.1	U	0.1	U	0.25	J	0.1	U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	5	U	0.7	U	0.14	U	1.6	U	0.13	U	0.13	U	0.13	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	5	U	0.8	U	0.16	U	1.8	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	5	U	0.8	U	0.16	U	2	U	0.28	U	0.28	U	0.28	U
Acetone	UG/L	2600	17%			45	262	25	U	6.5	UJ	2.5	J	6.7	U	5	U	5	UJ	5	UR
Benzene	UG/L	0.48	2%	1	0	5	268	5	U	0.8	U	0.16	U	2	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	5	U	1.9	U	0.39	U	1.9	U	0.25	U	0.25	U	0.25	U
Bromoform	UG/L	0	0%	80	0	0	268	5	U	1.3	UJ	0.26	UJ	1.3	U	0.5	U	0.5	U	0.5	U
Carbon disulfide	UG/L	0	0%			0	268	5	U	0.95	U	0.19	UJ	0.97	U	0.8	U	0.8	U	0.8	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	5	U	1.4	UJ	0.27	U	1.3	U	0.5	U	0.5	U	0.5	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	5	U	0.9	U	0.32	U	1.6	U	0.25	U	0.25	U	0.25	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	5	U	1.8	U	0.32	U	1.8	U	0.1	U	0.1	U	0.1	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	5	UJ	1.6	U	0.32	U	1.6	U	1	U	1	U	1	UJ
Chloroform	UG/L	71	8%	7	7	22	268	5	U	1.7	U	0.34	U	1.7	U	0.14	U	0.14	U	0.14	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	48		380		49		57		41		330		23	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	5	U	1.8	U	0.36	U	1.8	U	0.11	U	0.11	U	0.11	U
Cyclohexane	UG/L	0.3	0%			1	268	5	U	1.1	UJ	0.53	U	2.7	U	0.25	U	0.25	U	0.25	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	5	U	1.4	U	0.29	U	1.4	U	0.25	UJ	0.25	U	0.25	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	5	U	0.9	U	0.18	U	0.92	U	0.11	U	0.11	U	0.11	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	5	U	0.95	U	0.19	U	0.96	U	0.1	U	0.1	U	0.1	U
Methyl Acetate	UG/L	6	1%			2	253	5	UJ	0.85	UJ	0.17	UJ	2.5	U	0.19	U	0.19	U	0.19	UJ
Methyl bromide	UG/L	2.1	0%	5	0	1	262	5	UJ	1.4	U	0.28	U	1.4	U	0.8	U	0.8	UJ	0.8	UJ
Methyl butyl ketone	UG/L	0	0%			0	268	25	UJ	6	U	1.2	U	6.2	U	1	U	1	U	1	UJ
Methyl chloride	UG/L	0	0%	5	0	0	268	5	UJ	1.7	U	0.35	U	1.7	U	0.33	U	0.33	U	0.33	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	5	U	1.1	UJ	0.5	U	2.5	U	0.1	U	0.1	U	0.1	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	25	UJ	6.5	UJ	1.3	U	6.6	U	1	U	1	U	1	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	25	UJ	4.6	UJ	0.91	U	4.5	U	1	U	1	U	1	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	5	U	0.8	UJ	0.16	U	0.8	U	0.2	U	0.2	U	0.2	U
Methylene chloride	UG/L	18	4%	5	7	12	268	5	U	2.2	UJ	0.44	U	2.2	U	1	U	1	U	1	U
Styrene	UG/L	0	0%	5	0	0	268	5	U	0.9	U	0.18	U	0.92	U	0.11	U	0.11	U	0.11	U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								MWT-22		MWT-22		MWT-22		MWT-22		MWT-22		MWT-22	
Matrix								GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20226		ALBW20241		ALBW20256		ALBW20269		ALBW20281		ALBW20300		ALBW20316
Sample Date								12/14/2011		6/21/2012		12/12/2012		7/10/2013		12/12/2013		6/21/2014		12/18/2014
QC Type								SA		SA		SA		SA		SA		SA		SA
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM
Sample Round								12		13		14		15		16		17		18
Filtered								Total		Total		Total		Total		Total		Total		Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethene	UG/L	2.8	12%	5	0	33	268	0.38	J	0.11	U	0.11	U	0.27	J	0.14	J	0.11	U	0.11	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.29	J	0.1	UJ	0.22	J	0.28	J	0.25	J	0.11	J	0.1	U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U
Acetone	UG/L	2600	17%			45	262	5	U	5	UJ	5	U	5	U	5	U	5	U	5	U
Benzene	UG/L	0.48	2%	1	0	5	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25	U	0.25	UJ	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	U
Bromoform	UG/L	0	0%	80	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Carbon disulfide	UG/L	0	0%			0	268	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1	U	1	UJ	1	U	2	U	2	U	2	UJ	2	U
Chloroform	UG/L	71	8%	7	7	22	268	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U
Cis-1,2-Dichloroethene	UG/L	820	58%	5	166	235	268	140		57	J	86	J	280		200	J	28	J	32	J
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11	U	0.11	U	0.11	UJ	0.11	U	0.11	U	0.11	U	0.11	U
Cyclohexane	UG/L	0.3	0%			1	268	0.25	U	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	UJ	0.25	U	0.25	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl Acetate	UG/L	6	1%			2	253	0.19	U	0.19	UR	0.19	UJ	0.19	U	0.19	U	0.19	U	0.19	U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.8	UJ	0.8	UJ	0.8	UJ	2	U	2	UJ	2	U	2	U
Methyl butyl ketone	UG/L	0	0%			0	268	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33	UJ	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1	U	1	UJ	1	UJ	1	UJ	1	U	1	U	1	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Styrene	UG/L	0	0%	5	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								PT-22		PT-22		PT-22		PT-22		PT-22		PT-22	
Matrix								GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20060		ALBW20086		ALBW20089		ALBW20104		ALBW20118		ALBW20133	ALBW20148
Sample Date								1/3/2007		3/15/2007		6/5/2007		11/14/2007		6/26/2008		12/15/2008	6/2/2009
QC Type								SA		SA		SA		SA		SA		SA	SA
Study ID								LTM		LTM		LTM		LTM		LTM		LTM	LTM
Sample Round								1		2		3		4		5		6	7
Filtered								Total		Total		Total		Total		Total		Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	1	U	1	U	1	U	1	U	1	U	0.26	U	0.26	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	1	U	1	U	1	U	1	U	1	U	0.21	U	0.21	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	1	U	1	U	1	U	1	U	1	UJ	0.31	U	0.31	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	1	U	1	U	1	U	1	U	1	U	0.23	U	0.23	U
1,1-Dichloroethene	UG/L	62	13%	5	1	34	268	1	U	1	U	1	U	1	U	1	U	0.75	U	0.75	U
1,1-Dichloroethene	UG/L	2.8	12%	5	0	33	268	1	U	1	U	1	U	1	U	1	U	0.29	U	0.29	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	1	U	1	U	1	UJ	1	U	1	U	0.41	U	0.41	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	1	U	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	1	U	1	U	1	U	1	U	1	U	0.17	U	0.17	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1	U	1	U	1	U	1	U	1	U	0.2	U	0.2	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	3.3		2.4		5.6		5		3.9		2.6		4	
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	1	U	1	U	1	U	1	U	1	U	0.14	U	0.14	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1	U	1	U	1	U	1	U	1	U	0.16	U	0.16	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1	U	1	U	1	U	1	U	1	U	0.16	U	0.16	U
Acetone	UG/L	2600	17%			45	262	5	U	5	U	3.8	J	5.3		5	U	1.3	U	1.3	U
Benzene	UG/L	0.48	2%	1	0	5	268	1	U	1	U	1	U	1	U	1	U	0.16	U	0.16	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	1	U	1	U	1	U	1	U	1	U	0.38	U	0.39	U
Bromoform	UG/L	0	0%	80	0	0	268	1	U	1	U	1	U	1	U	1	U	0.26	U	0.26	UJ
Carbon disulfide	UG/L	0	0%			0	268	1	U	1	U	1	U	1	U	1	U	0.19	U	0.19	UJ
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	1	U	1	U	1	U	1	U	1	U	0.27	U	0.27	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	1	U	1	U	1	U	1	U	1	U	0.18	U	0.32	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	1	U	1	U	1	U	1	U	1	U	0.32	U	0.32	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1	UJ	1	U	1.1	J	0.82	J	1	UJ	0.32	U	0.32	U
Chloroform	UG/L	71	8%	7	7	22	268	1	U	1	U	1	U	1	U	1	U	0.34	U	0.34	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	87		61		62		320		36		52		49	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	1	U	1	U	1	U	1	U	1	U	0.36	U	0.36	U
Cyclohexane	UG/L	0.3	0%			1	268	1	U	1	U	1	U	1	U	1	U	0.22	U	0.53	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	1	U	1	U	1	UJ	1	U	1	U	0.26	U	0.29	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	1	U	1	U	1	U	1	U	1	U	0.18	U	0.18	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	1	U	1	U	1	U	1	U	1	U	0.19	U	0.19	U
Methyl Acetate	UG/L	6	1%			2	253	1	U	1	UJ	1	UJ	1	U	1	UJ	0.17	U	0.17	UJ
Methyl bromide	UG/L	2.1	0%	5	0	1	262	1	U	1	U	1	UJ	1	U	1	UJ	0.28	U	0.28	U
Methyl butyl ketone	UG/L	0	0%			0	268	5	U	5	U	5	U	5	U	5	UJ	1.2	U	1.2	U
Methyl chloride	UG/L	0	0%	5	0	0	268	1	U	1	U	1	U	1	U	1	UJ	0.34	U	0.35	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	1	U	1	U	1	UJ	1	U	1	U	0.22	U	0.5	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	5	U	5	U	5	U	5	U	5	UJ	1.3	U	1.3	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	5	U	5	U	5	U	5	U	5	UJ	0.91	U	0.91	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	1	U	1	U	1	U	1	U	1	U	0.16	U	0.16	U
Methylene chloride	UG/L	18	4%	5	7	12	268	1	UJ	1	U	1	U	1	U	1	U	0.44	UJ	0.44	U
Styrene	UG/L	0	0%	5	0	0	268	1	U	1	U	1	U	1	U	1	U	0.18	U	0.18	U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								PT-22		PT-22		PT-22		PT-22		PT-22		PT-22	
Matrix								GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20163		ALBW20178		ALBW20193		ALBW20208		ALBW20223		ALBW20253	
Sample Date								12/16/2009		6/30/2010		12/17/2010		7/22/2011		12/14/2011		12/13/2012	
QC Type								SA		SA		SA		SA		SA		SA	
Study ID								LTM		LTM		LTM		LTM		LTM		LTM	
Sample Round								8		9		10		11		12		14	
Filtered								Total		Total		Total		Total		Total		Total	
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																			
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.26	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.21	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.31	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.23	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.38	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.29	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.41	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.39	U	0.44	U	0.44	U	0.44	UJ	0.44	U	0.44	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.17	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.2	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	3		3.2		1.9		0.1	U	1.9		2.1		1.8	
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.32	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.36	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.39	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U
Acetone	UG/L	2600	17%			45	262	1.3	U	5	U	5	UJ	5.3	J	5	U	5	UJ	5	U
Benzene	UG/L	0.48	2%	1	0	5	268	0.41	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.39	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromoform	UG/L	0	0%	80	0	0	268	0.26	U	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U
Carbon disulfide	UG/L	0	0%			0	268	0.19	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.27	U	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	UJ	0.5	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.32	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.32	U	0.1	U	0.1	U	0.1	UJ	0.1	U	0.1	U	0.1	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	0.32	U	1	U	1	U	1	U	1	U	1	UJ	1	U
Chloroform	UG/L	71	8%	7	7	22	268	0.34	U	0.14	U	0.19	J	1	U	0.14	U	0.14	U	0.14	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	29		43		42		42		32		35		28	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.36	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
Cyclohexane	UG/L	0.3	0%			1	268	0.53	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.29	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.18	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.19	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl Acetate	UG/L	6	1%			2	253	0.5	U	0.19	UJ	0.19	U	0.19	U	0.19	U	0.19	UR	0.19	UJ
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.28	U	0.8	UJ	0.8	UJ	0.8	UJ	0.8	UJ	0.8	UJ	0.8	UJ
Methyl butyl ketone	UG/L	0	0%			0	268	1.2	U	1	UJ	1	U	1	U	1	U	1	UJ	1	U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.35	U	0.33	U	0.33	U	0.33	U	0.33	UJ	0.33	U	0.33	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.5	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1.3	U	1	U	1	U	1	U	1	U	1	UJ	1	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	0.91	U	1	U	1	U	1	U	1	U	1	U	1	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.16	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Methylene chloride	UG/L	18	4%	5	7	12	268	0.44	U	1	U	1	U	1	U	1	U	1	U	1	U
Styrene	UG/L	0	0%	5	0	0	268	0.18	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U

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Table B-1
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Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								PT-22		PT-22		PT-22		PT-22		MWT-23		MWT-23		MWT-23	
Matrix								GW		GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20266		ALBW20284		ALBW20297		ALBW20313		ALBW20065		ALBW20080		ALBW20094	
Sample Date								7/9/2013		12/12/2013		6/21/2014		12/18/2014		1/3/2007		3/16/2007		6/6/2007	
QC Type								SA		SA		SA		SA		SA		SA		SA	
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM	
Sample Round								15		16		17		18		1		2		3	
Filtered								Total		Total		Total		Total		Total		Total		Total	
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5	U	0.5	U	0.5	U	0.5	U	4	U	4	U	2	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18	U	0.18	U	0.18	U	0.18	U	4	U	4	U	2	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	4	U	4	U	2	UJ
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13	U	0.13	U	0.13	U	0.13	U	4	U	4	U	2	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25	U	0.25	U	0.25	U	0.25	U	4	U	4	U	2	U
1,1-Dichloroethene	UG/L	2.8	12%	5	0	33	268	0.11	U	0.11	U	0.11	U	0.11	U	4	U	4	U	2	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	4	U	4	U	2	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44	U	0.44	U	0.44	U	0.44	U	4	U	4	U	2	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	4	U	4	U	2	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21	U	0.21	U	0.21	U	0.21	U	4	U	4	U	2	U
1,2-Dichloroethane	UG/L	5.8	16%	0.6	34	42	268	2.3		2		3.1		1.2		23	J	4	U	1.8	J
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13	U	0.13	U	0.13	U	0.13	U	4	U	4	U	2	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	4	U	4	U	2	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28	U	0.28	U	0.28	U	0.28	U	4	U	4	U	2	U
Acetone	UG/L	2600	17%			45	262	5	U	5	U	5	U	5	U	180		190		190	
Benzene	UG/L	0.48	2%	1	0	5	268	0.25	U	0.25	U	0.25	U	0.25	U	4	U	4	U	2	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	4	U	4	U	2	U
Bromoform	UG/L	0	0%	80	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	4	U	4	U	2	U
Carbon disulfide	UG/L	0	0%			0	268	0.6	U	0.6	U	0.6	U	0.6	U	4	U	4	U	2	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	4	U	4	U	2	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	4	U	4	U	2	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1	U	0.1	U	0.1	U	0.1	U	4	U	4	U	2	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	2	U	2	U	2	U	2	U	4	U	4	U	2	U
Chloroform	UG/L	71	6%	7	7	22	268	0.14	U	0.14	U	0.14	U	0.14	U	4	U	4	U	2	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	39		37		62		22		69		21		3.1	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	4	U	4	U	2	U
Cyclohexane	UG/L	0.3	0%			1	268	0.25	U	0.25	U	0.25	U	0.25	U	4	U	4	U	2	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25	U	0.25	UJ	0.25	U	0.25	U	4	U	4	U	2	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11	U	0.11	U	0.11	U	0.11	U	4	U	4	U	1.3	J
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1	U	0.1	U	0.1	U	0.1	U	4	U	4	U	2	U
Methyl Acetate	UG/L	6	1%			2	253	0.19	U	0.19	U	0.19	U	0.19	U	4	U	4	UJ	5.1	
Methyl bromide	UG/L	2.1	0%	5	0	1	262	2	U	2	UJ	2	U	2	U	4	U	4	U	2	U
Methyl butyl ketone	UG/L	0	0%			0	268	1	U	1	U	1	U	1	U	20	U	20	U	10	U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33	U	0.33	U	0.33	U	0.33	U	4	U	4	U	2	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1	U	0.1	U	0.1	U	0.1	U	4	U	4	U	2	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1	U	1	U	1	U	1	U	250		130		73	
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1	UJ	1	U	1	U	1	U	20	U	20	U	10	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2	U	0.2	U	0.2	U	0.2	U	4	U	4	U	2	U
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	1	U	1	U	1	U	2.8	J	4	U	2	U
Styrene	UG/L	0	0%	5	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	4	U	4	U	2	U

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Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								MWT-23		MWT-23		MWT-23		MWT-23		MWT-23		MWT-23		MWT-23	
Matrix								GW		GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20109		ALBW20110		ALBW20125		ALBW20140		ALBW20155		ALBW20170		ALBW20185	
Sample Date								11/16/2007		11/16/2007		6/25/2008		12/12/2008		6/2/2009		12/15/2009		6/29/2010	
QC Type								SA		DU		SA		SA		SA		SA		SA	
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM	
Sample Round								4		4		5		6		7		8		9	
Filtered								Total		Total		Total		Total		Total		Total		Total	
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	10	U	4	U	1	U	0.26	UJ	0.26	U	0.26	U	0.5	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	10	U	4	U	1	U	0.21	U	0.21	U	0.21	U	0.18	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	10	U	4	U	1	U	0.31	U	0.31	U	0.31	U	0.5	UJ
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	10	U	4	U	1	U	0.23	U	0.23	U	0.23	U	0.13	U
1,1-Dichloroethene	UG/L	62	13%	5	1	34	268	10	U	4	U	1	U	0.75	U	0.75	U	0.38	U	0.25	U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	10	U	4	U	1	U	0.29	U	0.29	U	0.29	U	0.11	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	10	U	4	U	1	U	0.41	U	0.41	U	0.41	U	0.25	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	10	U	4	U	1	U	1	UJ	1	UJ	0.39	U	0.44	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	10	U	4	U	1	U	0.17	U	0.17	U	0.17	U	0.25	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	10	U	4	U	1	U	0.2	U	0.2	U	0.2	U	0.21	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	10	U	4	U	0.6	J	0.6	J	0.64	J	0.21	U	0.66	J
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	10	U	4	U	1	U	0.14	U	0.14	U	0.32	U	0.13	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	10	U	4	U	1	U	0.16	U	0.16	U	0.36	U	0.25	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	10	U	4	U	1	U	0.16	U	0.16	U	0.39	U	0.28	U
Acetone	UG/L	2600	17%			45	262	64		62		4	J	1.3	U	1.6	J	1.3	U	5	U
Benzene	UG/L	0.48	2%	1	0	5	268	10	U	4	U	1	U	0.16	U	0.16	U	0.41	U	0.25	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	10	U	4	U	1	U	0.38	U	0.39	U	0.39	U	0.25	U
Bromoform	UG/L	0	0%	80	0	0	268	10	U	4	U	1	U	0.26	U	0.26	UJ	0.26	UJ	0.5	U
Carbon disulfide	UG/L	0	0%			0	268	10	U	4	U	1	U	0.19	U	0.19	UJ	0.19	UJ	0.6	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	10	U	4	U	1	U	0.27	UJ	0.27	U	0.27	U	0.5	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	10	U	4	U	1	U	0.18	U	0.32	U	0.32	U	0.25	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	10	U	4	U	1	U	0.32	U	0.32	U	0.32	U	0.1	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	10	U	4	U	1	UJ	0.32	U	0.32	U	0.32	UJ	1	U
Chloroform	UG/L	71	8%	7	7	22	268	10	U	4	U	1	U	0.34	U	0.34	U	0.34	U	0.14	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	10	U	2.1	J	1	U	2.4		0.42	J	0.47	J	0.41	J
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	10	U	4	U	1	U	0.36	U	0.36	U	0.36	U	0.11	U
Cyclohexane	UG/L	0.3	0%			1	268	10	U	4	U	1	U	0.22	U	0.53	U	0.53	U	0.25	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	10	U	4	U	1	U	0.28	UJ	0.29	U	0.29	U	0.25	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	10	U	4	U	0.85	J	0.71	J	0.49	J	0.18	U	0.38	J
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	10	U	4	U	1	U	0.19	U	0.19	U	0.19	U	0.1	U
Methyl Acetate	UG/L	6	1%			2	253	10	U	4	UJ	1	UJ	0.17	U	0.17	UJ	0.5	U	0.19	UJ
Methyl bromide	UG/L	2.1	0%	5	0	1	262	10	U	4	U	1	UJ	0.28	U	0.28	U	0.28	U	0.8	UJ
Methyl butyl ketone	UG/L	0	0%			0	268	50	U	20	UJ	5	UJ	1.2	U	1.2	U	1.2	U	1	UJ
Methyl chloride	UG/L	0	0%	5	0	0	268	10	U	4	U	1	U	0.34	U	0.35	U	0.35	UJ	0.33	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	10	U	4	U	1	U	0.22	U	0.5	U	0.5	U	0.1	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	26	J	25		12		1.3	U	1.3	U	1.3	U	1	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	50	U	20	U	5	U	0.91	U	0.91	U	0.91	U	1	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	10	U	4	U	1	U	0.16	U	0.16	U	0.16	U	0.2	U
Methylene chloride	UG/L	18	4%	5	7	12	268	12		4	U	1	U	0.44	UJ	0.44	U	0.44	U	1	U
Styrene	UG/L	0	0%	5	0	0	268	10	U	4	U	1	U	0.18	U	0.18	U	0.18	U	0.11	U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								MWT-23		MWT-23		MWT-23		MWT-23		MWT-23		MWT-23	
Matrix								GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20200		ALBW20201		ALBW20215		ALBW20230		ALBW20231		ALBW20245	ALBW20260
Sample Date								12/19/2010		12/19/2010		7/19/2011		12/14/2011		12/14/2011		6/20/2012	12/13/2012
QC Type								SA		DU		SA		SA		DU		SA	SA
Study ID								LTM		LTM		LTM		LTM		LTM		LTM	LTM
Sample Round								10		10		11		12		12		13	14
Filtered								Total		Total		Total		Total		Total		Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.52	J	0.52	J	0.25	U	0.32	J	0.33	J	0.25	U	0.25	U
1,1-Dichloroethene	UG/L	2.8	12%	5	0	33	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	1.5		1.8		1		1.3		1.2		0.88	J	0.72	J
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U
Acetone	UG/L	2600	17%			45	262	5	UJ	5	UJ	5	UR	5	U	5	U	5	UJ	5	U
Benzene	UG/L	0.48	2%	1	0	5	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	UJ	0.25	U
Bromoform	UG/L	0	0%	80	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Carbon disulfide	UG/L	0	0%			0	268	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1	UJ	1	UJ	1	UJ	1	U	1	U	1	UJ	1	U
Chloroform	UG/L	71	8%	7	7	22	268	0.14	U	0.17	J	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U
Cis-1,2-Dichloroethene	UG/L	820	58%	5	166	235	268	4.6		4.6		0.57	J	2		2		0.55	J	2	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
Cyclohexane	UG/L	0.3	0%			1	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.14	J	0.12	J	0.13	J	0.15	J	0.17	J	0.13	J	0.21	J
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl Acetate	UG/L	6	1%			2	253	0.19	U	0.19	U	0.19	UJ	0.19	U	0.19	U	0.19	UR	0.19	UJ
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.8	U	0.8	U	0.8	UJ	0.8	UJ	0.8	UJ	0.8	UJ	0.8	UJ
Methyl butyl ketone	UG/L	0	0%			0	268	1	U	1	U	1	UJ	1	U	1	U	1	UJ	1	U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33	U	0.33	U	0.33	U	0.33	UJ	0.33	UJ	0.33	U	0.33	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1	U	1	U	1	U	1	U	1	U	1	UJ	1	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1	U	1	U	1	U	1	U	1	U	1	UJ	1	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Styrene	UG/L	0	0%	5	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								MWT-23	MWT-23	MWT-23	MWT-23	MWT-23	MWT-23	MWT-24
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20261	ALBW20273	ALBW20288	ALBW20304	ALBW20305	ALBW20320	ALBW20063
Sample Date								12/13/2012	7/10/2013	12/14/2013	6/20/2014	6/20/2014	12/18/2014	1/3/2007
QC Type								DU	SA	SA	SA	DU	SA	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								14	15	16	17	17	18	1
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.71 J
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	1 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25 U	0.5 J	0.25 U	0.25 U	0.25 U	0.43 J	0.81 J
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	1 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	1 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	1 U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.31 J	1.2	0.21 J	0.55 J	0.57 J	0.1 U	1 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	1 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	1 U
Acetone	UG/L	2600	17%			45	262	5 U	5 U	5 UJ	5 U	5 U	5 U	42 U
Benzene	UG/L	0.48	2%	1	0	5	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1 U
Bromoform	UG/L	0	0%	80	0	0	268	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Carbon disulfide	UG/L	0	0%			0	268	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	1 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	1 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1 U	2 U	2 U	2 U	2 U	2 U	1 U
Chloroform	UG/L	71	8%	7	7	22	268	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	1 U
Cis-1,2-Dichloroethene	UG/L	820	58%	5	166	235	268	1.8	3.3	2.6	0.46 J	0.43 J	2.7	280
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	1 U
Cyclohexane	UG/L	0.3	0%			1	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.19 J	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	1 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U
Methyl Acetate	UG/L	6	1%			2	253	0.19 UJ	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	1 U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.8 U	2 U	2 U	2 UJ	2 UJ	2 U	1 U
Methyl butyl ketone	UG/L	0	0%			0	268	1 U	1 U	1 U	1 U	1 U	1 U	5 U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	1 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1 U	1 U	1 U	1 U	1 U	1 U	24
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1 U	1 UJ	1 U	1 U	1 U	1 U	5 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1 U
Methylene chloride	UG/L	18	4%	5	7	12	268	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	UG/L	0	0%	5	0	0	268	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	1 U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								MWT-24		MWT-24		MWT-24		MWT-24		MWT-24		MWT-24	
Matrix								GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20078		ALBW20092		ALBW20107		ALBW20122		ALBW20137		ALBW20152		ALBW20167	
Sample Date								3/15/2007		6/5/2007		11/13/2007		6/26/2008		12/12/2008		6/2/2009		12/15/2009	
QC Type								SA		SA		SA		SA		SA		SA		SA	
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM	
Sample Round								2		3		4		5		6		7		8	
Filtered								Total		Total		Total		Total		Total		Total		Total	
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.58	J	2	U	1	U	5	U	0.76	J	0.26	U	0.4	J
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	1	U	2	U	1	U	5	U	0.21	U	0.21	U	0.21	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	1	U	2	UJ	1	U	5	UJ	0.31	U	0.31	U	0.31	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	1	U	2	U	1	U	5	U	0.23	U	0.23	U	0.23	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.83	J	1.1	J	1	U	5	U	0.75	U	0.75	U	0.7	J
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	1	U	2	U	1	U	5	U	0.29	U	0.29	U	0.29	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	1	U	2	U	1	U	5	U	0.41	U	0.41	U	0.41	U
1,2-Dibrome-3-chloropropane	UG/L	0	0%	0.04	0	0	268	1	U	2	U	1	U	5	UJ	1	UJ	1	UJ	0.39	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	1	U	2	U	1	U	5	U	0.17	U	0.17	U	0.17	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1	U	2	U	1	U	5	U	0.2	U	0.2	U	0.2	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	1	U	2	U	1	U	5	U	0.21	U	0.21	U	0.21	U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	1	U	2	U	1	U	5	U	0.14	U	0.14	U	0.32	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1	U	2	U	1	U	5	U	0.16	U	0.16	U	0.36	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1	U	2	U	1	U	5	U	0.16	U	0.16	U	0.39	U
Acetone	UG/L	2600	17%			45	262	54		73		5	U	25	U	1.3	U	1.3	U	1.3	U
Benzene	UG/L	0.48	2%	1	0	5	268	1	U	2	U	1	U	5	U	0.16	U	0.16	U	0.41	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	1	U	2	U	1	U	5	U	0.38	U	0.39	U	0.39	U
Bromoform	UG/L	0	0%	80	0	0	268	1	U	2	U	1	U	5	U	0.26	U	0.26	UJ	0.26	UJ
Carbon disulfide	UG/L	0	0%			0	268	1	U	2	U	1	U	5	U	0.19	U	0.19	UJ	0.19	UJ
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	1	U	2	U	1	U	5	U	0.27	UJ	0.27	U	0.27	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	1	U	2	U	1	U	5	U	0.18	U	0.32	U	0.32	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	1	U	2	U	1	U	5	U	0.32	U	0.32	U	0.32	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1	U	2	U	1	U	5	UJ	0.32	U	0.47	J	0.32	UJ
Chloroform	UG/L	71	8%	7	7	22	268	1	U	2	U	1	U	5	U	0.34	U	0.34	U	0.34	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		[illegible]	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	1	U	2	U	1	U	5	U	0.36	U	0.36	U	0.36	U
Cyclohexane	UG/L	0.3	0%			1	268	1	U	2	U	1	U	5	U	0.22	U	0.53	U	0.53	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	1	U	2	U	1	U	5	U	0.28	UJ	0.29	U	0.29	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	1	U	2	U	1	U	5	U	0.18	U	0.18	U	0.18	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	1	U	2	U	1	U	5	U	0.19	U	0.19	U	0.19	U
Methyl Acetate	UG/L	6	1%			2	253	1	UJ	6		1	UJ	5	UJ	0.17	U	0.17	UJ	0.5	U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	1	U	2	U	1	U	5	UJ	0.28	U	0.28	U	0.28	U
Methyl butyl ketone	UG/L	0	0%			0	268	5	U	10	U	5	UJ	25	UJ	1.2	U	1.2	U	1.2	U
Methyl chloride	UG/L	0	0%	5	0	0	268	1	U	2	U	1	U	5	UJ	0.34	U	0.35	U	0.35	UJ
Methyl cyclohexane	UG/L	0.17	0%			1	268	1	U	2	U	1	U	5	U	0.22	U	0.5	U	0.5	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	36		40		5	U	25	UJ	1.3	U	1.3	U	1.3	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	5	U	10	U	5	U	25	UJ	0.91	U	0.91	U	0.91	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	1	U	2	U	1	U	5	U	0.16	U	0.16	U	0.16	U
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	1	J	1	U	5	U	0.44	UJ	0.44	U	0.44	U
Styrene	UG/L	0	0%	5	0	0	268	1	U	2	U	1	U	5	U	0.18	U	0.18	U	0.18	U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								MWT-24		MWT-24		MWT-24		MWT-24		MWT-24		MWT-24		MWT-24	
Matrix								GW		GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20182		ALBW20197		ALBW20212		ALBW20227		ALBW20242		ALBW20257		ALBW20270	
Sample Date								7/1/2010		12/17/2010		7/22/2011		12/13/2011		6/19/2012		12/12/2012		7/9/2013	
QC Type								SA		SA		SA		SA		SA		SA		SA	
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM	
Sample Round								9		10		11		12		13		14		15	
Filtered								Total		Total		Total		Total		Total		Total		Total	
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.79	J	0.58	J	0.25	U	0.44	J	0.8	J	0.57	J	0.7	J
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44	U	0.44	U	0.44	UJ	0.44	U	0.44	U	0.44	U	0.44	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1	U	0.1	U	3.3		0.1	U	0.1	UJ	0.1	U	0.1	U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U
Acetone	UG/L	2600	17%			45	262	5	U	5	UJ	5	U	5	U	5	UJ	5	U	5	U
Benzene	UG/L	0.48	2%	1	0	5	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	UJ	0.25	U	0.25	U
Bromoform	UG/L	0	0%	80	0	0	268	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U
Carbon disulfide	UG/L	0	0%			0	268	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	U	0.5	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1	U	0.1	U	0.1	UJ	0.1	U	0.1	U	0.1	U	0.1	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1	U	1	U	1	U	1	UJ	1	UJ	1	U	2	U
Chloroform	UG/L	71	8%	7	7	22	268	0.14	U	0.19	J	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	31		23		39		16		28		36		24	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
Cyclohexane	UG/L	0.3	0%			1	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25	UJ	0.25	U	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl Acetate	UG/L	6	1%			2	253	0.19	U	0.19	U	0.19	U	0.19	U	0.19	UR	0.19	UJ	0.19	U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.8	U	0.8	UJ	0.8	UJ	0.8	UJ	0.8	UJ	0.8	UJ	2	U
Methyl butyl ketone	UG/L	0	0%			0	268	1	U	1	U	1	U	1	U	1	UJ	1	U	1	U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33	U	0.33	U	0.33	U	0.33	UJ	0.33	U	0.33	U	0.33	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1	U	1	U	1	U	1	U	1	UJ	1	U	1	U
Methyl Isobutyl ketone	UG/L	1.9	0%			1	268	1	U	1	U	1	U	1	U	1	UJ	1	U	1	UJ
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Styrene	UG/L	0	0%	5	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								MWT-24		MWT-24		MWT-24		PT-17		PT-17		PT-17	
Matrix								GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20285		ALBW20301		ALBW20317		ALBW20058		ALBW20073		ALBW20087		ALBW20102
Sample Date								12/11/2013		6/21/2014		12/18/2014		1/2/2007		3/15/2007		6/5/2007		11/13/2007
QC Type								SA		SA		SA		SA		SA		SA		SA
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM
Sample Round								16		17		18		1		2		3		4
Filtered								Total		Total		Total		Total		Total		Total		Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5	U	0.5	U	0.5	U	1	U	2	U	1	U	1	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18	U	0.18	U	0.18	U	1	U	2	U	1	U	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	1	U	2	U	1	UJ	1	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13	U	0.13	U	0.13	U	1	U	2	U	1	U	1	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.57	J	0.25	U	0.38	J	1	U	2	U	1	U	1	U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11	U	0.11	U	0.11	U	1	U	2	U	1	U	1	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	1	U	2	U	1	U	1	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44	U	0.44	U	0.44	U	1	U	2	U	1	U	1	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25	U	0.25	U	0.25	U	1	U	2	U	1	U	1	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21	U	0.21	U	0.21	U	1	U	2	U	1	U	1	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1	U	0.1	U	0.1	U	1	U	2	U	1	U	1	U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13	U	0.13	U	0.13	U	1	U	2	U	1	U	1	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25	U	0.25	U	0.25	U	1	U	2	U	1	U	1	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28	U	0.28	U	0.28	U	1	U	2	U	1	U	1	U
Acetone	UG/L	2600	17%			45	262	5	U	5	U	5	U	9.3	U	22		5	U	5	U
Benzene	UG/L	0.48	2%	1	0	5	268	0.25	U	0.25	U	0.25	U	1	U	2	U	1	U	1	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25	U	0.25	U	0.25	U	1	U	2	U	1	U	1	U
Bromoform	UG/L	0	0%	80	0	0	268	0.5	U	0.5	U	0.5	U	1	U	2	U	1	U	1	U
Carbon disulfide	UG/L	0	0%			0	268	0.6	U	0.6	U	0.6	U	1	U	2	U	1	U	1	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	1	U	2	U	1	U	1	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	1	U	2	U	1	U	1	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1	U	0.1	U	0.1	U	1	U	2	U	1	U	1	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	2	U	2	U	2	U	1	U	2	U	1	U	1	U
Chloroform	UG/L	71	8%	7	7	22	268	0.14	U	0.14	U	0.14	U	1	U	2	U	1	U	1	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	21		21		11		62		28		43		27	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11	U	0.11	U	0.11	U	1	U	2	U	1	U	1	U
Cyclohexane	UG/L	0.3	0%			1	268	0.25	U	0.25	U	0.25	U	1	U	2	U	1	U	1	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25	UJ	0.25	U	0.25	U	1	U	2	U	1	U	1	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11	U	0.11	U	0.11	U	1	U	2	U	1	U	1	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1	U	0.1	U	0.1	U	1	U	2	U	1	U	1	U
Methyl Acetate	UG/L	6	1%			2	253	0.19	U	0.19	U	0.19	U	1	U	2	UJ	1	U	1	UJ
Methyl bromide	UG/L	2.1	0%	5	0	1	262	2	UJ	2	U	2	U	1	U	2	U	1	U	1	U
Methyl butyl ketone	UG/L	0	0%			0	268	1	U	1	U	1	U	5	U	10	U	5	U	5	UJ
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33	U	0.33	U	0.33	U	1	U	2	U	1	U	1	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1	U	0.1	U	0.1	U	1	U	2	U	1	U	1	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1	U	1	U	1	U	5.4		11		5	U	5	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1	U	1	U	1	U	5	U	10	U	5	U	5	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2	U	0.2	U	0.2	U	1	U	2	U	1	U	1	U
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	1	U	1	U	1	U	1.2	J	1	U	1	U
Styrene	UG/L	0	0%	5	0	0	268	0.11	U	0.11	U	0.11	U	1	U	2	U	1	U	1	U

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Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								PT-17		PT-17		PT-17		PT-17		PT-17		PT-17		PT-17		PT-17	
Matrix								GW		GW		GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20116		ALBW20131		ALBW20146		ALBW20161		ALBW20176		ALBW20191		ALBW20206	
Sample Date								6/26/2008		12/11/2008		6/2/2009		12/15/2009		7/1/2010		12/18/2010		7/21/2011	
QC Type								SA		SA		SA		SA		SA		SA		SA	
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM	
Sample Round								5		6		7		8		9		10		11	
Filtered								Total		Total		Total		Total		Total		Total		Total	
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	1	U	0.26	UJ	0.26	U	0.26	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	1	U	0.21	U	0.21	U	0.21	U	0.18	U	0.18	U	0.18	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	1	UJ	0.31	U	0.31	U	0.31	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	1	U	0.23	U	0.23	U	0.23	U	0.13	U	0.13	U	0.13	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	1	U	0.75	U	0.75	U	0.38	U	0.25	U	0.25	U	0.25	UJ
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	1	U	0.29	U	0.29	U	0.29	U	0.24	J	0.42	J	0.11	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	1	U	0.41	U	0.41	U	0.41	U	0.25	U	0.25	U	0.25	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	1	UJ	1	UJ	1	UJ	0.39	U	0.44	U	0.44	U	0.44	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	1	U	0.17	U	0.17	U	0.17	U	0.25	U	0.25	U	0.25	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1	U	0.2	U	0.2	U	0.2	U	0.21	U	0.21	U	0.21	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	1	U	0.21	U	0.21	U	0.21	U	0.1	U	0.1	U	0.1	U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	1	U	0.14	U	0.14	U	0.32	U	0.13	U	0.13	U	0.13	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1	U	0.16	U	0.16	U	0.38	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1	U	0.16	U	0.16	U	0.39	U	0.28	U	0.28	U	0.28	U
Acetone	UG/L	2600	17%			45	262	5	U	1.3	U	1.3	U	1.3	U	5	U	5	UJ	5	U
Benzene	UG/L	0.48	2%	1	0	5	268	1	U	0.16	U	0.16	U	0.41	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	1	U	0.38	U	0.39	U	0.39	U	0.25	U	0.25	U	0.25	U
Bromoform	UG/L	0	0%	80	0	0	268	1	U	0.26	U	0.26	UJ	0.26	UJ	0.5	U	0.5	U	0.5	UJ
Carbon disulfide	UG/L	0	0%			0	268	1	U	0.19	U	0.19	UJ	0.19	UJ	0.6	U	0.6	U	0.6	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	1	U	0.27	UJ	0.27	U	0.27	U	0.5	U	0.5	U	0.5	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	1	U	0.18	U	0.32	U	0.32	U	0.25	U	0.25	U	0.25	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	1	U	0.32	U	0.32	U	0.32	U	0.1	U	0.1	U	0.1	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1	UJ	0.32	U	0.49	J	0.32	UJ	1	U	1	U	1	U
Chloroform	UG/L	71	8%	7	7	22	268	1	U	0.34	U	0.34	U	0.34	U	0.14	U	0.15	J	0.14	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	21		24		88		65		81		38		94	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	1	U	0.36	U	0.36	U	0.36	U	0.11	U	0.11	U	0.11	U
Cyclohexane	UG/L	0.3	0%			1	268	1	U	0.22	U	0.53	U	0.53	U	0.25	U	0.25	U	0.25	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	1	U	0.26	UJ	0.29	U	0.29	U	0.25	UJ	0.25	U	0.25	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	1	U	0.18	U	0.18	U	0.18	U	0.11	U	0.11	U	0.11	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	1	U	0.19	U	0.19	U	0.19	U	0.1	U	0.1	U	0.1	U
Methyl Acetate	UG/L	6	1%			2	253	1	UJ	0.17	U	0.17	UJ	0.5	U	0.19	U	0.19	U	0.19	U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	1	UJ	0.28	U	0.28	U	0.28	U	0.8	U	0.8	UJ	0.8	UJ
Methyl butyl ketone	UG/L	0	0%			0	268	5	UJ	1.2	U	1.2	U	1.2	U	1	U	1	U	1	U
Methyl chloride	UG/L	0	0%	5	0	0	268	1	UJ	0.34	U	0.35	U	0.35	UJ	0.33	U	0.33	U	0.33	UJ
Methyl cyclohexane	UG/L	0.17	0%			1	268	1	U	0.22	U	0.5	U	0.5	U	0.1	U	0.1	U	0.1	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	5	UJ	1.3	U	1.3	U	1.3	U	1	U	1	U	1	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	5	UJ	0.91	U	0.91	U	0.91	U	1	U	1	U	1	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	1	U	0.16	U	0.16	U	0.16	U	0.2	U	0.2	U	0.2	U
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	0.44	UJ	0.44	U	0.44	U	1	U	1	U	1	U
Styrene	UG/L	0	0%	5	0	0	268	1	U	0.18	U	0.18	U	0.18	U	0.11	U	0.11	U	0.11	U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								PT-17		PT-17		PT-17		PT-17		PT-17		PT-17		PT-17		PT-17	
Matrix								GW		GW		GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20221		ALBW20236		ALBW20251		ALBW20264A		ALBW20279		ALBW20295		ALBW20311	
Sample Date								12/13/2011		6/19/2012		12/13/2012		7/10/2013		12/13/2013		6/20/2014		12/16/2014	
QC Type								SA		SA		SA		SA		SA		SA		SA	
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM	
Sample Round								12		13		14		15		16		17		18	
Filtered								Total		Total		Total		Total		Total		Total		Total	
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11	U	0.37	J	0.18	J	0.11	U	0.16	J	0.32	J	0.31	J
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U
1,2-Dichloroethane	UG/L	5.8	16%	0.6	34	42	268	0.1	U	0.1	UJ	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U
Acetone	UG/L	2600	17%			45	262	5	U	5	UJ	5	U	5	U	5	U	5	U	5	U
Benzene	UG/L	0.48	2%	1	0	5	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromoform	UG/L	0	0%	80	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Carbon disulfide	UG/L	0	0%			0	268	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1	UJ	1	UJ	1	U	2	U	2	U	2	U	2	U
Chloroform	UG/L	71	6%	7	7	22	268	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	26		170		68		38		84		130		120	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
Cyclohexane	UG/L	0.3	0%			1	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	UJ	0.25	U	0.25	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl Acetate	UG/L	6	1%			2	253	0.19	U	0.19	UR	0.19	UJ	0.19	U	0.19	U	0.19	U	0.19	U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.8	U	0.8	UJ	0.8	UJ	2	U	2	UJ	2	UJ	2	U*
Methyl butyl ketone	UG/L	0	0%			0	268	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33	UJ	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1	U	1	UJ	1	U	1	UJ	1	U	1	U	1	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Styrene	UG/L	0	0%	5	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								MWT-7		MWT-7		MWT-7		MWT-7		MWT-7		MWT-7	
Matrix								GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20062		ALBW20077		ALBW20091		ALBW20106		ALBW20120		ALBW20135	ALBW20150
Sample Date								1/4/2007		3/15/2007		6/5/2007		11/13/2007		6/25/2008		12/15/2008	6/2/2009
QC Type								SA		SA		SA		SA		SA		SA	SA
Study ID								LTM		LTM		LTM		LTM		LTM		LTM	LTM
Sample Round								1		2		3		4		5		6	7
Filtered								Total		Total		Total		Total		Total		Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	1	U	1	U	1	U	1	U	1	U	0.26	U	0.26	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	1	U	1	U	1	U	1	U	1	U	0.21	U	0.21	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	1	U	1	U	1	UJ	1	U	1	UJ	0.31	U	0.31	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	1	U	1	U	1	U	1	U	1	U	0.23	U	0.23	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	1	U	1	U	1	U	1	U	1	U	0.75	U	0.75	U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	1	U	1	U	1	U	1	U	1	U	0.29	U	0.29	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	1	U	1	U	1	U	1	U	1	U	0.41	U	0.41	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	1	U	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	1	U	1	U	1	U	1	U	1	U	0.17	U	0.17	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1	U	1	U	1	U	1	U	1	U	0.2	U	0.2	U
1,2-Dichloroethane	UG/L	5.6	16%	0.5	34	42	268	1	U	1	U	1	U	1	U	1	U	0.21	U	0.21	U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	1	U	1	U	1	U	1	U	1	U	0.14	U	0.14	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1	U	1	U	1	U	1	U	1	U	0.16	U	0.16	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1	U	1	U	1	U	1	U	1	U	0.16	U	0.16	U
Acetone	UG/L	2600	17%			45	262	5	U	5	U	5	U	5	U	5	U	1.3	U	1.3	U
Benzene	UG/L	0.48	2%	1	0	5	268	1	U	1	U	1	U	1	U	1	U	0.16	U	0.16	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	1	U	1	U	1	U	1	U	1	U	0.38	U	0.39	U
Bromoform	UG/L	0	0%	80	0	0	268	1	U	1	U	1	U	1	U	1	U	0.26	U	0.26	UJ
Carbon disulfide	UG/L	0	0%			0	268	1	U	1	U	1	U	1	U	1	U	0.19	U	0.19	UJ
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	1	U	1	U	1	U	1	U	1	U	0.27	U	0.27	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	1	U	1	U	1	U	1	U	1	U	0.18	U	0.32	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	1	U	1	U	1	U	1	U	1	U	0.32	U	0.32	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1	U	1	U	1	U	0.65	J	1	UJ	0.93	J	0.61	J
Chloroform	UG/L	71	8%	7	7	22	268	1	U	1	U	1	U	1	U	1	U	0.34	U	0.34	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	35		42		69		780		90		78		68	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	1	U	1	U	1	U	1	U	1	U	0.36	U	0.36	U
Cyclohexane	UG/L	0.3	0%			1	268	1	U	1	U	1	U	1	U	1	U	0.22	U	0.53	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	1	U	1	U	1	U	1	U	1	U	0.28	U	0.29	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	1	U	1	U	1	U	1	U	1	U	0.18	U	0.18	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	1	U	1	U	1	U	1	U	1	U	0.19	U	0.19	U
Methyl Acetate	UG/L	6	1%			2	253	1	U	1	UJ	1	U	1	UJ	1	UJ	0.17	U	0.17	UJ
Methyl bromide	UG/L	2.1	0%	5	0	1	262	1	U	1	U	1	U	1	U	1	UJ	0.28	U	0.28	U
Methyl butyl ketone	UG/L	0	0%			0	268	5	U	5	U	5	U	5	UJ	5	UJ	1.2	U	1.2	U
Methyl chloride	UG/L	0	0%	5	0	0	268	1	U	1	U	1	U	1	U	1	UJ	0.34	U	0.35	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	1	U	1	U	1	U	1	U	1	U	0.22	U	0.5	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	5	U	5	U	5	U	5	U	5	UJ	1.3	U	1.3	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	5	U	5	U	5	U	5	U	5	UJ	0.91	U	0.91	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	1	U	1	U	1	U	1	U	1	U	0.16	U	0.16	U
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	1	U	1	U	1	U	1	U	0.44	UJ	0.44	U
Styrene	UG/L	0	0%	5	0	0	268	1	U	1	U	1	U	1	U	1	U	0.18	U	0.18	U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								MWT-7		MWT-7		MWT-7		MWT-7		MWT-7		MWT-7	
Matrix								GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20165		ALBW20180		ALBW20195		ALBW20210		ALBW20225		ALBW20240		ALBW20255	
Sample Date								12/15/2009		7/1/2010		12/18/2010		7/22/2011		12/13/2011		6/19/2012		12/13/2012	
QC Type								SA		SA		SA		SA		SA		SA		SA	
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM	
Sample Round								8		9		10		11		12		13		14	
Filtered								Total		Total		Total		Total		Total		Total		Total	
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.26	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.21	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.31	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.23	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.38	U	0.25	U	0.25	U	0.94	J	1.2		0.25	U	0.25	U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.48	J	0.78	J	0.98	J	0.11	U	0.11	U	0.59	J	0.5	J
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.41	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	UJ
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.39	U	0.44	U	0.44	U	0.44	UJ	0.44	U	0.44	U	0.44	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.17	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.2	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U
1,2-Dichloroethane	UG/L	5.8	16%	0.6	34	42	268	0.21	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	UJ	0.1	U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.32	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.36	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.39	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U
Acetone	UG/L	2600	17%			45	262	1.3	U	5	U	5	UJ	5	U	5	U	5	UJ	5	U
Benzene	UG/L	0.48	2%	1	0	5	268	0.41	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.39	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	UJ	0.25	UJ
Bromoform	UG/L	0	0%	80	0	0	268	0.26	UJ	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U
Carbon disulfide	UG/L	0	0%			0	268	0.19	UJ	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.27	U	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	UJ	0.5	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.32	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.32	U	0.1	U	0.1	U	0.1	UJ	0.1	U	0.1	U	0.1	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	0.32	UJ	1	U	1	U	1	U	1	UJ	1	UJ	1	U
Chloroform	UG/L	71	8%	7	7	22	268	0.34	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	140		170		120		12		86		140		100	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.36	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	UJ
Cyclohexane	UG/L	0.3	0%			1	268	0.53	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	UJ
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.29	U	0.25	UJ	0.25	U	0.25	U	0.25	UJ	0.25	U	0.25	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.18	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.19	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl Acetate	UG/L	8	1%			2	253	0.5	U	0.19	U	0.19	U	0.19	U	0.19	U	0.19	UR	0.19	UJ
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.28	U	0.8	U	0.6	UJ	0.6	UJ	0.8	U	0.8	UJ	0.8	UJ
Methyl butyl ketone	UG/L	0	0%			0	268	1.2	U	1	U	1	U	1	U	1	U	1	UJ	1	U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.35	UJ	0.33	U	0.33	U	0.33	U	0.33	UJ	0.33	U	0.33	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.5	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1.3	U	1	U	1	U	1	U	1	U	1	UJ	1	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	0.91	U	1	U	1	U	1	U	1	U	1	UJ	1	UJ
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.16	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Methylene chloride	UG/L	18	4%	5	7	12	268	0.44	U	1	U	1	U	1	U	1	U	1	U	1	U
Styrene	UG/L	0	0%	5	0	0	268	0.18	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								MWT-7		MWT-7		MWT-7		MWT-7		PT-24		PT-24		PT-24	
Matrix								GW		GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20268		ALBW20283		ALBW20299		ALBW20315		ALBW20061		ALBW20076		ALBW20090	
Sample Date								7/10/2013		12/13/2013		6/20/2014		12/16/2014		1/2/2007		3/15/2007		6/5/2007	
QC Type								SA		SA		SA		SA		SA		SA		SA	
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM	
Sample Round								15		16		17		18		1		2		3	
Filtered								Total		Total		Total		Total		Total		Total		Total	
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5	U	1	U	0.5	U	2.5	U	1	U	1	U	1	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.16	U	0.36	U	0.18	U	0.9	U	1	U	1	U	1	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5	U	1	U	0.5	U	2.5	U	1	U	1	U	1	UJ
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13	U	0.26	U	0.13	U	0.65	U	1	U	1	U	1	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25	U	0.5	U	0.25	U	1.3	U	0.68	J	1	U	0.75	J
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.5	J	0.22	U	0.89	J	1.8	J	1	U	1	U	1	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.5	U	0.25	U	1.3	U	1	U	1	U	1	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44	U	0.88	U	0.44	U	2.2	U	1	U	1	U	1	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25	U	0.5	U	0.25	U	1.3	U	1	U	1	U	1	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21	U	0.42	U	0.21	U	1.1	U	1	U	1	U	1	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1	U	0.2	U	0.1	U	0.5	U	1	U	1	U	1	U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13	U	0.26	U	0.13	U	0.65	U	1	U	1	U	1	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25	U	0.5	U	0.25	U	1.3	U	1	U	1	U	1	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28	U	0.56	U	0.28	U	1.4	U	1	U	1	U	1	U
Acetone	UG/L	2600	17%			45	262	5	U	10	UJ	5	U	25	U	5	U	5	U	5	U
Benzene	UG/L	0.48	2%	1	0	5	268	0.25	U	0.5	U	0.25	U	1.3	U	1	U	1	U	1	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25	U	0.5	U	0.25	U	1.3	U	1	U	1	U	1	U
Bromoform	UG/L	0	0%	80	0	0	268	0.5	U	1	U	0.5	U	2.5	U	1	U	1	U	1	U
Carbon disulfide	UG/L	0	0%			0	268	0.6	U	1.2	U	0.6	U	3	U	1	U	1	U	1	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5	U	1	U	0.5	UJ	2.5	U	1	U	1	U	1	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.5	U	0.25	U	1.3	U	1	U	1	U	1	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1	U	0.2	U	0.1	U	0.5	U	1	U	1	U	1	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	2	U	4	U	2	U	10	U	1	U	1	U	1	U
Chloroform	UG/L	71	8%	7	7	22	268	0.14	U	0.53	J	0.14	U	0.95	J	1	U	1	U	1	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	230		140		160		380		84		38		60	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11	U	0.22	U	0.11	U	0.55	U	1	U	1	U	1	U
Cyclohexane	UG/L	0.3	0%			1	268	0.25	U	0.5	U	0.25	U	1.3	U	1	U	1	U	1	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25	U	0.5	U	0.25	U	1.3	U	1	U	1	U	1	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11	U	0.22	U	0.11	U	0.55	U	1	U	1	U	1	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1	U	0.2	U	0.1	U	0.5	U	1	U	1	U	1	U
Methyl Acetate	UG/L	8	1%			2	253	0.19	U	0.38	U	0.19	U	0.95	U	1	U	1	UJ	1	U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	2	U	4	U	2	UJ	10	U	1	U	1	U	1	U
Methyl butyl ketone	UG/L	0	0%			0	268	1	U	2	U	1	U	5	U	5	U	5	U	5	U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33	U	0.66	U	0.33	U	1.7	U	1	U	1	U	1	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1	U	0.2	U	0.1	U	0.5	U	1	U	1	U	1	U
Methyl ethyl ketone	UG/L	4900	6%			22	268	1	U	2	U	1	U	5	U	5	U	5	U	5	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1	UJ	2	U	1	U	5	U	5	U	5	U	5	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2	U	0.4	U	0.2	U	1	U	1	U	1	U	1	U
Methylene chloride	UG/L	16	4%	5	7	12	268	1	U	2	U	1	U	5	U	1	U	1	U	1	U
Styrene	UG/L	0	0%	5	0	0	268	0.11	U	0.22	U	0.11	U	0.55	U	1	U	1	U	1	U

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Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Area								ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL	ASH LANDFILL
Loc ID								PT-24	PT-24	PT-24	PT-24	PT-24	PT-24	PT-24
Matrix								GW	GW	GW	GW	GW	GW	GW
Sample ID								ALBW20105	ALBW20119	ALBW20134	ALBW20149	ALBW20164	ALBW20179	ALBW20194
Sample Date								11/13/2007	6/26/2008	12/12/2008	6/2/2009	12/15/2009	6/30/2010	12/17/2010
QC Type								SA	SA	SA	SA	SA	SA	SA
Study ID								LTM	LTM	LTM	LTM	LTM	LTM	LTM
Sample Round								4	5	6	7	8	9	10
Filtered								Total	Total	Total	Total	Total	Total	Total
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
Volatile Organic Compounds														
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	1 U	1 U	0.26 U	0.26 U	0.26 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	1 U	1 U	0.21 U	0.21 U	0.21 U	0.18 U	0.18 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	1 U	1 UJ	0.31 U	0.31 U	0.31 U	0.5 UJ	0.5 U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	1 U	1 U	0.23 U	0.23 U	0.23 U	0.13 U	0.13 U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.56 J	0.69 J	0.75 U	0.75 U	0.38 U	0.54 J	0.54 J
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	1 U	1 U	0.29 U	0.29 U	0.29 U	0.11 U	0.11 U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	1 U	1 U	0.41 U	0.41 U	0.41 U	0.25 U	0.25 U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	1 U	1 UJ	1 UJ	1 UJ	0.39 U	0.44 U	0.44 U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	1 U	1 U	0.17 U	0.17 U	0.17 U	0.25 U	0.25 U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1 U	1 U	0.2 U	0.2 U	0.2 U	0.21 U	0.21 U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	1 U	1 U	0.21 U	0.21 U	0.21 U	0.1 U	0.1 U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	1 U	1 U	0.14 U	0.14 U	0.32 U	0.13 U	0.13 U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1 U	1 U	0.16 U	0.16 U	0.36 U	0.25 U	0.25 U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	1 U	1 U	0.16 U	0.16 U	0.39 U	0.28 U	0.28 U
Acetone	UG/L	2600	17%			45	262	5 U	5 U	1.3 U	1.3 U	1.3 U	5 U	5 UJ
Benzene	UG/L	0.48	2%	1	0	5	268	1 U	1 U	0.16 U	0.16 U	0.41 U	0.25 U	0.25 U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	1 U	1 U	0.38 U	0.38 U	0.38 U	0.25 U	0.25 U
Bromoform	UG/L	0	0%	80	0	0	268	1 U	1 U	0.26 U	0.26 UJ	0.26 UJ	0.5 U	0.5 U
Carbon disulfide	UG/L	0	0%			0	268	1 U	1 U	0.19 U	0.19 UJ	0.19 UJ	0.6 U	0.6 U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	1 U	1 U	0.27 U	0.27 U	0.27 U	0.5 U	0.5 U
Chlorobenzene	UG/L	0	0%	5	0	0	268	1 U	1 U	0.18 U	0.32 U	0.32 U	0.25 U	0.25 U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	1 U	1 U	0.32 U	0.32 U	0.32 U	0.1 U	0.1 U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1 U	1 UJ	0.32 U	0.32 U	0.32 UJ	1 U	1 U
Chloroform	UG/L	71	8%	7	7	22	268	1 U	1 U	0.34 U	0.34 U	0.34 U	0.14 U	0.16 J
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	39	48	34	32	28	33	30
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	1 U	1 U	0.38 U	0.38 U	0.38 U	0.11 U	0.11 U
Cyclohexane	UG/L	0.3	0%			1	268	1 U	1 U	0.22 U	0.53 U	0.53 U	0.25 U	0.25 U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	1 U	1 U	0.28 U	0.29 U	0.29 U	0.25 U	0.25 U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	1 U	1 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	1 U	1 U	0.19 U	0.19 U	0.19 U	0.1 U	0.1 U
Methyl Acetate	UG/L	6	1%			2	253	1 UJ	1 UJ	0.17 U	0.17 UJ	0.5 U	0.19 UJ	0.19 U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	1 U	1 UJ	0.28 U	0.28 U	0.28 U	0.8 UJ	0.8 UJ
Methyl butyl ketone	UG/L	0	0%			0	268	5 UJ	5 UJ	1.2 U	1.2 U	1.2 U	1 UJ	1 U
Methyl chloride	UG/L	0	0%	5	0	0	268	1 U	1 UJ	0.34 U	0.35 U	0.35 UJ	0.33 U	0.33 U
Methyl cyclohexane	UG/L	0.17	0%			1	268	1 U	1 U	0.22 U	0.5 U	0.5 U	0.1 U	0.1 U
Methyl ethyl ketone	UG/L	4900	8%			22	268	5 U	5 UJ	1.3 U	1.3 U	1.3 U	1 U	1 U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	5 U	5 UJ	0.91 U	0.91 U	0.91 U	1 U	1 U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	1 U	1 U	0.16 U	0.16 U	0.16 U	0.2 U	0.2 U
Methylene chloride	UG/L	18	4%	5	7	12	268	1 U	1 U	0.44 UJ	0.44 U	0.44 U	1 U	1 U
Styrene	UG/L	0	0%	5	0	0	268	1 U	1 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								PT-24		PT-24		PT-24		PT-24		PT-24		PT-24	
Matrix								GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20209		ALBW20224		ALBW20239		ALBW20254		ALBW20267		ALBW20282		ALBW20298	
Sample Date								7/21/2011		12/13/2011		6/19/2012		12/12/2012		7/9/2013		12/11/2013		6/20/2014	
QC Type								SA		SA		SA		SA		SA		SA		SA	
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM	
Sample Round								11		12		13		14		15		16		17	
Filtered								Total		Total		Total		Total		Total		Total		Total	
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.78	J	0.48	J	0.57	J	0.32	J	0.51	J	0.52	J	0.25	U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1	U	0.1	U	0.1	UJ	0.1	U	0.1	U	0.1	U	0.1	U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U
Acetone	UG/L	2600	17%			45	262	5	U	5	U	5	UJ	5	U	5	U	5	U	5	U
Benzene	UG/L	0.48	2%	1	0	5	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25	U	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	U
Bromoform	UG/L	0	0%	80	0	0	268	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Carbon disulfide	UG/L	0	0%			0	268	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	UJ
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1	U	1	UJ	1	UJ	1	U	2	U	2	U	2	U
Chloroform	UG/L	71	8%	7	7	22	268	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U
Cis-1,2-Dichloroethene	UG/L	820	68%	5	166	235	268	37		21		32		18		24		23		23	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
Cyclohexane	UG/L	0.3	0%			1	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	UJ	0.25	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl Acetate	UG/L	6	1%			2	253	0.19	U	0.19	U	0.19	UR	0.19	UJ	0.19	U	0.19	U	0.19	U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.8	UJ	0.8	U	0.8	UJ	0.8	UJ	2	U	2	UJ	2	UJ
Methyl butyl ketone	UG/L	0	0%			0	268	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33	UJ	0.33	UJ	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1	U	1	U	1	UJ	1	U	1	UJ	1	U	1	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Styrene	UG/L	0	0%	5	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
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Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								PT-24		MW-56		MW-56		MW-56		MW-56		MW-56	
Matrix								GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20314		ALBW20072		ALBW20101		ALBW20124		ALBW20139		ALBW20154		ALBW20169	
Sample Date								12/19/2014		1/4/2007		6/6/2007		6/26/2008		12/11/2008		6/4/2009		12/18/2009	
QC Type								SA		SA		SA		SA		SA		SA		SA	
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM	
Sample Round								18		1		3		5		6		7		8	
Filtered								Total		Total		Total		Total		Total		Total		Total	
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5	U	1	U	1	U	1	U	0.26	UJ	0.26	U	0.26	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18	U	1	U	1	U	1	U	0.21	U	0.21	U	0.21	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5	U	1	U	1	UJ	1	UJ	0.31	U	0.31	U	0.31	UJ
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13	U	1	U	1	U	1	U	0.23	U	0.23	U	0.23	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.29	J	1	U	1	U	1	U	0.75	U	0.75	U	0.38	U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11	U	1	U	1	U	1	U	0.29	U	0.29	U	0.29	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	1	U	1	U	1	U	0.41	U	0.41	U	0.41	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44	U	1	U	1	U	1	UJ	1	UJ	1	U	0.39	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25	U	1	U	1	U	1	U	0.17	U	0.17	U	0.17	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21	U	1	U	1	U	1	U	0.2	U	0.2	U	0.2	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1	U	1	U	1	U	1	U	0.21	U	0.21	U	0.21	U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13	U	1	U	1	U	1	U	0.14	U	0.14	U	0.32	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25	U	1	U	1	U	1	U	0.16	U	0.16	U	0.36	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28	U	1	U	1	U	1	U	0.16	U	0.16	U	0.39	U
Acetone	UG/L	2600	17%			45	262	5	U	5	U	5	U	5	U	1.3	U	1.3	UJ	1.3	U
Benzene	UG/L	0.48	2%	1	0	5	268	0.25	U	1	U	1	U	1	U	0.18	U	0.16	U	0.41	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25	U	1	U	1	U	1	U	0.38	U	0.39	U	0.39	U
Bromoform	UG/L	0	0%	80	0	0	268	0.5	U	1	U	1	U	1	U	0.26	U	0.26	U	0.26	U
Carbon disulfide	UG/L	0	0%			0	268	0.6	U	1	U	1	U	1	U	0.19	U	0.19	U	0.19	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5	U	1	U	1	U	1	U	0.27	UJ	0.27	U	0.27	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	1	U	1	U	1	U	0.18	U	0.32	U	0.32	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1	U	1	U	1	U	1	U	0.32	U	0.32	U	0.32	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	2	U	1	U	1	U	1	UJ	0.32	U	0.32	U	0.32	UJ
Chloroform	UG/L	71	8%	7	7	22	268	0.14	U	1	U	1	U	1	U	0.34	U	0.34	U	0.34	U
Cis-1,2-Dichloroethene	UG/L	820	68%	5	166	235	268	13		1.2		1.7		1.3		0.4	J	1		0.56	J
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11	U	1	U	1	U	1	U	0.36	U	0.36	U	0.36	U
Cyclohexane	UG/L	0.3	0%			1	268	0.25	U	1	U	1	U	1	U	0.22	U	0.53	U	0.53	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25	U	1	U	1	U	1	U	0.28	UJ	0.29	U	0.29	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11	U	1	U	1	U	1	U	0.18	U	0.18	U	0.18	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1	U	1	U	1	U	1	U	0.19	U	0.19	U	0.19	U
Methyl Acetate	UG/L	6	1%			2	253	0.19	U	1	U	1	U	1	UJ	0.17	U	0.17	U	0.5	U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	2	U	1	U	1	U	1	UJ	0.28	U	0.28	U	0.28	UJ
Methyl butyl ketone	UG/L	0	0%			0	268	1	U	5	U	5	U	5	UJ	1.2	U	1.2	U	1.2	U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33	U	1	U	1	U	1	UJ	0.34	U	0.35	U	0.35	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1	U	1	U	1	U	1	U	0.22	U	0.5	U	0.5	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1	U	5	U	5	U	5	UJ	1.3	U	1.3	U	1.3	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1	U	5	U	5	U	5	UJ	0.91	U	0.91	U	0.91	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2	U	1	U	1	U	1	U	0.16	U	0.16	U	0.16	U
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	1	U	1	U	1	U	0.44	UJ	0.44	U	0.44	U
Styrene	UG/L	0	0%	5	0	0	268	0.11	U	1	U	1	U	1	U	0.18	U	0.18	U	0.18	U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
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Seneca Army Depot Activity

Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								MW-56		MW-56		MW-56		MW-56		MW-56		MW-56		MW-56	
Matrix								GW		GW		GW		GW		GW		GW		GW	
Sample ID								ALBW20184		ALBW20199		ALBW20214		ALBW20229		ALBW20244		ALBW20259		ALBW20272	
Sample Date								7/1/2010		12/19/2010		10/4/2011		12/12/2011		6/18/2012		12/14/2012		7/9/2013	
QC Type								SA		SA		SA		SA		SA		SA		SA	
Study ID								LTM		LTM		LTM		LTM		LTM		LTM		LTM	
Sample Round								9		10		11		12		13		14		15	
Filtered								Total		Total		Total		Total		Total		Total		Total	
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds																					
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	UJ	0.1	U	0.1	U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U	0.28	U
Acetone	UG/L	2600	17%			45	262	5	U	5	UJ	5	U	5	U	5	UJ	5	U	5	U
Benzene	UG/L	0.48	2%	1	0	5	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	UJ	0.25	U	0.25	U
Bromoform	UG/L	0	0%	80	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Carbon disulfide	UG/L	0	0%			0	268	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	1	U	1	UJ	1	U	1	U	1	UJ	1	U	2	U
Chloroform	UG/L	71	8%	7	7	22	268	0.14	U	0.24	J	1		0.14	U	0.14	U	0.14	U	0.14	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	0.61	J	0.86	J	2.3		0.95	J	2.2		0.85	J	2.2	
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
Cyclohexane	UG/L	0.3	0%			1	268	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl Acetate	UG/L	6	1%			2	253	0.19	U	0.19	U	0.19	U	0.19	U	0.19	UR	0.19	UJ	0.19	U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	0.8	U	0.8	U	0.8	U	0.8	U	0.8	UJ	0.8	UJ	2	U
Methyl butyl ketone	UG/L	0	0%			0	268	1	U	1	U	1	U	1	U	1	UJ	1	U	1	U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U	0.33	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1	U	1	U	1	U	1	U	1	UJ	1	U	1	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1	U	1	U	1	U	1	U	1	UJ	1	U	1	UJ
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Styrene	UG/L	0	0%	5	0	0	268	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U	0.11	U

Appendix B

Table B-1
Complete Groundwater Data for Ash Landfill Long Term Monitoring
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

Area								ASH LANDFILL		ASH LANDFILL		ASH LANDFILL	
Loc ID								MW-56		MW-56		MW-56	
Matrix								GW		GW		GW	
Sample ID								ALBW20287		ALBW20303		ALBW20319	
Sample Date								12/11/2013		6/22/2014		12/19/2014	
QC Type								SA		SA		SA	
Study ID								LTM		LTM		LTM	
Sample Round								16		17		18	
Filtered								Total		Total		Total	
Parameter	Unit	Maximum Value	Frequency of Detections	Cleanup Goals	Number of Exceedances	Number of Times Detects	Number of Samples Analyzed	Value	Qual	Value	Qual	Value	Qual
Volatile Organic Compounds													
1,1,1-Trichloroethane	UG/L	15	2%	5	1	5	268	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	UG/L	0	0%	5	0	0	268	0.18	U	0.18	U	0.18	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/L	0	0%	5	0	0	268	0.5	U	0.5	UJ	0.5	U
1,1,2-Trichloroethane	UG/L	0	0%	1	0	0	268	0.13	U	0.13	U	0.13	U
1,1-Dichloroethane	UG/L	62	13%	5	1	34	268	0.25	U	0.25	U	0.25	U
1,1-Dichloroethene	UG/L	2.6	12%	5	0	33	268	0.11	U	0.11	U	0.11	U
1,2,4-Trichlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U
1,2-Dibromo-3-chloropropane	UG/L	0	0%	0.04	0	0	268	0.44	U	0.44	U	0.44	U
1,2-Dibromoethane	UG/L	0	0%	0.0006	0	0	268	0.25	U	0.25	U	0.25	U
1,2-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.21	U	0.21	U	0.21	U
1,2-Dichloroethane	UG/L	5.6	16%	0.6	34	42	268	0.1	U	0.1	U	0.1	U
1,2-Dichloropropane	UG/L	0.29	0%	1	0	1	268	0.13	U	0.13	U	0.13	U
1,3-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	UG/L	0	0%	3	0	0	268	0.28	U	0.28	U	0.28	U
Acetone	UG/L	2600	17%			45	262	5	U	5	U	5	U
Benzene	UG/L	0.48	2%	1	0	5	268	0.25	U	0.25	U	0.25	U
Bromodichloromethane	UG/L	0	0%	80	0	0	268	0.25	U	0.25	U	0.25	U
Bromoform	UG/L	0	0%	80	0	0	268	0.5	U	0.5	U	0.5	U
Carbon disulfide	UG/L	0	0%			0	268	0.6	U	0.6	U	0.6	U
Carbon tetrachloride	UG/L	0	0%	5	0	0	268	0.5	U	0.5	U	0.5	U
Chlorobenzene	UG/L	0	0%	5	0	0	268	0.25	U	0.25	U	0.25	U
Chlorodibromomethane	UG/L	0	0%	80	0	0	268	0.1	U	0.1	U	0.1	U
Chloroethane	UG/L	1.1	3%	5	0	7	268	2	U	2	UJ	2	U
Chloroform	UG/L	71	8%	7	7	22	268	0.14	U	0.14	U	0.14	U
Cis-1,2-Dichloroethene	UG/L	820	88%	5	166	235	268	1.7		0.98	J	0.89	J
Cis-1,3-Dichloropropene	UG/L	0	0%	0.4	0	0	268	0.11	U	0.11	U	0.11	U
Cyclohexane	UG/L	0.3	0%			1	268	0.25	U	0.25	U	0.25	U
Dichlorodifluoromethane	UG/L	0.3	0%	5	0	1	268	0.25	UJ	0.25	U	0.25	U
Ethyl benzene	UG/L	9.2	7%	5	1	19	268	0.11	U	0.11	U	0.11	U
Isopropylbenzene	UG/L	0.1	0%	5	0	1	268	0.1	U	0.1	U	0.1	U
Methyl Acetate	UG/L	6	1%			2	253	0.19	U	0.19	U	0.19	U
Methyl bromide	UG/L	2.1	0%	5	0	1	262	2	UJ	2	U	2	U
Methyl butyl ketone	UG/L	0	0%			0	268	1	U	1	U	1	U
Methyl chloride	UG/L	0	0%	5	0	0	268	0.33	U	0.33	U	0.33	U
Methyl cyclohexane	UG/L	0.17	0%			1	268	0.1	U	0.1	U	0.1	U
Methyl ethyl ketone	UG/L	4900	8%			22	268	1	U	1	U	1	U
Methyl isobutyl ketone	UG/L	1.9	0%			1	268	1	U	1	U	1	U
Methyl Tertbutyl Ether	UG/L	0	0%			0	268	0.2	U	0.2	U	0.2	U
Methylene chloride	UG/L	18	4%	5	7	12	268	1	U	1	U	1	U
Styrene	UG/L	0	0%	5	0	0	268	0.11	U	0.11	U	0.11	U

APPENDIX C

REGRESSION PLOTS

Figure C-1
Regression Plot of Well Concentrations At MWT-25
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

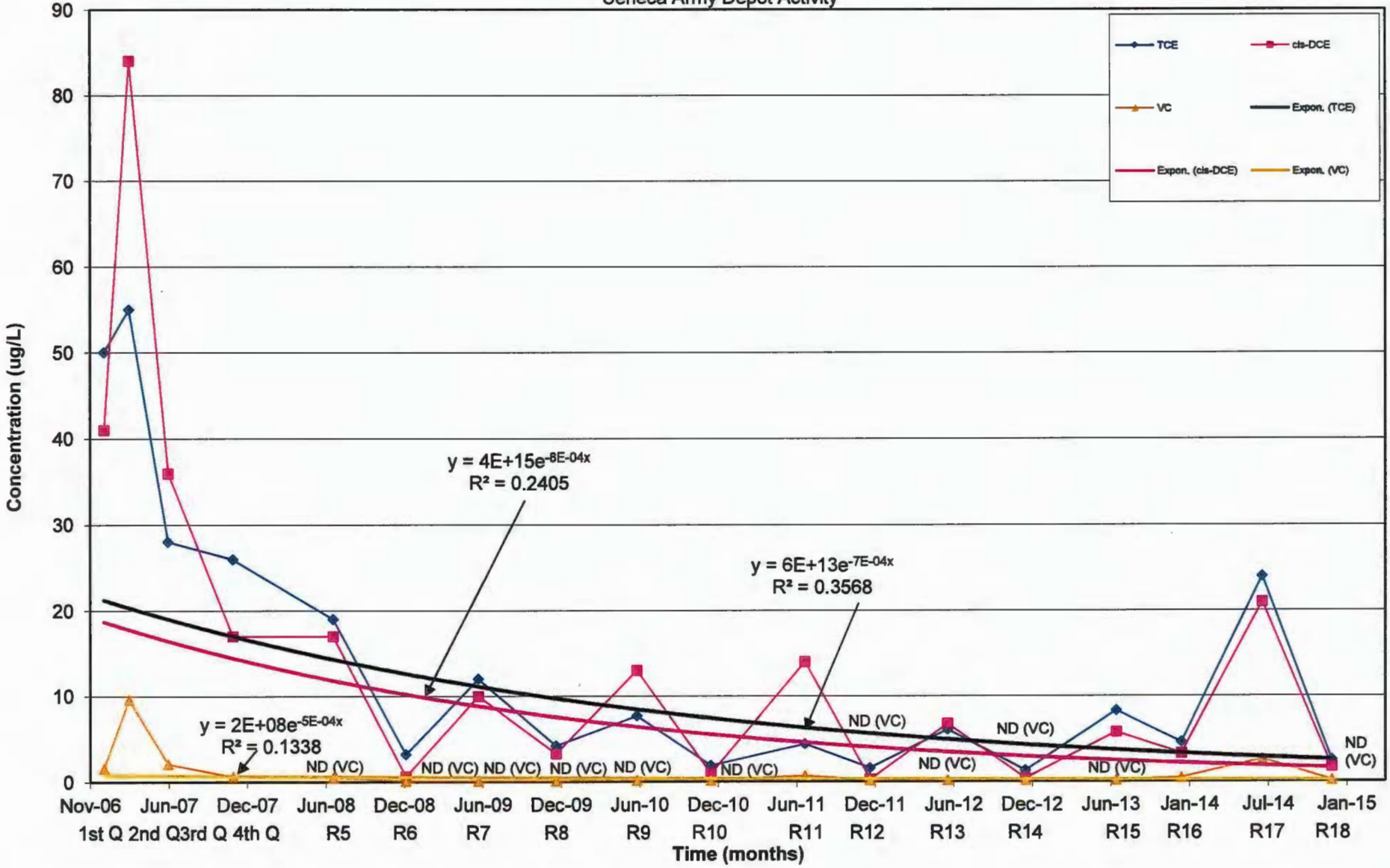

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Figure C-3
Regression Plot of Well Concentrations At MWT-27
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

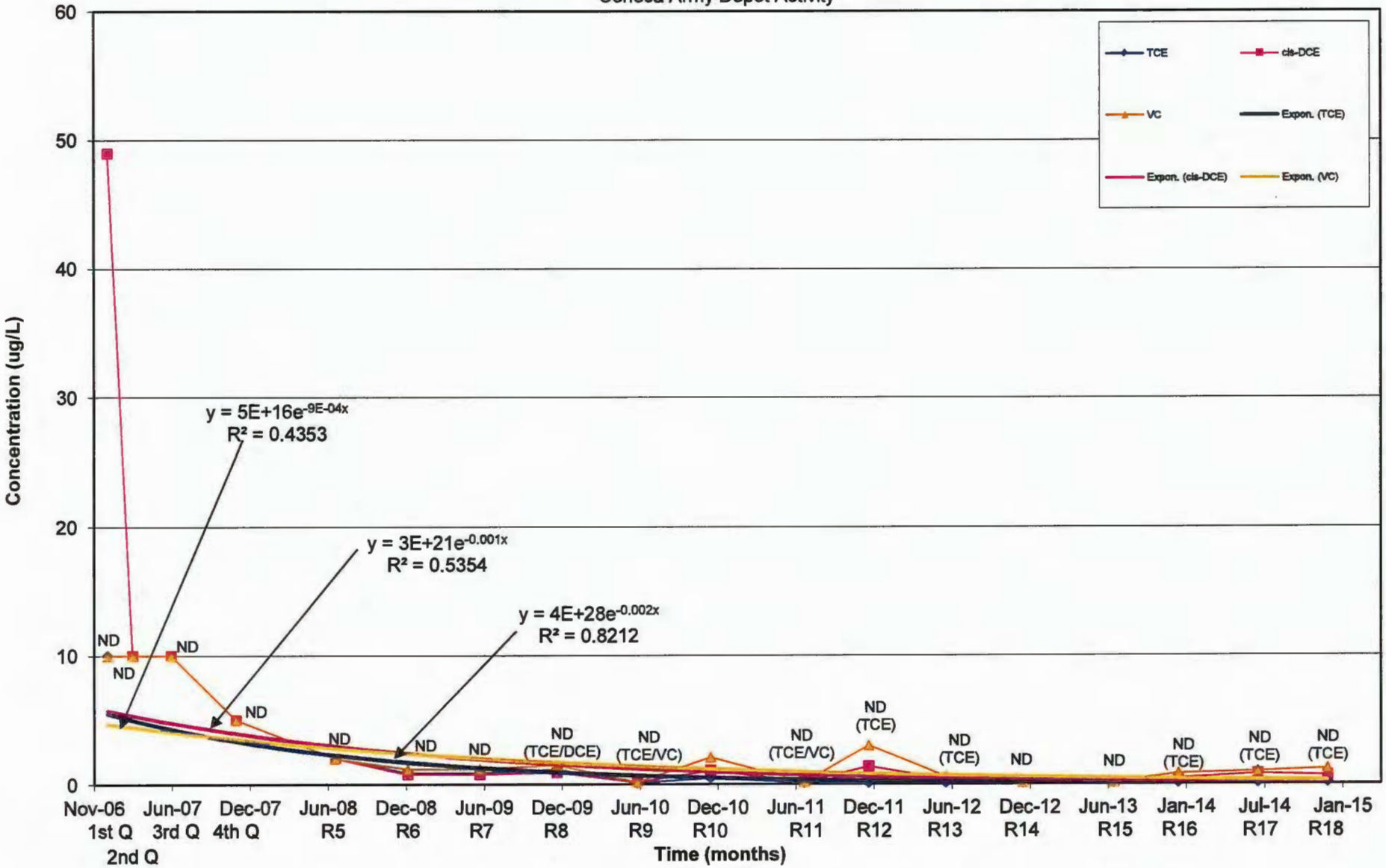

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Figure C-5
Regression Plot of Well Concentrations At MWT-29
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

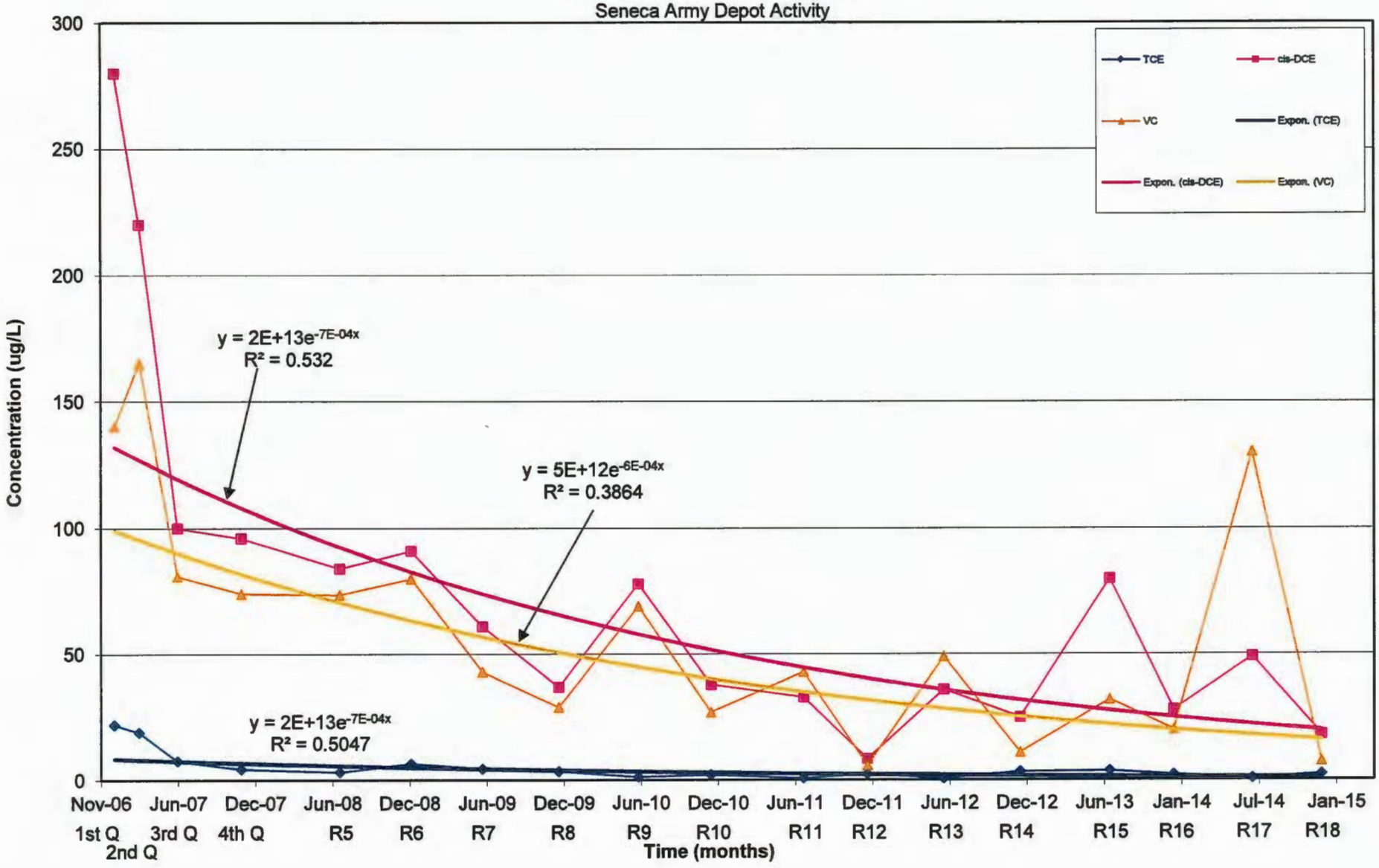

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Figure C-7
Regression Plot of Well Concentrations At PT-22
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

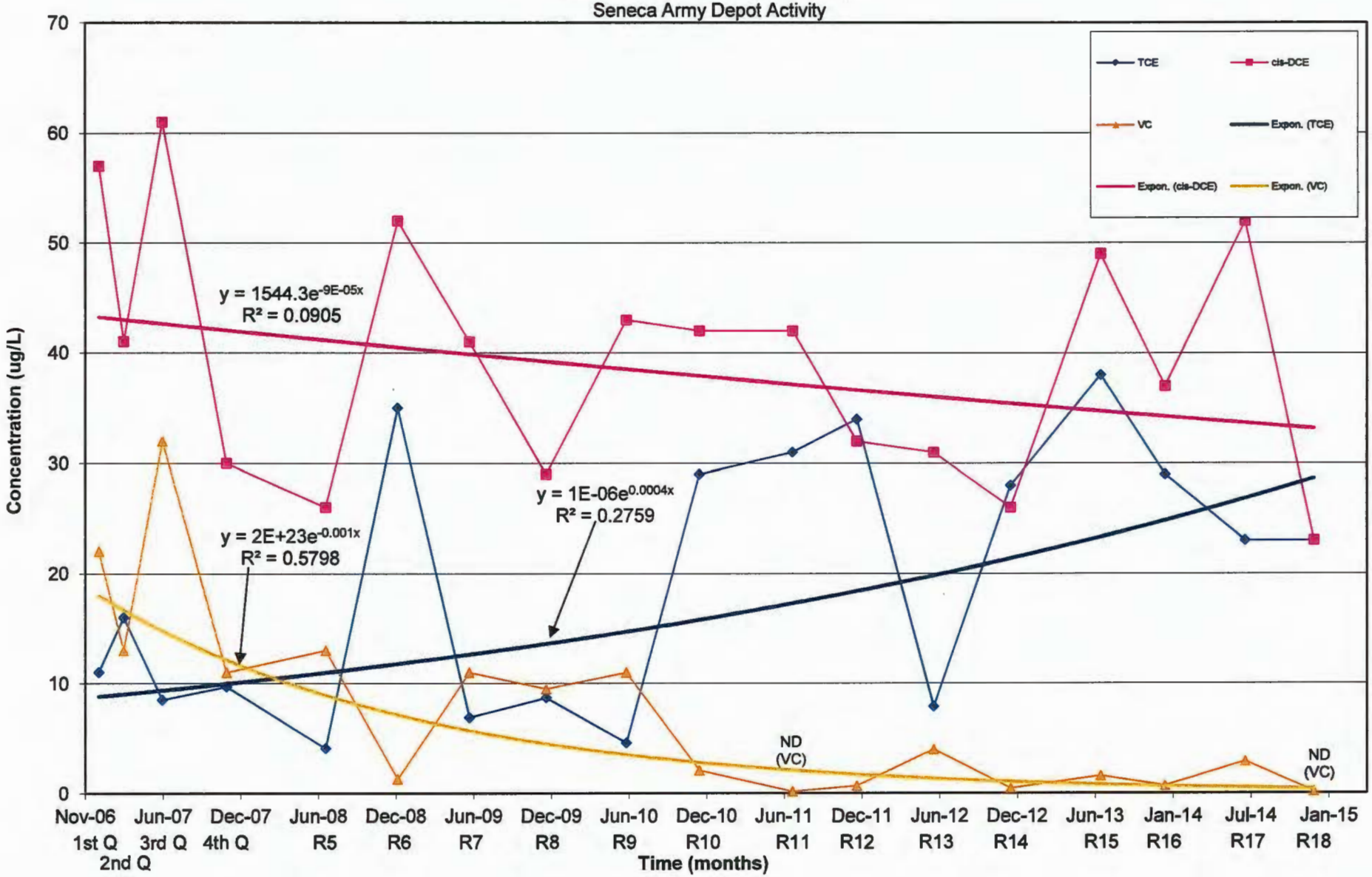

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Fig. C-9
Regression Plot of Well Concentrations At MWT-24
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

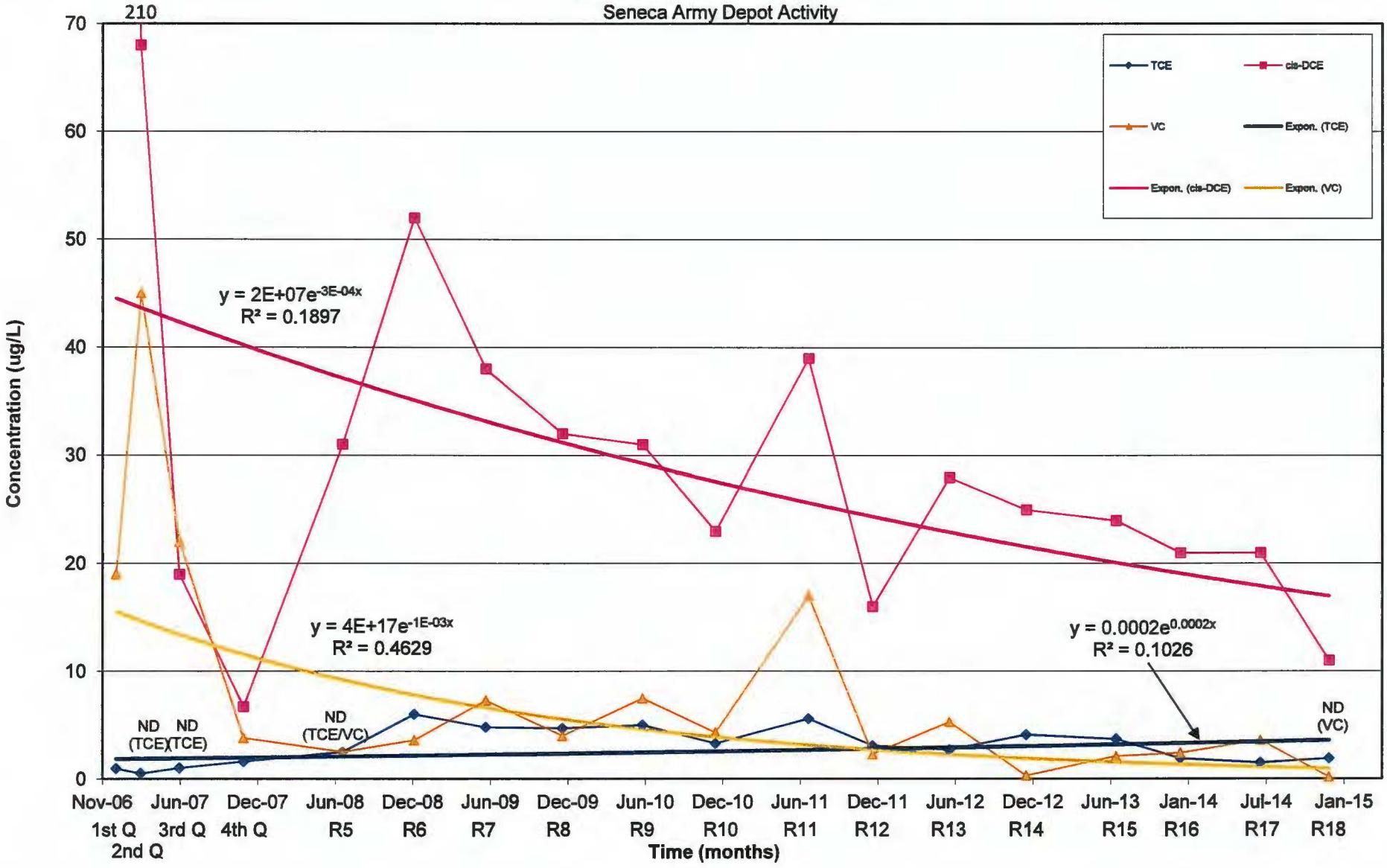

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Figure C-11
Regression Plot of Well Concentrations At PT-18A
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity

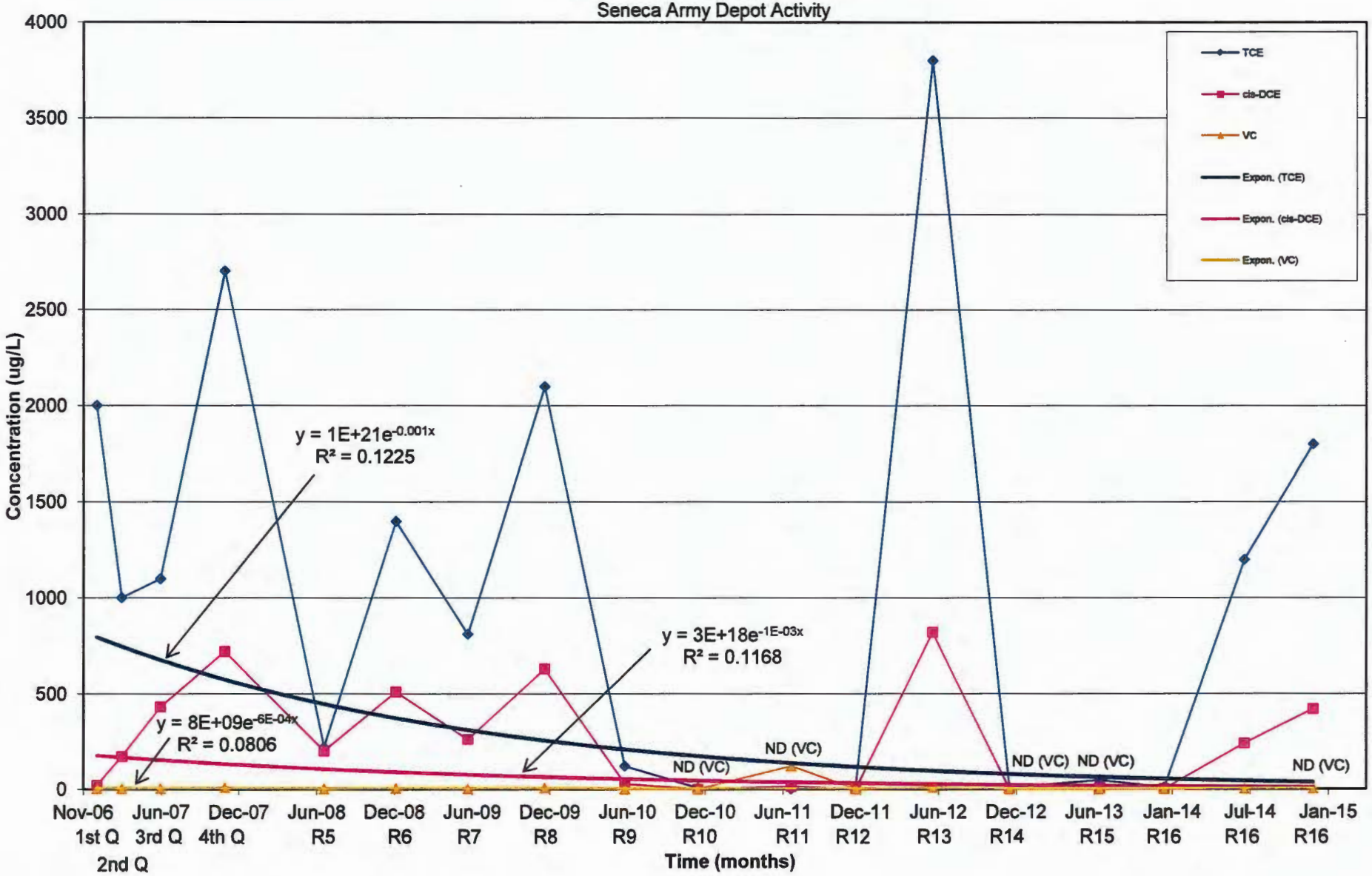

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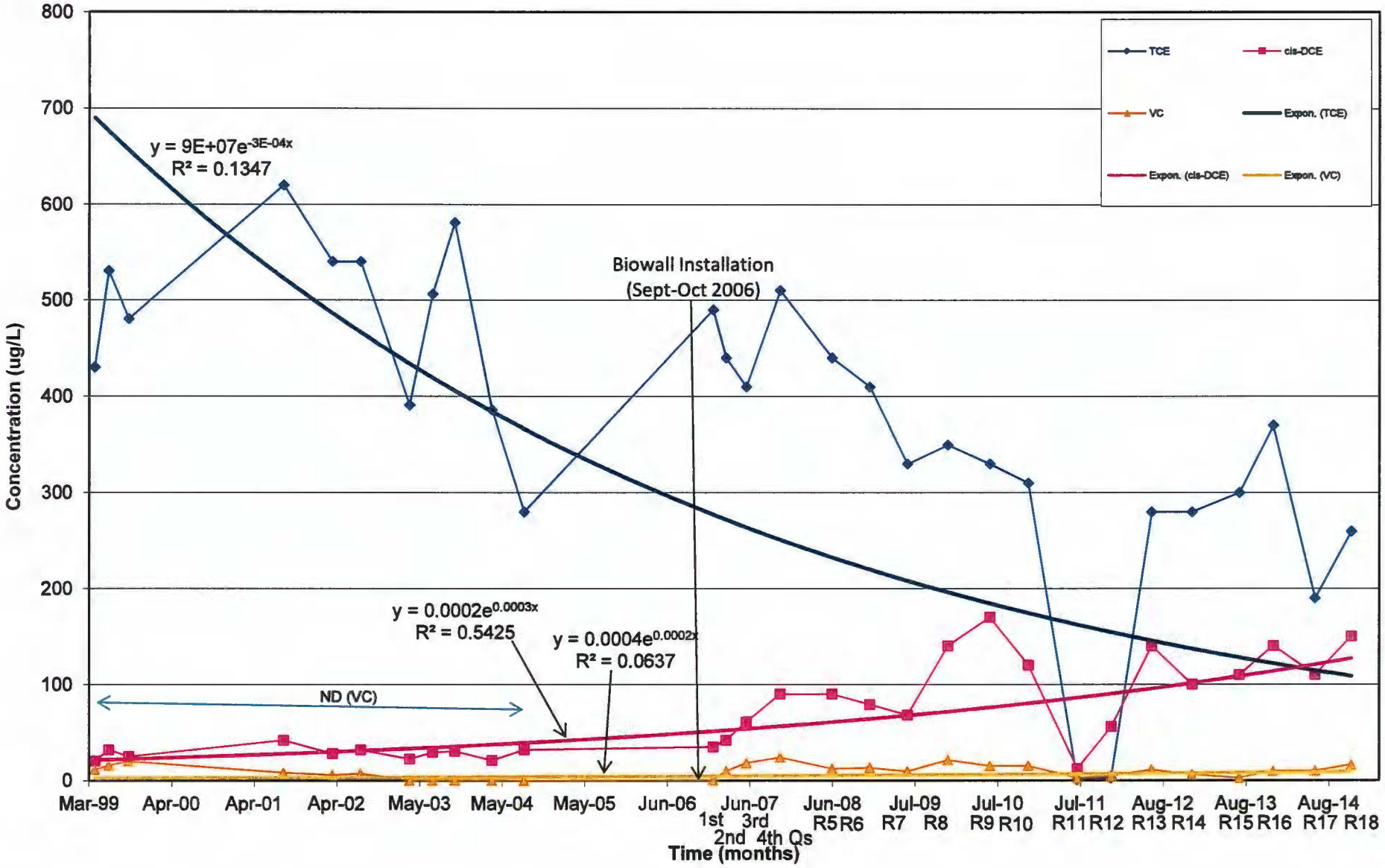
Figure C-13
Regression Plot of Well Concentrations At MWT-7
Ash Landfill Annual Report, Year 8
Seneca Army Depot Activity



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