Prepared for

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2020 REMEDIAL ACTION REPORT

Operable Unit 4, Source Areas

CORTESE LANDFILL SITE
NARROWSBURG, NEW YORK

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1. INTRODUCTION

1.1 Purpose

On behalf of the Cortese Landfill Potentially Responsible Party Group (PRP Group), Geosyntec Consultants, Inc. and its New York affiliate, B & B Engineers & Geologists of New York, P.C. (collectively Geosyntec) has prepared this Remedial Action Report (RAR) for Operable Unit (OU) 4, Source Areas, to document the construction and operation of the Source Area Remedial Action (RA) at the Cortese Landfill Site (Site) located in Narrowsburg, New York (**Figure 1**). The Source Area RA, selected in the 2010 Record of Decision (ROD)/ROD Amendment (USEPA, 2010) to the earlier 1994 ROD (USEPA, 1994), addresses the remaining source contamination present below the water table beneath former source areas. The Source Area RA was conducted in accordance with the Consent Decree, Civil Action No. 96-CV-1513, for the Cortese Landfill Site in Narrowsburg, New York (Consent Decree, USEPA, 1995) and Amendment to the Consent Decree (USEPA, 2012). The Source Area RA presented in the Final Remedial Design (RD) Report for OU4, Source Areas (Geosyntec, 2012a) consists of in-situ treatment via air sparging (AS) at the former source areas, including amendment addition (such as ozone) during the final phase of AS, and soil vapor extraction (SVE) with aboveground treatment followed by a stabilization period of up to five years and a post-stabilization In Situ Chemical Oxidation (ISCO) application, if necessary, to treat recalcitrant source materials. The purpose of this RAR is to demonstrate and document the construction and operation of the OU4 RA, that the performance standards described in the Final Remedial Design (RD) Report for OU4 Source Areas have successfully been achieved, and to compile the associated records that were relied upon for this determination.

1.2 Report Organization

The document contains the following additional sections:

- The remainder of Section 1 provides the site description, site history and regulatory background;
- Section 2 provides background on the remedial action objectives, cleanup goals and the components of the Final RD;
- Section 3 provides a summary of construction activities;
- Section 4 provides the construction performance standards and construction quality control information;
- Section 5 provides a summary of surveying and record drawings of the source area RA;
- Section 6 provides a summary of the final inspection and certifications;
- Section 7 provides information on institutional controls;

- Section 8 provides a summary of green remediation practices;
- Section 9 provides a summary of the operation, maintenance, and monitoring of the source area RA;
- Section 10 provides a discussion of performance monitoring results;
- Section 11 provides a chronology of events during the Source Area RA;
- Section 12 provides contact information; and
- Section 13 lists references used throughout this RAR.

Supporting information is provided in the tables, figures, and appendices of this RAR.

1.3 Site Description

The Site is located in Narrowsburg, Sullivan County, New York (see **Figure 1**). The Site property boundary encompasses approximately 3.75 acres of land owned by Mr. John Cortese and another 1.53-acre parcel along the northern margin of the Cortese property owned by the Town of Tusten, which purchased the property from Mr. Cortese in 1973. The landfill is located on the floodplain of the Delaware River and is bounded to the northeast by a steep bedrock escarpment and to the southwest by a railroad embankment (see **Figure 2**). The northern edge of the landfill lies approximately 70 feet south of the Narrowsburg Wastewater Treatment Plant. The Delaware River is approximately 400 feet southwest of the landfill, separated from the Site by the railroad embankment. Seven residences are located along the river across the railroad embankment from the Site. Other features of interest in the immediate area include a small backwater area (the embayment) along the eastern shoreline of the Delaware River located approximately 800 feet southwest of the landfill.

1.4 Site History and Regulatory Background

The Site received municipal solid waste (MSW) from approximately July 1970 to July 1981 at an estimated rate of approximately 3,000 cubic yards per year. Disposal practices were poorly documented, such that records about the types and volume of wastes received are essentially non-existent. The extent of MSW has been assessed based upon geophysical surveys and test pits. For a six-month period in 1973, the Site received industrial wastes including paint thinners, sludge, solvents, dyes, waste oil, and other petroleum products. Disposal of these wastes included the burial of drums in trenches. According to depositional testimony of the former landfill owner/operator and landfill employees, drums were disposed in three areas in the landfill. Initially, drums were emptied and/or crushed or mixed with MSW in a trench located in the northwest corner of the landfill. Subsequently, drums were segregated from MSW and disposed intact in the main drum disposal area in the center of the landfill. Drums were also disposed intact in another area beyond the southern end of the landfill. Two septage lagoons located outside of the southern end of the landfill also received industrial waste. The locations of the former source areas are shown on **Figure 2**.

In 1985, an agreement between SCA Services and New York State Department of Environmental Conservation (NYSDEC) was reached to conduct a remedial investigation at the Site. Pursuant to the agreement, a Phase I Remedial Investigation (RI) Report was submitted in August 1988 and a Phase II RI Report was submitted in 1989. Groundwater contamination including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and inorganics was detected at and downgradient from the landfill migrating to the Delaware River through the permeable sand and gravel overburden deposits in the river valley. In April of 1990, NYSDEC formally transferred the lead enforcement role for the Site to the USEPA under an Administrative Order on Consent (AOC).

A Remedial Investigation (RI) was completed in January 1994 (Golder, 1994a) and a Feasibility Study (FS) was completed in August 1994 (Golder, 1994b) for the Site. Results of the RI indicated that groundwater previously impacted by the landfill and the former septage lagoons flows to the west/southwest toward the Delaware River. A 1994 ROD (USEPA, 1994a) specified the selected remedial components for the Site, including natural attenuation for constituents in groundwater downgradient from the landfill. A Removal Action, including a source removal component for constituents of concern (COC) at the former septage lagoons, was completed during 1995 pursuant to a 1994 Administrative Order on Consent (AOC, USEPA, 1994b).

A 1996 Consent Decree was entered for design and construction of the 1994 ROD remedy. The Consent Decree Scope of Work divided the remedy into two Remedial Work Elements. RWE I source control measures included removal of the intact drum disposal area (IDDA) and construction of landfill closure systems. RWE II included groundwater extraction at the downgradient edge of the landfill and natural attenuation of downgradient areas and was intended to be implemented several years after construction of the RWE I source control measures.

Drums and soils determined to be Resource Conservation and Recovery Act (RCRA) hazardous waste were excavated and transported off-site for treatment and disposal in 1996. Contaminated soils excavated from these areas, which were not RCRA characteristic hazardous wastes, were placed beneath the landfill cover and above the seasonal high groundwater table. The landfill closure cover was constructed in 1997. Routine groundwater monitoring began in October 1996 pursuant to the Remedial Design Work Plan (Golder, 1996a), Sampling, Analysis and Monitoring Plan (Golder, 1996b), and Quality Assurance Project Plan (Golder, 1996c). Long-term operation, maintenance (O&M) and monitoring of the landfill closure systems, as well as their potential effect in improving groundwater and surface water quality, has been on-going since that time. Annual O&M Reports describing the results of the long-term monitoring program, including groundwater, surface water, and landfill gas data, have been submitted annually since

1998. The source area removals and landfill closure systems described above constitute Operable OU 1 and 2.

Following RWE I construction, the Group completed the remedial design of the groundwater extraction and treatment component of RWE II (CRA, 2010). Concurrently, the Group evaluated a number of remedial alternatives to the groundwater extraction and treatment components of RWE II. Data from a source area investigation performed in 2004 (Golder, 2004a) showed an area beneath former IDDA 1b that contained previously undocumented sorbed-phase and residual-phase (i.e., non-mobile, non-aqueous phase liquid [NAPL]) VOC contamination. Additional source characterization was conducted in 2007 to further evaluate the horizontal and vertical extent of the new source area and to provide data to support the selection and design of potential in situ source area treatment technologies (Golder 2007a-c, 2008a). In 2010, the Former Source Areas Feasibility Study (Geosyntec, 2010a) evaluated remedial alternatives for the residual source materials beneath the former source areas. In-situ source treatment in combination with monitored natural attenuation (MNA) was selected as the remedial action for groundwater and the former sources areas. USEPA amended the 1994 ROD (hereinafter the “2010 ROD/ROD Amendment”; USEPA, 2010) and a Consent Decree amendment was entered to treat the additional source materials (OU4) and change the groundwater remediation technology for RWE II groundwater (i.e. OU3) to MNA. Operation and maintenance of OU3 began in April 2014 in accordance with the USEPA approved MNA Plan.

The Remedial Design for OU4 was submitted to USEPA in August 2011 and revised in March 2012 (Geosyntec, 2012a). Construction of OU4 in-situ source area treatment began in December 2012 and was completed in September 2013. OU4 construction included construction of the AS and SVE systems and installation of vapor-phase granular activated carbon (VGAC) units for off-gas treatment. Operation and maintenance of the OU4 Source Area Remedial Action began in September 2014 and was suspended in October 2017 upon agency approval (Geosyntec, 2017b; USEPA, 2017).

1.5 Conceptual Site Model

1.5.1 Site Geology

In the vicinity of the Site, a deep channel has been incised by the Delaware River into the Upper Devonian sandstone bedrock of the Catskill Formation. Pleistocene sediments of glacial origin were deposited and reworked in the river valley, resulting in channel, bar and over bank deposits typical of this depositional environment. The resulting lithofacies consist of unconsolidated, densely packed sands and silty sands with intervals and lenses locally rich in either silty clay or gravel. A thin mantle of silt, resulting from post-glacial flooding of the valley, overlies the coarser deposits at the present land surface.

At the landfill, the surficial clayey silt layer averages less than 10 feet in thickness and might have been locally removed during initial landfill trench and fill operations. This silt layer is underlain by sands and gravels/river cobbles to a depth of approximately 30 to 40 feet below ground surface (bgs), forming the ‘upper sand and gravel unit’. At IDDA 1b, the upper sand and gravel unit varied from approximately 9 to 22 feet in thickness. Within the upper sand and gravel unit, there were many individual layers of varying proportions of silty sand, sandy silt, fine to coarse sand, fine to coarse gravel, and cobbles (trace). In general, fine-grained lenses (silty clay and clayey silt) were not observed within the upper sand and gravel unit. The upper sand and gravel deposits are generally underlain by discontinuous intervals (facies) of “intermediate” fine sand and silty clay. The transition from the upper sand and gravel unit to the deeper fine sand and silt unit varied from a sharp contrast in some borings to a more gradual transition zone in others. Additional sand and gravel units occur at some locations between the intermediate sand/silty clay and the top of bedrock. Bedrock was encountered at depths ranging from 38 to 78 feet bgs in the vicinity of former IDDA 1b.

1.5.2 Site Hydrogeology

Results from the aquifer pumping tests conducted during the Phase II RI hydrogeologic characterization indicate that the overburden deposits in the study area behave as a single hydrogeologic unit. Throughout the entire thickness of unconsolidated sediments, groundwater occurs under water table conditions, such that the unit acts as an unconfined aquifer. Bedrock forms a second, deeper hydrogeologic unit. Groundwater flows to the southwest toward, but oblique to, the Delaware River. Groundwater flows from the vicinity of former IDDA 1b source area toward the Delaware River.

A conceptual groundwater flow system was developed for the Site area during the RI and has been updated based upon additional monitoring data from wells installed in 2011 and 2013. Groundwater flows through fractures in the bedrock from the topographic highs (the escarpment) and discharges into the unconsolidated sediments of the Delaware River floodplain where it mixes with groundwater recharged along the floodplain, and then discharges at the topographic low (the river). Groundwater flow in the overburden sediments in the Site vicinity is predominantly horizontal toward the river, but also has a downward vertical component downgradient from IDDA 1b. This results in a diving plume scenario where monitoring wells located between the railroad embankment and the Delaware River have higher concentrations at intermediate overburden depths compared to shallow wells screened at the water table. The calculated average groundwater velocity is 165 feet per year based upon a hydraulic conductivity of 1.6×10^{-2} cm/sec, a horizontal gradient of 0.003 (but ranging up to 0.009), and an assumed porosity of 30 percent. Using the maximum horizontal gradient, groundwater flow velocities can be as high as 500 feet per year on a short-term basis.

1.5.3 Nature and Extent of Source Area Contamination

The following Target Compound List (TCL) VOCs were detected in at least one soil sample at IDDA 1b prior to OU4 operation:

Aromatic Hydrocarbons	Benzene, Toluene, Ethylbenzene, Xylenes, and Naphthalene;
Chlorinated Aromatics	1,2,4- Trichlorobenzene, 1,2-Dichlorobenzene, and 1,4-Dichlorobenzene;
Chloromethanes	Carbon Tetrachloride and Chloroform;
Chlorinated Ethanes	1,1,1-Trichloroethane (TCA);
Chlorinated Ethenes	Tetrachloroethene (PCE), Trichloroethene (TCE), cis-1,2-Dichloroethene (cDCE), and Vinyl Chloride (VC); and
Ketones	Acetone, 2-Butanone (MEK), and 4-Methyl-2-pentanone (MIBK).

The estimated source area at IDDA 1b was approximately 21,000 square feet (0.5 acre). The depth interval where TCL VOC concentrations were detected in soil was 15 to 40 feet bgs. Most exceedances were between 23 and 30 feet bgs. There were no detections of TCL VOCs in deep soil samples (55 to 80 feet bgs). Total petroleum hydrocarbons (TPH) data indicate that TCL VOCs and SVOCs comprised a minor percentage of the total contaminant mass.

From 2004 to 2016, free-phase NAPL has been intermittently detected at wells MW-13, MW-16, S-1 and S-2 within the estimated source area with thicknesses up to 0.74 feet but more often at thicknesses less than 0.2 feet. These measurements indicated that there was a smear zone of free-phase and residual NAPL at the depth of groundwater table fluctuation. The depth interval where residual product is likely to have occurred was from 15 to 40 feet bgs, primarily between 23 and 30 feet bgs.

Although the 2010 ROD envisioned additional source area treatment at former IDDA 2 and the former septage lagoons, TCL VOCs were only detected in 15 of the 72 soil samples collected during air sparge well installation in those areas during 2012 and 2013 (Geosyntec, 2013c). Only two (2) of the 15 samples with TCL VOC detections had concentrations above 25 micrograms per kilogram (µg/kg). In addition, no potential presence of NAPL was indicated in the samples collected and no direct evidence of NAPL nor odor was observed in the field. Consequently, former IDDA 2 and the former septage lagoons did not require active treatment.

1.5.4 Nature and Extent of Groundwater Contamination

Historically, TCL VOCs, SVOCs, inorganics, and TPH have been detected in groundwater samples from within the source areas and downgradient of the Site. Chlorinated aliphatic hydrocarbons, chlorinated aromatic hydrocarbons, and non-chlorinated aromatic hydrocarbons (benzene, toluene, ethylbenzene and total xylenes, collectively referred to as BTEX) were the prevalent TCL VOCs in the source area. SVOCs consistently detected in the IDDA 1b source area wells were chlorinated benzenes, phenolic compounds, phthalate compounds, and polynuclear aromatic hydrocarbons (PAHs). Gasoline range organics (GRO) and diesel range organics (DRO) were detected during TPH analysis of groundwater samples at the source areas. Iron, manganese, and arsenic concentrations also exceed ROD cleanup levels in groundwater samples near the source areas. Those metals are likely derived from naturally-occurring aquifer solids and are mobilized by the anaerobic conditions in the source area. There were strong seasonal fluctuations in constituent concentrations at the source area.

The types of TCL VOCs detected in groundwater samples downgradient of the landfill included aromatic hydrocarbons, chlorinated aromatic hydrocarbons, and chlorinated aliphatic hydrocarbons. Chlorinated aliphatic hydrocarbons were the most prevalent VOCs in most of the downgradient wells. SVOCs and TPH were generally not detected in downgradient monitoring wells except for MW-18B. Metals that include iron, manganese, and arsenic occur at concentrations that are above ROD cleanup levels in most downgradient wells. The seasonal fluctuations of constituent concentrations were less pronounced at the downgradient wells compared to those near the source area.

The extent of groundwater above ROD cleanup levels occurred in an approximately 1,300-foot wide zone between the landfill and the Delaware River. There were very rapid concentration decreases away from the source area in both the downgradient and side-gradient directions.

1.5.5 Constituent Transport, Fate, and Persistence

Prior to construction of the source control measures, the upper sand and gravel unit was likely in a quasi-equilibrium steady state condition with respect to sorption because the COC plume had reached the Delaware River by the late 1980s. Recent historical data have shown there is currently an overall trend of declining COC mass in the source areas. Near the source areas, TCL VOCs and SVOCs are generally confined to shallow zones of the aquifer, which also have a higher hydraulic conductivity compared to the deeper zones. Therefore, the overall extent of VOCs and SVOCs indicate that most of the mass flux of VOCs toward the Delaware River is expected to be within the upper sand and gravel unit. However, it should be noted that downgradient from former IDDA 1b near the Delaware River, higher VOC concentrations were detected in samples from monitoring wells that are screened in the intermediate depth of the saturated zone, compared to samples from monitoring wells that are screened in the upper sand and gravel unit. Those higher concentrations might be due to downward gradients in the vicinity of former IDDA 1b and/or geologic heterogeneities that provide preferential migration pathways toward the intermediate depth zones.

Prior to OU4 treatment system startup, contaminant concentrations at individual wells generally did not show strongly declining trends over time. Concentrations were stable with seasonal fluctuation ranges and overall declining VOC and SVOC concentrations along groundwater migration pathways from the landfill toward the Delaware River since the late 1980s.

In general, minor changes in the concentrations of arsenic, iron, and manganese were observed prior to OU4 treatment system startup. The redox-induced mobilization of iron, manganese, and arsenic is not expected to change until most of the reduced organic carbon from MSW leachate and NAPL that is present in the sediments beneath the groundwater table at the remaining source areas has been depleted. Although the concentrations of these metals decrease toward the river, they are still present at relatively high concentrations compared to the historical results from background and side-gradient wells.

Natural attenuation processes have caused significant mass reduction (approximately 90 percent) along the groundwater advective transport pathway prior to reaching the river. However, redox conditions likely do not rebound to background (aerobic) conditions prior to discharge of shallow groundwater to the Delaware River and some TCL compounds persist in off-site groundwater. Analysis of natural attenuation parameters in groundwater, performed as part of long-term monitoring since 1995, has confirmed the presence of several natural attenuation indicators as outlined in the 2010 ROD. Indirect lines of evidence (geochemical footprints) of anaerobic biodegradation processes have been documented in groundwater at the Site, including accumulation of reductive dechlorination daughter products VC and cDCE from PCE and TCE parent compounds detected in source area soils; 1,1-dichloroethane and chloroethane from the TCA parent compound; chlorobenzene from the trichlorobenzene- and dichlorobenzene-isomer parent compounds; and chloroform and methylene chloride from the carbon tetrachloride parent compound. This is further supported by the detection of ethane and ethene in groundwater samples at concentrations several orders of magnitude greater than background concentrations. The low concentrations of BTEX and total organic carbon (TOC) electron donors downgradient of the landfill as compared to near the source area suggests anaerobic mineralization of BTEX compounds. Evidence of active anaerobic microbial processes in groundwater downgradient from the landfill were indicated by the reduced concentrations of electron acceptors such as dissolved oxygen (DO), nitrate, and sulfate and increased concentrations of products of microbial processes, including ammonia, iron, manganese, and methane. Finally, the 16S-RNA gene of *Dehalococcoides* has been detected in samples of aquifer solids from the source area and *Dehalococcoides* possessing the VC reductase (vcrA) gene were detected in the source area groundwater samples in 2011, which provides direct evidence of the presence of bacteria with the ability to accomplish complete reductive dechlorination of chlorinated ethenes.

Site-related constituents were previously detected in the Delaware River and the embayment due to groundwater discharge. Since 2003 total TCL VOCs in the Delaware River have consistently been less than 7 micrograms per liter (µg/L) or less than the upriver station sample concentration, most of which has been acetone (a common laboratory contaminant) and has not exceeded surface water cleanup standards.

2. REMEDIAL ACTION OBJECTIVES

The 2010 ROD/ROD Amendment and the SOW specify the following Remedial Action Objectives (RAOs) for the OU3 and OU4 remedial actions based on results of the risk assessment and the determination of applicable or relevant and appropriate requirements (ARARs) for the Site:

- Reduction or elimination of the potential for source areas to release contaminants to groundwater;
- Reduction or elimination of the potential for migration of contaminants downgradient of the former landfill; and
- Restoration of the aquifer downgradient of the landfill as a potential source of drinking water by reducing contaminant levels to the federal and state MCLs.

The OU4 RA directly addresses the first two RAOs.

2.1 Cleanup Goals

The Performance Criterion for the OU4 remedy is achieve a 90% reduction in the baseline mass discharge of total TCL VOCs from the treatment area. Monitoring wells form two mass discharge transects downgradient of the in-situ source treatment area. One transect is located near the source areas and the other transect is located farther downgradient as shown on **Figure 3**. A baseline mass discharge estimate was developed for each transect in the Operation, Maintenance and Monitoring (OM&M) Plan for OU4 (Geosyntec, 2013a). The estimated baseline mass discharge from the source area transect is 390 grams per day (g/day). An estimated 25 g/day are discharged through the downgradient transect. Further details of the mass discharge calculations are provided in the OM&M Plan. These data indicate that the aquifer between the two transects is naturally attenuating VOCs at an estimated rate of 365 g/day or approximately 94% of the VOCs before active treatment.

During OU4 OM&M, groundwater performance monitoring has been conducted periodically at the source area transect wells as outlined in the OM&M Plan. The TCL VOC results from source area transect wells have been compared against the baseline mass discharge (390 g/day) to evaluate if the Performance Criterion has been achieved.

Implementation has been guided by the Performance Criterion that will determine the transition between remedial components set out in the 2010 ROD/ROD Amendment and other steps, if necessary, to improve their performance. The technical approach for MNA of downgradient groundwater at OU3 is presented separately in the MNA Plan (Geosyntec, 2013b) and is not discussed in this RAR.

2.2 Summary of Final Remedial Design

The in-situ source treatment at OU4 was designed to remove COCs from groundwater at or beneath the former source areas and thereby enhance the rate of dissolution of residual source material. The Performance Criterion for OU4 in-situ source treatment is based on a reduction in the mass discharge of COCs from the source areas (ITRC, 2010). The OM&M Plan, which describes each component of the in-situ source treatment and details the operating parameters is provided as **Appendix A**. The major remedial components are summarized in the following sections which include:

- Air sparging;
- Soil vapor extraction and off-gas treatment;
- Amendment additions (e.g., ozone) during air sparging;
- Stabilization; and
- Post-stabilization ISCO application, if necessary.

2.2.1 Air Sparging

AS was used throughout the source area to remove a significant component of the petroleum hydrocarbons and other VOCs by volatilization. AS consists of injecting air below the water table in order to volatilize dissolved VOCs and partition them into soil gas in the vadose zone. AS also introduced oxygen into the groundwater at the source area which should promote aerobic biodegradation processes, although biodegradation is not being relied upon as the primary removal mechanism.

2.2.2 Soil Vapor Extraction and Treatment

SVE wells were operated in the vadose zone to collect the VOC vapors coming off the water table due to AS. In addition, the vacuum applied above the water table was expected to volatilize residual VOCs in the vadose zone and capillary fringe even though these materials are contained by the landfill cap and are not targeted for treatment.

It was expected that the VOC concentrations in the SVE air stream initially required treatment based on the pilot test results (Geosyntec, 2012a). VOC concentrations were expected to decrease over time, and that the relative proportion of various VOCs to each other would also change because reductive dechlorination reactions would be inhibited during AS and hence daughter products such as vinyl chloride would not be produced or would be present in much lower concentrations. Therefore, it was expected that treatment of the SVE off-gas will not be necessary as the AS/SVE operation continued.

2.2.3 Amendment Addition

It was expected that AS would preferentially remove the VOCs that are more volatile and/or amenable to aerobic biodegradation, possibly decreasing the mass discharge of these VOCs to the levels necessary to achieve the OU4 Performance Criterion. Conversely, some of the petroleum hydrocarbons and chlorinated VOCs may not have been adequately treated by AS alone due to limited volatility or treatability by aerobic biodegradation. It was originally planned that ozone would be added as an AS amendment for the final phase of the AS program if the decreases in the mass discharge of the less volatile or less aerobically biodegradable constituents did not show adequate progress toward achieving the Performance Criterion.

It was also possible that the concentrations of VOCs in the downgradient aquifer and in the SVE off-gas would decrease over time to an asymptotic limit as the AS/SVE removal rate became limited by the rate of dissolution but the mass discharge would remain above the Performance Criterion. This would be determined by evaluation of the downgradient groundwater and SVE off-gas monitoring data. If the AS/SVE removal rates became mass-transfer limited, then ozone may have been applied. The timing of the addition of ozone to the AS program would have been determined by the performance monitoring data.

As discussed in Section 10, monitoring data did not indicate that the use of ozone or other suitable amendments was necessary.

2.2.4 Stabilization

Active treatment was planned to not extend for more than ten years from AS startup without written approval of USEPA. When determination that the OU4 Performance Criterion has been achieved, the Group may request that active treatment be suspended. The stabilization period may last up to five years to allow the active treatment components to subside and for groundwater redox conditions to re-equilibrate. During the stabilization period, performance monitoring will continue in order to assess groundwater quality downgradient of the source treatment systems. It is possible that concentrations might increase temporarily during stabilization, but stable or decreasing concentrations should be established within five years.

As of this RAR, the active treatment has been suspended, but the Site has not entered the stabilization period.

2.2.5 Post-Stabilization ISCO Application (If Necessary)

If the OU4 Performance Criterion described above is not maintained by the end of the stabilization period, or if Site-specific MNA performance monitoring criteria established consistent with *Performance Monitoring for MNA Remedies for VOCs in Groundwater* (EPA/600/R-04/027, dated April 2004) are not achieved, then a post-stabilization ISCO application, potentially including a surfactant enhancement, to address the remaining more recalcitrant source materials could be applied and monitoring of downgradient groundwater would continue. Multiple applications of the post-stabilization ISCO amendment may be considered if the Performance Criterion is not achieved after the first application. The Group may also petition the agencies for permission to apply other amendments after the post-stabilization ISCO, if appropriate.

If the post-stabilization ISCO application achieves the Performance Criterion, downgradient groundwater would continue to be monitored pursuant to the MNA Plan and then compliance demonstration monitoring would be performed. Otherwise, the contingent remedy would be considered.

3. CONSTRUCTION ACTIVITIES

3.1 Overview

Construction of the AS and SVE components of the OU4 remedy began on 29 November 2012 and was substantially completed on 11 September 2013. The construction activities for the OU4 remedy were performed by Conestoga-Rovers & Associates (CRA) as the primary RA contractor with responsibility for all construction activities. On-site construction was performed in two seasons with a winter shutdown. The first construction season was between 29 November 2012 and 23 January 2013. The second construction season was between 8 April 2013 and 11 September 2013. The following sections describe the major construction activities that were performed to complete the AS and SVE components of the OU4 remedy and were documented in the Interim Source Area Remedial Action Report (ISARSR), Operable Unit 4, Source Areas (Geosyntec, 2013d) submitted to USEPA in December 2013.

3.2 Mobilization and Site Preparation

CRA mobilized to the Site on 29 November 2012. The construction trailer and the field office for the Engineer and USEPA were established northwest of the Site at the end of the paved access road to the Site and the Narrowsburg WWTP. The contractor staging area was established in the northern portion of the Site adjacent to the northern Site entrance. Fisher Associates surveyed the Site layout including control points, proposed AS and SVE well locations and grading of the proposed temporary access road. The alignment of the temporary access road was modified as a field change during the pre-construction meeting on 5 December 2012.

CRA began Site preparation activities including installation of temporary erosion and sedimentation (E&S) controls, removal of portions of the chain-link fence, and restaging pre-existing investigation-derived waste (IDW). Temporary E&S controls consisted of silt fence installed in 100-foot rolls at the limit of disturbance as shown on the E&S control plan. Chain-link fencing was removed from the southern portion of the Site to allow access to the IDDA 2 and Septage Lagoon areas. Empty drums that were previously staged to the south of the Septage Lagoon were restaged to the contractor staging area, crushed and stockpiled.

Installation of the temporary access road began on 18 December 2012. CRA used a CAT 312 excavator and CAT D4 bulldozer to cut the grade for the road subbase. Based on Geosyntec's observation of the grading, the underlying cap geosynthetic components were not encountered during excavation. Non-woven geotextile was placed under the aggregate subbase provided by Valley Sand and Gravel of Honesdale, Pennsylvania. Subbase aggregate was accepted for use following review of submitted sieve testing and chemical analyses. Temporary access road installation was completed on 20 December 2012.

Stabilization of the Site entrance was completed on 20 January 2013 to allow for future traffic from large vehicles. The CAT 312 excavator was used to remove the existing stone and culvert and the materials were stockpiled off of the road. Two lengths of an eight-inch diameter high density polyethylene (HDPE) culvert were attached at the middle and covered with #3 stone at certain points using a skid steer. With the stone holding the pipe down, the crew was able to bend the culvert into the angle necessary to allow the flow of water coming down the steep Site entrance. Once the placement was finalized, it was fully covered with #3 stone and smoothed out with the blade of the skid steer. A finer aggregate material was added for compaction and traction purposes, and the existing culvert was removed.

3.3 Pre-Existing IDW Removal

Pre-existing IDW from previous investigations at the Site included:

1. The pilot test treatment unit constructed wetland in the vicinity of former IDDA 1b;
2. Zero-valent iron pilot test treatment unit in the vicinity of former IDDA 1b;
3. 55-gallon drums of spent vapor-phase granular activated carbon from the AS/SVE pilot test in the vicinity of former IDDA 1b;
4. Empty overpacks located to the south of the former septage lagoons; and
5. Existing 55-gallon drums of soil cuttings and well development water from previous drilling operations.

In order to facilitate future construction activities, CRA coordinated the characterization, consolidation, profiling, manifesting, transport and off-site disposal of these wastes. Solid and liquid IDW was segregated and samples were collected in order to develop waste profiles for off-site disposal in accordance with the Quality Assurance Project Plan (QAPP) prepared by CRA for the Source Area Remedial Action.

The IDW included approximately 50 steel drums, large steel containers, and materials that formed the pilot test constructed wetland area including soil, plywood, plastic, and PVC pipe. Once the drums were removed from the area, an excavator began removal of the berm surrounding the old treatment system. The material removed contained backfill soil, plywood, plastic, and PVC. Once the bulk of the material was in the roll off boxes, a skid steer was utilized to smooth out the surface so the drill rig could easily be maneuvered around the area and drilling could commence. Several roll off boxes were used in the removal of the various materials from the IDDA 1b area. Empty steel drums were crushed using the bucket of an excavator on Site and placed into one of the roll off boxes. Many of the steel drums contained soil material which had frozen and required removal prior to disposal. The most effective method of removal was for CRA to heat the steel drums using a propane torch. After several minutes the solid materials would loosen up and more easily slide out of the drums. A forklift drum handler was utilized to safely lift each of the drums and remove its contents.

The IDW also included four large containers of water surrounded by the berm which needed to be removed before drilling in that area could begin. A roll off box was placed near the berm and lined with several sheets of plastic to avoid leaking. A trash pump was used to remove the IDW water from the containers into the lined roll off box. No other solid materials were placed into that particular roll off box after this was completed. Due to the cold weather conditions there was a possibility that the water could freeze, causing problems for transportation and disposal. A system was created to circulate and heat the water throughout the workday to avoid this issue. The trash pump was set up to circulate water out of the roll off box, through a steel drum heated with a propane torch, and back into the roll off box. This method was used for the purge water from well development in a separate container on the Site.

Four (4) waste characterization samples of solid IDW were collected on 6 December 2012 and sent under chain of custody to TestAmerica Pittsburgh for analyses. Three (3) samples of liquid IDW were collected on 17 December 2012 and sent under chain of custody to TestAmerica Pittsburgh for analyses. Copies of the analytical reports are included in Appendix A of the ISARAR. Based on the analytical results, CRA identified potential disposal facilities and a list of proposed facilities was sent to USEPA on 11 January 2013 for approval (see Appendix B of the ISARAR). USEPA Region 2 Off-site Rule Request Forms were approved on 15 January 2013 for High Acres Landfill in Fairport, New York for non-hazardous solid IDW disposal and for Environmental Quality (EQ) York in York, Pennsylvania for non-hazardous liquid IDW.

Between 18 and 25 January 2013, 3,350 gallons of non-hazardous aqueous IDW were transported to EQ York and seven roll-off boxes (approximately 10 cubic yards each) of non-hazardous solid IDW were transported to High Acres Landfill for disposal. Waste manifests are included in Appendix B of the ISARAR.

3.4 LNAPL Recovery

The Final RD called for light non-aqueous-phase liquid (LNAPL) recovery from existing monitoring wells MW-13, S-1 and S-2 during RA construction in order to reduce the mass of residual source material prior to in-situ source treatment. A review of historical LNAPL thickness measurements indicated that LNAPL has not been detected in monitoring well S-1 in recent years. CRA was directed by the Engineer to install the specified LNAPL recovery systems in monitoring wells MW-13 and S-2 only. Model SPG2 and SPG4 skimmers (QED Environmental Systems, Ann Arbor, MI) were installed in monitoring wells MW-13 and S-2, respectively, on 5 and 6 January 2013. Initial attempts to recover LNAPL using the skimmers were unsuccessful. On the advice of QED, CRA collected samples of LNAPL from S-2 with a bailer and measured the viscosity on 17 January 2013. The measured viscosity was less than 40 centistokes. CRA consulted with QED to resolve the issue. QED suggested that the viscosity and density of the LNAPL (similar to 90W oil) is affecting performance and that the inlet on the recovery device may be too small.

QED recommended modification of the skimmer. The SPG4 LNAPL skimmer assembly was removed from monitoring well S-2, decontaminated and shipped to QED on or about 18 February 2013. QED then shipped a replacement skimmer assembly with larger diameter tubing. CRA enlarged the holes on the skimmer as instructed by QED. The replacement skimmer was installed in S-2 by CRA on 9 April 2013 at the start of Phase II of construction. LNAPL recovery operations were restarted at S-2, however insufficient thickness of LNAPL was present in MW-13.

LNAPL recovery was suspended on 7 and 8 May 2013 during trenching for the installation of the AS distribution piping. When LNAPL recovery operations were restarted, the skimmers recovered mostly water. CRA measured the LNAPL thickness in MW-13 and S-2 and it was determined that insufficient thickness was present. It was agreed that CRA would monitor LNAPL thickness in MW-13 and S-2 every two weeks and operate the LNAPL recovery systems when sufficient thickness was present.

LNAPL and groundwater recovered from MW-13 and S-2 were containerized on-site in a 55-gallon drum and characterized. An USEPA Region 2 Off-site Rule Request Form will be submitted to USEPA for approval prior to shipment of the 55-gallon drum for disposal that is anticipated in February 2014.

3.5 AS Well Installation

CRA subcontracted Boart Longyear Company (BLY) for AS well installation. Installation of the AS wells in the IDDA 2 and Septage Lagoon areas (ASW-38 to ASW-61) was conducted between 12 and 20 December 2012 and witnessed by Geosyntec. Boreholes were advanced using sonic drilling methods. Steel casings were decontaminated between each boring. CRA monitored the soil cuttings using a photoionization detector (PID) during borehole advancement. The soil physical attributes and PID readings were documented on field boring logs. Boring advancement continued through the upper sand and gravel unit until the underlying silty sand was encountered. The target screened interval was above the contact between the upper sand and gravel unit and the underlying silty sand. CRA determined the proper depth for the screen interval with confirmation by Geosyntec. CRA collected three (3) soil samples from each boring for submittal to the fixed laboratory (TestAmerica Buffalo) for analyses for target compound list (TCL) VOCs and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) under chain of custody. Soil samples were collected from near the water table, the bottom of the boring and a middle depth based on the highest PID reading. If no VOCs were detected by the PID, the third sample was collected from the middle of the saturated zone in each boring. Analytical reports are provided in Appendix A of the ISARAR. Boring logs and the

USEPA Region 2 electronic data deliverable (EDD) for the lithology of select AS wells are provided in Appendix C of the ISARAR.

AS well construction consisted of a two-foot length of two-inch diameter, wire-wrapped stainless steel screen and a two-inch diameter Schedule 80 chlorinated polyvinyl chloride (CPVC) riser. The CPVC riser was completed above the ground surface. A sand filter pack was placed around the screen from the bottom of the borehole up to two feet above the screened interval. A two-foot thick bentonite seal was installed above the sand pack by placing bentonite chips and hydrating for at least one hour. Grout, consisting of cement and bentonite powder, was then added to fill the remaining annulus to just below the ground surface. Once the grout had set, the CPVC riser was cut below the ground surface and a three-foot stainless steel riser was attached using a CPVC-metal adapter. A threaded end cap was installed to secure the well. Well construction logs are provided in Appendix C of the ISARAR.

A production goal of three (3) air sparging wells per day was established, however, the crew was often able to install four per day. In order to drain the area around AS wells ASW-38 and ASW-39 prior to drilling, a drainage channel was cut to the northwest. Geosynthetic cap components were encountered at AS wells ASW-38 and ASW-42. These locations were dug out by hand to expose the geosynthetics and the geosynthetics were cut using hand tools prior to drilling.

Installation of the AS wells continued in the IDDA 1b area (ASW-1 to ASW-37) between 20 December 2012 and 23 January 2013. Prior to drilling in the IDDA 1b area, the geosynthetic cap components at the borehole location were exposed and cut by hand. Boreholes were advanced using sonic drilling methods. Steel casings were decontaminated between each boring. CRA monitored the soil cuttings using a PID during borehole advancement. The soil physical attributes and PID readings were documented on field boring logs. Boring advancement continued through the upper sand and gravel unit until the silty sand was encountered. The target screened interval was above the contact between the upper sand and gravel unit and the underlying silty sand. CRA determined the proper depth for the screen interval with confirmation by Geosyntec. No soil samples were collected for chemical analysis. AS well construction was the same as for the AS wells installed in the IDDA 2 and Septage Lagoon area. Boring logs, well construction logs and the USEPA Region 2 EDD for the lithology of select AS wells are provided in Appendix C of the ISARAR. Soil cuttings from drilling were containerized in a roll-off box pending waste profiling, manifesting, and off-site transport and disposal.

The AS wells were developed according to the specifications. Well development began in the IDDA 2 and Septage Lagoon area on 18 January 2013 and in the IDDA 1b treatment area on 21 January 2013. All AS well development was completed by 25 January 2013. Well development water was containerized in a 500-gallon polyethylene tank pending waste profiling, manifesting, and off-site transport and disposal.

Soil analytical data for AS borings in the IDDA 2 and Septage Lagoon area were validated by CRA and were found to be usable (see Appendix D of the ISARAR for the data validation report). The VOC results were evaluated for the potential presence of NAPL as specified in the Final RD and presented to USEPA (Appendix E of the ISARAR). The highest detection of total TCL VOCs was 3,211 micrograms per kilogram (µg/kg) in the shallow (15 to 16 feet below ground surface) sample collected from AS well ASW-58. This sample also had the highest results for GRO and DRO of 470,000 µg/kg and 240,000 µg/kg, respectively. No potential presence of NAPL was indicated in any of the soil samples. In addition, no direct evidence of NAPL nor odor was observed in the field. It is worth noting that no VOCs were detected in 57 of the 72 soil samples analyzed. Detected total TCL VOCs were greater than 25 µg/kg in only two samples, both from ASW-58. Based on those VOC data and the evaluation for the potential presence of NAPL, the Group requested a design change on 22 January 2013 (Appendix E of the ISARAR) with regard to the Source Area RA at the former IDDA 2 and septage lagoon treatment area:

1. The AS and SVE wellheads and associated piping would not be installed;
2. The AS/SVE trailer and associated process equipment, piping and controls would not be constructed;
3. The concrete pad for this treatment area would not be constructed and the paved access road will be modified to end at the concrete pad for the IDDA 1b treatment area;
4. The secondary electrical service and communications would not be brought to this treatment area; and
5. No other remedial components, such as amendment addition or in-situ chemical oxidation, will be performed at this treatment area.

USEPA and NYSDEC approved Items 1 to 4 above by electronic mail on 15 February 2013 (Appendix E of the ISARAR).

3.6 <u>SVE Well Installation</u>

BLY was also contracted by CRA to install the SVE wells. Installation of the SVE wells in the IDDA 2 and Septage Lagoon areas (SVE15 to SVE24) and the IDDA 1b area (SVE03 to SVE14) was conducted between 3 and 23 January 2013 and witnessed by Geosyntec. Prior to drilling in the IDDA 1b area, the geosynthetic cap components at the borehole location were exposed and cut by hand. Boreholes were advanced using sonic drilling methods. Steel casings were decontaminated between each boring. CRA monitored the soil cuttings using a photoionization detector (PID) during borehole advancement. The soil physical attributes and PID readings were documented on field boring logs. Boring advancement continued until the water table was encountered. The target screened interval was one to two feet above the encountered water table.

CRA determined the proper depth for the screen interval with confirmation by Geosyntec. No soil samples were collected for chemical analysis.

SVE well construction consisted of a five-foot length of four-inch diameter, wire-wrapped stainless steel screen and a four-inch diameter Schedule 80 CPVC riser. The CPVC riser was completed above the ground surface. A sand filter pack was placed around the screen from the bottom of the borehole up to two feet above the screened interval. A two-foot thick bentonite seal was installed above the sand pack by placing bentonite chips and hydrating for at least one hour. Grout, consisting of cement and bentonite powder, was then added to fill the remaining annulus to just below the ground surface. A threaded end cap was installed to secure the well. Well construction logs are provided in Appendix C of the ISARAR.

A production goal of four SVE wells per day was established, however, the crew could achieve five per day if there were no delays. Soil cuttings from drilling were containerized in a roll-off box pending waste profiling, manifesting, and off-site transport and disposal.

3.7 Well Installation IDW Removal

One sample of solid IDW and one sample of aqueous IDW from AS and SVE well installation and development were collected on 24 January 2013 and sent under chain of custody to TestAmerica Pittsburgh for analyses. Copies of the analytical reports are included in Appendix A of the ISARAR. The solid IDW was identified as non-hazardous and an eighth roll-off container (approximately 10 cubic yards) was shipped to High Acres Landfill on 1 February 2013

Based on the analytical results, the aqueous IDW was characterized as hazardous based on trichloroethene toxicity characteristic leaching procedure (TCLP) concentration of 9.3 milligrams per Liter (mg/L); above the TCLP limit of 0.5 mg/L. CRA identified potential disposal facilities and a list of proposed facilities was sent to USEPA on 8 February 2013 for approval (see Appendix B of the ISARAR). The USEPA Region 2 Off-site Rule Request Form was approved on 12 February 2013 for the Michigan Disposal Water Treatment Plant (EQ Michigan) in Belleville, Michigan for hazardous aqueous IDW disposal. Approximately 3,000 gallons of aqueous IDW were shipped to EQ Michigan for disposal as hazardous waste on 19 February 2013.

3.8 Fence and Gate Installation

CRA contracted Rutkoski Fencing Inc. (Rutkoski) to perform installation of fencing. Rutkoski mobilized to the Site on 10 April 2013. Chain-link fence was installed to the south of the Septage Lagoon area in accordance with the construction drawings. The hill acted as a natural barrier, as no vehicles or equipment could enter the Site from that direction. Previous to the new fence being installed, the existing chain-link fence only extended to the area between IDDA2 and the Septage-lagoon area. Per agreement at the pre-construction meeting, the existing entrance gate was relocated to the southern end of the fenced area and a new gate was installed at the main entrance to the Site. Per the as-built drawings (Appendix F of the ISARAR), a total of 352.1 linear feet of fencing was installed.

In addition, the Group directed CRA to make repairs of the chain-link fence on the west side of the Site adjacent to the access road. The existing fence had been damaged in several locations due to fallen tree branches during the break in RA construction. Rutkoski installed new sections of fence, replacing the damaged sections. All fencing installation and repairs were completed on 10 April 2013.

3.9 Geosynthetic Repairs

Repairs to penetrations of the geosynthetic components of the landfill cap were conducted between 10 and 22 April 2013 and subsequent QC testing was documented by Geosyntec. Penetrations included those from previous investigations at the Site and the installation of the AS and SVE wells in the IDDA 1b treatment area. CRA contracted American Environmental Group (AEG) to perform the repairs. Repairs included patching of historical soil boring locations and the installation of boots and skirts on existing wells and monitoring points. 40 mm linear low density polyethylene (LLDPE) smooth liner was utilized for all of the repair work.

Prior to AEG's arrival on Site, CRA exposed the geosynthetic components with the excavator and hand tools. Protective outer well casings were removed and stored for reinstallation prior to excavation. Geosynthetic components were encountered approximately two to three feet below ground surface. Precautions were taken to avoid damaging the well stickups and the exposed geosynthetics.

AEG began repairs on 18 April 2013. Each morning began with a trial seam from both of the extrusion welders. The trial seam is required to pass certain peel and shear strength tests before any repair could be done. The trial seams were again done in the afternoon of each working day. Once Geosyntec had approved the trial seams, then repairs could begin. Crew members began a repair by first clearing the exposed geosynthetics of any dirt and debris. The layers of the landfill geosynthetics were cut in an "X" pattern and folded back in four sections. The landfill geosynthetics consisted of three distinct layers: the LLDPE, geonet, and geotextile fabric. Only the top two layers, the geonet and the geotextile fabric, were peeled away from each of the wells for the repairs. The new boots were created for each well depending on its size from a new roll of LLDPE available on Site. The boots were welded to the existing geosynthetics and to the well casing?? using the extrusion welders. The top of the boots were sealed with silicone caulk. Each weld was inspected, initialed and time stamped for Geosyntec's approval. Before a repair was signed off on, the welds were vacuum tested by one of the members of AEG's crew. The welds were sprayed with water and then covered with a vacuum box. If any air bubbles appeared around the weld, it required further repair. If no bubbles appeared, then it was initialed and time stamped again and approved for backfilling. Patch repairs used the same process as the well repairs, but only required a new LLDPE geosynthetics to be cut to size and shape and welded flat onto the existing geosynthetics to cover the exposed area. A Geosyntec representative was on Site to observe and document each of the repairs completed by AEG. Geosynthetic repair documentation is included as Appendix G of the ISARAR.

In total, 74 boots and patches were completed in IDDA1b between 18 and 20 April 2013. CRA backfilled the holes using the excavator and skid steer and brought that section of the Site back to its proper grade. The steel well covers that many of the existing wells had protecting them were reinstalled and relabeled.

3.10 AS/SVE Trailer Fabrication

CRA contracted Bisco Environmental (Bisco) to fabricate the AS/SVE trailers at Bisco's facilities in Taunton, Massachusetts. Work on the AS/SVE trailer and associated process equipment, piping and controls for the IDDA 2 and Septage Lagoon treatment was discontinued following approval of the design change on 15 February 2013 (Appendix E of the ISARAR). Shop drawings and cut sheets for the IDDA 1b process equipment were submitted by Bisco to the Engineer for review on 7 February 2013. Long-lead process equipment was approved for purchase by the Engineer on 21 February 2013. Shop drawings and cut sheets for the control panel were submitted by Bisco to the Engineer for review on 25 April 2013 and were approved on 9 May 2013.

Mr. Aron Krasnopoler of Geosyntec and Mr. Bart Bartholomey of CRA attended the run-off inspection at Bisco's facilities in Taunton, Massachusetts on 11 June 2013. Bisco reviewed the AS and SVE system construction with CRA and Geosyntec and tested the alarms and controls. The level transmitters for the SVE condensate holding tank (T-705) had not been installed and were not tested. In addition, the installation of exterior electrical junction boxes was requested. The AS/SVE trailer and associated process equipment were approved for shipment pending installation of the level transmitter and the exterior electrical junction boxes. The level transmitter was tested at the Site during startup (Section 4.16).

3.11 Concrete Pad Installation

Installation of the concrete pad for the IDDA 1b treatment area was conducted on 29 and 30 April 2013. CRA contracted Gallik and Riefler Masonry to perform all concrete related work for the installation. The Final RD called for installation of two (2) concrete pads in the IDDA 1b and the IDDA 2 and Septage Lagoon treatment areas with dimensions of 34 feet by 28 feet. The concrete pad for the IDDA 2 and Septage Lagoon treatment area was not constructed after USEPA approved the design change for this area on 15 February 2013. The dimensions of the concrete pad for the IDDA 1b treatment area was increased to 42 feet by 24 feet in the design clarification issued by the Engineer on 12 April 2013 (Appendix H of the ISARAR) due to the increased length of the AS/SVE trailer.

CRA marked out the area and surveyed all four corners of the pad's location. A set of three conduits were installed leading to the West side of the pad. The ends of the conduits were oriented vertically and stick up in the center of the area to be exposed after the concrete had been poured. Stone was added to the rectangular area and it was compacted using a vibrating compactor until the amount of compaction required was achieved.

One-inch rebar was used to create the frame to hold the concrete pad together. The rebar was cut to form a grid pattern of approximately 18-inch squares. The design called for two of these grid patterns on top of one another with 7-inch clearance between them. Smaller pieces of rebar, called pins, were brought to the Site prefabricated with arms to hold the 1-inch bars at the correct clearances. These pins were hammered into the ground every several feet. This allowed for adjustments to the height of the rebar to achieve the 2-inch clearance from the bottom and 3-inch clearance from the top of the pad. A 6-inch clearance was also called for from the edges of the pad. Concrete was delivered to the Site by truck through Wayne County Ready Mix. Concrete was poured into the mold in two lengthwise sections, moving from South to North.

At several points during the pouring, slump tests were performed to check the consistency of the concrete being used. Cylinders were also collected to be used for laboratory analysis of compression strength. Each truck was instructed to pour concrete for several minutes before performing a slump test and collecting a cylinder. The slump test was performed using a 12-inch cone and a 5/8-inch rebar tamping rod. Freshly poured concrete was shoveled into the slump cone to the top, tamping down every third of the way to full. The cone was then carefully removed and the height of the concrete was measured. A maximum allowable slump for this application was 4 inches. A temperature of the concrete was also taken at this time. Once the slump test had passed, a 12-inch by 6-inch cylinder was collected, tamped down, and set aside near the work area. This would allow proper drying of the concrete in the actual field conditions. In all, five cylinders were collected with four of them being sent to Fairway Testing for compressive strength analysis on 30 April 2013. Concrete was poured throughout the day until the mold was completely filled. As the pad dried, it was smoothed, given a finished texture, and sealed.

Fairway Testing conducted the 7-day compressive strength analysis on 7 May 2013 and reported an average strength of 3,010 pounds per square inch (psi). The 28-day compressive strength analysis was performed on 28 May 2013 with an average strength of 4,650 psi reported. Based on Geosyntec's review of the results, the specification of a minimum strength of 3,000 psi was achieved. Copies of the concrete testing results are provided in Appendix G of the ISARAR.

3.12 AS/SVE Trailer Delivery and Installation

The AS/SVE trailer and heat exchanger for the IDDA 1b treatment area arrived on the morning of 18 June 2013. A boom crane was used to lift the trailer and place it near the western edge of the concrete pad. A lumber shim was placed beneath the south end of the trailer for leveling purposes due to the sloping of the pad. Vapor-phase granular activated carbon (VGAC) units from Tetrasolv arrived later in the day and were placed on the northeast corner of the concrete pad.

3.13 AS Distribution Piping Installation

Installation of the AS distribution piping was conducted between 1 and 10 May 2013. The Final RD called for installation of individual one-inch diameter HDPE (PE 4710) piping to each AS wellhead. Installation was to be supported aboveground. CRA proposed installation in shallow trenches (<12 inches in depth) above the landfill cap as a bid alternative which was accepted by the Group and the Design Engineer. At the time of installation, the AS/SVE trailer had not yet been delivered to the Site. The common trench started on the west side of the concrete pad at the approximate location of the air injection header in the AS/SVE trailer and continued to the east. The trench then branched to the north and south toward individual AS wellheads with an effort to minimize the amount of trenching required. The as-built locations of the trenches are shown on the as-built drawings in Appendix F of the ISARAR.

The one-inch diameter HDPE piping was unrolled and left in the sun to allow it to become flexible at least one day prior to placement in the trench. Piping was placed in the trench starting at each AS wellhead and running back to the concrete pad. A single length of pipe was installed in the trench without joints or fittings for each AS wellhead. Backfill was placed on top of the piping then tracer wire was installed along the length of the pipe. The trenches were then backfilled and the area was regraded. The piping was terminated aboveground at the concrete pad, labeled and capped. Two AS wells, ASW34 and ASW35 are located to the east of the eastern stormwater management channel. AS distribution piping to these locations exits the trench and is installed aboveground across the diversion channel.

The AS wellheads were assembled, installed and connected to the AS distribution piping between 14 and 22 May 2013. Geosyntec inspected the wellhead assemblies following installation in accordance with the amendment to the CQA Plan.The AS wellheads were installed on the AS wells in accordance with the Final RD and submittals for the AS wellhead components that were submitted to the Engineer for approval. As-built details are shown in Appendix F of the ISARAR.

CRA performed pneumatic leak testing of the AS distribution piping between 3 and 5 June 2013 in accordance with the testing procedure submitted to and approved by the Engineer. Geosyntec CQA personnel were present to observe the leak testing. A testing header that allowed for five simultaneous tests to take place was fabricated by CRA. The free ends of the HDPE pipe (at the concrete pad) were heated up with a propane torch to allow them to expand and then the pipe was attached to the testing header and clamped. A portable air compressor was connected to the header and used to pressurize each HDPE line to a pressure of 30 pounds per square inch (psi). The pipe was tested for leaks by applying a soap solution. A leak was defined as formation of bubbles where the soap solution was applied. If leaks were found, the joint was adjusted and the test was restarted. The leak test of each pipe was accepted when a pressure of 30 psi ± 1 psi was maintained for one hour. Each leak test was documented on a leak test data sheet. Signed copies of the data sheets are provided in Appendix G of the ISARAR.

3.14 SVE Distribution Piping Installation

Installation of the SVE distribution piping was conducted between 18 June and 1 July 2013. Four-inch and six-inch diameter HDPE pipe was used for the two headers to connect the SVE wells to the IDDA 1b AS/SVE trailer. Two-inch diameter CPVC pipe was used for the lateral connecting the SVE wellhead to the HDPE header. The SVE distribution piping was installed aboveground and supported on pipe stands which are bolted into small concrete pads. Pipe stands were placed approximately 12 feet apart. The SVE piping was sloped so that any condensing moisture will flow back towards the SVE well. The CPVC laterals were sloped downward toward the SVE well and HDPE headers were sloped downward away from the AS/SVE trailer. The HDPE pipe lengths were cut to length and shape and fusion welded.

After installation, snaking of the HDPE piping was observed due to thermal expansion particularly in the four-inch HDPE header piping. There was a concern that the lateral movement of the pipe would cause stress on the pipe supports and the SVE wellheads. The pipe supports were loosened to allow for lateral movement of the pipe. CRA proposed the installation of CPVC telescoping expansion joints (Spears Manufacturing Company) to allow for lateral movement of the pipe due to thermal expansion. The expansion joints would allow for movement of up to six inches. The Engineer accepted and the Group approved installation of expansion joints at four locations: 1) the header to SVE09, 2) the header to SVE10, 3) the header between SVE12 and SVE13, and 4) the header between SVE13 and SVE14. As-built locations are presented in Appendix F of the ISARAR.

CRA performed pneumatic leak testing of the SVE distribution piping on 1 July 2013 in accordance with the testing procedure submitted to and approved by the Engineer. Geosyntec CQA personnel were present to observe the leak testing. The header used for leak testing of the AS distribution piping was also used for leak testing of the SVE distribution piping. A portable air compressor was connect to the header and used to pressurize each SVE header to a pressure of 30 psi. Each SVE header pipe was tested for leaks by applying a soap solution. A leak was defined as formation of bubbles where the soap solution was applied. If leaks were found, the joint was adjusted and the test was restarted. The leak test of each SVE header was accepted when a pressure of 30 psi ± 1 psi was maintained for one hour. Each leak test was documented on leak test data sheet. Signed copies of the data sheets are provided in Appendix G of the ISARAR. Following the completion of leak testing the SVE header piping was connected to the AS/SVE trailer.

CRA insulated the SVE distribution piping between 1 and 26 August 2013. Insulation for the six-inch diameter piping was used to insulate the expansion joints. Geosyntec was not present during the installation but inspected the insulation during startup and shakedown.

3.15 Paving

Paving of the permanent access road from the northern Site entrance to the IDDA 1b treatment area occurred between 25 and 31 July 2013. Geosyntec reviewed and approved the submittals for paving prior to the work but was not present during paving in accordance with the amendment to the CQA Plan. The as-built location of the permanent access road is shown in the as-built drawings in Appendix F of the ISARAR.

3.16 Electrical and Communications Services

The electrical plan presented in the Final RD proposed that electrical and communication services would be brought to the treatment areas from Delaware Drive under the railroad embankment and into the west of the Site. CRA and the Engineer met with New York State Electric and Gas (NYSEG), the local electric utility on 23 January 2013 to review the planned route for electrical service. NYSEG determined the availability of the electrical service required to operate the in-situ source treatment system and the need for the installation of additional infrastructure (i.e. utility poles). NYSEG provided a preliminary design to provide electrical service on 1 February 2013.

CRA submitted an Application for Pipe and Wire Occupancy to Norfolk Southern Corporation (Norfolk Southern) on 18 March 2013 in accordance with the project specifications. Norfolk Southern notified CRA on 25 March 2013 that Norfolk Southern no longer controlled the railroad tracks adjacent to the Site and returned the application. CRA was informed that that section of the railroad tracks is now controlled by the Central New York Railroad and that the application for occupancy should be submitted to the New York, Susquehanna & Western Railway Corporation (NYSWR). CRA submitted a new application for occupancy to NYSWR on 8 April 2013.

On 17 April 2013, the PRP Group directed CRA to get alternative pricing from NYSEG for routing the electrical service to the Site via Engelman Lane. NYSEG provided a conceptual design and preliminary costs on 30 April 2013 to provide electrical service via Engelman Lane and Oak Street. The PRP Group directed CRA to modify the electrical plan to provide electrical service via Oak Street instead of Delaware Drive and request a final design from NYSEG. NYSEG provided the final design on 29 May 2013 and began the process of obtaining the necessary easements for construction. The modification to the electrical plan was documented as a field change. The as-built locations of the electrical service are provided in Appendix F of the ISARAR.

CRA began excavation of the trench for conduit installation on 5 June 2013. Trenching began from the west side of the concrete pad, crossed the temporary road south of the pad, and ran parallel with the road to the location of the future utility pole. CRA also excavated the locations for installation of the transformer vault and the pull box. After completing the trench, CRA placed three (3) six- inch diameter PVC conduits at the bottom of the trench. One conduit is for the electrical service, one conduit is for communication services, and one is spare for future use. After conduit placement in the trench, a layer of soil was backfilled over top of it and then compacted with a vibrating plate compactor to a depth ranging from 27.5 inches at the Site entrance to 12.5 inches near the transformer pad location. Caution tape was then rolled out in the trench and the trench was backfilled. The area was then brought back to final grade.

The excavation for the transformer vault was to a depth of approximately 18 inches with no penetration of the landfill cap components. Geotextile fabric was placed on top of the cover soil and then six inches of gravel subbase was placed in the excavation. The transformer vault was then placed in the excavation using a boom crane and the excavation was filled with soil. Because the depth of the transformer vault was 36 inches (greater than the depth of the excavation), additional fill was placed around the vault at a 1:4 slope. A 24-inch wide, four-inch thick strip of stone was placed around the vault for drainage.

Pull string was blown through the conduits for use during conductor installation. Conduit and vault installation were completed on 12 June 2013.

NYSEG completed installation of new utility poles and overhead wires on 7 August 2013 and installation of the transformer was completed on 14 August 2013. Demco New York, the electrical subcontractor, installed the primary and secondary conductors and made the electrical service connections to the AS/SVE trailer between 19 and 26 August 2013. NYSEG inspected the electrical service installation on 27 August 2013 and made the final service connections to provide electrical service to the AS/SVE trailer and associated equipment. Demco tested the rotation of the electrical motors on the air compressor (C-201), the SVE blowers (C-203 and C-204) and the heat exchanger (H-503). All motors were shown to have the proper rotation.

Frontier Communications completed installation of the communication services on 13 September 2013.

3.17 AS/SVE Startup and Shakedown

Bisco and Geosyntec conducted startup and shakedown of the AS and SVE systems between 27 and 29 August 2013.

Wiring for the heat exchanger temperature transmitter (TIT-503) was found to not have been connected to the PLC. CRA installed wiring with confirmation of installation by Bisco. The temperature transmitter was tested and found to be functioning properly.

Sampling ports at the influent, midpoint and effluent of the VGAC vessels had not been installed. CRA installed the influent and midpoint sampling ports on the inlet flanges of the VGAC vessels and installed the effluent sampling port on the discharge stack mounted to the AS/SVE trailer.

On 27 August 2013, Geosyntec performed startup testing of SVE blower C-203 and associated SVE wells. Heat exchanger H-503 was started in “Auto”. The SVE blower was started with the dilution air valve open and the valve to moisture separator T-703 closed. The globe valve at each SVE wellhead connected to SVE blower C-203 was closed. The valve to T-703 was opened and the dilution air valve was closed to achieve the target vacuum of 63 inches of mercury (in Hg). Geosyntec tested the four SVE wells connected to SVE blower C-203 (SVE09, SVE12, SVE13, and SVE14) by opening the globe valve at each wellhead and measuring the flow rate at each well using a velocity meter (Velocicalc, TSI Inc.) that was inserted into the flow measuring port. After flow and vacuum measurements were completed at all four wells, the measurements were repeated. Flow and vacuum were achieved at all four SVE wells. The flow and vacuum measurements are presented in Appendix G of the ISARAR. The methane concentration at the SVE blower inlet was monitored as a percentage of the methane lower explosive limit (LEL) during testing of the SVE wells and the dilution air valve was adjusted to keep the methane concentration below 50% of the methane LEL.

On 28 August 2013, Geosyntec performed startup testing of SVE blower C-204 and associated SVE wells. Heat exchanger H-503 was started in “Auto”. The SVE blower was started with the dilution air valve open and the valve to moisture separator T-704 closed. The globe valve at each SVE wellhead connected to SVE blower C-204 was closed. The valve to T-704 was opened and the dilution air valve was closed to achieve the target vacuum of 20 in Hg. Geosyntec tested the nine SVE wells connected to SVE blower C-204 (SVE02, SVE03, SVE04, SVE05, SVE06, SVE07, SVE08, SVE10, and SVE11) by opening the globe valve at each wellhead and measuring the flow rate at each well using a velocity meter (Velocicalc, TSI Inc.) that was inserted into the flow measuring port. After flow and vacuum measurements were completed at all four wells, the measurements were repeated. Flow and vacuum were achieved at all nine SVE wells. The flow and vacuum measurements are presented in Appendix G of the ISARAR. The methane concentration at the SVE blower inlet was monitored as a percentage of the methane LEL during testing of the SVE wells and the dilution air valve was adjusted to keep the methane concentration below 50% of the methane LEL.

Geosyntec observed that the drains on the VGAC vessels were unplugged and were leaking off-gas. The SVE system was then shutdown. Bisco procured plugs and installed them. Both the C-203 and C-204 SVE systems were restarted. Geosyntec collected samples of SVE off-gas in

Tedlar bags from the influent, midpoint and effluent sample ports. VOC concentrations were measured with a PID. The influent VOC concentration was 16.5 parts per million vapor (ppmv) while the VOC concentration in the midpoint and effluent samples were below the detection limit of the PID.

Geosyntec and Bisco performed startup testing on the AS system. Bisco tested the operation of compressor C-201 to ensure that the compressor would shut off after pressurizing the air receiver tank T-701. Geosyntec and Bisco tested the pressurization of the AS distribution piping and the AS wells. Because of the elevated methane concentrations in the SVE off-gas, Geosyntec decided not to inject air into aquifer. The air pressure on each AS distribution line was set to 5 psig, below the entry pressure, i.e. the pressure at which flow into the surrounding groundwater would be expected. This allowed the pressurization of the AS well to be tested.

All AS wells were able to pressurize except ASW16 which has measurable air flow but no pressure, suggesting a leak. The AS piping to ASW16 was tested with the ball valve to the wellhead closed by pressurizing the pipe. The pipe was able to hold pressure which suggested a leak at the wellhead or well. The pressure gauge at the ASW16 wellhead was swapped with a new gauge but ASW16 still had measurable air flow below the entry pressure. CRA then removed the concrete pad and excavated around ASW16 to expose the transition from the CPVC riser to the stainless steel wellhead. The fitting was found to be sheared off and the source of the leak. CRA removed the damaged fitting and installed a replacement. ASW16 was retested and was able to be pressurized but a small leak was observed. Testing with a soap solution indicated a leak at the transition fitting. The AS wellhead connection to the fitting was tightened and the leak was fixed.

Geosyntec tested the sequencing of the AS cycles. The AS wells were grouped into two sequences:

Sequence 1: ASW01, ASW03, ASW05, ASW08, ASW10, ASW12, ASW14, ASW16, ASW18, ASW20, ASW22, ASW24, ASW26, ASW28, ASW30, ASW32, ASW34, ASW36, and ASW37.

Sequence 2: ASW02, ASW04, ASW06, ASW07, ASW09, ASW11, ASW13, ASW15, ASW17, ASW19, ASW21, ASW23, ASW25, ASW27, ASW29, ASW31, ASW33, and ASW35.

When each sequence was started, the solenoid valves in each sequence were observed to have opened. The sequences were shut down by the low flow alarm because the wellhead pressures were still set below the entry pressure and no there was no flow to the AS wells.

Bisco demonstrated the operation of the level transmitter for the SVE condensate tank T-705 that had not been installed at the time of the runoff inspection on 11 June 2013 (see Section 4.9) and it was accepted by Geosyntec.

3.18 Site Restoration

Site restoration activities, including regrading disturbed areas and reseeding to restore vegetative cover, were conducted as work was completed. Geotextile fabric and stone were placed in the IDDA 1b treatment area to eliminate the need for mowing around the AS and SVE wells and the aboveground SVE distribution piping. Site restoration was inspected by Geosyntec during startup and shakedown and during the Pre-Final Inspection with USEPA on 11 September 2013. Silt fence installed as temporary E&S controls will remain in place until next spring in order to allow time for the reseeded vegetative cover to become established.

3.19 Site Demobilization

Construction equipment was demobilized prior to substantial completion as it no longer became necessary to keep it at the Site. CRA completed demobilization on 12 September 2013 following the Pre-Final Inspection with USEPA.

4. CONSTRUCTION PERFORMANCE STANDARDS AND CONSTRUCTION QUALITY CONTROL

4.1 Construction Performance Standards

Construction performance standards were established by the drawings and specifications developed for the Final RD and incorporated into the construction agreement between the Group and the RA Contractor. The drawings and specifications referenced standards for materials, methods and testing for construction quality control (CQC). CQC refers to those actions taken by the RA Contractor, including many of their subcontractors, manufacturers, and/or suppliers, through a planned system of inspections and tests used to directly monitor, control and document the quality of the materials used in and construction of the remedy in compliance with the approved drawings and specifications, and other applicable construction documents.

4.2 Construction Quality Assurance

To verify that the RA construction occurred in accordance with the intent of the performance standards and goals outlined in the previous section, the Group implemented a construction quality assurance (CQA) program, which was outlined in the CQA Plan provided in the RD. During the RA, the Group retained Geosyntec to provide CQA services and to document and certify that construction activities were completed in accordance with the project criteria.

The CQA program implemented during the RA included several key components including: (i) routine inspections and meetings by key project personnel; (ii) documentation of design modifications; (iii) construction oversight, documentation, and testing; and (iv) surveying and record drawings. The following sections describe the relevant information with respect to each of these components.

4.2.1 Site Inspections and Meetings

A primary means of construction quality control was routine progress meetings and visits by representatives of the project stakeholders including USEPA, PADEP, Group technical committee members, Geosyntec, and the RA contractor. As discussed in Section 4.2, the first meeting conducted was a pre-construction meeting on 5 December 2012 at the Site.

Progress meetings were generally conducted by teleconference on a weekly basis during construction activities and on a bi-weekly basis between the first and second construction seasons. In total, 31 progress meetings were held. These meetings were used to discuss and resolve problems anticipated and/or noted during constructions, minor modifications to the design and schedule, and construction progress. Meeting minutes for each construction progress meeting and the pre-construction meeting are provided in Appendix I of the ISARAR.

4.2.2 Deviations from Original Remedial Design

Several deviations from the original RD were necessary to accommodate changes in field conditions, project schedules, and adverse weather conditions during the project. Significant changes to the design were generally documented through the issuance of design clarifications by the Engineer. A total of eight (8) design clarifications were made during the course of the project. The design clarifications are provided in Appendix H of the ISARAR and a summary of the modifications made in each design clarification is provided in Table 3 of the ISARAR.

As described above, minor changes to the design were typically made during construction progress meetings and documented in the minutes of those meetings. Meeting minutes are provided in Appendix I of the ISARAR. Burial of the AS distribution piping in shallow trenches above the landfill cap was accepted as a bid alternative by the Group and the Design Engineer. The installation of four (4) expansion joints in the SVE distribution piping was approved following the observation of thermal expansion in the 4-inch diameter HDPE piping.

Other modifications included the request for no active treatment beneath the former IDDA 2 and Septage Lagoon source areas with COCs in groundwater to be addressed through MNA. As described in Section 3.5, source characterization of the IDDA 2 and Septage Lagoon treatment area found that that the residual source material in this area does not meet the design criteria for material requiring active treatment. In February 2013, USEPA approved the request. A copy of this modification request and the USEPA approval are provided in Appendix E of the ISARAR.

4.2.3 Documentation of Construction Activities

Construction activities were monitored by the Engineer's on-site construction CQA personnel and verified through the Engineer's review of field monitoring and testing results and the final as-built survey. The Engineer's on-site CQA representative monitored and documented construction activities and tested various media and materials to verify conformance with the quality control objectives set forth in the Site CQA Plan, submitted as part of the Final RD. Documentation of construction activities included both photographic documentation and completion of daily field reporting of construction activities. A copy of the daily field reports generated during the project is provided in Appendix J of the ISARAR. A photographic log containing selected photographs of major construction activities is provided in Appendix K of the ISARAR.

In addition to monitoring and documenting construction activities, the CQA representative reviewed supplier and manufacturer QC information provided by the Contractor and performed various sampling, monitoring, and testing activities during construction. All materials that required conformance sampling or testing documentation met project criteria. On-site monitoring and testing of materials was limited and included the following activities:

- monitoring of geosynthetic repairs;
- compressive strength testing of concrete during installation of the concrete pad;
- pneumatic leak testing of the AS and SVE distribution piping; and
- startup and shakedown of the AS and SVE systems.

The results of each of these monitoring and testing activities are presented in Appendix G of the ISARAR. All required tests or monitoring performed as part of the RA construction met project specifications.

4.3 Green Remediation

The Final RD included a Green Remediation Plan (GRP). "Green Remediation" is the practice of considering environmental effects of the implementation of a remedy and incorporating options, where appropriate, to enhance the net environmental benefit of cleanup actions. The GRP developed environmental metrics to be reported to USEPA during remedy implementation to demonstrate satisfaction of the GRP objectives. The GRP environmental metrics applicable to RA construction are use of clean diesel fuels and technologies and industrial material reuse or recycling.

4.3.1 Use of Clean Diesel Fuels and Technologies

During construction procurement, information on the bidder's diesel-powered fleet was solicited and that information was evaluated as part of the procurement decision process. CRA proposed to rent late model earth moving equipment and use ultra-low sulfur diesel (ULSD) fuel or Biodiesel whenever appropriate. CRA also recommended that jobsite crews limit equipment idle time to five minutes when possible and safe in an effort to save fuel and reduce emissions.

4.3.2 Industrial Material Reuse or Recycling

CRA segregated the pre-existing IDW and consolidated similar wastes for characterization and disposal. Waste streams were evaluated for potential reuse or recycling. However, no reuse application or recycler was found that would accept any of the waste streams. All of the pre-existing IDW was transport off-site for disposal as described in Section 4.3.

5. SURVEYING AND RECORD DRAWINGS

Fisher Associates (Fisher) of Rochester, New York was contracted by CRA to provide professional surveying services during construction. During the project, Fisher provided survey control for the constructed features including field locating and staking for control points, grade stakes and well locations, and preparation of the final as-built survey.

In accordance with the Project Specifications, Fisher prepared final Record Drawings of the Site, on behalf of CRA. A preliminary as-built drawing of the AS and SVE well locations and the temporary access road was provided to Geosyntec on 4 March 2013 following completion of the first construction season. A preliminary as-built drawing of AS and SVE distribution piping, the concrete pad and the electrical service installation was provided to Geosyntec on 24 September 2013.

These drawings were incorporated into the as-built drawing provided in Appendix F of the ISARAR. Based on Geosyntec's review, the design requirements have been met.

6. FINAL INSPECTION AND CERTIFICATIONS

6.1 Final Inspection

The Pre-Final Inspection of the Source Area RA was conducted by USEPA on 11 September 2013 with representatives of the Group, Geosyntec and CRA. No deficiencies were noted nor communicated by USEPA.

6.2 Health and Safety Requirements

CRA prepared a Health and Safety Contingency Plan (HSCP) in accordance with the project Specifications. The HSCP was submitted with the Remedial Action Work Plan (RAWP) to USEPA on 14 October 2012. Revisions to the RAWP and HSCP were submitted to USEPA on 20 December 2012 in response to USEPA comments.

Tailgate meetings were held at the beginning of each workday at the Site during RA construction and documented in the daily field log prepared by the Site Manager. No reportable incidents occurred on Site during RA construction.

6.3 Engineer of Record Certification

Geosyntec provided CQA monitoring services during construction of the Source Area RA at OU4. The CQA monitoring was performed by qualified Geosyntec personnel on a full-time basis from December 2012 through January 2013 and April through August 2013 with the exception for those activities for which on-site monitoring was not required per the addendum to the CQA Plan approved by USEPA on 10 October 2012. As part of these activities, CQA personnel monitored the following construction activities:

- Installation of temporary E&S controls;
- Installation of the temporary access road and stabilized construction entrance;
- AS and SVE well installation in the former IDDA 1b source area and in the former IDDA 2 and Septage Lagoon source areas;
- Repair of landfill cap geosynthetics that were cut to access the underlying subsurface during boring and well installations;
- Off-site testing of the AS and SVE systems prior to shipment;
- Delivery of the IDDA 1b AS/SVE trailer;
- Delivery and connection of the off-gas treatment equipment to the AS/SVE trailers;
- Installation and testing of AS distribution piping and associated valves and fittings to connect the AS wells to the AS/SVE trailer;

- Testing of SVE distribution piping and associated valves and fittings to connect the SVE wells to the AS/SVE trailer;
- Excavation and trenching for the installation of electrical and data communication service connections to the AS/SVE trailers; and
- Start-up and shakedown of the AS and SVE systems.

During construction, CQA personnel verified that conformance tests were performed on the construction materials at the frequencies required in the specifications and that only materials meeting these requirements were used. CQA personnel also verified that conditions or materials identified as not conforming to the project requirements were replaced, and/or repaired, and modifications to the RD were approved to allow the conditions or materials to be used.

Based on Geosyntec's observations during construction, the results of our CQA monitoring program and testing presented in the appendices of this RAR, and the record as-built drawings provided by Fisher Associates, the in-situ source treatment system at OU 4 of the Cortese Landfill Site was constructed in substantial conformance with the RD, the approved design modifications presented in Appendix H and listed in Table 3 of the ISARAR, the ROD/ROD Amendment, the SOW and the Consent Decree.

The Engineer of Record Certification for the work described herein was previously approved and signed for the submittal of the ISARAR in December 2013. A copy of the original signature page from the ISARAR is included in this RAR as **Attachment 1**.

6.4 Duly Authorized Representative Certification

The Duly Authorized Representative Certification for the work described herein was previously approved and signed for the submittal of the ISARAR in December 2013. A copy of the original signature page from the ISARAR is included in this RAR as **Attachment 2**.

7. INSTITUTIONAL CONTROLS

Annually, Geosyntec has contacted the Code Enforcement/Building Department of the Town of Tusten to verify that the groundwater institutional controls for the areas downgradient from the landfill remain in force. Those controls include:

- Local Law #1 passed in 1996 restricting groundwater use in the vicinity of the Site to monitoring purposes only; and

- Local Law #4 passed in 1998 requiring drinking water connections for properties located downgradient from the Site and within the Narrowsburg Sewer and Water District.

According to the Code Enforcement/Building Department, both of those Local Laws remain in force and are not superseded or nullified by subsequent laws. No contraventions of those laws have been noted to-date.

Regarding institutional controls for the landfill cap, an environmental protection easement and declaration of restrictive covenants for the Site was recorded in October 2016 in the Site property records with Sullivan County, New York. Restrictions on property include:

- No soil excavation, including landscaping and surficial regrading, without prior written approval by USEPA and Grantees;

- Groundwater supply wells shall not be installed or utilized; groundwater shall not be hydrologically altered in any way; and groundwater underlying the Site shall not be withdrawn for any purpose other than groundwater monitoring and/or treatment, without prior written approval by USEPA and Grantees; and

- No use or activity shall be permitted at the Property, unless otherwise provided for in the Consent Decree and its accompanying Statement of Work, which may disturb the integrity of any of the response actions implemented at the Site, prior written approval by USEPA and Grantees;

- No infringement to the restrictions has been noted to-date.

8. GREEN REMEDIATION

"Green Remediation" is the practice of considering environmental effects of the implementation of a remedy and incorporating options, where appropriate, to enhance the net environmental benefit of cleanup actions. The Green Remediation Plan (GRP) included in the OU4 Remedial Design (Geosyntec, 2012a) presented the strategies, metrics, and documentation to be used to demonstrate the sustainability of the Remedial Action during construction, operation and monitoring of the OU4 Source Area RA. The following sections present data to demonstrate satisfaction of the GRP objectives.

8.1 Use of 100% Renewable Sources of Energy

The Respondents have opted to purchase RECs equivalent to the electrical power usage at the Site in lieu of using 100% of electricity from renewable sources. The energy usage represented by the RECs purchased will offset the environmental effects of energy usage at the Site. Note that RECs will likely be purchased periodically whereas energy consumption will be continuous. Therefore, the overall "balance" of energy use and RECs purchased will be out of sync at a given point in time or for a given reporting period depending upon the timing of energy consumption and REC purchases. However, balance will be achieved for the timeframe of active treatment system operation.

Based on estimates and meter readings by the electrical utility, the OU4 Source Area RA has used the following amounts of electricity by year:

- 2013: 84,900 kilo-watt hours (kWh)
- 2014: 84,700 kWh
- 2015: 192,600 kWh
- 2016: 441,800 kWh
- 2017: 415,200 kWh
- 2018: 14,600 kWh
- 2019: 7,100 kWh

The Group has purchased RECs equivalent to the electricity usage for each period. The service zip code is 12764. Since the AS/SVE system was shut off in October 2017, electricity usage has primarily been for heating.

8.2 Industrial Material Reuse or Recycling

During operation of the AS/SVE system, spent VGAC was transported off-Site for regeneration and reuse as follows:

- 2014: 62,000 pounds
- 2015: 80,000 pounds
- 2016: 142,000 pounds
- 2017: 57,000 pounds

The AS/SVE system was not in operation in 2018 or 2019, and no VGAC was transported off-Site for regeneration and reuse during that time.

9. OPERATION, MAINTENANCE, AND MONITORING

The implementation of the OU4 remedy components and associated groundwater performance standards are detailed in the OM&M Plan (**Appendix A**) and discussed in each Annual O&M Report. During the course of OU4 remedy implementation, the following OM&M components were monitored to evaluate the effectiveness of the OU4 remedy:

- Source Area groundwater monitoring;
- LNAPL monitoring; and
- VGAC off-gas monitoring.

The following sections summarize the monitoring procedures during the OU4 remedy implementation through present day, as applicable.

9.1 Operation and Maintenance Activities

During the Source Area RA, O&M activities were performed by Ground/Water Treatment & Technology, Inc. (GWTT) as outlined in the OM&M Plan (Geosyntec 2014a). O&M activities included initial startup of the AS/SVE system, conducting weekly Site/system inspections and completion of O&M inspection forms, remote monitoring, adjusting the system flow and injection rates, performing routine maintenance on system components (e.g., system adjustments, compressor oil changes, etc.), coordinating load-out of spent VGAC and condensate, and performing unscheduled maintenance and repairs, as necessary. O&M logs generated during AS/SVE operation are provided in **Appendix B.**

Operation of the AS/SVE system was suspended following observation that a fire had occurred in the second VGAC unit on 9 April 2015. Analysis and response to this incident is documented in The VGAC Fire Incident Report submitted in May 2016, and is provided as **Appendix C**. As described in the VGAC Fire Incident Report, Geosyntec, GWTT and its VGAC vendor, Evoqua, assessed and repaired the system during summer and fall 2015. Initial SVE startup procedures were revised to maintain sufficient air flow through the carbon beds for adequate heat transfer and to control the VOC load on the carbon units during startup.

Following repairs to the SVE system, VGAC replacement, and implementation of OM&M Plan revisions to operating procedures, the SVE system was restarted on 5 November 2015 and successfully continued operation without further incident until it was shut down in October 2017. Treatment residuals, including condensate and spent VGAC, were removed from the Site following shut down.

9.2 OU4 Groundwater Monitoring

Water quality has been monitored at the Site since the late 1980s. Sampling has been performed by Terra Nova Technical Corporation (Terra Nova) of Allentown, New Jersey since 1996. Samples have been analyzed by TestAmerica of Buffalo, New York, and the same laboratory under previous ownership (i.e. Severn Trent) since before the 2010 ROD/ROD Amendment. Currently, groundwater and surface water quality are monitored in accordance with the revised Monitored Natural Attenuation (MNA) Plan (Geosyntec, 2013a), OM&M Plan (Geosyntec, 2014a,), and O&M QAPP (Geosyntec, 2013e). Prior to approval of the 2014 OM&M Plan, groundwater monitoring was conducted semi-annually. Currently, groundwater monitoring is conducted tri-annually (three times per year) in spring, summer, and fall.

There are eight monitoring wells in the OU4 groundwater monitoring network which include MW-1A, MW-1B, MW-1C, MW-10, MW-11, MW-20A, MW-20B, and EX-1. **Table 1** summarizes the sample points and analytical parameters of the OU4 groundwater monitoring network. The locations of the OU4 monitoring wells are shown on **Figure 3**.

Monitoring wells were purged and sampled using dedicated bladder pumps in accordance with the low-flow/low stress sampling procedures presented in the O&M QAPP (Geosyntec, 2013e). Prior to commencing groundwater sampling, synoptic water levels were measured with an electronic water level indicator to the nearest 0.01 foot. Each monitoring well was purged until the field parameters including pH, temperature, specific conductance, ORP, DO, and turbidity met stabilization criteria. Field parameters were monitored using YSI model 556 (or similar) and LaMotte 2020 (or similar) field meters, calibrated by Terra Nova for all field parameters on a daily basis. Calibration results, available for review upon request, were recorded in Terra Nova's field books. Field parameter measurements can be found in Terra Nova's Groundwater Sampling Reports included in **Appendix D**. Following field parameter stabilization, groundwater samples were collected by filling laboratory-provided, pre-preserved sample containers directly from the pump discharge tubing.

Samples were analyzed for TCL VOCs and SVOCs, total metals (arsenic, iron, and manganese), TPH-GRO, TPH-DRO, and for electron donors/acceptors (alkalinity, ammonia, nitrate-nitrite, sulfate, and total organic carbon). Sample analytical methods, preservatives, and technical hold times are provided in **Table 2**. **Tables 3 through 5** summarize the groundwater analytical data for VOCs, SVOCs, and metals/leachate indicator/TPH/field water quality parameters, respectively. Laboratory analysis reports provided by TestAmerica are presented in **Appendix E**.

9.3 LNAPL Monitoring and Recovery

Monitoring and recovery of free light non-aqueous phase liquid LNAPL was conducted at select monitoring wells in the IDDA 1b treatment area during Source Area RA construction in order to recover LNAPL prior to the start of treatment system operations. Historically, LNAPL has only been present at three monitoring wells (MW13, MW-16, and S-2). The depth to product and depth to water was measured to the nearest 0.01 foot relative to the top of the inner casing using an interface probe and recorded. The depth to product was subtracted from the depth to water in order to determine the LNAPL thickness in the well to the nearest 0.01 foot and recorded. LNAPL monitoring was conducted semi-annually during the groundwater monitoring events through the startup of the AS/SVE system by Terra Nova. Ground/Water Treatment & GWTT conducted bi-weekly LNAPL monitoring beginning on 19 September 2014. Following AS/SVE system startup, LNAPL monitoring was conducted bi-weekly for approximately six months until 3 April 2015.

Following the 3 April 2015 LNAPL monitoring, bi-weekly monitoring was suspended as monitoring and recovery operations were considered complete in accordance with the OM&M Plan. LNAPL monitoring is currently conducted during the tri-annual groundwater monitoring events.

LNAPL recovery was conducted only on 13 November 2014 at MW-16 and S-2 using a sorbent sock as described in the OM&M Plan. Product thickness was determined to be too small for the LNAPL skimmers which were used during OU4 RA construction. Subsequent recovery attempts only stained the sorbent sock. LNAPL and adsorbent materials were containerized and disposed of in accordance with Section 5.5 of the OM&M Plan. **Table 6** summarizes the LNAPL measurements observed at Site monitoring wells from 2005 through present day.

9.4 SVE System and VGAC Off-Gas Monitoring

GWTT conducted weekly monitoring during normal AS/SVE operations between 2014 and 2017. During the initial startups of both the AS and SVE systems, monitoring was conducted twice a week. During each VGAC monitoring event, the influent to each carbon unit was monitored for VOCs by PID, and for methane, oxygen, carbon monoxide, and carbon dioxide by landfill gas meter (LFGM). Summa canister samples were collected from the influent to the lead VGAC unit (SP-503) to help estimate the VOC mass removed by the SVE system, and from the influent of the second unit (SP-504) to assess compliance with off-gas limits. VOC analyses were completed by USEPA Method TO-15 in accordance with the O&M QAPP (Geosyntec, 2013e)). Summa canisters were collected the week prior to and on the day of VGAC exchange. GWTT conducted weekly monitoring of the VGAC units using field instruments from 2 September 2014 through 9 April 2015 when the system was shut down due to fire in the VGAC units. VGAC monitoring resumed with the restart of SVE operation on 9 November 2015 and continued until suspension of active treatment on 18 October 2017.

The Summa canister analytical results during AS and SVE operations are summarized in **Table 7** and compared to threshold concentrations for off-gas treatment and VGAC exchange (VGAC Threshold Concentrations) presented in Addendum No. 2 to the Operation, Maintenance and Monitoring Plan for OU4 (Geosyntec, 2015a). VGAC Threshold Concentrations are based on the predicted source concentrations that would potentially equal Annual Guideline Concentrations (AGCs) presented in the Guidelines for the Toxic Ambient Air Contaminants (DAR-1; NYSDEC, 1997) at a potential fence line receptor. **Table 7** also presents PID field screening, total VOC concentrations based on full analytical results, and the VOC mass flow rate as calculated from total VOC concentrations and total discharge flow rate from the SVE blowers. Laboratory analytical reports for VGAC TO-15 analyses are presented in **Appendix F**.

10. PERFORMANCE MONITORING

10.1 Groundwater

The Performance Criterion described in **Section 2.1** has been established to evaluate the effectiveness of the OU4 remedy. This Performance Criterion has guided the operation of the AS/SVE treatment system from startup through present day and has informed in the assessment of the performance of the OU4 remedy. Comprehensive tables containing the groundwater monitoring results since 2008 for OU4 are presented in **Tables 3 through 5**. Copies of the laboratory reports and accompanying chain of custodies documentation are provided for reference in **Appendix E**.

Volatile Organic Compounds

Source Area VOC groundwater monitoring results are summarized in **Table 3**. Those results indicate that chlorinated aliphatic hydrocarbons, chlorinated aromatic hydrocarbons, BTEX, and ketones have been historically detected during the groundwater monitoring. Consistent with recent and historical results, the highest VOC concentrations along the source area transect were detected at EX-1 (screened in the upper sand and gravel unit downgradient of the former source areas). Although EX-1 has had the greatest VOC concentrations throughout the monitoring, concentrations during recent monitoring events were generally much lower than those historically measured at that location prior to treatment system operation. Historically, total VOC concentrations at EX-1 have been greater in the spring when the higher groundwater table elevation contacts more of the residual NAPL smear zone. The concentration peaks during recent years occur in July, are subdued compared to pre-treatment conditions, and continue to decline through time. These changes support a finding that the OU4 remedy successfully treated the contaminant mass in the smear zone.

During recent monitoring events, chlorinated aliphatic hydrocarbons at EX-1 tended to constitute the largest fraction of total VOCs detected, with chlorinated aromatic hydrocarbons and BTEX being detected to a lesser extent. Historically, particularly at monitoring locations nearest the source areas (i.e., MW-1B and EX-1), BTEX rather than chlorinated aliphatic hydrocarbons tended to be the predominant group of compounds detected. The proportionally greater decrease of BTEX compounds in the contaminant mixture may be attributable to AS operation. BTEX compounds generally aerobically degrade more readily than the chlorinated compounds and AS operation introduced oxygen into source area groundwater. Therefore, some in-situ aerobic biodegradation of BTEX likely occurred although this was not an intended component of the OU4 remedy and the mass degraded cannot be quantified. There was a slight increase in chlorinated aliphatic concentrations at EX-1 during the July and October 2019 events when compared to recent historical results, which declined in 2020.

Other monitoring wells in the source area transect where VOC's are frequently detected include MW-1B, MW-10, and MW-20A/B. During 2019, VOCs were not detected at MW-11 (April), MW-1A (April), and MW-1C (April, July, and October). There have been no VOC detections at MW-1A since May 2018 or MW-11 since May 2010.

Overall, recent VOC concentrations detected along the source area transect are generally one to two orders of magnitude lower than those historically detected at the Site prior to treatment system operation with apparent long-term downward trends at most locations.

Semi-Volatile Organic Compounds

SVOC sample results for source area transect monitoring wells are summarized in **Table 4**. Those results indicate that historically detected SVOCs include chlorinated benzenes, phenolic compounds, cyclic ether, and various phthalate compounds. The greatest SVOC concentrations have historically been detected at EX-1 and MW-10. 1,2,4-trichlorobenzene, 1,4-dichlorobenzene and 1,4-dioxane were generally the predominant SVOCs detected in the central portion of the source area transect (i.e., EX-1, and MW-1B).

There have been no SVOC detections at MW-1A since May 2016. Phenolic compounds were detected at MW-1C during 2020 at concentrations greater than most historical data for that location. As shown in **Table 4**, SVOC concentrations detected along the source area transect in recent monitoring events indicate generally downward trends at most locations.

Unfiltered Metals

As shown in **Table 5**, arsenic, iron, and manganese have been detected at concentrations greater than background in most of the source area transect monitoring wells during the groundwater monitoring. As discussed in the RI Report (Golder, 1994a) and in the prior Annual O&M Reports, those metals are probably naturally occurring and released from the sediments below the groundwater table by reductive dissolution in the zone of low redox created by MSW landfill leachate, methane gas, and/or the residual NAPL.

Iron and arsenic concentrations at EX-1 and MW-1C tended to be slightly higher in recent years than in pre-treatment monitoring events. The higher concentrations may be related to suspension of the source zone air sparging system operation, which has likely facilitated re-establishment of a less aerobic environment, thus increasing the solubility of the iron and arsenic-containing oxides.

Concentrations of metals in other source area wells in recent monitoring events are generally similar to historical pre-treatment concentrations with no readily apparent trends.

Total Petroleum Hydrocarbons

TPH results from the groundwater monitoring events are summarized in **Table 5.** Those results indicate that TPH-GRO is typically detected at EX-1, MW-1B, MW-10, and MW-1C. TPH-GRO is intermittently detected at MW-1C and MW-11. TPH-DRO was detected at EX-1, MW-1B, and MW-1C in recent monitoring events with concentrations generally lower than pre-treatment monitoring events. TPH-GRO/DRO has not been detected at MW-1A to-date.

In general, recent OU4 transect monitoring results for TPH-GRO/DRO are generally lower than pre-treatment concentrations and have either apparent downward trends or no trend.

Electron Donor/Acceptor and Leachate Indicator Parameters

Electron donor/acceptor and MSW leachate indicator parameters, including alkalinity, TOC, nitrate-nitrite, ammonia, and sulfate are monitored at source area transect wells during the groundwater monitoring events and sample results are summarized in **Table 5**. Those data are useful for monitoring improvements in groundwater quality resulting from construction of the low-permeability closure cover on the landfill and operation of the OU4 treatment system, and changes to the groundwater geochemical environment that promote natural attenuation of various constituents.

The results indicate that ammonia, TOC, and sulfate tended to be higher in the northwestern and central portions of the source area transect at monitoring wells MW-10, EX-1, MW-1B than near the southeastern edge at MW-20A/B that are sidegradient from the MSW in the landfill. Ammonia and TOC concentrations in recent monitoring events were generally consistent with historical pre-treatment results, except for TOC at EX-1 where concentrations were slightly higher in 2019 and 2020 when compared to results at that location prior to treatment. In recent monitoring events, alkalinity concentrations at most locations rebounded from lower concentrations that were measured during and shortly after stopping active source area treatment (i.e., 2015 to 2018) to concentrations that were more consistent with those measured prior to air sparging (i.e. before 2015). It should be noted that alkalinity was decreasing prior to OU4 system operation, possibly due to landfill cap construction and consequent reduced MSW leachate generation.

Increasing sulfate and nitrate-nitrite concentrations were detected at MW-10, EX-1, and MW-1C during air sparging between 2015 and 2018. The increasing concentrations indicated that the AS/SVE system was likely promoting less anaerobic groundwater conditions along much of the transect compared to pre-treatment conditions. In recent monitoring events, sulfate concentrations continued to be detected at most source area transects monitoring wells at concentrations higher than those detected prior to active treatment. However, nitrate-nitrite concentrations at all source area transect monitoring wells have decreased since the AS/SVE system was shut off in 2017. The lower nitrate-nitrite concentrations indicate that more anaerobic groundwater conditions have begun to redevelop since the AS/SVE system was shut off, as shown recent dissolved oxygen concentrations at some locations.

Field Geochemistry

Field geochemical parameters that include DO, ORP, specific conductivity, and pH from the groundwater monitoring events are summarized in **Table 5**. The data indicate that groundwater along the source area transect is generally slightly acidic. ORP was variable ranging from oxidizing to slightly reducing. However, the ORP and DO readings indicated movement toward a more reducing geochemical environment when compared to data from when the AS/SVE system was operating.

10.1.1 Mass Discharge

To evaluate changes in VOC mass discharge from the baseline values presented in the OM&M Plan, (Geosyntec, 2014a) total VOC data from the monitoring events (see **Table 3**) were used to calculate mass discharge for each monitoring event for the OU4 transect. This is the primary performance metric for the OU4 RA. A summary of the calculated mass discharge results and comparison to baseline values are presented in **Table 8.** Geologic cross-sections through each transect and a detailed breakdown of the calculations for the most recent monitoring events are presented in **Appendix G**. Mass discharge calculation procedures used to generate the values were consistent with those presented in the OM&M Plan (Geosyntec, 2014a).

As shown in **Table 8**, OU4 transect mass discharge in April and July 2020 (more than two years after cessation of active treatment) were 93% and 97%, lower than baseline, respectively. The performance metric is at least a 90% reduction. A time-series plot of OU4 mass discharge from each monitoring event since April 2014 and comparison against the OU4 baseline discharge and Performance Standard is provided as **Figure 4**. Those results show that mass discharge from the source area transect has continued to be less than or equal to the Performance Standard even though active treatment has not occurred since October 2017. OU4 mass discharge has been less than or equal to the Performance Standard for thirteen (13) consecutive monitoring events (i.e., since July 2016). Higher mass discharge was measured for the July and October 2019 and April 2020 events when compared to the results since 2016 but the mass discharge continues to meet the Performance Standard.

10.1.2 20% Rebound Assessment for Individual VOCs

Select VOC concentrations were further evaluated to assess if concentrations have rebounded more than 20% since AS/SVE shutdown in October 2017. Although evaluation of individual VOCs are not required to determine whether the Performance Criterion has been achieved, it informs in the assessment of biodegradation trends in OU4 groundwater. It should be noted that the Remedial Design and the O&M Plan specify that a 20% rebound of total VOC mass flux would trigger system restart, not rebound of individual VOCs. The specific VOCs and locations discussed below were selected by reviewing VOC concentrations in downgradient monitoring wells prior to OU4 treatment to identify those that had detections greater than cleanup goals. A 20% rebound comparison level for each well/constituent pair was calculated from the average concentration prior to treatment system shutdown plus 20% of the change in average concentration before, and at the end of, treatment system operation. Based on this assessment, monitoring wells EX-1 and MW-1B were evaluated for the following VOC constituents: 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,1-Dichloroethane, Benzene, cis-1,2-Dichloroethene, Chlorobenzene, Trichloroethene, and Vinyl Chloride.

Figures 5a through 5r present time-series charts for the above well/constituent pairs and compares concentrations to the 20% rebound comparison level. The following observations can be made:

- 1,2-Dichlorobenzene: There have been three recent detections above the 20% rebound comparison level at EX-1 following AS/SVE system shutdown but no apparent trend. There has been only one detection above the 20% rebound comparison level at MW-1B following AS/SVE system shutdown and no apparent trend.

- 1,3-Dichlorobenzene: There have been eight consecutive detections above the 20% rebound comparison level at EX-1 beginning in spring 2018 with an apparent increasing trend during that time. There have been only two detections above the 20% rebound threshold at MW-1B following AS/SVE system shutdown and no apparent trend.

- 1,4-Dichlorobenzene: There have been five consecutive detections above the 20% rebound comparison level at EX-1 beginning in spring 2019 with no apparent trend. There have been only two detections above the comparison level at MW-1B following AS/SVE system shutdown and no apparent trend.

- 1,1-Dichloroethane: There have been only two detections above the 20% rebound comparison level at EX-1 following AS/SVE system shutdown and no apparent trend with three consecutive detections below the comparison level since that time. There have been no detections above the comparison level at MW-1B following AS/SVE system shutdown.

- Benzene: There has been only one detection at EX-1 above the 20% rebound comparison level (summer 2020) and no apparent trend. There have been no detections at MW-1B above the 20% rebound comparison level following AS/SVE system shutdown.

- Cis-1,2-Dichloroethane: There have been only two detections at EX-1 above the 20% rebound comparison level following AS/SVE system shutdown and no apparent trend.

There have been no detections above the 20% rebound comparison level at MW-1B following AS/SVE system shutdown.

- Chlorobenzene: There have been four consecutive detections above the 20% rebound comparison level at EX-1 beginning in summer 2019 with a possible increasing trend. There have been only two detections above the 20% rebound comparison level at MW-1B following AS/SVE system shutdown and no apparent trend.
- Trichloroethene: There has been only one detection above the 20% rebound comparison level at EX-1 following AS/SVE system shutdown and no apparent trend. There has been only one detection above the 20% rebound comparison level at MW-1B following AS/SVE system shutdown and no apparent trend.
- Vinyl Chloride: There has been only one detection above the 20% rebound comparison level at EX-1 following AS/SVE system shutdown and no apparent trend. There have been no detections above the 20% rebound comparison level following AS/SVE system shutdown.

10.1.3 Natural Attenuation Evaluation

As outlined in the 2010 ROD/ROD Amendment, an analysis of historic Site data collected as part of long-term groundwater monitoring since 1995 showed evidence indicating that anaerobic natural attenuation processes; including anaerobic mineralization of aromatic hydrocarbons and TPH as well as reductive dechlorination of chlorinated ethanes, ethenes, and chlorinated aromatics, have occurred in downgradient groundwater.

Groundwater data collected in recent monitoring events continue to support natural attenuation of several Site constituents. Specifically, evidence of anaerobic biodegradation processes in groundwater has been documented, including:

- Detection of chlorinated ethene reductive dechlorination daughter products vinyl chloride and cis-1,2-dichloroethene from parent compounds tetrachloroethene and trichloroethene;
- Detection of chlorinated ethane reductive dechlorination daughter products 1,1-dichloroethane and chloroethane from parent compound 1,1,1-trichloroethane;
- Detection of chlorobenzene and dichlorobenzene isomers from reductive dechlorination of the trichlorobenzene and dichlorobenzene isomer parent compounds; and
- Larger fractions of total VOCs comprised by chlorinated ethene, chlorinated ethane, and chlorinated benzene daughter products in downgradient groundwater compared to that historically detected near the source areas.

10.2 LNAPL

LNAPL measurements beginning in 2005 through present day at select monitoring wells are presented in **Table 6**. As discussed in **Section 9.2**, LNAPL monitoring currently occurs tri-annually and coincides with the groundwater monitoring events. Historically, there have been LNAPL observations at only three monitoring wells (MW-13, MW-16, and S-2). As shown in **Table 6**, there have been no observations of LNAPL at any Site monitoring wells since May 2016.

10.3 VGAC

Summa canister analytical results during AS and SVE operations between 2014 and 2017 are summarized in **Table 7** and compared to threshold concentrations for off-gas treatment and VGAC exchange (VGAC Threshold Concentrations) presented in Addendum No. 2 to the Operation, Maintenance and Monitoring Plan for OU4 (Geosyntec, 2015a). VGAC Threshold Concentrations are based on the predicted source concentrations that would potentially equal Annual Guideline Concentrations (AGCs) presented in the Guidelines for the Toxic Ambient Air Contaminants (DAR-1; NYSDEC, 1997) at a potential fenceline receptor. **Table 7** also presents PID field screening, total VOC concentrations based on full analytical results, and the VOC mass flow rate as calculated from total VOC concentrations and total discharge flow rate from the SVE blowers. Analytical reports for VGAC monitoring are presented in **Appendix F**.

As shown in **Table 7**, influent VOC concentrations at SP-503 during normal AS and SVE operations consisted primarily of non-chlorinated aromatic hydrocarbons (benzene, toluene, ethylbenzene, and total xylenes, collectively referred to as BTEX), chlorinated aliphatics, and chlorinated aromatics of which toluene and trichloroethene (TCE) were the major individual constituents detected. In most cases, detected concentrations of benzene, 1,1-dichloroethane, carbon tetrachloride, chloroform, TCE, tetrachloroethene (PCE), 1,4-dichlorobenzene, and 1,2,4-trimethylbenzene in the influent stream to the VGAC treatment units were greater than VGAC Threshold Concentrations with occasional exceedances for detected concentrations of methylene chloride and vinyl chloride.

The performance of the first two VGAC units was monitored at SP-504. VGAC exchange was conducted on a two-week frequency. Detected VOC concentrations at SP-504 were below VGAC Threshold Concentrations between 8 January 2015 and 3 April 2015 with the exception of occasional detections of vinyl chloride and 1,4-dichlorobenzene.

VGAC monitoring resumed with the restart of SVE operation on 9 November 2015. As shown in **Table 7**, influent VOC concentrations as measured at SP-503 were lower than during normal AS and SVE operations as would be expected with restart at lower SVE well flow rates. VOCs detected at SP-503 in the influent stream to the VGAC treatment units with concentrations above

VGAC Threshold Concentrations included benzene, chloroform, TCE, PCE, vinyl chloride, and 1,4-dichlorobenzene.

Temporal trends of individual VOCs were used as an indicator of AS/SVE performance toward achieving the OU4 Performance Standard. Review of the predominant VOCs (benzene, toluene, total xylenes, PCE, TCE, cDCE, vinyl chloride, chloroform, 1,2,4-trichlorobenzene, and 1,4-dichlorobenzene) in the gas stream during system operation indicate that:

- Concentrations of cDCE and vinyl chloride decreased since the sharp increase in March 2016 after restart of AS operations;

- Concentrations of benzene and 1,4-dichlorobenzene decreased since the restart of AS operations. This may be due to more aerobic conditions in groundwater that promote aerobic biodegradation of benzene and reduce the production of 1,4-dichlorobenzene through reductive dichlorination; and

- Concentrations of toluene, total xylenes, PCE, TCE, and 1,2,4- trichlorobenzene decreased since May 2016 after the revised design AS flow rate of fifteen (15) SCFM was established at most AS wells.

Specific details for VGAC off-gas performance monitoring and AS/SVE system operation are presented in the Annual O&M Reports for each year of operation. Prior to system shutdown, the final exceedance of a VGAC Threshold Concentration at the effluent of the second unit (SP-504) occurred on 30 March 2016, with a concentration of vinyl chloride of 180 µg/m3 (Threshold Concentration of 138 µg/m3). As shown in **Table 7**, there were then 18 months without a threshold exceedance until system shutdown on 18 October 2017.

10.4 Data Quality Evaluation

Upon receipt of the laboratory reports, usability of the laboratory analytical data generated during the long-term monitoring program (i.e. groundwater results) was evaluated using several methods, as described below.

Quality assurance/quality control (QA/QC) samples were collected during each sampling event and included: (i) field duplicate samples; (ii) trip blanks; and (iii) matrix spike and matrix spike duplicate (MS/MSD) sets. Samples were placed immediately on ice and sent under executed chain of custody to TestAmerica Laboratories in Buffalo, New York. Trip blanks were used to monitor for potential VOC contamination while the samples were at the Site and in transit. Field duplicates were collected to assess the precision of the field sampling techniques. Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples were collected to measure the analytical methods accuracy and provide an indication of possible matrix analytical interference.

Following receipt of the analytical reports, Geosyntec conducted a data quality evaluation, which included: (i) an evaluation of the analytical data for the trip blank, field duplicate, MS/MSD samples, and laboratory quality control data; and (ii) a review of constituent detection limits, analytical methods, hold-times, and temperature requirements to ensure that data were properly qualified.

A Geosyntec representative evaluated the data quality for each monitoring event. Based on the data quality assessment, unless otherwise noted in each Annual O&M Report, the analytical data for samples collected under the performance monitoring program were accepted (including estimated data) for their intended use. Findings of each data quality evaluation are summarized in the Annual O&M Reports. As requested, EPA is provided electronic data deliverables (EDDs) in EQuIS format.

10.5 Conclusion

Based on assessment of historical and current OU4 performance monitoring data, trend evaluation, and the mass discharge discussion provided in Section 10.1.1, we believe that the performance standards described in the Final RD Report for OU4 Source Areas have successfully been achieved and maintained.

11. CHRONOLOGY OF EVENTS

11.1 Work Completed To-Date

Table 9 presents a summary of the Site chronology starting with the 1994 ROD through present day. The chronology of events at the Site between 1994 and 2010 was summarized in the third Five-Year Review report prepared by USEPA in July 2011. The chronology of events at the Site between 2011 through present day is based on the Annual O&M Reports.

12. CONTACT INFORMATION

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ATTACHMENT 1

Engineer of Record Certification

7. FINAL INSPECTION AND CERTIFICATIONS

7.1 Final Inspection

The Pre-Final Inspection of the Source Area RA was conducted by USEPA on 11 September 2013 with representatives of the Group, Geosyntec and CRA. No deficiencies were noted nor communicated by USEPA.

7.2 Health and Safety Requirements

CRA prepared a Health and Safety Contingency Plan (HSCP) in accordance with the project Specifications. The HSCP was submitted with the Remedial Action Work Plan (RAWP) to USEPA on 14 October 2012. Revisions to the RAWP and HSCP were submitted to USEPA on 20 December 2012 in response to USEPA comments.

Tailgate meetings were held at the beginning of each work day at the Site during RA construction and documented in the daily field log prepared by the Site Manager. No reportable incidents occurred on Site during RA construction.

7.3 Engineer of Record Certification

Geosyntec provided CQA monitoring services during construction of the Source Area RA at OU4. The CQA monitoring was performed by qualified Geosyntec personnel on a full-time basis from December 2012 through January 2013 and April through August 2013 with the exception for those activities for which on-site monitoring was not required per the addendum to the CQA Plan approved by USEPA on 10 October 2012. As part of these activities, CQA personnel monitored the following construction activities:

- Installation of temporary E&S controls;
- Installation of the temporary access road and stabilized construction entrance;
- AS and SVE well installation in the former IDDA 1b source area and in the former IDDA 2 and Septage Lagoon source areas;
- Repair of landfill cap geosynthetics that were cut to access the underlying subsurface during boring and well installations;
- Off-site testing of the AS and SVE systems prior to shipment;
- Delivery of the IDDA 1b AS/SVE trailer;
- Delivery and connection of the off-gas treatment equipment to the AS/SVE trailers;
- Installation and testing of AS distribution piping and associated valves and fittings to connect the AS wells to the AS/SVE trailer;

- Testing of SVE distribution piping and associated valves and fittings to connect the SVE wells to the AS/SVE trailer;
- Excavation and trenching for the installation of electrical and data communication service connections to the AS/SVE trailers; and
- Start-up and shakedown of the AS and SVE systems.

During construction, CQA personnel verified that conformance tests were performed on the construction materials at the frequencies required in the specifications and that only materials meeting these requirements were used. CQA personnel also verified that conditions or materials identified as not conforming to the project requirements were replaced, and/or repaired, and modifications to the RD were approved to allow the conditions or materials to be used.

Based on Geosyntec's observations during construction, the results of our CQA monitoring program and testing presented in the appendices of this RAR, and the record as-built drawings provided by Fisher Associates, the in-situ source treatment system at OU 4 of the Cortese Landfill Site was constructed in substantial conformance with the RD, the approved design modifications presented in Appendix H and listed in **Table 3** of this RAR, the ROD/ROD Amendment, the SOW and the Consent Decree.

Aron A. Krasnopoler, Ph.D., P.E.
Project Engineer
New York P.E. License No. 7601454

ATTACHMENT 2

Duly Authorized Representative Certification

7.4 Duly Authorized Representative Certification

Except as provided below, I certify that the information contained in or accompanying this Interim Remedial Action Report is true, accurate, and complete.

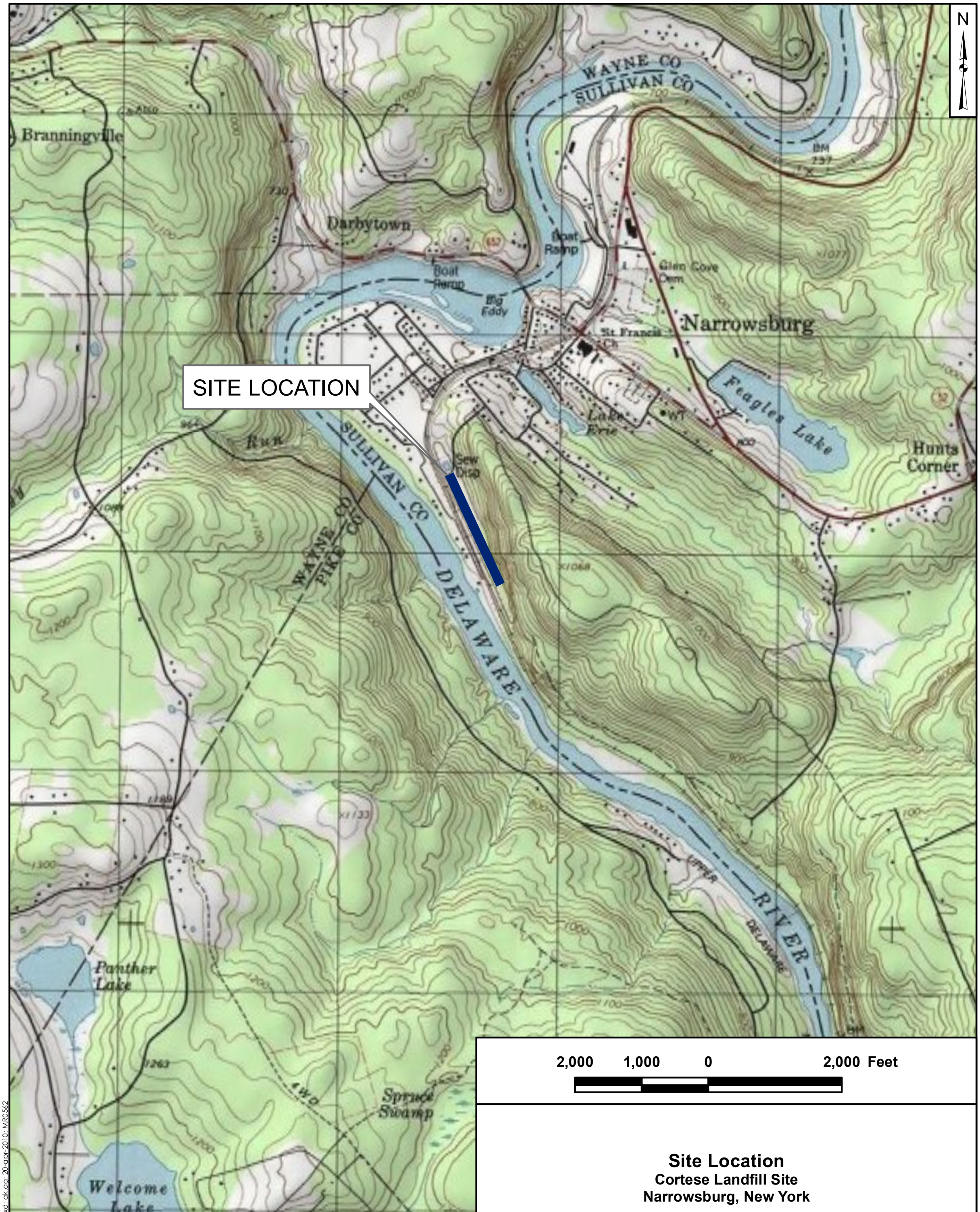
As to those portions of this Interim Remedial Action Report for which I cannot personally verify their accuracy, I certify under penalty of law that this Interim Remedial Action Report and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

Name: MARK SNYDER

Title: Cortese Landfill PRP Group Project Coordinator

FIGURES



2,000 1,000 0 2,000 Feet

Site Location
Cortese Landfill Site
Narrowsburg, New York

Notes
USGS 7.5' Topographic Quadrangle Narrowsburg, New York

Geosyntec consultants

Figure 1

Columbia, Maryland | **September 2020**

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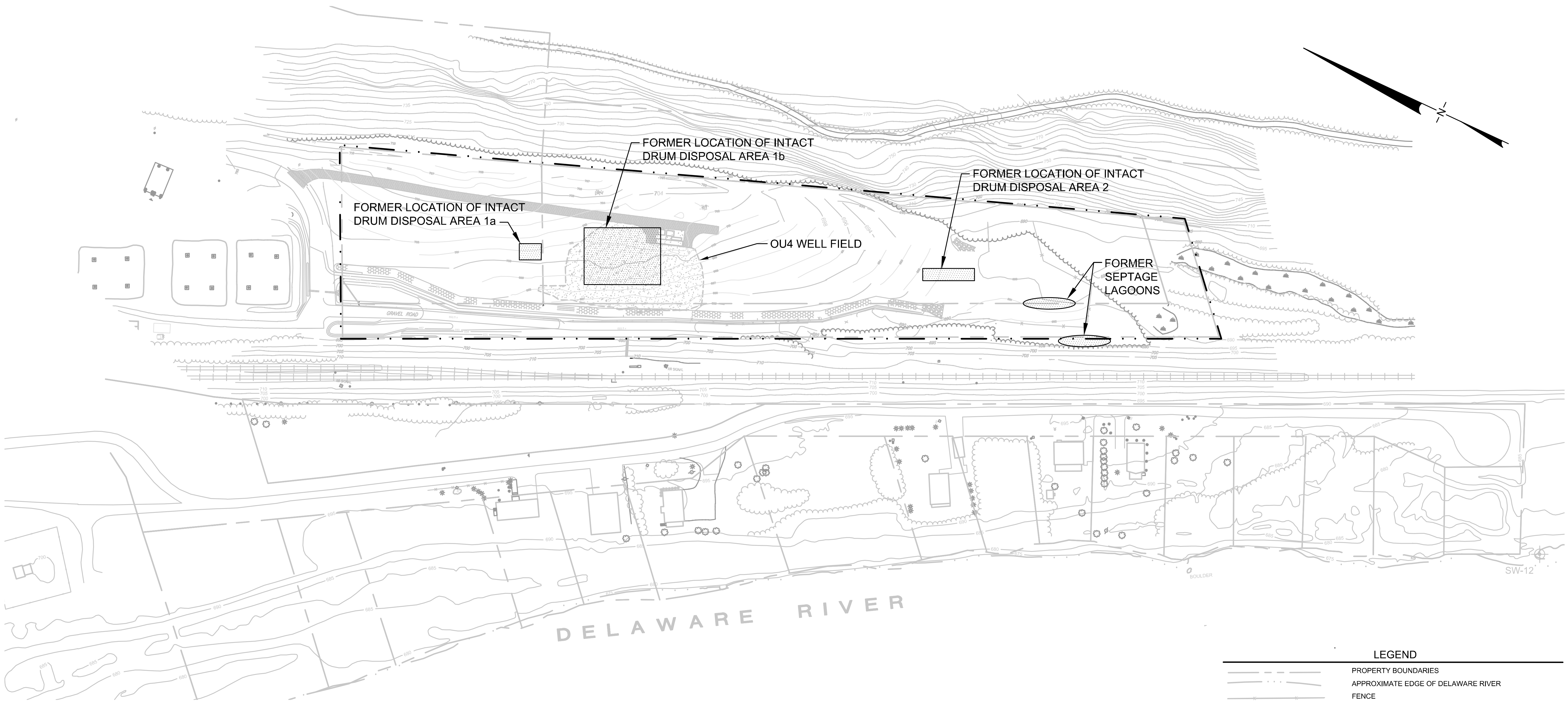


LEGEND

- PROPERTY BOUNDARIES
- APPROXIMATE EDGE OF DELAWARE RIVER
- FENCE
- LANDFILL COVER ELEVATION CONTOUR
- PRE-EXISTING TOPOGRAPHY ELEVATION CONTOUR
- SITE BOUNDARY

150 75 0 150
SCALE: 1" = 150'

NOTES:

1. ALL COORDINATES SHOWN ON THIS MAP REFLECT THE NORTH AMERICAN DATUM 1983 (NAD 83) AS DERIVED USING THE NATIONAL GEODETIC SURVEY SHIFT OF N 05°05'25" AND E A DISTANCE OF 426,246.03' AS APPLIED TO THE NATIONAL GEODETIC SURVEY DATUM OF 1927 (NAD 27). ALL ELEVATIONS SHOWN ON THIS MAP REFLECT THE NORTH AMERICAN VERTICAL DATUM OF 1988, AS DERIVED USING THE NATIONAL GEODETIC SURVEY SHIFT OF -0.5479' AS APPLIED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.

2. TOPOGRAPHY AND SURFACE FEATURES EAST OF DELAWARE DRIVE WERE ORIGINALLY PREPARED BY FIELD METHODS BY OM P. POPLI P.E., L.S. PC CONSULTING ENGINEERS & SURVEYORS, ROCHESTER, NEW YORK, MARCH 1995. TOPOGRAPHY CHANGES SINCE MARCH 1995 PREPARED BY ENVIRONMENTAL RESEARCH, INC. ON DECEMBER 12, 1996. PROPERTY LINES EAST OF DELAWARE DRIVE WERE DETERMINED FROM A SURVEY MAP ENTITLED "CORTESE LAND FILL SITE" DATED MAY 7, 1985, PREPARED BY GARY PACKER, P.L.S. AND "TAX MAP, TOWN OF TUSTEN, SULLIVAN COUNTY, NY," DATED 11/20/92. LANDFILL PROPERTY BOUNDARY TAKEN FROM BASELINE-PROPERTY BOUNDARY-CONTROL, CORTESE LANDFILL SITE, TOWN OF TUSTEN, SULLIVAN COUNTY, NY, MAY 7, 1985, BY GARY PARKER, P.L.S. TOPOGRAPHY AND SURFACE FEATURES WEST OF DELAWARE DRIVE WERE DIGITIZED FROM AN ELECTRONICALLY SCANNED FILE OF THE TOPOGRAPHIC BASE MAP PREPARED BY ROBINSON AERIAL SURVEYS, INC., BY PHOTOGRAMMETRIC METHODS FROM PHOTOGRAPH TAKEN APRIL 18, 1985.

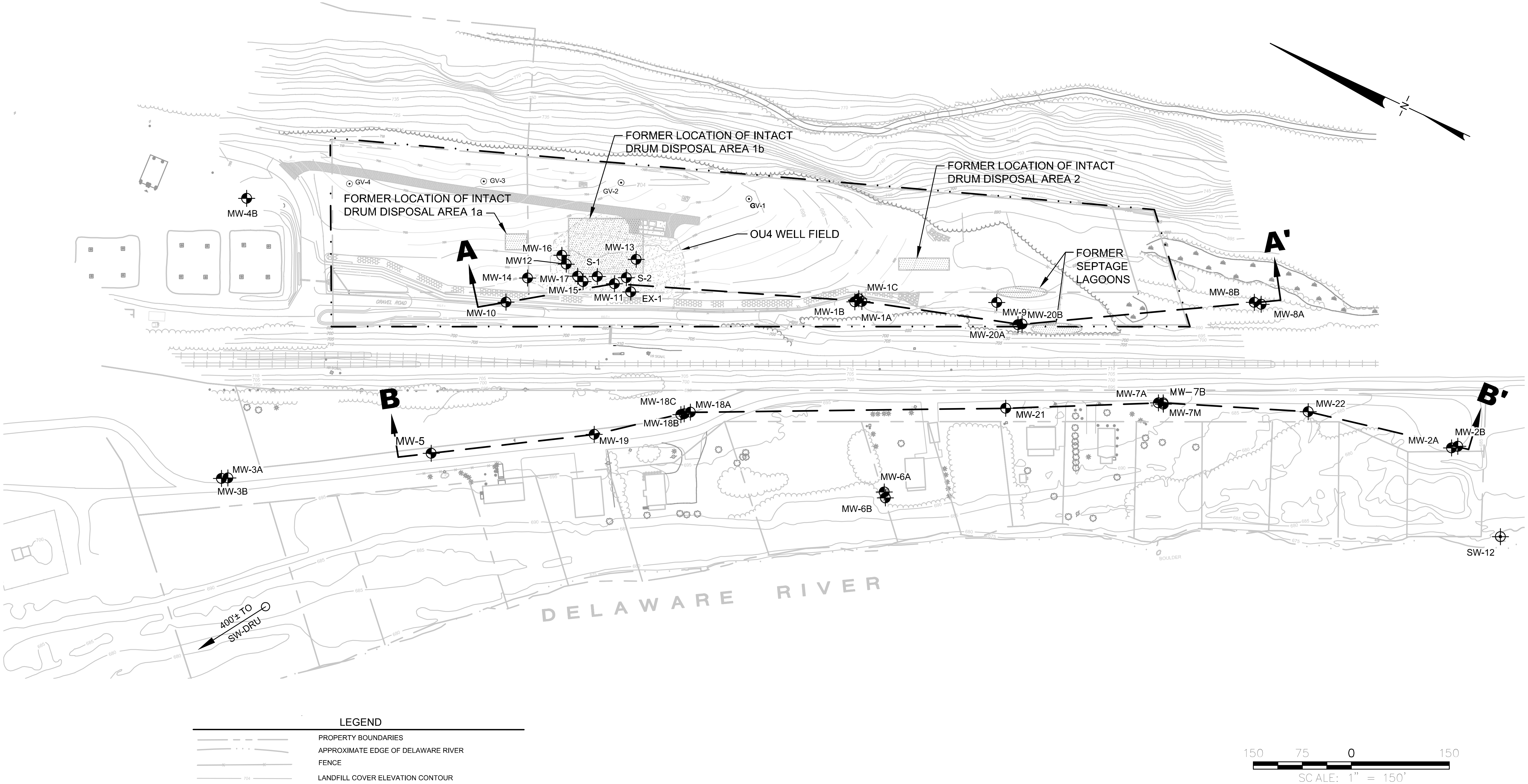
3. REFERENCE: DRAWING DEVELOPED FROM FIGURE 2, "SITE PLAN" OF THE SOURCE CHARACTERIZATION REPORT BY GOLDER ASSOCIATES, INC., DATED 24 JANUARY 2008.

SITE PLAN
CORTESE LANDFILL SITE
NARROWSBURG, NEW YORK

Geosyntec consultants
COLUMBIA, MARYLAND

DATE:	SEPTEMBER 2020
PROJECT NO.	MR0562N
DOCUMENT NO.	MD20120
FILE NO.	05621701
FIGURE NO.	2

P:\cadd\0562-cortese\05621700\05621701.dwg, 1-2, 2/5/2019 10:18:16 AM, bferrick



LEGEND

	PROPERTY BOUNDARIES
	APPROXIMATE EDGE OF DELAWARE RIVER
	FENCE
	LANDFILL COVER ELEVATION CONTOUR
	PRE-EXISTING TOPOGRAPHY ELEVATION CONTOUR
GV-1	PASSIVE GAS VENT
	MONITORING WELL
SW-DRU	SURFACE WATER SAMPLE POINT
	SITE BOUNDARY

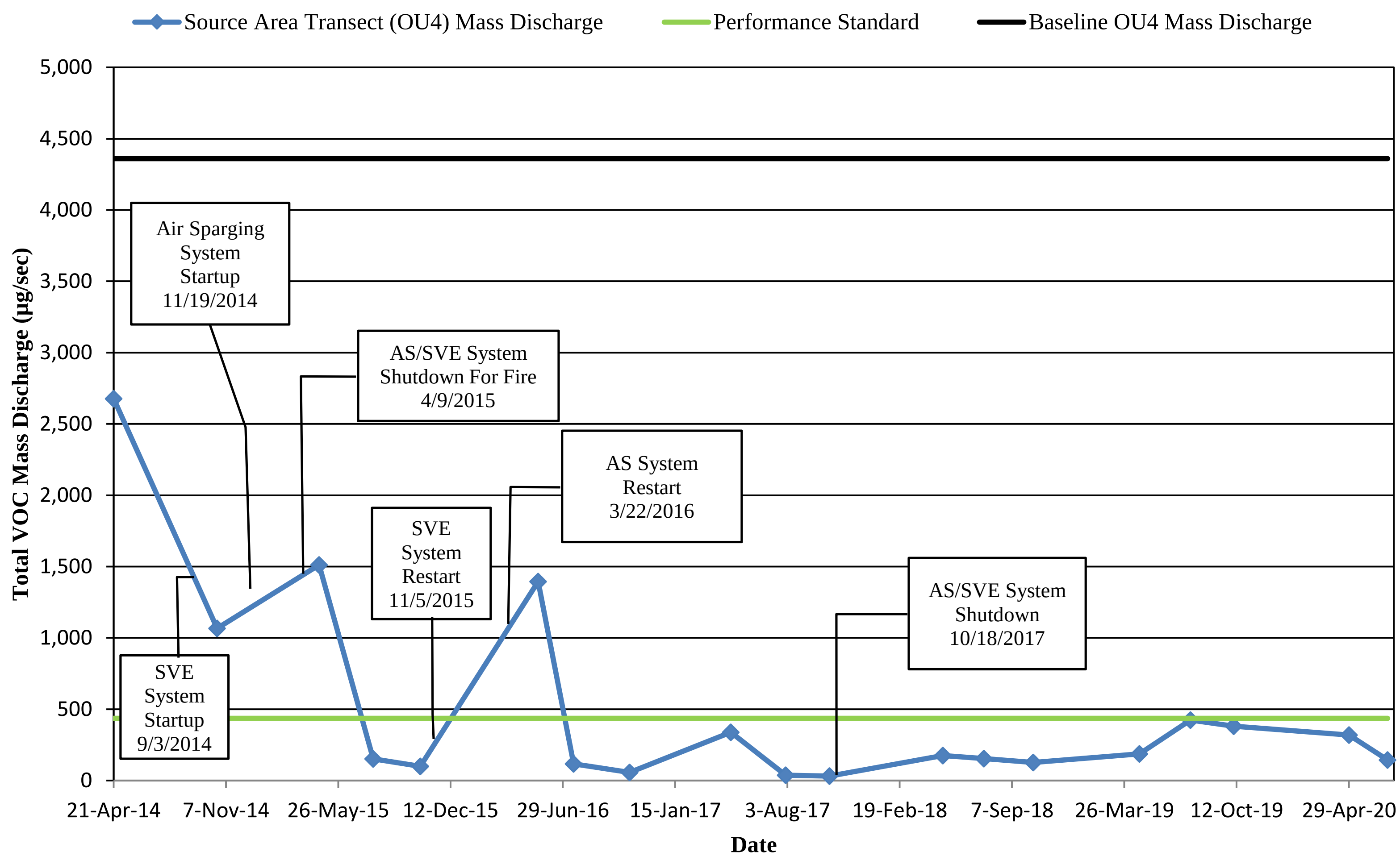
NOTES:

1. MONITORING WELL LOCATIONS AND REFERENCE ELEVATIONS FOR WELLS INSTALLED PRIOR TO DECEMBER 2010 WERE PROVIDED BY THEW ASSOCIATES, P.E., L.S., PLLC IN DECEMBER 2010. MONITORING WELLS INSTALLED AFTER DECEMBER 2010 WERE SURVEYED BY FISHER ASSOCIATES IN FEBRUARY 2013.
2. SEE FIGURE 2 FOR OTHER FEATURE REFERENCES.
3. SEE APPENDIX G FOR CROSS SECTION A-A'

COMBINED OU3 AND OU4
PERFORMANCE MONITORING NETWORK
CORTESE LANDFILL SITE
NARROWSBURG, NEW YORK

Geosyntec consultants
COLUMBIA, MARYLAND

DATE:	SEPTEMBER 2020
PROJECT NO.	MR0562N
DOCUMENT NO.	MD20120
FILE NO.	05621703
FIGURE NO.	3



<u>Notes:</u>
Performance Standard = 90% reduction in total VOC baseline mass discharge
Mass dicharge calculation details are provided in Appendix G
µg/sec - micrograms per sec

Time Trend Graph of OU4 Total VOC Mass Discharge
Cortese Landfill Site
Narrowsburg, New York

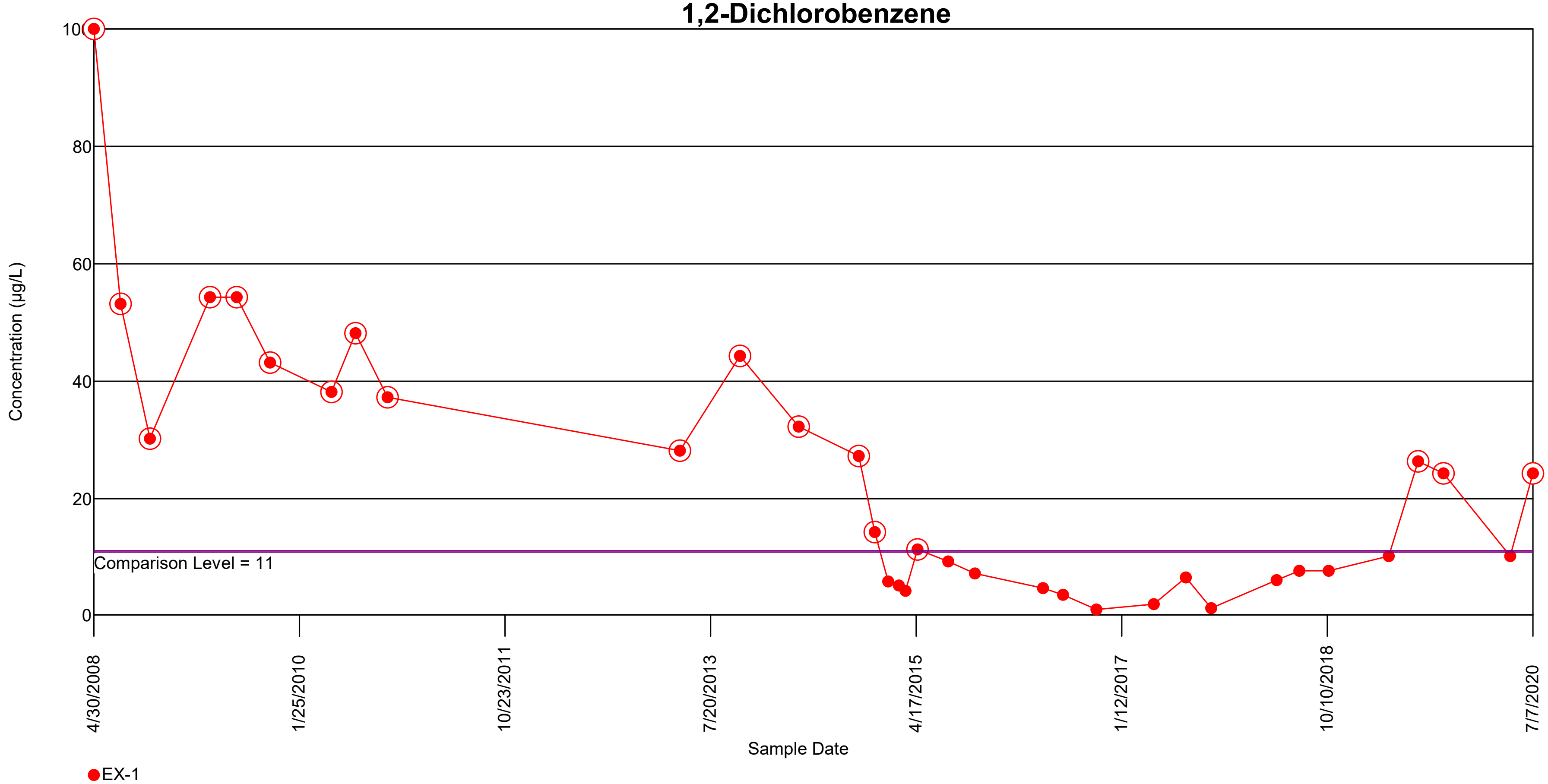
Geosyntec consultants

Columbia, Maryland | September 2020

Figure 4

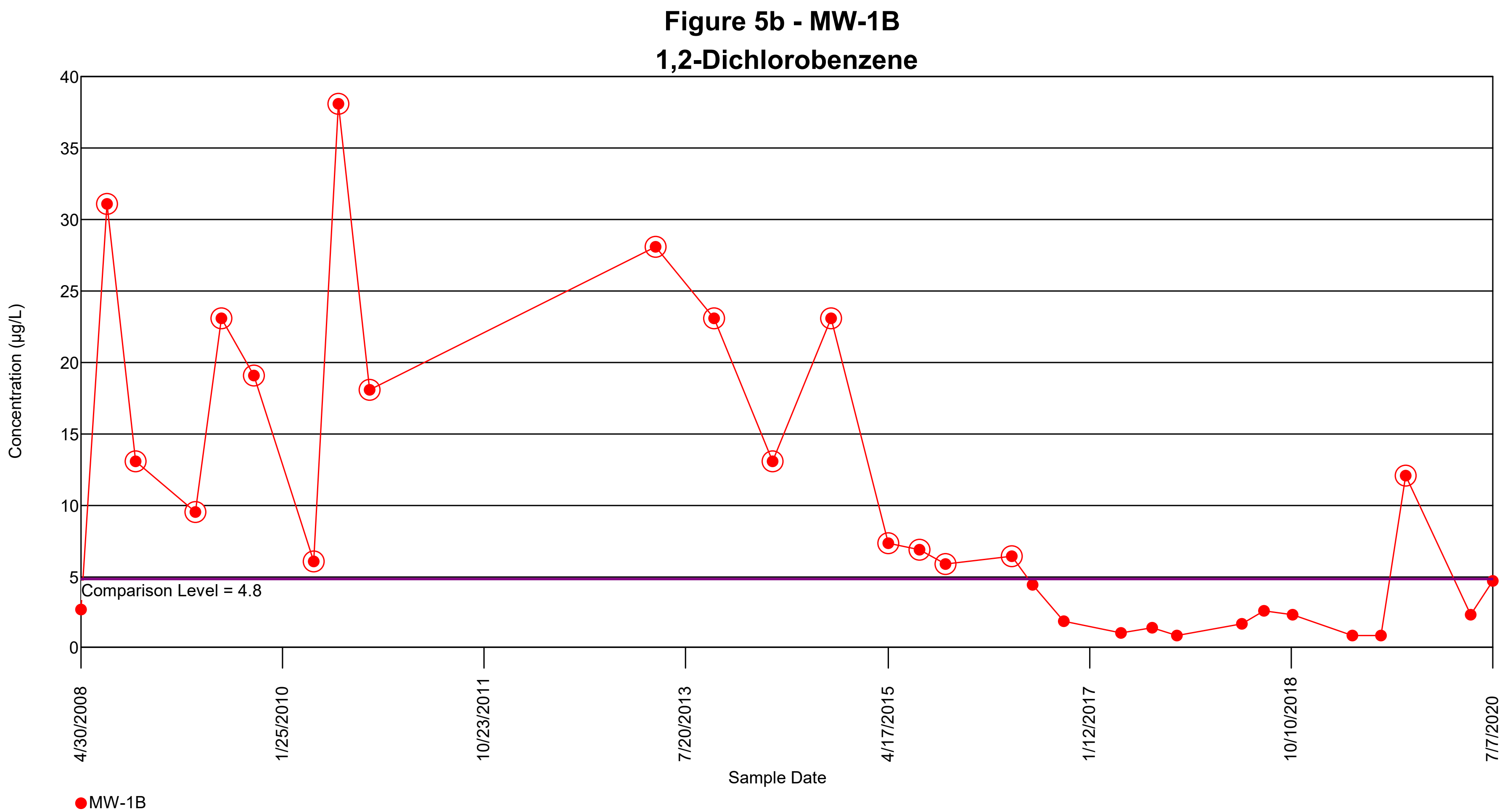
P:\PRJ1\Mdrem\PROJECTS\MR0562 Cortese NPL Site\Environmental Monitoring\2020\2020 Remedial Action Report\Tables\Table 8 Tables_Figure_X - OU4 Mass Discharge - ready for pe

Figure 5a - EX-1



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

Non-Detects Replaced with Detection Limit

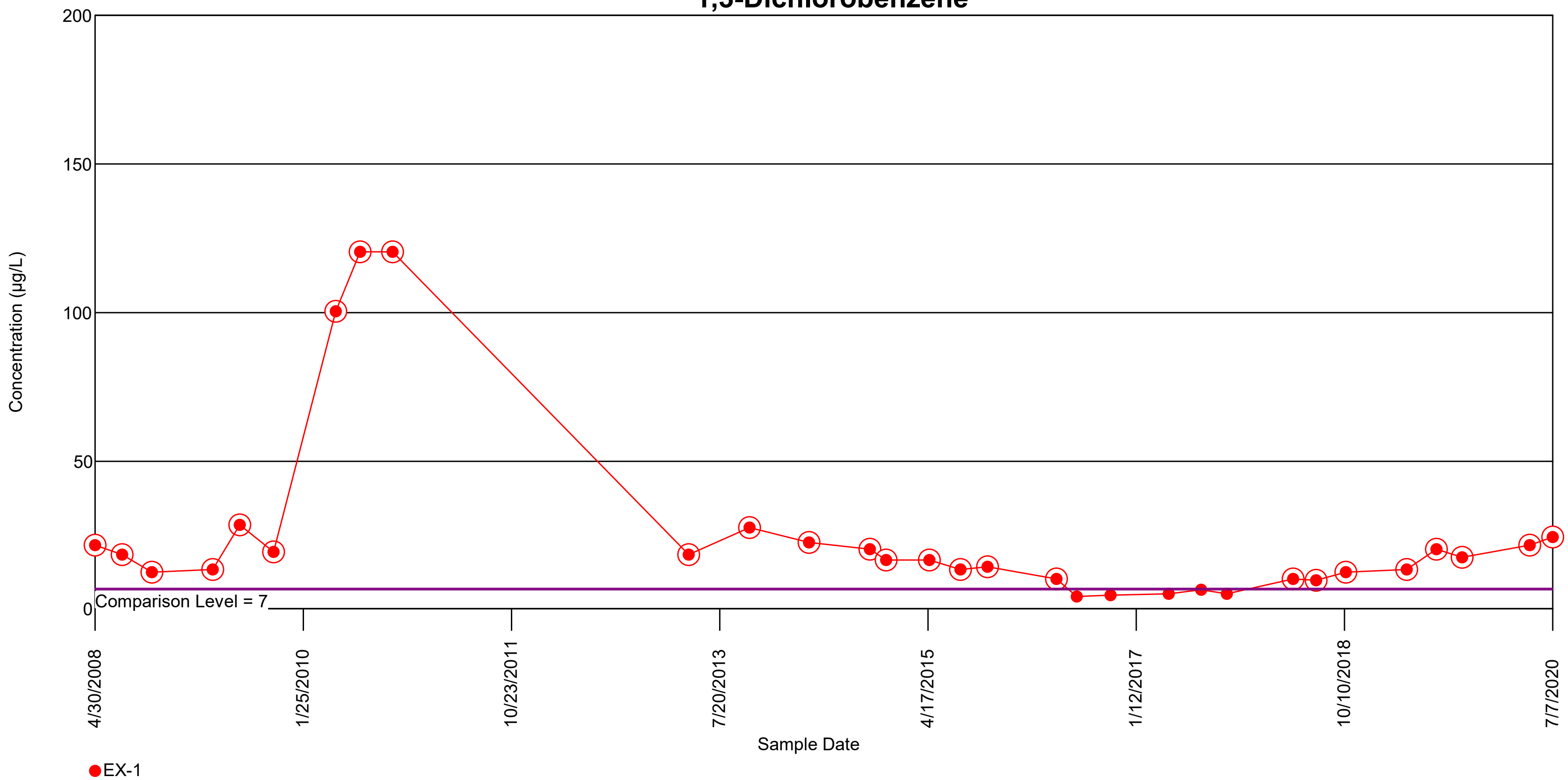


Notes:

(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

Non-Detects Replaced with Detection Limit

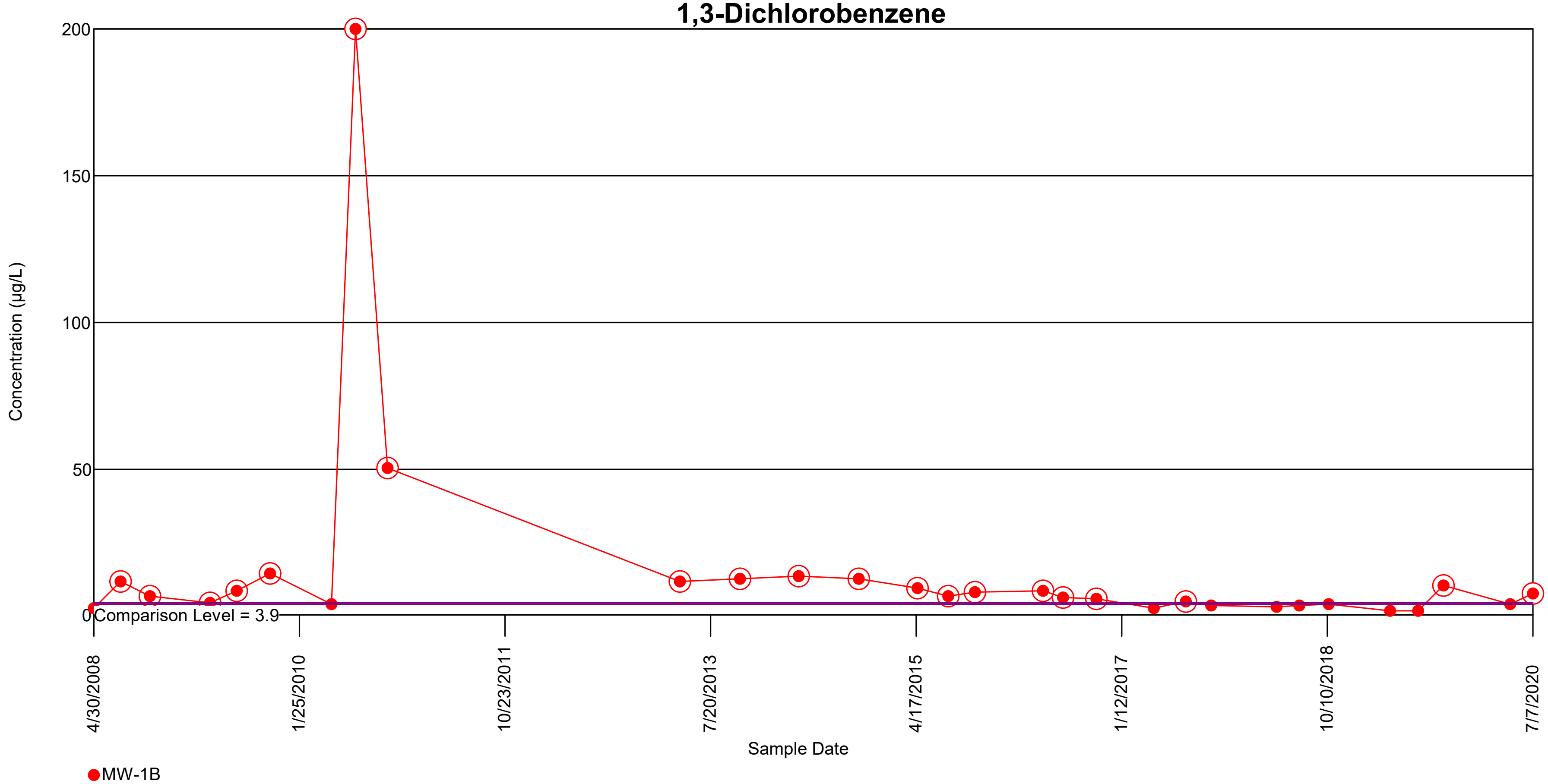
Figure 5c - EX-1
1,3-Dichlorobenzene



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

Non-Detects Replaced with Detection Limit

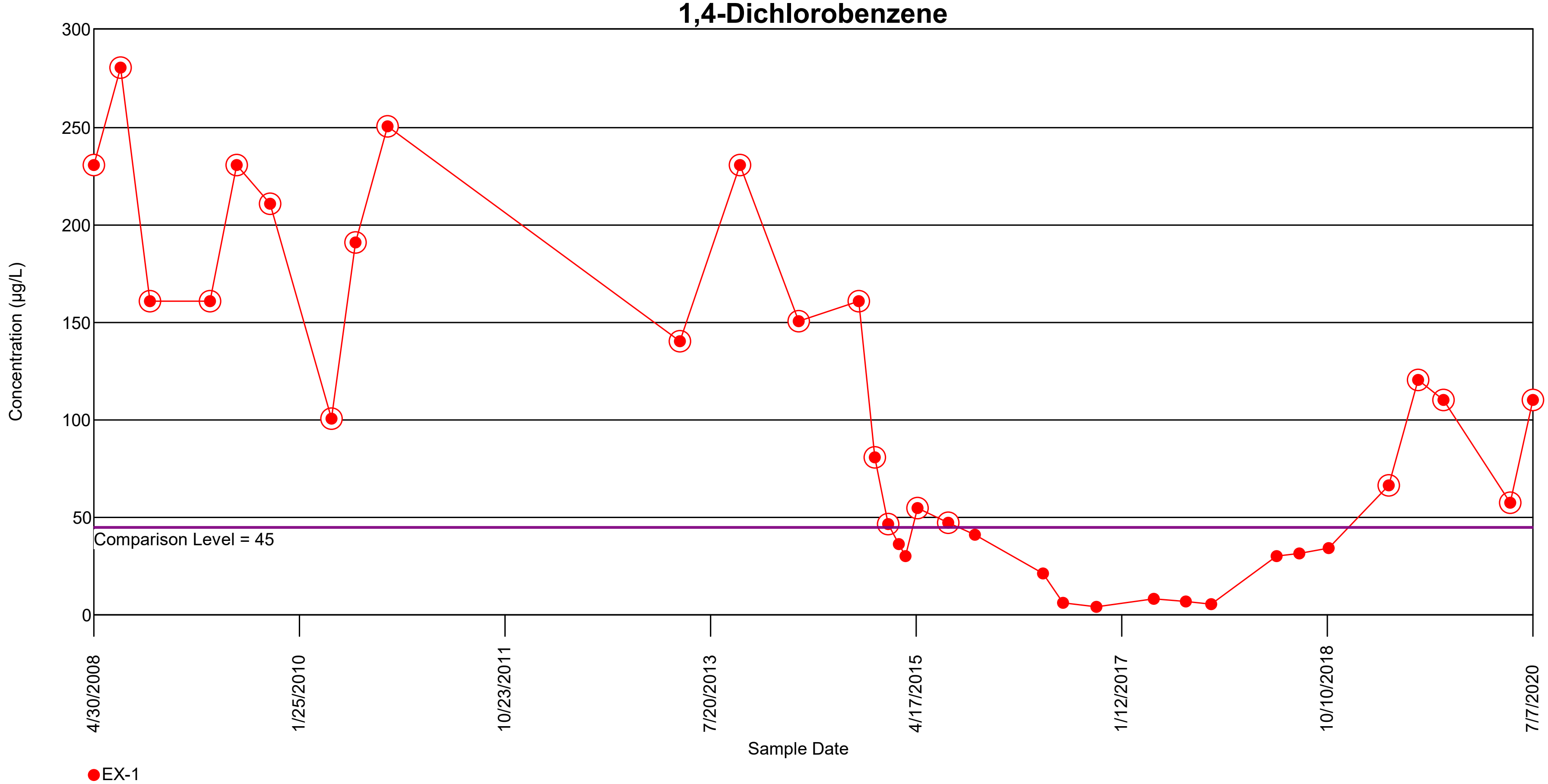
Figure 5d - MW-1B
1,3-Dichlorobenzene



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

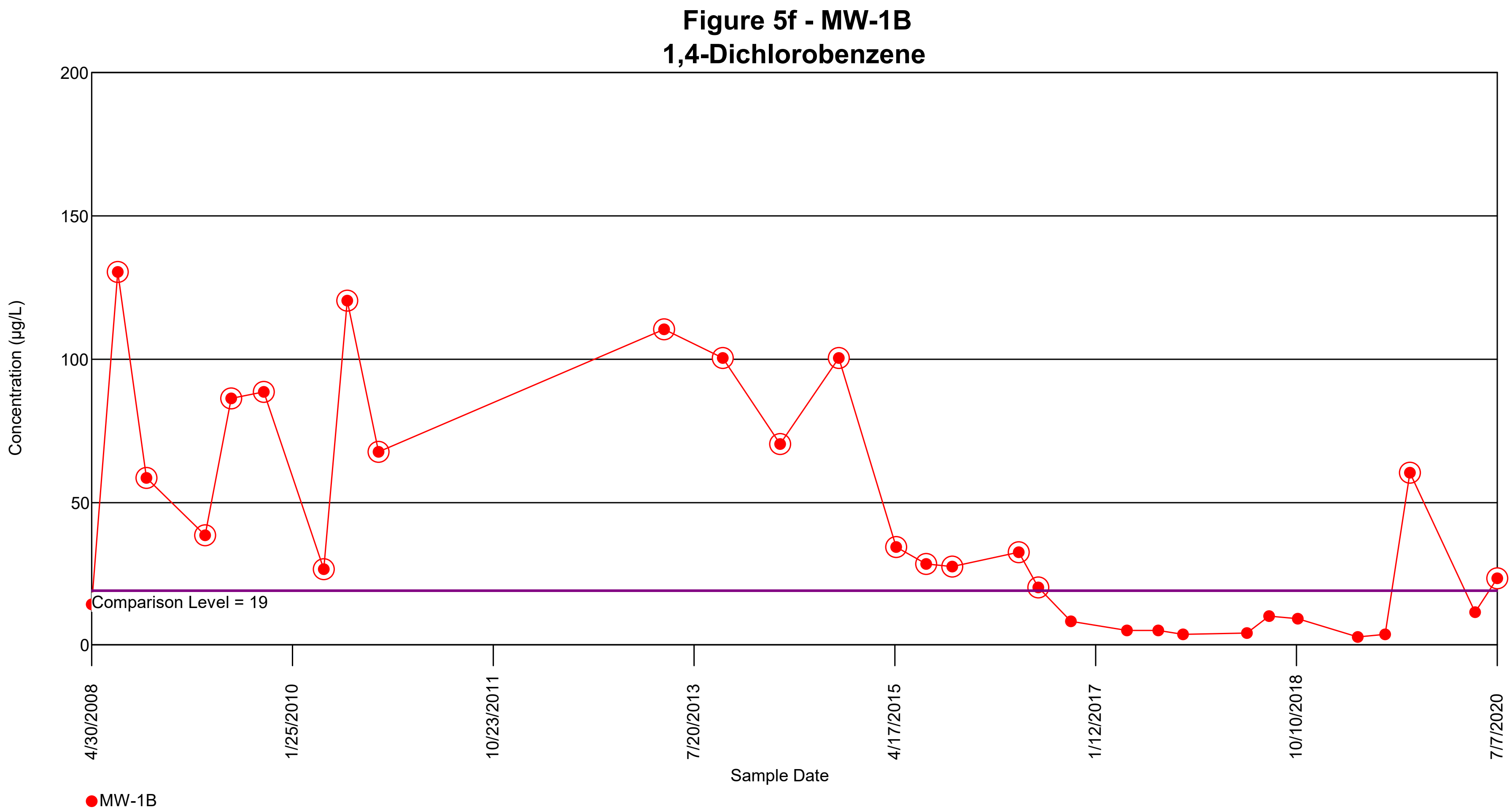
Non-Detects Replaced with Detection Limit

Figure 5e - EX-1
1,4-Dichlorobenzene



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

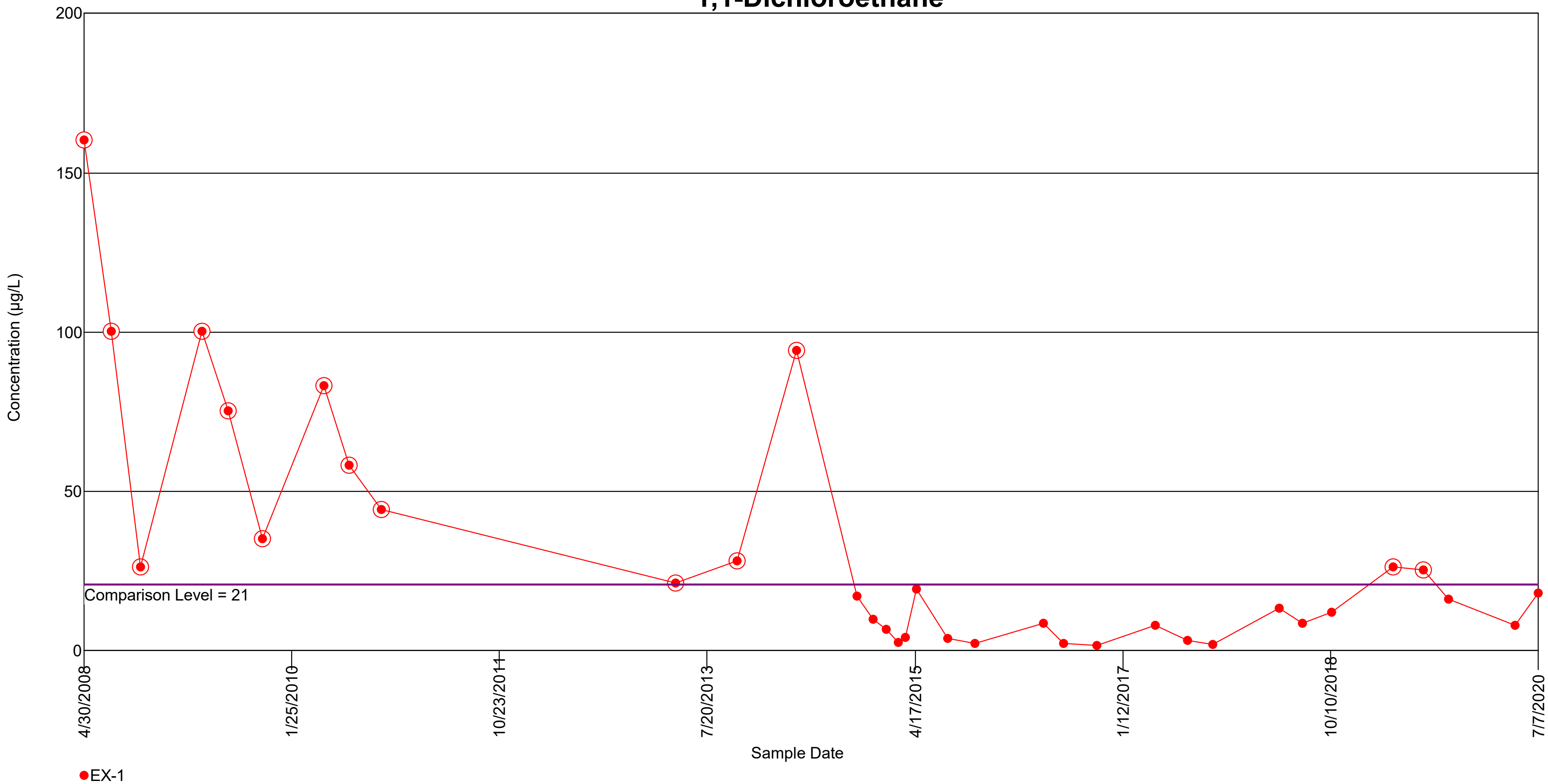
Non-Detects Replaced with Detection Limit



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

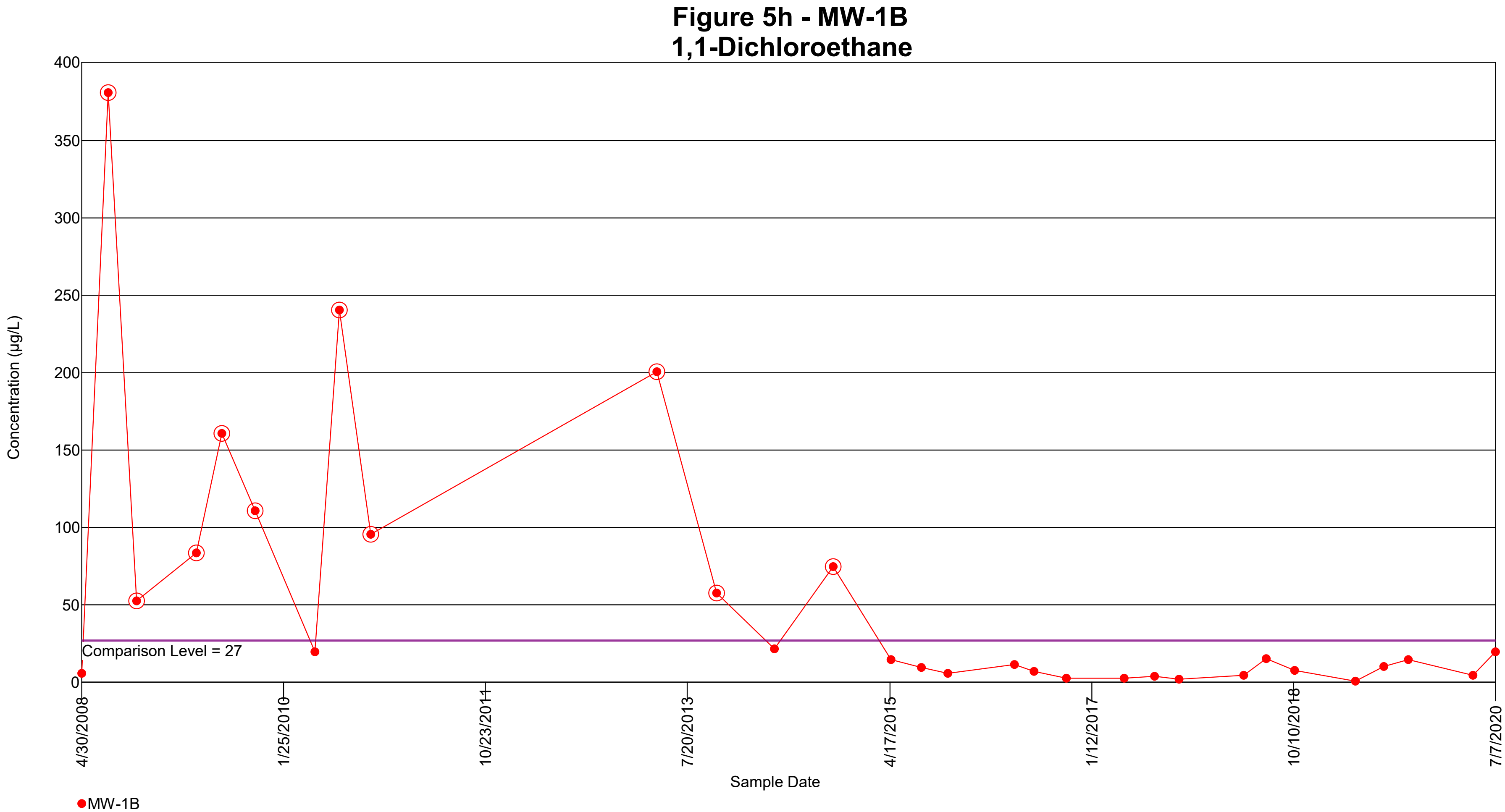
Non-Detects Replaced with Detection Limit

Figure 5g - EX-1
1,1-Dichloroethane



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

Non-Detects Replaced with Detection Limit

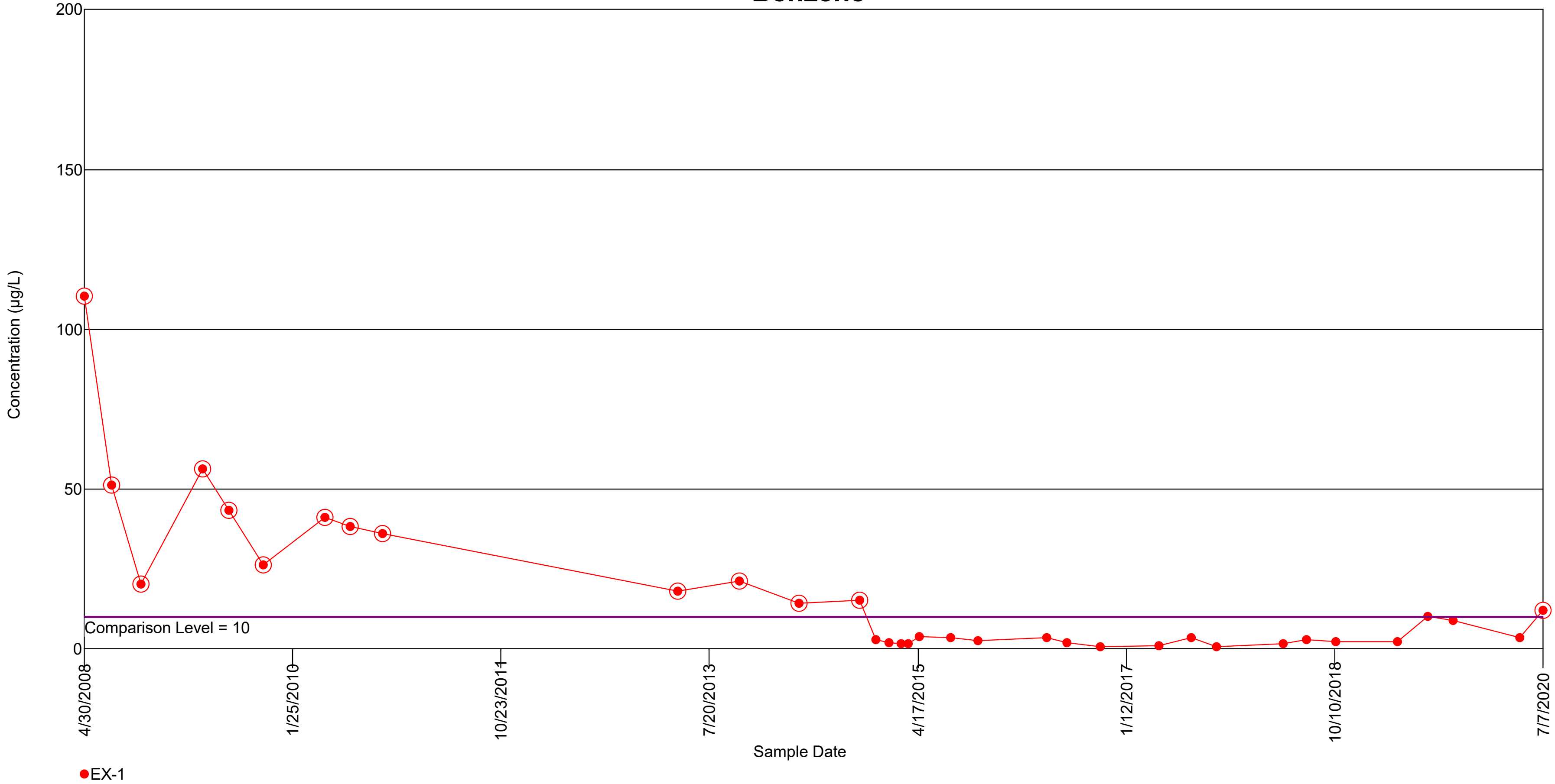


Notes:

(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

Non-Detects Replaced with Detection Limit

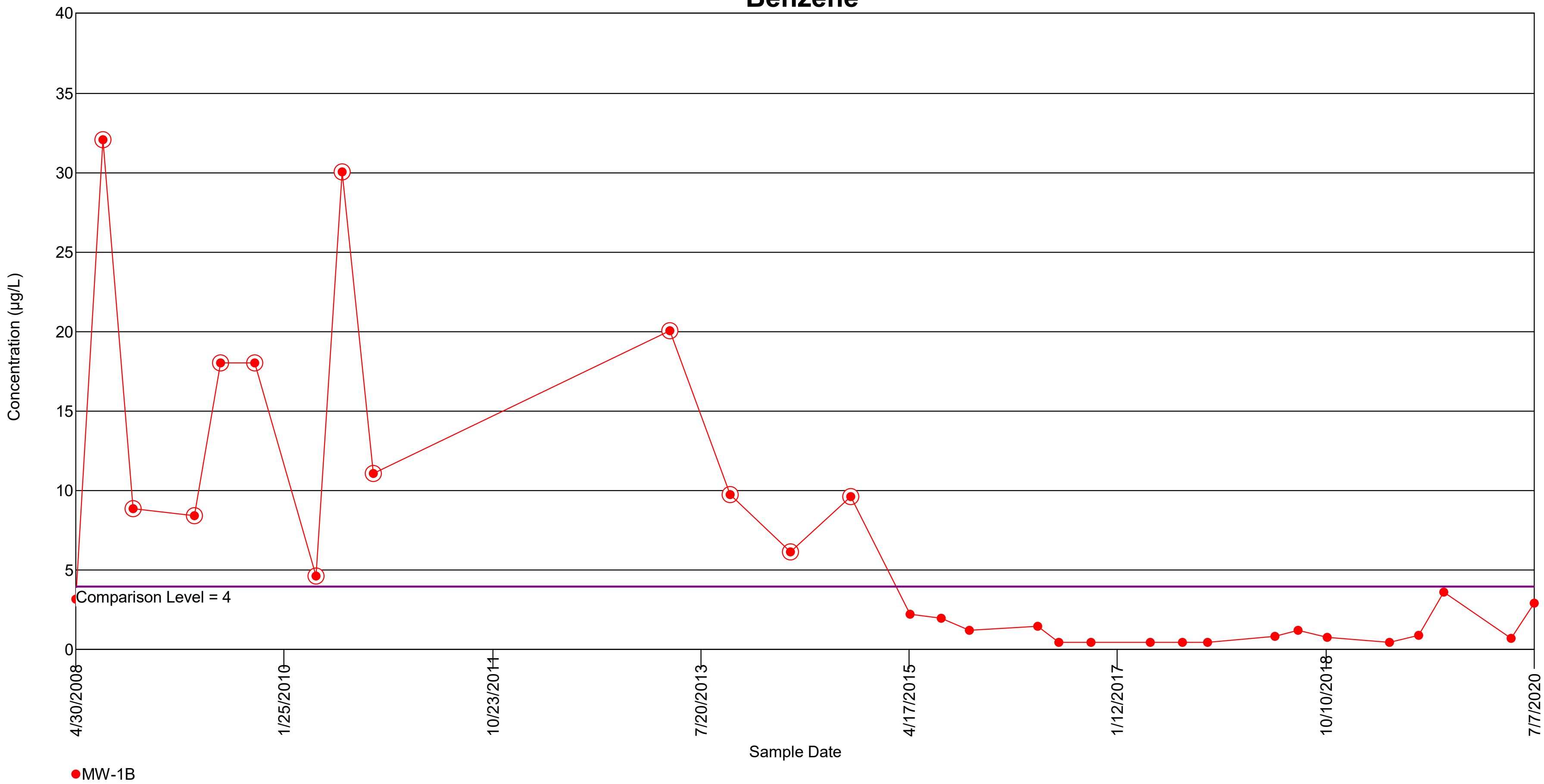
Figure 5i - EX-1
Benzene



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

Non-Detects Replaced with Detection Limit

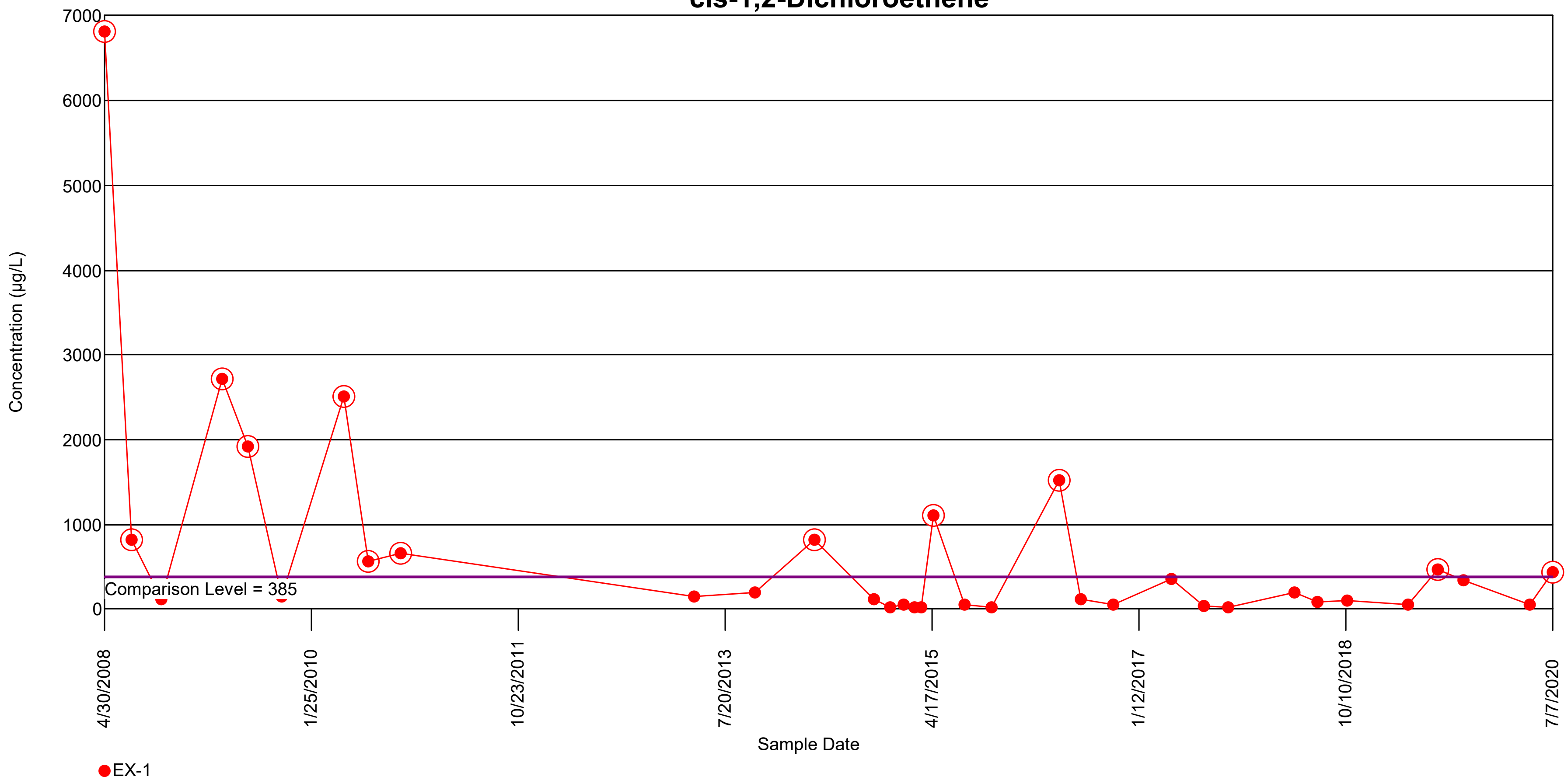
Figure 5j - MW-1B
Benzene



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

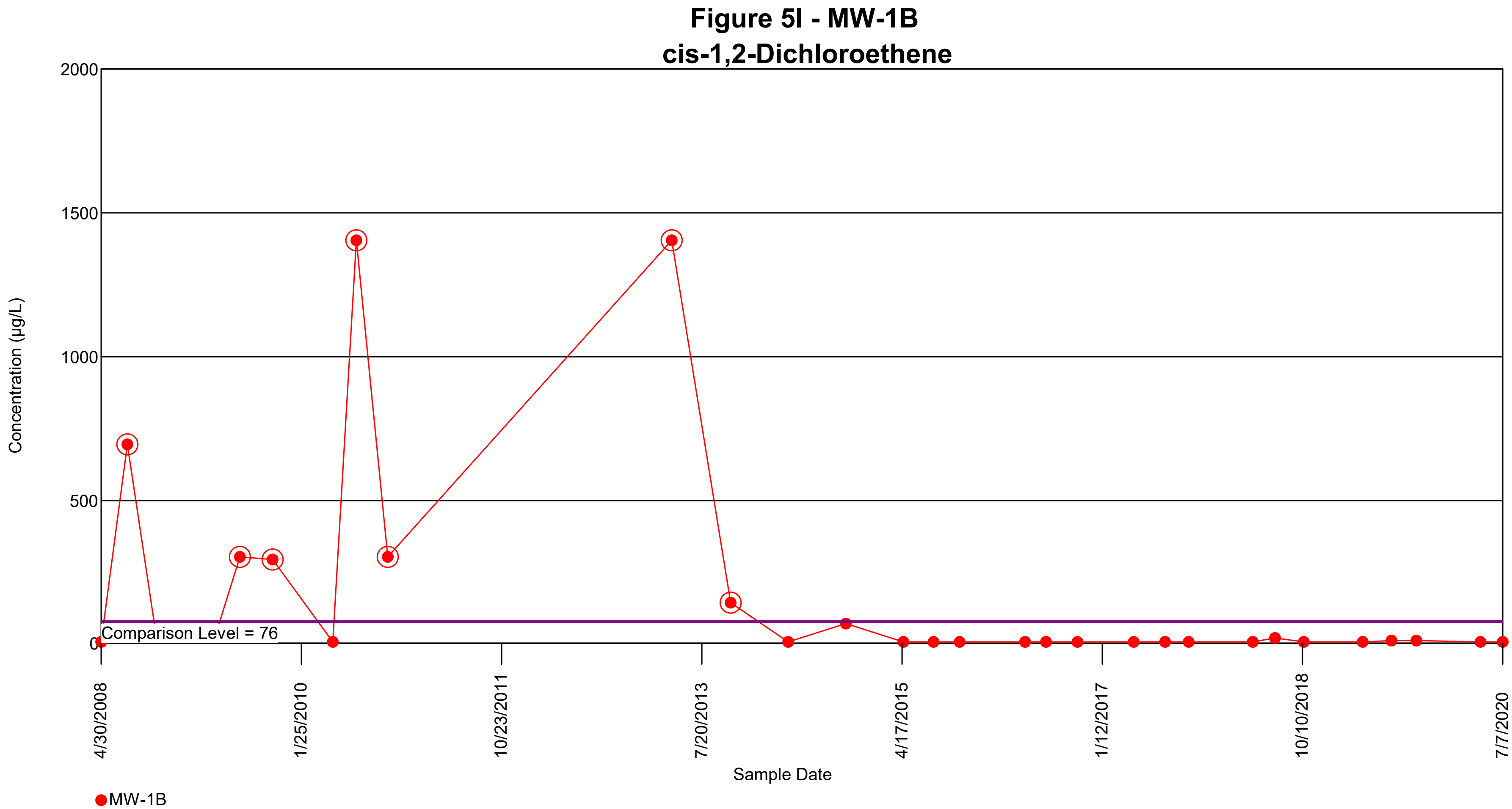
Non-Detects Replaced with Detection Limit

Figure 5k - EX-1
cis-1,2-Dichloroethene



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

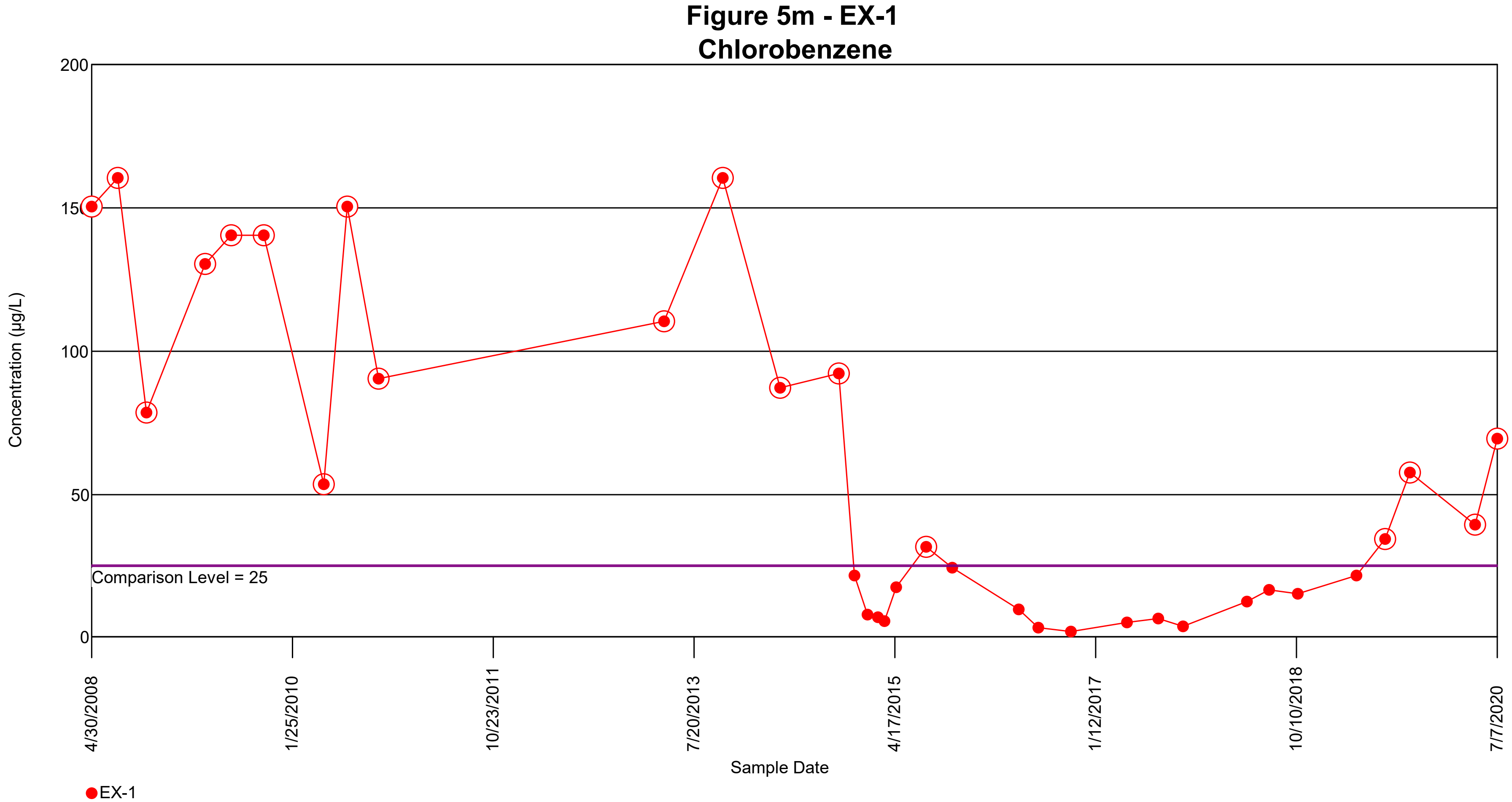
Non-Detects Replaced with Detection Limit



Notes:

(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

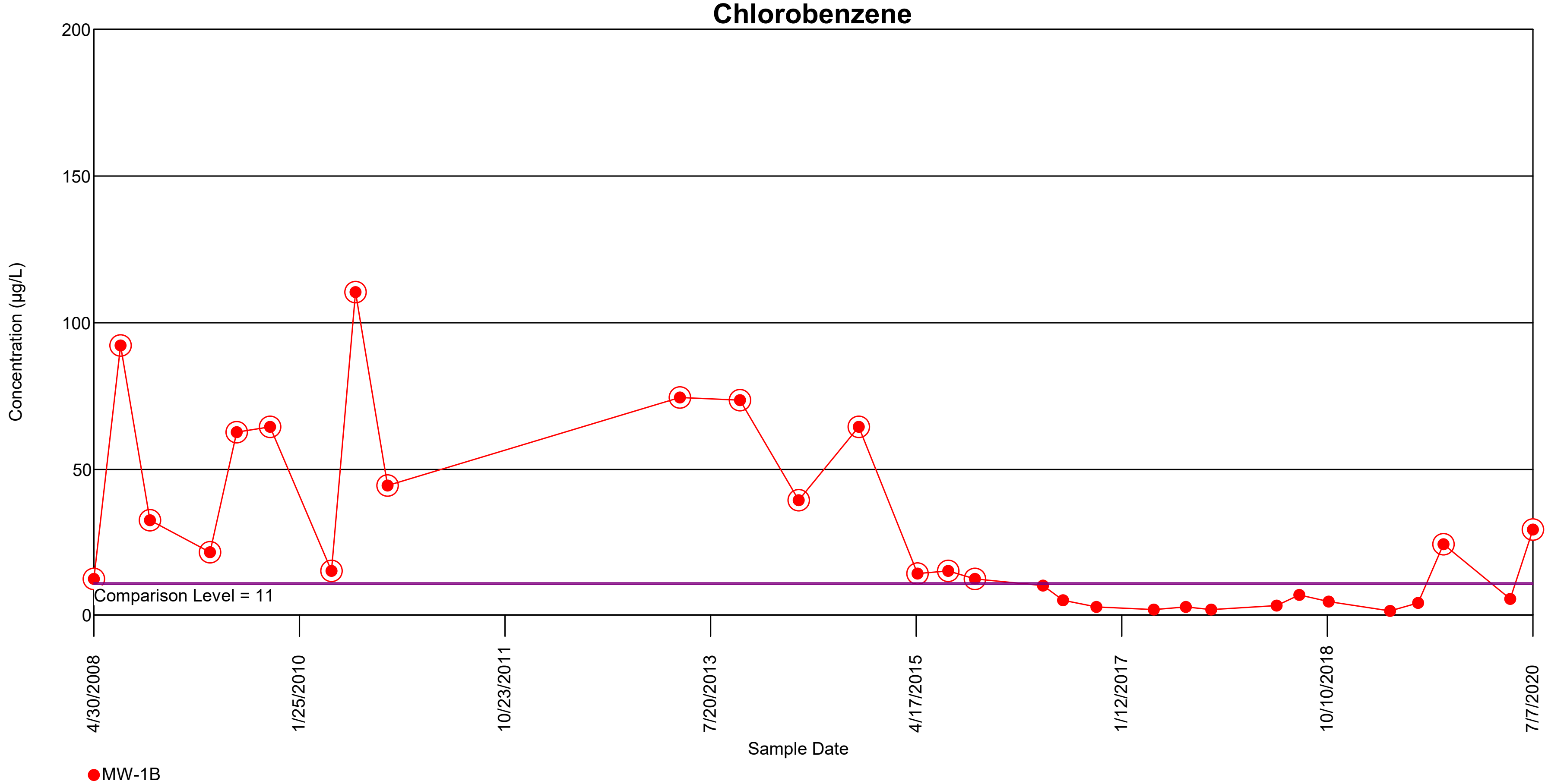
Non-Detects Replaced with Detection Limit



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

Non-Detects Replaced with Detection Limit

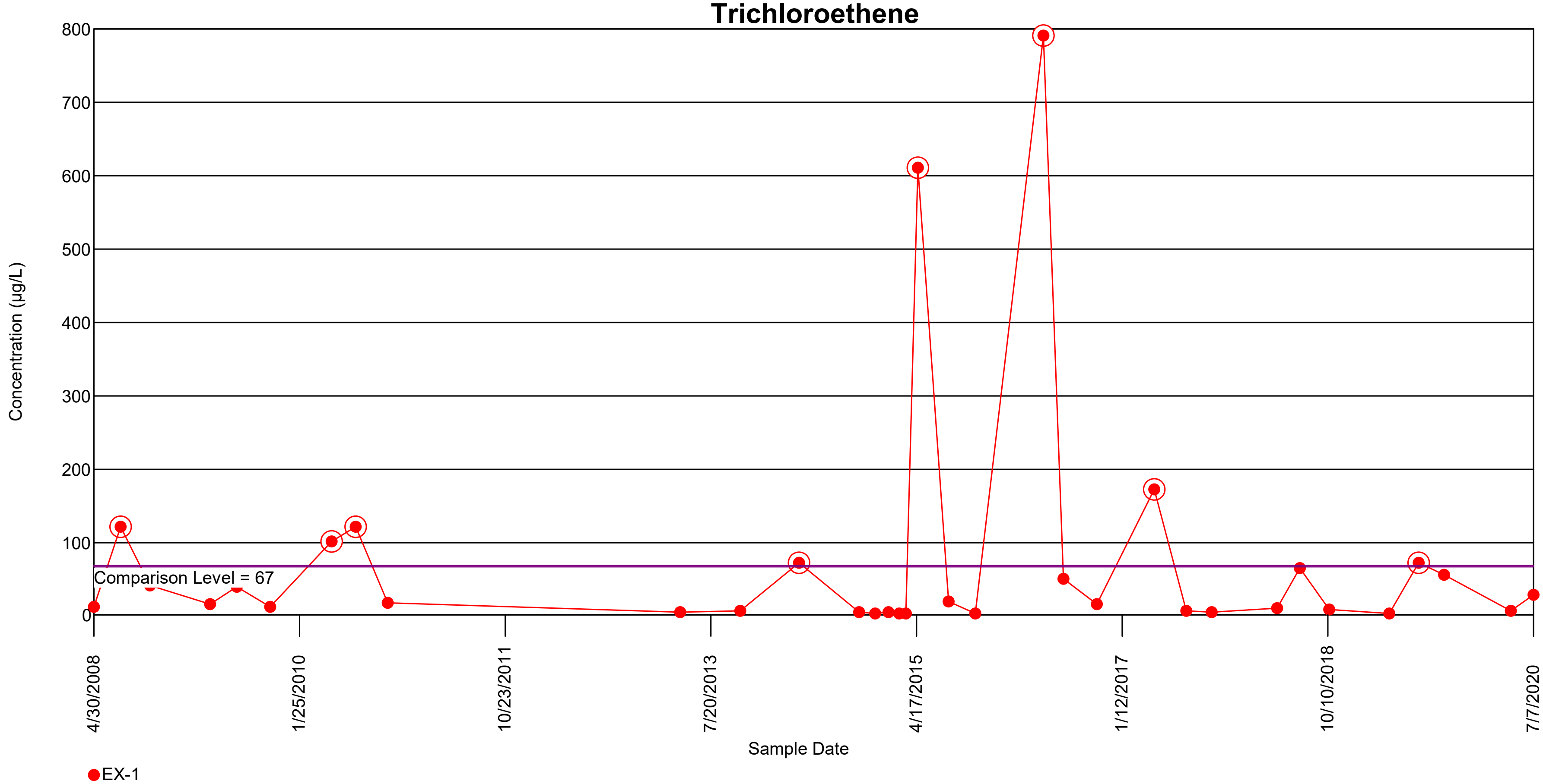
Figure 5n - MW-1B
Chlorobenzene



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

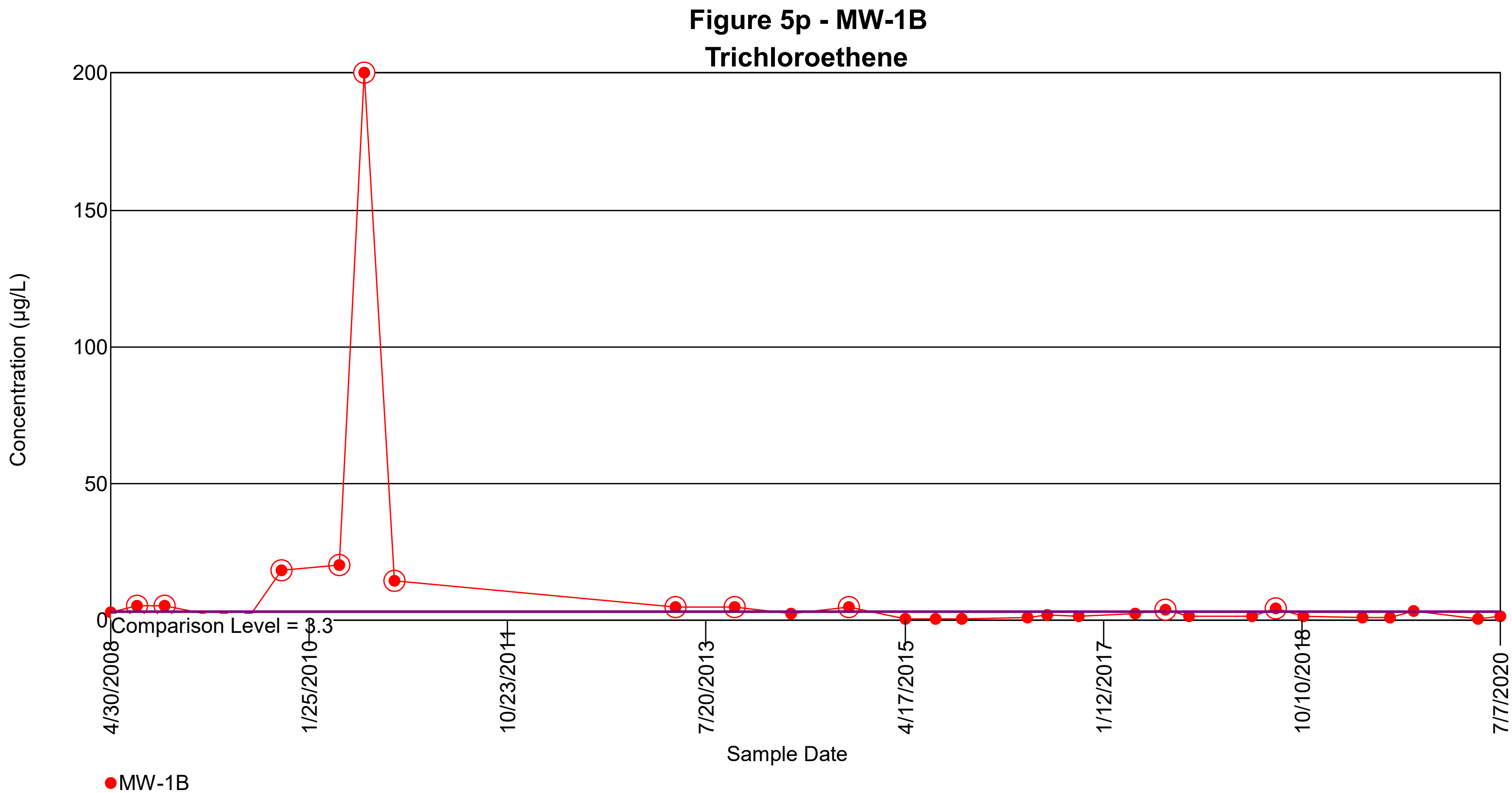
Non-Detects Replaced with Detection Limit

Figure 5o - EX-1
Trichloroethene



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

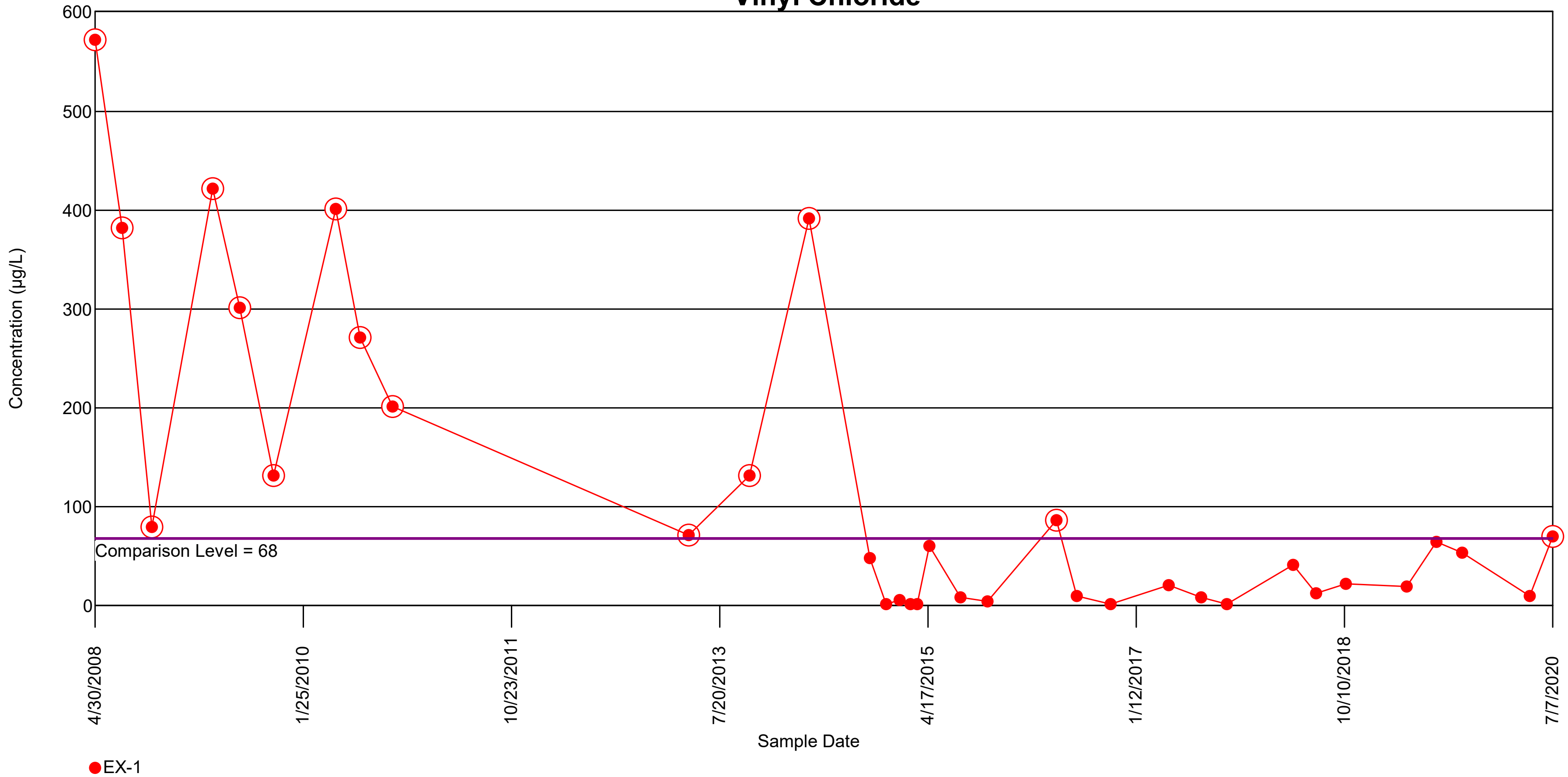
Non-Detects Replaced with Detection Limit



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

Non-Detects Replaced with Detection Limit

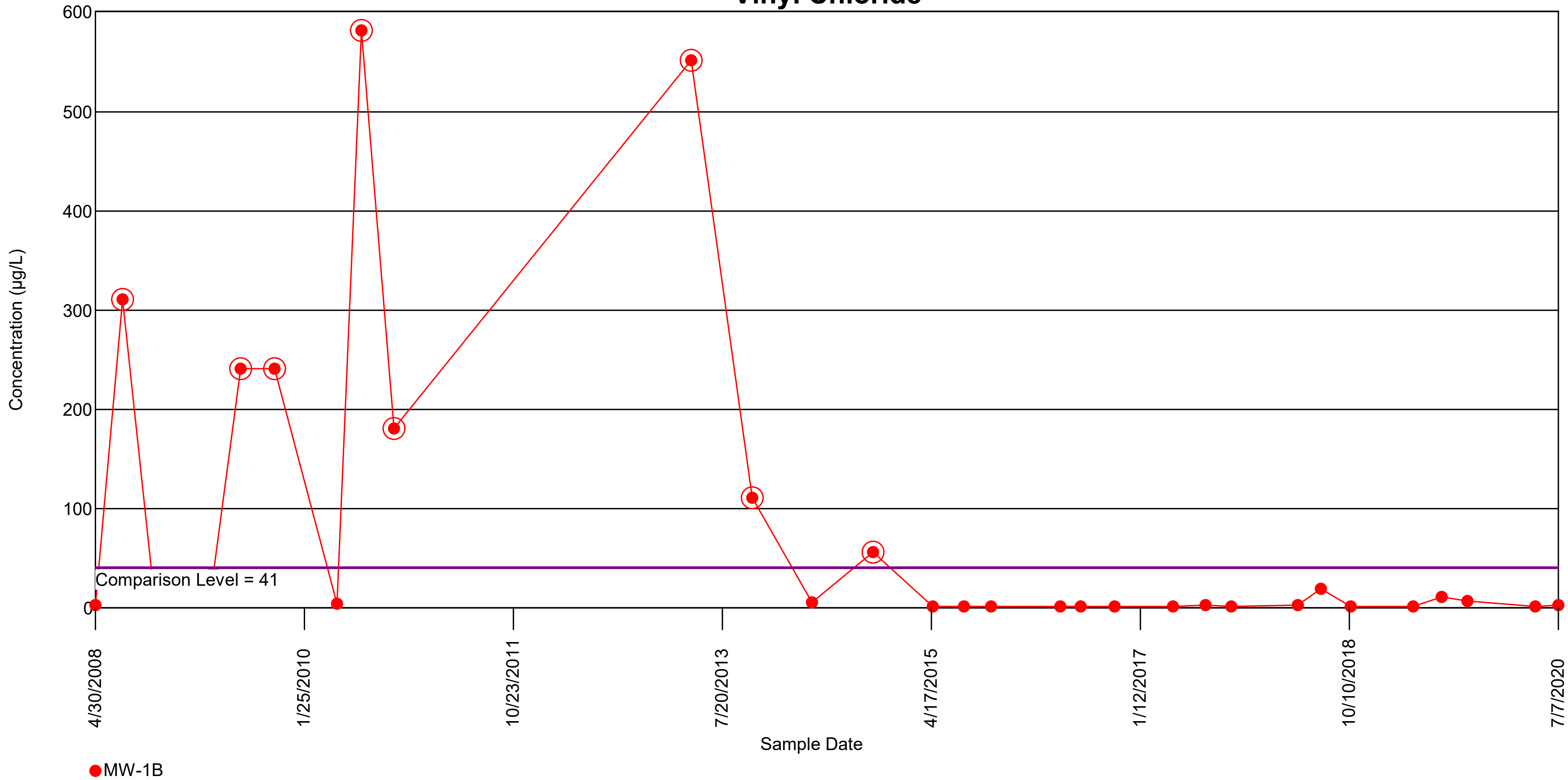
Figure 5q - EX-1
Vinyl Chloride



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

Non-Detects Replaced with Detection Limit

Figure 5r - MW-1B
Vinyl Chloride



Notes:
(1) The time series graphs plot the constituent concentration versus time at a given well.
(2) Solid symbols denote values less than the 20% rebound threshold and open symbols denote values greater than the 20% rebound threshold.
(3) The Comparison Level is the 20% rebound threshold.

Non-Detects Replaced with Detection Limit

TABLES

TABLE 1
GROUNDWATER SAMPLE POINTS AND ANALYTICAL PARAMETERS

Cortese Landfill Site
Narrowsburg, NY

Location ID	Sampling Event	Parameter				
		VOCs (1)	SVOCs (2)	Metals (3)	Electron Donors/Acceptors (4)	TPH (5)
Operable Unit 4 - Source Area Monitoring Wells						
MW-1A	Spring	X	X	X	X	X
MW-1B	Spring	X	X	X	X	X
	Summer	X		X	X	
	Fall	X		X	X	X
MW-1C	Spring	X	X	X	X	X
	Summer	X		X	X	
	Fall	X		X	X	X
MW-10	Spring	X	X	X	X	X
	Summer	X		X	X	
	Fall	X		X	X	X
MW-11	Spring	X	X	X	X	X
MW-20A	Summer	X	X	X	X	
	Fall	X		X	X	
MW-20B	Spring	X	X	X	X	
	Fall	X		X	X	
EX-1	Spring	X	X	X	X	X
	Summer	X		X	X	
	Fall	X		X	X	X

Notes:

Monitoring performed as specified in the Operation and Maintenance Quality Assurance Project Plan (O&M QAPP; May 2013), and OU4 Operation, Maintenance, and Monitoring Plan (OM&M Plan; July, 2014).

SVOCs - Semivolatile Organic Compounds listed in worksheet #15 of QAPP

VOCs - Volatile Organic Compounds listed in worksheet #15 of QAPP

TPH - Total Petroleum Hyrdocarbons

All samples were unfiltered

(1) Analysis of VOCs included dichlorobenzene isomers

(2) Analysis of SVOCs included benzoic acid and 1,4-dioxane

(3) Metals analyzed were arsenic, iron, and manganese

(4) Electron Donors/Acceptors analyzed were alkalinity, sulfate, nitrate+nitrite, ammonia, and total organic carbon

(5) Analysis of TPH included TPH-Gasoline Range Orgranics (C6-C10) and TPH-Diesel Range Organics (C10-C28)

TABLE 2
ANALYTICAL METHODS, SAMPLE CONTAINERS, PRESERVATION, AND TECHNICAL HOLD TIMES

Cortese Landfill Site
Narrowsburg, NY

Parameter	Sample Matrix	Methodology	Container		Preservation	Hold Time
			Size	Type		
TCL VOCs	Groundwater	SW846 8260C	3-40 ml	G	Cool to 4 ^{o}C; HCl; pH < 2; no headspace	14 days
TCL SVOCs	Groundwater	SW846 8270D	2-1000 ml	Amber G	Cool to 4 ^{o}C	7 days E
Total Metals	Groundwater	SW846 6010C	1-500 ml	P	Cool to 4 ^{o}C; HNO_3; pH < 2	180 days
Ammonia	Groundwater	EPA 350.1	1-1000 ml	P or G	Cool to 4 ^{o}C; H_2SO_4; pH < 2	28 days
Nitrate+Nitrite	Groundwater	EPA 353.2	1-250 ml	P or G	Cool to 4 ^{o}C; H_2SO_4; pH < 2	28 days
Sulfate	Groundwater	ASTM D516-90, 02	1-125 ml	P or G	Cool to 4 ^{o}C	28 days
Alkalinity	Groundwater	EPA 310.2	1-250 ml	P or G	Cool to 4 ^{o}C	14 days
TPH-GRO	Groundwater	SW846 8015D	3-40 ml	G	Cool to 4 ^{o}C; HCl; pH < 2; no headspace	14 days
TPH-DRO	Groundwater	SW846 8015D	2-1000 ml	Amber G	Cool to 4 ^{o}C; HCl; pH < 2	7 days E
Total Organic Carbon	Groundwater	SM20 5310D	2-40 ml	G	Cool to 4 ^{o}C; HCl; pH < 2	28 days
Specific Conductance	Groundwater	Electrode	NA	P or G	None	Field Measurement
pH	Groundwater	Electrode	NA	P or G	None	Field Measurement
Turbidity	Groundwater	Electrode	NA	P or G	None	Field Measurement
Dissolved Oxygen	Groundwater	Electrode	NA	G	None	Field Measurement
Temperature	Groundwater	Thermistor	NA	G	None	Field Measurement

Notes:
G - Glass
ml - milliliters
P - Polyethylene
TPH - Total Petroleum Hydrocarbons
DRO - Diesel Range Organics (C10-C28)
SVOCs - Semivolatile Organic Compounds
TCL - Target Compound List (defined in USEPA CLP SOW OLM03.2)
VOCs - Volatile Organic Compounds
GRO - Gasoline Range Organics (C6-C10)
E - Hold time for SVOCs and TPH-DRO/ORO is 7 days for start of extraction and 40 days after extraction for analysis
ASTM - American Society for Testing and Materials
SM - Standard Methods developed by Standard Methods Committee comprised of members from the American Public Health Association, Amerian Water Works Association, and Water Environment Federation

Metals analyzed were arsenic, iron, and manganese

EPA methodology taken from Chemical Methods for the Analysis of Water and Waste, 1979, revised 1983 and subsequent updates

SW846 is Test Methods for Evaluating Solid Waste, Update III, dated November 1996 and subsequent updates

TABLE 3
EX-1 GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburgh, NY

		Sample Location	EX-1															
		Sample Date	**4/30/2008**	**7/24/2008**	**10/22/2008**	**4/27/2009**	**7/17/2009**	**10/29/2009**	**5/6/2010**	**7/22/2010**	**10/28/2010**	**4/17/2013**	**10/21/2013**	**4/21/2014**	**10/22/2014**	**12/11/2014**	**1/22/2015**	**2/26/2015**
	Parameters	**Units**																
Volatile Organic Compounds	1,1,1-Trichloroethane	µg/L	**440**	**53J**	**11J**	**210**	**140J**	**13J**	**210**	<120U	**68J**	**30**	**26J**	**150**	**16J**	**1.1**	**10**	<0.82U
	1,1,2,2-Tetrachloroethane	µg/L	<25U	<120U	<40U	<17U	<17U	<4.3U	<100U	<120U	<120U	<1.1U	<2.1U	<2.1U	<0.84U	<0.21U	**0.42J**	<0.21U
	1,1,2-Trichloroethane	µg/L	<25U	<120U	<40U	<18U	<18U	<4.6U	<100U	<120U	<120U	<1.2U	<2.3U	<2.3U	<0.92U	<0.23U	<0.23U	<0.23U
	1,1-Dichloroethane	µg/L	**160**	**100J**	**26J**	**100**	**75J**	**35J**	**83J**	**58J**	**44J**	**21J**	**28J**	**94**	**17J**	**9.5**	**6.4**	**2.3**
	1,1-Dichloroethene	µg/L	**11J**	<120U	<40U	<23U	<23U	<5.9U	<100U	<120U	<120U	<1.5U	<2.9U	**6.3J**	<1.2U	<0.29U	<0.29U	<0.29U
	1,2-Dichlorobenzene	µg/L	**100**	**53J**	**30J**	**54J**	**54J**	**43J**	**38J**	**48J**	**37J**	**28**	**44J**	**32J**	**27**	**14**	**5.5**	**4.8**
	1,2-Dichloroethane	µg/L	**5.8J**	<120U	<40U	<17U	<17U	<4.3U	<100U	<120U	<120U	<1.1U	<2.1U	<2.1U	**1.5J**	**0.56J**	<0.21U	**0.27J**
	1,2-Dichloropropane	µg/L	<25U	<120U	<40U	<12U	<26U	<6.6U	<100U	<120U	<120U	<3.6U	<7.2U	<7.2U	<2.9U	<0.72U	<0.72U	<0.72U
	1,3-Dichlorobenzene	µg/L	**21J**	**18J**	**12J**	<13U	<28U	**19J**	<100U	<120U	<120U	**18J**	**27J**	**22J**	**20**	**16**	-	-
	1,4-Dichlorobenzene	µg/L	**230**	**280**	**160**	**160**	**230J**	**210**	**100**	**190**	**250**	**140**	**230**	**150**	**160**	**80**	**46**	**36**
	2-Butanone	µg/L	**530**	**130**	<40U	**500**	**300J**	<26U	**990**	<120U	<120U	**39**	<13U	**47J**	<5.3U	<1.3U	<1.3U	<1.3U
	2-Hexanone	µg/L	<25U	<120U	<40U	<99U	<99U	<25U	<100U	<120U	<120U	<6.2U	<12U	<12U	<5U	<1.2U	<1.2U	<1.2U
	4-Methyl-2-pentanone	µg/L	**210**	**63J**	<40U	<73U	<73U	<18U	**130**	**78J**	<120U	**15J**	<21U	<21U	<8.4U	**3J**	<2.1U	<2.1U
	Acetone	µg/L	**170**	**98J**	<80U	**180J**	<110U	<27U	**220**	<250U	<250U	**22J**	<30U	<30U	<12U	**7.6J**	<10U	**3.7J**
	Benzene	µg/L	**110**	**51J**	**20J**	**56J**	**43J**	**26J**	**41J**	**38J**	**36J**	**18J**	**21J**	**14J**	**15J**	**2.8**	**1.7**	**1.4**
	Dichlorobromomethane	µg/L	<25U	<120U	<40U	<31U	<31U	<7.7U	<100U	<120U	<120U	<2U	<3.9U	<3.9U	<1.6U	<0.39U	<0.39U	<0.39U
	Bromoform	µg/L	<25U	<120U	<40U	<21U	<21U	<5.1U	<100U	<120U	<120U	<1.3U	<2.6U	<2.6U	<1U	<0.26U	<0.26U	<0.26U
	Bromomethane	µg/L	<25U	<120U	<40U	<23U	<23U	<5.6U	<100U	<120U	<120U	<3.5U	<6.9U	<6.9U	<2.8U	<0.69U	<0.69U	<0.69U
	Carbon Disulfide	µg/L	<25U	<120U	<40U	<16U	<16U	<3.9U	<100U	<120U	<120U	<0.95U	<1.9U	<1.9U	<0.76U	**0.84J**	<0.19U	**0.44J**
	Carbon Tetrachloride	µg/L	<25U	<120U	<40U	<21U	<21U	<5.3U	<100U	<120U	<120U	<1.4U	<2.7U	<2.7U	<1.1U	<0.27U	<0.27U	<0.27U
	Chlorobenzene	µg/L	**150**	**160**	**78**	**130**	**140J**	**140**	**53J**	**150**	**90J**	**110**	**160**	**87**	**92**	**21**	**7.3**	**6.6**
	Chlorodibromomethane	µg/L	<25U	<120U	<40U	<26U	<26U	<6.4U	<100U	<120U	<120U	<1.6U	<3.2U	<3.2U	<1.3U	<0.32U	<0.32U	<0.32U
	Chloroethane	µg/L	<25U	<120U	<40U	<26U	<26U	<6.5U	<100U	<120U	<120U	<1.6U	<3.2U	<3.2U	<1.3U	<0.32U	<0.32U	<0.32U
	Chloroform	µg/L	**69**	<120U	<40U	**32J**	<27U	<6.7U	**26J**	<120U	<120U	**2.8J**	<3.4U	**26J**	<1.4U	**0.73J**	**0.9J**	<0.34U
	Chloromethane	µg/L	<25U	<120U	<40U	<28U	<28U	<6.9U	<100U	<120U	<120U	<1.8U	<3.5U	<3.5U	<1.4U	<0.35U	<0.35U	<0.35U
	cis-1,2-Dichloroethene	µg/L	**6800**	**800**	**100**	**2700**	**1900**	**140**	**2500**	**550**	**650**	**140**	**190**	**800**	**100**	**7.8**	**37**	**2.9**
	cis-1,3-Dichloropropene	µg/L	<25U	<120U	<40U	<28U	<28U	<7.1U	<100U	<120U	<120U	<1.8U	<3.6U	<3.6U	<1.4U	<0.36U	<0.36U	<0.36U
	Methylene Chloride	µg/L	<25U	**14J**	<40U	<35U	<35U	<8.8U	<100U	<120U	<120U	<5U	<4.4U	**4.9J**	<1.8U	<0.44U	<0.44U	<0.44U
	Ethylbenzene	µg/L	**730J**	**220**	**90**	**390**	**290J**	**120**	**350**	**170**	**170**	**130**	**93**	**130**	**60**	**10**	**7.6**	**4.3**
	Styrene	µg/L	<25U	<120U	<40U	<15U	<15U	<3.7U	<100U	<120U	<120U	<3.7U	<7.3U	<7.3U	<2.9U	<0.73U	<0.73U	<0.73U
	Trichloroethene	µg/L	**9.6J**	<120U	<40U	<14U	<37U	<9.2U	<100U	<120U	**16J**	<2.3U	<4.6U	**71**	**2.3J**	<0.46U	**3.5**	**0.74J**
	Tetrachloroethene	µg/L	**54**	<120U	<40U	<29U	<29U	<7.3U	**24J**	<120U	<120U	<1.8U	<3.6U	**8.5J**	<1.4U	<0.36U	<0.36U	<0.36U
	Toluene	µg/L	**11,000**	**2600J**	**450**	**5300**	**3700**	**1200**	**5300**	**1900**	**1500**	**1300**	**620J**	**2700**	**130**	**21**	**32**	**2.2**
	trans-1,2-Dichloroethene	µg/L	**6.6**	<25U	<8U	<10U	<34U	<8.4U	<20U	<25U	<25U	<4.5U	<9U	<9U	<3.6U	<0.9U	<0.9U	<0.9U
	trans-1,3-Dichloropropene	µg/L	<25U	<120U	<40U	<29U	<29U	<7.4U	<100U	<120U	<120U	<1.9U	<3.7U	<3.7U	<1.5U	<0.37U	<0.37U	<0.37U
	Vinyl Chloride	µg/L	**570J**	**380**	**78**	**420**	**300J**	**130**	**400**	**270**	**200**	**71**	**130**	**390**	**47**	<0.9U	**4.5**	<0.9U
	Total Xylenes	µg/L	**2900**	**950**	**320**	**1500**	**1100**	**450**	**1400**	**670**	**650**	**500**	**400**	**500**	**250**	**52**	**17**	**5**
	Total VOCS	µg/L	**25,000**	**6000**	**1400**	**12,000**	**8300**	**2600**	**12,000**	**4200**	**3800**	**2600**	**2000**	**5300**	**940**	**280**	**200**	**76**

TABLE 3
EX-1 GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburgh, NY

		Sample Location	EX-1																	
		Sample Date	3/19/2015	4/22/2015	7/27/2015	10/19/2015	5/16/2016	7/18/2016	10/26/2016	4/24/2017	7/31/2017	10/17/2017	5/7/2018	7/19/2018	10/15/2018	4/22/2019	7/22/2019	10/7/2019	4/29/2020	7/7/2020
Parameters		Units																		
Volatile Organic Compounds	1,1,1-Trichloroethane	µg/L	**3.2**	**170**	**5**	**0.96J**	**120**	**10J**	**3J**	**36**	<6.6U	**1.3J**	**12**	**5.2**	**7.8**	**11J**	**9.5J**	<8.2U	**5.8**	**2.8J**
	1,1,2,2-Tetrachloroethane	µg/L	<0.21U	**1.6J**	<0.21U	<0.21U	**2.1J**	<0.84U	**0.64J**	**1.1J**	<1.7U	<0.21U	<0.42U	**0.96J**	**0.55J**	<0.84U	**3.3J**	**2.5J**	**1.5J**	<0.21U
	1,1,2-Trichloroethane	µg/L	<0.23U	<0.92U	<0.23U	<0.23U	<0.92U	<0.92U	<0.23U	<0.23U	<1.8U	<0.23U	<0.46U	**0.29J**	<0.23U	<0.92U	<0.92U	<2.3U	**0.29J**	<0.23U
	1,1-Dichloroethane	µg/L	**4.1**	**19J**	**3.5J**	**2J**	**8.4J**	**2J**	**1.4J**	**7.6**	<3U	**1.6J**	**13**	**8.5**	**12**	**26**	**25**	**16J**	**18**	**7.6**
	1,1-Dichloroethene	µg/L	<0.29U	**2.6J**	<0.29U	<0.29U	**4.8J**	<1.2U	<0.29U	**4.6J**	<2.3U	<0.29U	**0.69J**	<0.29U	**0.3J**	<1.2U	<1.2U	<2.9U	**0.82J**	<0.29U
	1,2-Dichlorobenzene	µg/L	**3.9**	**11J**	**9.1**	**6.9**	**4.4J**	<3.2U	**0.87J**	**1.6J**	<6.3U	**0.98J**	**5.9J**	**7.3**	**7.5**	**9.9J**	**26**	**24J**	**10**	**24**
	1,2-Dichloroethane	µg/L	<0.21U	<0.84U	<0.21U	<0.21U	<0.84UJ	<0.84U	<0.21U	<0.21U	<1.7U	<0.21U	<0.42U	**0.64J**	<0.21U	<0.84U	<0.84U	<2.1U	**1.1J**	**0.32J**
	1,2-Dichloropropane	µg/L	<0.72U	<2.9U	<0.72U	<0.72U	<2.9U	<2.9U	<0.72U	<0.72U	<5.8U	<0.72U	<1.4U	<0.72U	<0.72U	<2.9U	<2.9U	<7.2U	<0.72U	<0.72U
	1,3-Dichlorobenzene	µg/L	-	**16J**	**13**	**14**	**10J**	**4.1J**	**4.5J**	**4.6J**	<6.2U	**4.6J**	**9.9J**	**9.2**	**12**	**13J**	**20**	**17J**	**21**	**24**
	1,4-Dichlorobenzene	µg/L	**30**	**54**	**47**	**41**	**21**	**5.6J**	**4J**	**8.1**	<6.7U	**5**	**30**	**31**	**34**	**66**	**120**	**110**	**57**	**110**
	2-Butanone	µg/L	<1.3U	<5.3U	<1.3U	<1.3U	<5.3U	<5.3U	<1.3U	<1.3U	<11U	<1.3U	<2.6U	<1.3U	<1.3U	**7.8J**	<5.3U	<13U	<1.3U	<1.3U
	2-Hexanone	µg/L	<1.2U	<5U	<1.2U	<1.2U	<5U	<5U	<1.2U	<1.2U	<9.9U	<1.2U	<2.5U	<1.2U	<1.2U	<5U	<5U	<12U	<1.2U	<1.2U
	4-Methyl-2-pentanone	µg/L	<2.1U	<8.4U	<2.1U	<2.1U	<8.4U	<8.4U	<2.1U	<2.1U	<17U	<2.1U	<4.2U	<2.1U	<2.1U	<8.4U	<8.4U	<21U	**2.3J**	<2.1U
	Acetone	µg/L	<3U	**75**	**3.9J**	<3U	<12U	<12U	<3U	**4.1J**	<24U	**6.2J**	**16J**	**6.1J**	<3U	<12U	<12U	<30U	**3.3J**	**4.9J**
	Benzene	µg/L	**1.3**	**3.6J**	**3.4J**	**2.3J**	**3.3J**	<1.6UJ	<0.41U	**0.68J**	<3.3U	<0.41U	**1.3J**	**2.7J**	**2.2J**	**2.1J**	**9.8J**	**8.6J**	**12**	**3.2J**
	Dichlorobromomethane	µg/L	<0.39U	<1.6U	<0.39U	<0.39U	<1.6U	<1.6U	<0.39U	<0.39U	<3.1U	<0.39U	<0.78U	<0.39U	<0.39U	<1.6U	<1.6U	<3.9U	<0.39U	<0.39U
	Bromoform	µg/L	<0.26U	<1UJ	<0.26U	<0.26U	<1U	<1U	<0.26U	<0.26U	<2.1U	<0.26U	<0.52U	<0.26U	<0.26U	<1U	<1U	<2.6U	<0.26U	<0.26U
	Bromomethane	µg/L	<0.69U	<2.8U	<0.69U	<0.69U	<2.8U	<2.8U	<0.69U	<0.69U	<5.5U	<0.69U	<1.4U	<0.69U	<0.69U	<2.8U	<2.8U	<6.9U	<0.69U	<0.69U
	Carbon Disulfide	µg/L	<0.19U	<0.76U	<0.19U	<0.19U	<0.76U	**1J**	**1.3J**	**3.1J**	<1.5U	**2.4J**	<0.38U	<0.19U	<0.19U	<0.76U	<0.76U	<1.9U	<0.19U	<0.19U
	Carbon Tetrachloride	µg/L	<0.27U	<1.1U	<0.27U	<0.27U	<1.1U	<1.1U	<0.27U	<0.27U	<2.2U	<0.27U	<0.54U	<0.27U	<0.27U	<1.1U	<1.1U	<2.7U	<0.27U	<0.27U
	Chlorobenzene	µg/L	**5.2**	**17J**	**31**	**24**	**9.2J**	<3U	**1.7J**	**5**	<6U	**3.6J**	**12**	**16**	**15**	**21**	**34**	**57**	**69**	**39**
	Chlorodibromomethane	µg/L	<0.32U	<1.3U	<0.32U	<0.32U	<1.3U	<1.3U	<0.32U	<0.32U	<2.6U	<0.32U	<0.64U	<0.32U	<0.32U	<1.3U	<1.3U	<3.2U	<0.32U	<0.32U
	Chloroethane	µg/L	<0.32U	<1.3U	<0.32U	<0.32U	<1.3U	<1.3U	<0.32U	<0.32U	<2.6U	<0.32U	<0.64U	<0.32U	<0.32U	<1.3U	<1.3U	<3.2U	<0.32U	<0.32U
	Chloroform	µg/L	<0.34U	**17J**	**0.81J**	<0.34U	**13J**	<1.4U	<0.34U	**3J**	<2.7U	<0.34U	**1.1J**	<1.9U	**1.2J**	**2.5J**	**8J**	**5.4J**	**1.6J**	**0.85J**
	Chloromethane	µg/L	**0.39J**	<1.4U	<0.35UJ	<0.35U	<1.4U	<1.4U	<0.35U	<0.35U	<2.8U	<0.35U	<0.7U	<0.35U	<0.35U	<1.4U	<1.4U	<3.5U	<0.35U	<0.35U
	cis-1,2-Dichloroethene	µg/L	**7.6**	**1100**	**38**	**12**	**1500J**	**100J**	**32**	**350**	**16**	**13**	**190**	**67**	**85**	**42**	**460J**	**320**	**420**	**35**
	cis-1,3-Dichloropropene	µg/L	<0.36U	<1.4U	<0.36U	<0.36U	<1.4U	<1.4U	<0.36U	<0.36U	<2.9U	<0.36U	<0.72U	<0.36U	<0.36U	<1.4U	<1.4U	<3.6U	<0.36U	<0.36U
	Methylene Chloride	µg/L	<0.44U	<1.8U	<0.44U	<0.44U	<1.8U	<1.8U	<0.44U	<0.44U	<3.5U	<0.44U	<0.88U	**0.56J**	<0.44U	<1.8U	<1.8U	**6.3J**	<0.44U	<0.44U
	Ethylbenzene	µg/L	**5.3**	**52**	**7.8**	**3.8J**	**15J**	<3U	<0.74U	**3.1J**	<5.9U	<0.74U	**5.5J**	**1.1J**	**2.7J**	**23**	**11J**	<7.4U	**8.9**	**8.6**
	Styrene	µg/L	<0.73U	<2.9U	<0.73U	<0.73U	<2.9U	<2.9U	<0.73U	<0.73U	<5.8U	<0.73U	<1.5U	<0.73U	<0.73U	<2.9U	<2.9U	<7.3U	<0.73U	<0.73U
	Trichloroethene	µg/L	**0.67J**	**610**	**17**	**1.1J**	**790**	**49**	**14**	**170**	**4.7J**	**2.1J**	**7.5J**	**62**	**6.5**	<1.8U	**70**	**53**	**27**	**4.1J**
	Tetrachloroethene	µg/L	<0.36U	**33**	**2.2J**	<0.36U	**46**	**5.4J**	**2.8J**	**23**	<2.9U	**0.54J**	**3.4J**	**6.7**	**2.4J**	**2.2J**	**10J**	**7.8J**	**6.9**	**1.1J**
	Toluene	µg/L	**9.7**	**790**	**0.83J**	<0.51U	**290**	**7.6J**	<0.51U	**42**	<4.1U	<0.51U	**2J**	**0.58J**	**32**	**98**	**4.3J**	<5.1U	**5.8**	**3.1J**
	trans-1,2-Dichloroethene	µg/L	<0.9U	<3.6U	<0.9U	<0.9U	<3.6U	<3.6U	<0.9U	<0.9U	<7.2U	<0.9U	<1.8U	<0.9U	<0.9U	<3.6U	<3.6U	<9U	**1.3**	<0.9U
	trans-1,3-Dichloropropene	µg/L	<0.37U	<1.5U	<0.37U	<0.37U	<1.5U	<1.5U	<0.37U	<0.37U	<3U	<0.37U	<0.74U	<0.37U	<0.37U	<1.5U	<1.5U	<3.7U	<0.37U	<0.37U
	Vinyl Chloride	µg/L	**0.93J**	**59**	**6.9**	**3.2J**	**85**	**8.8J**	<0.9U	**20**	<7.2U	<0.9U	**40**	**11**	**21**	**18J**	**63**	**52**	**69**	**8.3**
	Total Xylenes	µg/L	**6.9**	**170**	**11**	<0.66U	**46**	<2.6U	<0.66U	**10**	<5.3U	<0.66U	**7.6J**	**1.1J**	**6.2**	**40**	**3.9J**	<6.6U	**3.7J**	**2.7J**
	Total VOCS	µg/L	**87**	**3200**	**210**	**120**	**3000**	**200**	**67**	**700**	**21**	**42**	**360**	**240**	**250**	**390**	**880**	**680**	**658**	**122**

TABLE 3
MW-1A GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburgh, NY

		Sample Location	MW-1A					
		Sample Date	4/22/2015	5/16/2016	4/25/2017	5/8/2018	4/23/2019	4/30/2020
Parameters		Units						
Volatile Organics	1,1,1-Trichloroethane	µg/L	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U
	1,1,2,2-Tetrachloroethane	µg/L	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,1,2-Trichloroethane	µg/L	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U
	1,1-Dichloroethane	µg/L	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U
	1,1-Dichloroethene	µg/L	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U
	1,2-Dichlorobenzene	µg/L	<0.38U	<0.38U	<0.4U	<0.4U	<0.79U	<0.79U
	1,2-Dichloroethane	µg/L	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,2-Dichloropropane	µg/L	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U
	1,3-Dichlorobenzene	µg/L	<0.46U	<0.46U	<0.48U	<0.48U	<0.78U	<0.78U
	1,4-Dichlorobenzene	µg/L	<0.44U	<0.44U	<0.46U	<0.46U	<0.84U	<0.84U
	2-Butanone	µg/L	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U
	2-Hexanone	µg/L	<1.2U	<1.2U	<1.2U	<1.2UJ	<1.2U	<1.2U
	4-Methyl-2-pentanone	µg/L	<2.1U	<2.1U	<2.1U	<2.1UJ	<2.1U	<2.1U
	Acetone	µg/L	<3U	<3U	<3U	**3.5J**	<3U	<3U
	Benzene	µg/L	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U
	Dichlorobromomethane	µg/L	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U
	Bromoform	µg/L	<0.26UJ	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U
	Bromomethane	µg/L	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U
	Carbon Disulfide	µg/L	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	Carbon Tetrachloride	µg/L	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U
	Chlorobenzene	µg/L	<0.75U	<0.75U	<0.75U	<0.75U	<0.75U	<0.75U
	Chlorodibromomethane	µg/L	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroethane	µg/L	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroform	µg/L	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U
	Chloromethane	µg/L	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U
	cis-1,2-Dichloroethene	µg/L	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U
	cis-1,3-Dichloropropene	µg/L	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U
	Methylene Chloride	µg/L	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U
	Ethylbenzene	µg/L	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U
	Styrene	µg/L	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U
	Trichloroethene	µg/L	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U
	Tetrachloroethene	µg/L	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U
	Toluene	µg/L	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U
	trans-1,2-Dichloroethene	µg/L	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U
	trans-1,3-Dichloropropene	µg/L	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U
	Vinyl Chloride	µg/L	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U
	Total Xylenes	µg/L	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U
	Total VOCS	µg/L	ND	ND	ND	**3.5**	ND	ND

TABLE 3
MW-1B GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburgh, NY

		Sample Location	MW-1B														
		Sample Date	**4/30/2008**	**7/24/2008**	**10/22/2008**	**4/27/2009**	**7/17/2009**	**10/29/2009**	**5/6/2010**	**7/22/2010**	**10/28/2010**	**4/17/2013**	**10/21/2013**	**4/21/2014**	**10/22/2014**	**4/22/2015**	**7/27/2015**
	Parameters	**Units**															
Volatile Organics	1,1,1-Trichloroethane	µg/L	**4.6J**	**44**	**5.7**	**30**	**53**	**21J**	<20U	**45J**	**36J**	**200**	**26J**	<4.1U	**15J**	**3.5J**	**20**
	1,1,2,2-Tetrachloroethane	µg/L	<5U	**0.76J**	<5U	**0.27J**	**0.71J**	<8.5U	<20U	<200U	<50U	<2.1U	<2.1U	<1.1U	<2.1U	<0.21U	<0.21U
	1,1,2-Trichloroethane	µg/L	<5U	**0.82J**	<5U	<0.23U	**0.52J**	<9.2U	<20U	<200U	<50U	<2.3U	<2.3U	<1.2U	<2.3U	<0.23U	<0.23U
	1,1-Dichloroethane	µg/L	**5.4**	**380**	**52**	**83**	**160**	**110J**	**19J**	**240**	**95**	**200**	**57**	**21J**	**74**	**14**	**9**
	1,1-Dichloroethene	µg/L	<5U	**1.1J**	<5U	**0.41J**	**0.55J**	<12U	<20U	<200U	<50U	**3.1J**	<2.9U	<1.5U	<2.9U	<0.29U	**1.6J**
	1,2-Dichlorobenzene	µg/L	**2.6J**	**31**	**13**	**9.4**	**23**	**19J**	**6J**	**38J**	**18J**	**28J**	**23J**	**13J**	**23J**	**7.2**	**6.8**
	1,2-Dichloroethane	µg/L	<5U	<5U	<5U	**0.53J**	**1J**	<8.6U	<20U	<200U	<50U	<2.1U	<2.1U	<1.1U	<2.1U	**0.28J**	<0.21U
	1,2-Dichloropropane	µg/L	<5U	**1.5J**	<5U	**0.75J**	**1.3J**	<13U	<20U	<200U	<50U	<7.2U	<7.2U	<3.6U	<7.2U	<0.72U	<0.72U
	1,3-Dichlorobenzene	µg/L	**2J**	**11**	**6.1**	**4.1J**	**8**	<14U	**3.5J**	<200U	<50U	**11J**	**12J**	**13J**	**12J**	**9**	**6.1**
	1,4-Dichlorobenzene	µg/L	**14**	**130J**	**58**	**38**	**86**	**88J**	**26**	**120J**	**67**	**110**	**100**	**70**	**100**	**34**	**28**
	2-Butanone	µg/L	<5U	**82**	<5U	**6.3**	**30**	<53U	<20U	<200U	<50U	**83**	<13U	<6.6U	<13U	<1.3U	<1.3UJ
	2-Hexanone	µg/L	<5U	**1.9J**	<5U	<1.2U	<1.2U	<50U	<20U	<200U	<50U	<12U	<12U	<6.2U	<12U	<1.2U	<1.2U
	4-Methyl-2-pentanone	µg/L	<5U	**77**	<5U	**4.2J**	**19**	<36U	<20U	<200U	<50U	**29J**	<21U	<11U	<21U	<2.1U	<2.1U
	Acetone	µg/L	<10U	**54**	**3.2J**	**10**	**24**	<54U	<40U	<400U	<100U	<30U	<30U	<15U	<30U	<3U	<3U
	Benzene	µg/L	**3.1J**	**32**	**8.8**	**8.4**	**18**	**18J**	**4.6J**	**30J**	**11J**	**20J**	**9.7J**	**6.1J**	**9.6J**	**2.2J**	**1.9J**
	Dichlorobromomethane	µg/L	<5U	**1.5J**	<5U	<0.39U	<0.39U	<15U	<20U	<200U	<50U	<3.9U	<3.9U	<2U	<3.9U	<0.39U	<0.39U
	Bromoform	µg/L	<5U	<5U	<5U	<0.26U	<0.26U	<10U	<20U	<200U	<50U	<2.6U	<2.6U	<1.3U	<2.6U	<0.26UJ	<0.26U
	Bromomethane	µg/L	<5U	<5U	<5U	<0.28U	<0.28U	<11U	<20U	<200U	<50U	<6.9U	<6.9U	<3.5U	<6.9U	<0.69U	<0.69U
	Carbon Disulfide	µg/L	<5U	<5U	<5U	**0.26J**	<0.19U	<7.8U	<20U	<200U	<50U	<1.9U	<1.9U	<0.95U	<1.9U	<0.19U	<0.19U
	Carbon Tetrachloride	µg/L	<5U	<5U	<5U	<0.27U	<0.27U	<11U	<20U	<200U	<50U	<2.7U	<2.7U	<1.4U	<2.7U	<0.27U	<0.27U
	Chlorobenzene	µg/L	**12**	**92**	**32**	**21**	**62**	**64J**	**15J**	**110J**	**44J**	**74**	**73**	**39**	**64**	**14**	**15**
	Chlorodibromomethane	µg/L	<5U	<5U	<5U	<0.32U	<0.32U	<13U	<20U	<200U	<50U	<3.2U	<3.2U	<1.6U	<3.2U	<0.32U	<0.32U
	Chloroethane	µg/L	<5U	<5U	**1.8J**	<0.32U	**23**	<13U	<20U	<200U	<50U	<3.2U	<3.2U	**3.9J**	<3.2U	<0.32U	<0.32U
	Chloroform	µg/L	**0.8J**	**1.5J**	<5U	**1.8J**	**1.6J**	<13U	<20U	<200U	<50U	**20J**	<3.4U	<1.7U	<3.4U	<0.34U	**2.1J**
	Chloromethane	µg/L	<5U	**1.6J**	**0.83J**	<0.35U	<0.35U	<14U	<20U	<200U	<50U	<3.5U	<3.5U	<1.8U	<3.5U	<0.35U	<0.35U
	cis-1,2-Dichloroethene	µg/L	<2U	**690**	**25**	**19**	**300**	**290**	<4U	**1400J**	**300**	**1400**	**140**	<4.1U	**68**	<0.81U	<0.81U
	cis-1,3-Dichloropropene	µg/L	<5U	<5U	<5U	<0.36U	<0.36U	<14U	<20U	<200U	<50U	<3.6U	<3.6U	<1.8U	<3.6U	<0.36U	<0.36U
	Methylene Chloride	µg/L	<5U	<5U	<5U	<0.44U	<0.44U	**46J**	<20U	<200U	<50U	<4.4U	<4.4U	<2.2U	<4.4U	<0.44U	<0.44U
	Ethylbenzene	µg/L	**7.4**	**160J**	**36**	**47**	**130**	**90J**	**23**	**190J**	**62**	**170**	**70**	**41**	**70**	**12**	**17**
	Styrene	µg/L	<5U	<5U	<5U	<0.18U	<0.18U	<7.4U	<20U	<200U	<50U	<7.3U	<7.3U	<3.7U	<7.3U	<0.73U	<0.73U
	Trichloroethene	µg/L	**2.8J**	<5U	<5U	**0.74J**	**0.53J**	<18U	<20U	<200U	**14J**	<4.6U	<4.6U	<2.3U	<4.6U	<5U	<0.46U
	Tetrachloroethene	µg/L	<5U	<5U	<5U	**0.58J**	**0.55J**	<15U	<20U	<200U	<50U	**4.2J**	<3.6U	<1.8U	<3.6U	<0.36U	**0.47J**
	Toluene	µg/L	**32J**	**3100J**	**60**	**1000J**	**1200**	**2000**	**270**	**4200**	**890**	**3700**	**660**	**300**	**580**	<0.51UJ	**0.74J**
	trans-1,2-Dichloroethene	µg/L	<1U	**1.9**	<1U	**0.27J**	**0.75J**	<17U	<4U	<40U	<10U	<9U	<9U	<4.5U	<9U	<0.9U	<0.9U
	trans-1,3-Dichloropropene	µg/L	<5U	<5U	<5U	<0.37U	<0.37U	<15U	<20U	<200U	<50U	<3.7U	<3.7U	<1.9U	<3.7U	<0.37U	<0.37U
	Vinyl Chloride	µg/L	**2.2J**	**310**	**28**	**35**	**240**	**240**	**3.6J**	**580**	**180**	**550**	**110**	<4.5U	**56**	<0.9U	**1.2J**
	Total Xylenes	µg/L	**8.2**	**620**	**71**	**150**	**460**	**330**	**82**	**670**	**190**	**630**	**270**	**140**	**260**	**3.1J**	**23**
	Total VOCS	µg/L	**98**	**5900**	**410**	**1500**	**2900**	**3400**	**460**	**7700**	**2000**	**7300**	**1600**	**650**	**1400**	**100**	**140**

TABLE 3
MW-1B GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburgh, NY

		Sample Location	MW-1B														
		Sample Date	**10/19/2015**	**5/16/2016**	**7/18/2016**	**10/26/2016**	**4/25/2017**	**7/31/2017**	**10/17/2017**	**5/8/2018**	**7/19/2018**	**10/15/2018**	**4/23/2019**	**7/22/2019**	**10/7/2019**	**4/30/2020**	**7/7/2020**
	Parameters	**Units**															
Volatile Organics	1,1,1-Trichloroethane	**µg/L**	**7.9**	**14**	**13**	**2J**	<0.82U	**2J**	<0.82U	<1.6U	**3.3J**	<0.82U	<0.82U	**1.6J**	**2J**	<0.82U	**4.2J**
	1,1,2,2-Tetrachloroethane	**µg/L**	**0.22J**	**0.49J**	**0.55J**	<0.21U	<0.21U	**0.25J**	<0.21U	<0.42U	**0.46J**	<0.21U	<0.21U	<0.21U	**0.85J**	<0.21U	<0.21U
	1,1,2-Trichloroethane	**µg/L**	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.46U	<0.46U	<0.23U	<0.23U	<0.23U	<0.23UJ	<0.23U	<0.23U
	1,1-Dichloroethane	**µg/L**	**5.2**	**11**	**6.4**	**2.2J**	**1.9J**	**3.6J**	**1.8J**	**4.3J**	**15**	**7.4**	**0.46J**	**10**	**14**	**4.1J**	**19**
	1,1-Dichloroethene	**µg/L**	**0.47J**	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.58U	<0.58U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U
	1,2-Dichlorobenzene	**µg/L**	**5.8**	**6.3**	**4.3J**	**1.8J**	**1J**	**1.3J**	**0.8J**	**0.82J**	**2.5J**	**2.2J**	<0.79U	<0.79U	**12**	**2.2J**	**4.6J**
	1,2-Dichloroethane	**µg/L**	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.42U	<0.42U	<0.21U	<0.21U	<0.21U	<0.21UJ	<0.21U	<0.21U
	1,2-Dichloropropane	**µg/L**	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<1.4U	<1.4U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U
	1,3-Dichlorobenzene	**µg/L**	**7.3**	**7.8**	**5.5**	**5.4**	**2.1J**	**4.2J**	**2.9J**	**2.4J**	**2.8J**	**3.5J**	**1.1J**	**0.94J**	**9.9**	**3.6J**	**7.2**
	1,4-Dichlorobenzene	**µg/L**	**27**	**32**	**20**	**7.8**	**4.6J**	**4.8J**	**3.4J**	**3.7J**	**9.8J**	**8.8**	**2.3J**	**3.5J**	**60**	**11**	**23**
	2-Butanone	**µg/L**	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<5U	<1.3U	<2.6U	<2.6U	<1.3U	<1.3U	**2.6J**	<1.3U	<1.3U	**2.5J**
	2-Hexanone	**µg/L**	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<2.5UJ	<2.5U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U
	4-Methyl-2-pentanone	**µg/L**	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<4.2UJ	<4.2U	<2.1U	<2.1U	**2.3J**	<2.1U	<2.1U	**3.5J**
	Acetone	**µg/L**	<3U	**3.3J**	**6.9J**	**3.3J**	<3U	**16**	**4.3J**	<6U	**7.6J**	<3U	<3U	<3U	<3U	<3U	**3.2J**
	Benzene	**µg/L**	**1.2J**	**1.4J**	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.82U	**1.2J**	**0.74J**	<0.41U	**0.88J**	**3.6J**	**0.66J**	**2.9J**
	Dichlorobromomethane	**µg/L**	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.78U	<0.78U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U
	Bromoform	**µg/L**	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.52U	<0.52U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U
	Bromomethane	**µg/L**	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<1.4U	<1.4U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U
	Carbon Disulfide	**µg/L**	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.38U	<0.38U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	Carbon Tetrachloride	**µg/L**	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.54U	<0.54U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U
	Chlorobenzene	**µg/L**	**12**	**9.7**	**5**	**2.3J**	**1.7J**	**2.3J**	**1.5J**	**2.8J**	**6.4J**	**4.5J**	**1J**	**4.1J**	**24**	**5.2**	**29**
	Chlorodibromomethane	**µg/L**	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.64U	<0.64U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroethane	**µg/L**	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.64U	<0.64U	<0.32U	<0.32U	**2.3J**	<0.32U	<0.32U	<0.32U
	Chloroform	**µg/L**	**0.83J**	**2J**	**0.96J**	<0.34U	<0.34U	<0.34U	<0.34U	<0.68U	<1.3U	<0.34U	<0.34U	**0.43J**	**1.8J**	<0.34U	**1.2J**
	Chloromethane	**µg/L**	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.7U	<0.7U	<0.35U	<0.35U	<0.35U	<0.35UJ	<0.35U	<0.35U
	cis-1,2-Dichloroethene	**µg/L**	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	**1.1**	<0.81U	<1.6U	**15**	<0.81U	<0.81U	**7**	**6.4**	<0.81U	**1.3**
	cis-1,3-Dichloropropene	**µg/L**	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.72U	<0.72U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U
	Methylene Chloride	**µg/L**	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<2.1U	<0.88U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U
	Ethylbenzene	**µg/L**	**8.4**	**8.6**	**2.7J**	<0.74U	<0.74U	<0.74U	<0.74U	<1.5U	**5.8J**	<0.74U	<0.74U	**1.7J**	**6.6**	<0.74U	**7.5**
	Styrene	**µg/L**	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<1.5U	<1.5U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U
	Trichloroethene	**µg/L**	<0.46U	**0.9J**	**1.7J**	**1.2J**	**2.3J**	**3.7J**	**1.2J**	**0.98J**	**4.3J**	**1.4J**	**0.59J**	**0.72J**	**3.1J**	<0.46U	**1.3J**
	Tetrachloroethene	**µg/L**	<0.36U	**0.42J**	**0.75J**	<0.36U	<0.36U	**0.39J**	<0.36U	<0.72U	**1.3J**	<0.36U	<0.36U	<0.36U	**0.5J**	<0.36U	<0.36U
	Toluene	**µg/L**	<0.51U	**0.53J**	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<1U	**2.1J**	<0.51U	<0.51U	**16**	**1.1J**	<0.51U	**3.9J**
	trans-1,2-Dichloroethene	**µg/L**	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<1.8U	<1.8U	<0.9U	<0.9U	<0.9U	<0.9UJ	<0.9U	<0.9U
	trans-1,3-Dichloropropene	**µg/L**	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.74U	<0.74U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U
	Vinyl Chloride	**µg/L**	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	**1.9J**	<0.9U	<1.8U	**19**	<0.9U	<0.9U	**10**	**6.6**	<0.9U	**2.2J**
	Total Xylenes	**µg/L**	**1.4J**	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<1.3U	**7.9J**	<0.66U	<0.66U	**2.7J**	**3.6J**	<0.66U	**15**
	Total VOCS	**µg/L**	**78**	**99**	**68**	**26**	**14**	**42**	**16**	**15**	**110**	**29**	**5.5**	**67**	**160**	**10**	**97**

TABLE 3
MW-1C GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburgh, NY

		Sample Location	MW-1C														
		Sample Date	**4/30/2008**	**7/24/2008**	**10/22/2008**	**4/27/2009**	**7/17/2009**	**10/29/2009**	**5/6/2010**	**7/22/2010**	**10/28/2010**	**4/17/2013**	**10/21/2013**	**4/21/2014**	**10/22/2014**	**4/22/2015**	**7/27/2015**
	Parameters	**Units**															
Volatile Organics	1,1,1-Trichloroethane	µg/L	<5U	0.53J	<5U	<0.26U	<0.26U	**6.1**	<5U	<5U	<5U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82UJ	<0.82U
	1,1,2,2-Tetrachloroethane	µg/L	<5U	<5U	<5U	<0.21U	<0.21U	<0.21U	<5U	<5U	<5U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,1,2-Trichloroethane	µg/L	<5U	<5U	<5U	<0.23U	<0.23U	<0.23U	<5U	<5U	<5U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U
	1,1-Dichloroethane	µg/L	<5U	3.9J	0.75J	0.77J	0.85J	**33**	**0.58J**	**0.77J**	<5U	**2.7J**	**1.6J**	**20**	**4.1J**	**3.8J**	**1.6J**
	1,1-Dichloroethene	µg/L	<5U	<5U	<5U	<0.29U	<0.29U	<0.29U	<5U	<5U	<5U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U
	1,2-Dichlorobenzene	µg/L	<5U	<5U	<5U	<0.2U	<0.2U	**9.1**	<5U	<5U	<5U	<0.79U	<0.79U	**3.9J**	<0.79U	**1.1J**	<0.79U
	1,2-Dichloroethane	µg/L	<5U	<5U	<5U	<0.21U	<0.21U	**0.58J**	<5U	<5U	<5U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,2-Dichloropropane	µg/L	<5U	<5U	<5U	<0.14U	<0.32U	**0.54J**	<5U	<5U	<5U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U
	1,3-Dichlorobenzene	µg/L	<5U	<5U	<5U	<0.16U	<0.36U	**6.6**	<5U	<5U	<5U	<0.78U	<0.78U	**3.8J**	<0.78U	**1.1J**	<0.78U
	1,4-Dichlorobenzene	µg/L	3.6J	4J	2.2J	1.9J	2.6J	**46**	**2.6J**	**4.4J**	**0.96J**	**5.3**	**3.4J**	**20**	**4.8J**	**4.8J**	**2.3J**
	2-Butanone	µg/L	<5U	1.4J	<5U	<1.3U	<1.3U	**2.4J**	<5U	<5U	<5U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U
	2-Hexanone	µg/L	<5U	<5U	<5U	<1.2U	<1.2U	<1.2U	<5U	<5U	<5U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U
	4-Methyl-2-pentanone	µg/L	<5U	<5U	<5U	<0.91U	<0.91U	<0.91U	<5U	<5U	<5U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U
	Acetone	µg/L	<10U	5.2J	<10U	3.1J	<1.3U	<1.3U	**3.9J**	<10U	<10U	<3U	<3U	**12**	<3U	**3.9J**	<3U
	Benzene	µg/L	1.4J	1.3J	0.51J	0.56J	0.77J	**9.6**	**0.74J**	**1.1J**	<5U	**1.2J**	**0.75J**	**2.3J**	**1.1J**	<0.41U	<0.41U
	Dichlorobromomethane	µg/L	<5U	<5U	<5U	<0.39U	<0.39U	<0.39U	<5U	<5U	<5U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U
	Bromoform	µg/L	<5U	<5U	<5U	<0.26U	<0.26U	<0.26U	<5U	<5U	<5U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26UJ	<0.26U
	Bromomethane	µg/L	<5U	<5U	<5U	<0.28U	<0.28U	<0.28U	<5U	<5U	<5U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U
	Carbon Disulfide	µg/L	<5U	<5U	<5U	<0.19U	<0.19U	<0.19U	<5U	<5U	<5U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	Carbon Tetrachloride	µg/L	<5U	<5U	<5U	<0.27U	<0.27U	<0.27U	<5U	<5U	<5U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27UJ	<0.27U
	Chlorobenzene	µg/L	12	8	3.5J	3.4J	5.2	**31**	**5.2**	**7.7**	**0.77J**	**7.6**	**5**	**13**	**7.7**	**2.4J**	**1.2J**
	Chlorodibromomethane	µg/L	<5U	<5U	<5U	<0.32U	<0.32U	<0.32U	<5U	<5U	<5U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32UJ	<0.32U
	Chloroethane	µg/L	1.2J	0.54J	<5U	1.1J	<0.32U	**21**	**0.94J**	**0.81J**	<5U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroform	µg/L	<5U	<5U	<5U	<0.34U	<0.34U	<0.34U	<5U	<5U	<5U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U
	Chloromethane	µg/L	<5U	<5U	<5U	<0.35U	<0.35U	<0.35U	<5U	<5U	<5U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U
	cis-1,2-Dichloroethene	µg/L	<0.77U	<1U	<1U	0.28J	<0.38U	**1.8**	<1U	<1UJ	<1U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U
	cis-1,3-Dichloropropene	µg/L	<5U	<5U	<5U	<0.36U	<0.36U	<0.36U	<5U	<5U	<5U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U
	Methylene Chloride	µg/L	<5U	<5U	<5U	<0.44U	<0.44U	<0.44U	<5U	<5U	<5U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U
	Ethylbenzene	µg/L	<5U	1.2J	<5U	<0.18U	<0.18U	**46**	<5U	<5U	<5U	**0.88J**	<0.74U	**7.1**	<0.74U	<0.74U	<0.74U
	Styrene	µg/L	<5U	<5U	<5U	<0.18U	<0.18U	<0.18U	<5U	<5U	<5U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U
	Trichloroethene	µg/L	<5U	<5U	<5U	<0.18U	<0.46U	<0.46U	<5U	<5U	<5U	<0.46U	<0.46U	<0.46U	<0.46U	<5U	<0.46U
	Tetrachloroethene	µg/L	<5U	<5U	<5U	<0.36U	<0.36U	<0.36U	<5U	<5U	<5U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U
	Toluene	µg/L	0.56J	30J	<5U	<0.51U	<0.51U	**610**	<5U	**2.5J**	<5U	**3.4J**	<0.51U	**19**	<0.51U	**0.56J**	<0.51U
	trans-1,2-Dichloroethene	µg/L	<1U	<1U	<1U	<0.13U	<0.42U	**0.47J**	<1U	<1U	<1U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U
	trans-1,3-Dichloropropene	µg/L	<5U	<5U	<5U	<0.37U	<0.37U	<0.37U	<5U	<5U	<5U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U
	Vinyl Chloride	µg/L	<5U	<5U	<5U	<0.24U	<0.24U	**4.3J**	<5U	<5U	<5U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U
	Total Xylenes	µg/L	<5U	3.6J	<5U	<0.66U	<0.66U	**160**	<5U	<5U	<5U	**5.2**	**1.5J**	**24**	**1.3J**	<0.66U	<0.66U
	Total VOCS	µg/L	**19**	**60**	**7**	**12**	**9.5**	**990**	**14**	**18**	**1.8**	**27**	**13**	**130**	**19**	**18**	**5.1**

TABLE 3
MW-1C GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburgh, NY

		Sample Location	**MW-1C**														
		Sample Date	**10/19/2015**	**5/16/2016**	**7/18/2016**	**10/26/2016**	**4/25/2017**	**7/31/2017**	**10/17/2017**	**5/8/2018**	**7/19/2018**	**10/15/2018**	**4/23/2019**	**7/22/2019**	**10/7/2019**	**4/30/2020**	**7/7/2020**
	Parameters	**Units**															
Volatile Organics	1,1,1-Trichloroethane	µg/L	<0.82UJ	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U
	1,1,2,2-Tetrachloroethane	µg/L	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,1,2-Trichloroethane	µg/L	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U
	1,1-Dichloroethane	µg/L	**0.84J**	<0.38U	**0.77J**	**1.3J**	<0.38U	**0.39J**	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U
	1,1-Dichloroethene	µg/L	<0.29UJ	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U
	1,2-Dichlorobenzene	µg/L	<0.79U	<0.79U	<0.79UJ	<0.79U	<0.79U	<0.79U	<0.79U	<0.79U	<0.79U	<0.79U	<0.79U	<0.79U	<0.79U	<0.79U	<0.79U
	1,2-Dichloroethane	µg/L	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,2-Dichloropropane	µg/L	<0.72UJ	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U
	1,3-Dichlorobenzene	µg/L	<0.78U	<0.78U	<0.78U	**1.7J**	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U
	1,4-Dichlorobenzene	µg/L	**2.1J**	**0.86J**	**1.3J**	**3.5J**	<0.84U	<0.84U	<0.84U	<0.84U	<0.84U	<0.84U	<0.84U	<0.84U	<0.84U	<0.84U	**0.92J**
	2-Butanone	µg/L	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<5U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	**6.7**
	2-Hexanone	µg/L	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2UJ	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U
	4-Methyl-2-pentanone	µg/L	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1UJ	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U
	Acetone	µg/L	<3U	<3U	<3U	<3U	**3.3J**	**6J**	<3U	<3U	**6.6J**	<3U	<3U	<3U	<3U	**25**	**21**
	Benzene	µg/L	<0.41UJ	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U
	Dichlorobromomethane	µg/L	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U
	Bromoform	µg/L	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U
	Bromomethane	µg/L	<0.69UJ	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U
	Carbon Disulfide	µg/L	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	Carbon Tetrachloride	µg/L	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U
	Chlorobenzene	µg/L	**1J**	<0.75U	<0.75U	**1J**	<0.75U	<0.75U	<0.75U	<0.75U	<0.75U	<0.75U	<0.75U	<0.75U	<0.75U	<0.75U	<0.75U
	Chlorodibromomethane	µg/L	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroethane	µg/L	<0.32UJ	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroform	µg/L	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U
	Chloromethane	µg/L	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35UJ	<0.35U	<0.35U
	cis-1,2-Dichloroethene	µg/L	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U
	cis-1,3-Dichloropropene	µg/L	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U
	Methylene Chloride	µg/L	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.49U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U
	Ethylbenzene	µg/L	<0.74UJ	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U
	Styrene	µg/L	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U
	Trichloroethene	µg/L	<0.46UJ	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U
	Tetrachloroethene	µg/L	<0.36UJ	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U
	Toluene	µg/L	<0.51UJ	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	**26**	**190**
	trans-1,2-Dichloroethene	µg/L	<0.9UJ	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9UJ	<0.9U	<0.9U
	trans-1,3-Dichloropropene	µg/L	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U
	Vinyl Chloride	µg/L	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9UJ	<0.9U	<0.9U
	Total Xylenes	µg/L	<0.66UJ	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U
	Total VOCS	µg/L	**4**	**0.86**	**2.1**	**7.5**	**3.3**	**6.4**	ND	ND	**6.6**	ND	ND	ND	ND	**51**	**218**

TABLE 3
MW-10 GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburgh, NY

		Sample Location	MW-10														
		Sample Date	4/30/2008	7/24/2008	10/22/2008	4/27/2009	7/17/2009	10/29/2009	5/6/2010	7/22/2010	10/28/2010	4/17/2013	10/21/2013	4/21/2014	10/22/2014	4/22/2015	7/27/2015
	Parameters	Units															
Volatile Organics	1,1,1-Trichloroethane	µg/L	<5U	**2.2J**	<5U	<0.26U	<0.26U	<0.26U	<5U	<5U	<5U	<0.82U	<0.82U	**1.3J**	<0.82U	**2.5J**	<0.82U
	1,1,2,2-Tetrachloroethane	µg/L	<5U	<5U	<5U	<0.21U	<0.21U	<0.21U	<5U	<5U	<5U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,1,2-Trichloroethane	µg/L	<5U	<5U	<5U	<0.23U	<0.23U	<0.23U	<5U	<5U	<5U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U
	1,1-Dichloroethane	µg/L	**1.9J**	**1.7J**	<5U	<0.75U	<0.38U	<0.38U	**2J**	<5U	<5U	<0.38U	<0.38U	**4.3J**	<0.38U	**1.9J**	<0.38U
	1,1-Dichloroethene	µg/L	<5U	<5U	<5U	<0.29U	<0.29U	<0.29U	<5U	<5U	<5U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29UJ
	1,2-Dichlorobenzene	µg/L	**6.4**	**2J**	**0.66J**	**2.8J**	**1.2J**	**1.1J**	**5.1**	<5U	<5U	**0.96J**	<0.79U	**2J**	<0.79U	**1.8J**	<0.79U
	1,2-Dichloroethane	µg/L	<5U	<5U	<5U	<0.21U	<0.21U	<0.21U	<5U	<5U	<5U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,2-Dichloropropane	µg/L	<5U	<5U	<5U	<0.14U	<0.32U	<0.33U	<5U	<5U	<5U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U
	1,3-Dichlorobenzene	µg/L	**1J**	<5U	<5U	**0.35J**	<0.36U	<0.36U	**0.9J**	<5U	<5U	<0.78U	<0.78U	**1J**	<0.78U	**1.1J**	<0.78UJ
	1,4-Dichlorobenzene	µg/L	**11**	**4.7J**	**1.3J**	**4.9J**	**2.6J**	**2.7J**	**9.3**	**1.6J**	**1.3J**	**1.9J**	<0.84U	**7.9**	**0.85J**	**5.5**	<0.84U
	2-Butanone	µg/L	<5U	<5U	<5U	<1.3U	<1.3U	<1.3U	<5U	<5U	<5U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U
	2-Hexanone	µg/L	<5U	<5U	<5U	<1.2U	<1.2U	<1.2U	<5U	<5U	<5U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U
	4-Methyl-2-pentanone	µg/L	<5U	<5U	<5U	<0.91U	<0.91U	<0.91U	<5U	<5U	<5U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U
	Acetone	µg/L	<10U	**2.2J**	<10U	**2.3J**	<1.3U	<1.3U	<10U	<10U	<10U	<3U	<3U	<3U	<3U	<3U	<3U
	Benzene	µg/L	**34**	**3.2J**	**0.87J**	**9.3**	**1.9J**	**0.58J**	**13**	**0.91J**	**0.67J**	**1.7J**	<0.41U	**3J**	<0.41U	**1.9J**	<0.41U
	Dichlorobromomethane	µg/L	<5U	<5U	<5U	<0.39U	<0.39U	<0.39U	<5U	<5U	<5U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U
	Bromoform	µg/L	<5U	<5U	<5U	<0.26U	<0.26U	<0.26U	<5U	<5U	<5U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26UJ	<0.26U
	Bromomethane	µg/L	<5U	<5U	<5U	<0.28U	<0.28U	<0.28U	<5U	<5U	<5U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U
	Carbon Disulfide	µg/L	<5U	<5U	<5U	<0.19U	<0.19U	<0.19U	<5U	<5U	<5U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	Carbon Tetrachloride	µg/L	<5U	<5U	<5U	<0.27U	<0.27U	<0.27U	<5U	<5U	<5U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U
	Chlorobenzene	µg/L	**140**	**15**	**5.5**	**61**	**15**	**5.1**	**110**	**8.5**	**5.6**	**11**	**2.7J**	**14**	**3J**	**16**	**2.1J**
	Chlorodibromomethane	µg/L	<5U	<5U	<5U	<0.32U	<0.32U	<0.32U	<5U	<5U	<5U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroethane	µg/L	<5U	<5U	<5U	<0.32U	<0.32U	<0.32U	<5U	<5U	<5U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroform	µg/L	<5U	<5U	<5U	<0.34U	<0.34U	<0.34U	<5U	<5U	<5U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U
	Chloromethane	µg/L	<5U	<5U	<5U	<0.35U	<0.35U	<0.35U	<5U	<5U	<5U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U
	cis-1,2-Dichloroethene	µg/L	<0.92U	**71**	<1U	<0.16U	<0.38U	**1.2**	**1.3**	<1UJ	<1U	<0.81U	<0.81U	**8.3**	<0.81U	**25**	<0.81UJ
	cis-1,3-Dichloropropene	µg/L	<5U	<5U	<5U	<0.36U	<0.36U	<0.36U	<5U	<5U	<5U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U
	Methylene Chloride	µg/L	<5U	<5U	<5U	<0.44U	<0.44U	<0.44U	<5U	<5U	<5U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U
	Ethylbenzene	µg/L	**5.8**	**1.4J**	<5U	<0.18U	<0.18U	**0.49J**	**3.2J**	<5U	<5U	<0.74U	<0.74U	**11**	<0.74U	**0.91J**	<0.74U
	Styrene	µg/L	<5U	<5U	<5U	<0.18U	<0.18U	<0.18U	<5U	<5U	<5U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U
	Trichloroethene	µg/L	<5U	<5U	<5U	<0.18U	<0.46U	<0.46U	<5U	<5U	<5U	<0.46U	<0.46U	<0.46U	<0.46U	**26**	<0.46UJ
	Tetrachloroethene	µg/L	<5U	**0.74J**	<5U	<0.36U	<0.36U	<0.36U	<5U	<5U	<5U	<0.36U	<0.36U	<0.36U	<0.36U	**1.2J**	<0.36UJ
	Toluene	µg/L	**1.4J**	**63J**	<5U	<0.51U	<0.51U	**7.9**	**1.6J**	<5U	<5U	<0.51U	<0.51U	**92**	<0.51U	**1.5J**	<0.51UJ
	trans-1,2-Dichloroethene	µg/L	<1U	<1U	<1U	<0.13U	<0.42U	<0.42U	<1U	<1U	<1U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U
	trans-1,3-Dichloropropene	µg/L	<5U	<5U	<5U	<0.37U	<0.37U	<0.37U	<5U	<5U	<5U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U
	Vinyl Chloride	µg/L	**0.83J**	<5U	<5U	<0.24U	<0.24U	<0.24U	**1.2J**	<5U	<5U	<0.9U	<0.9U	**6**	<0.9U	**1.9J**	<0.9U
	Total Xylenes	µg/L	**5.5**	**4.8J**	<5U	<0.66U	<0.66U	**2J**	**4J**	<5U	<5U	<0.66U	<0.66U	**24**	<0.66U	**0.94J**	<0.66UJ
	Total VOCS	µg/L	**210**	**180**	**8.4**	**81**	**21**	**22**	**160**	**11**	**7.6**	**16**	**2.7**	**180**	**3.9**	**89**	**2.1**

TABLE 3
MW-10 GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburgh, NY

		Sample Location	MW-10														
		Sample Date	**10/19/2015**	**5/16/2016**	**7/18/2016**	**10/26/2016**	**4/24/2017**	**7/31/2017**	**10/17/2017**	**5/7/2018**	**7/19/2018**	**10/15/2018**	**4/22/2019**	**7/22/2019**	**10/7/2019**	**4/29/2020**	**7/7/2020**
	Parameters	**Units**															
Volatile Organics	1,1,1-Trichloroethane	µg/L	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U
	1,1,2,2-Tetrachloroethane	µg/L	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,1,2-Trichloroethane	µg/L	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U
	1,1-Dichloroethane	µg/L	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U
	1,1-Dichloroethene	µg/L	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U
	1,2-Dichlorobenzene	µg/L	<0.79U	<0.79U	<0.79UJ	<0.79U	**1.7J**	<0.79U	<0.79U	**0.87J**	<0.79U	<0.79U	**2.1J**	**1.1J**	<0.79U	**1.2J**	<0.79U
	1,2-Dichloroethane	µg/L	<0.21U	<0.21UJ	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,2-Dichloropropane	µg/L	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U
	1,3-Dichlorobenzene	µg/L	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U	<0.78U
	1,4-Dichlorobenzene	µg/L	<0.84U	**0.96J**	<0.84U	<0.84U	**4.2J**	<0.84U	<0.84U	**1.4J**	**1J**	**1.1J**	**3.8J**	**2.2J**	**1.5J**	**1.6J**	**1.4J**
	2-Butanone	µg/L	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<5U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U
	2-Hexanone	µg/L	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U
	4-Methyl-2-pentanone	µg/L	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U
	Acetone	µg/L	<3U	<3U	**3.9J**	<3U	<3U	**6J**	<3U	**5.2J**	<3U	<3U	<3U	<3U	<3U	<3U	<3U
	Benzene	µg/L	<0.41U	<0.41U	<0.41U	<0.41U	**0.9J**	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	**2.5J**	**1.2J**	<0.41U	<0.41U	<0.41U
	Dichlorobromomethane	µg/L	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U
	Bromoform	µg/L	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U
	Bromomethane	µg/L	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U
	Carbon Disulfide	µg/L	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	Carbon Tetrachloride	µg/L	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U
	Chlorobenzene	µg/L	**1.8J**	**2.5J**	**1.3J**	**0.82J**	**13**	**1.3J**	**0.86J**	**4.8J**	**2.9J**	**2.1J**	**27**	**12**	**6**	**14**	**6.8**
	Chlorodibromomethane	µg/L	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroethane	µg/L	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroform	µg/L	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U
	Chloromethane	µg/L	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U
	cis-1,2-Dichloroethene	µg/L	<0.81U	<0.81U	<0.81U	<0.81U	**1.3**	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	**6.5**	**1.9**	**0.92J**	<0.81U	<0.81U
	cis-1,3-Dichloropropene	µg/L	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U
	Methylene Chloride	µg/L	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U
	Ethylbenzene	µg/L	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U
	Styrene	µg/L	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U
	Trichloroethene	µg/L	<0.46U	<0.46U	<0.46U	<0.46U	**1.2J**	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	**2.8J**	**1.1J**	<0.46U	<0.46U	<0.46U
	Tetrachloroethene	µg/L	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	**3.1J**	**1.7J**	<0.36U	<0.36U	<0.36U
	Toluene	µg/L	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U
	trans-1,2-Dichloroethene	µg/L	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U
	trans-1,3-Dichloropropene	µg/L	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U
	Vinyl Chloride	µg/L	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U
	Total Xylenes	µg/L	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U
	Total VOCS	µg/L	**1.8**	**3.5**	**5.2**	**0.82**	**23**	**7.3**	**0.86**	**13**	**3.9**	**3.2**	**48**	**3.9**	**8.5**	**14**	**6.8**

TABLE 3
MW-11 GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburgh, NY

		Sample Location	MW-11																	
		Sample Date	**4/30/2008**	**7/24/2008**	**10/22/2008**	**4/27/2009**	**7/17/2009**	**10/29/2009**	**5/6/2010**	**7/22/2010**	**10/28/2010**	**4/17/2013**	**10/21/2013**	**4/21/2014**	**4/22/2015**	**5/16/2016**	**4/24/2017**	**5/7/2018**	**4/22/2019**	**4/29/2020**
	Parameters	**Units**																		
Volatile Organics	1,1,1-Trichloroethane	µg/L	<5U	<5U	<5U	<0.26U	<0.26U	<0.26U	**5.1**	<5U	<5U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U
	1,1,2,2-Tetrachloroethane	µg/L	<5U	<5U	<5U	<0.21U	<0.21U	<0.21U	<5U	<5U	<5U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,1,2-Trichloroethane	µg/L	<5U	<5U	<5U	<0.23U	<0.23U	<0.23U	<5U	<5U	<5U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U
	1,1-Dichloroethane	µg/L	<5U	<5U	<5U	<0.75U	<0.38U	<0.38U	**2.6J**	<5U	<5U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U
	1,1-Dichloroethene	µg/L	<5U	<5U	<5U	<0.29U	<0.29U	<0.29U	<5U	<5U	<5U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U
	1,2-Dichlorobenzene	µg/L	<1U	<1U	<1U	<0.2U	<0.2U	<0.2U	<1.8U	<1.9U	<1.8U	<0.38U	<0.79U	<0.38U	<0.37U	<0.37U	<0.4U	<0.4U	<0.79U	<0.79U
	1,2-Dichloroethane	µg/L	<5U	<5U	<5U	<0.21U	<0.21U	<0.21U	<5U	<5U	<5U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21UJ	<0.21U	<0.21U	<0.21U	<0.21U
	1,2-Dichloropropane	µg/L	<5U	<5U	<5U	<0.14U	<0.32U	<0.33U	<5U	<5U	<5U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U
	1,3-Dichlorobenzene	µg/L	<1U	<1U	<1U	<0.16U	<0.13U	<0.36U	<1.8U	<1.9U	<1.8U	<0.46U	<0.78U	<0.46U	<0.44U	<0.44U	<0.48U	<0.48U	<0.78U	<0.78U
	1,4-Dichlorobenzene	µg/L	**0.6J**	**0.82J**	<5U	<0.16U	<0.39U	<0.39U	**0.88J**	<5U	<5U	<0.84U	<0.84U	<0.84U	<0.84U	<0.84U	<0.84U	<0.84U	<0.84U	<0.84U
	2-Butanone	µg/L	<5U	<5U	<5U	<1.3U	<1.3U	<1.3U	<5U	<5U	<5U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U
	2-Hexanone	µg/L	<5U	<5U	<5U	<1.2U	<1.2U	<1.2U	<5U	<5U	<5U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U
	4-Methyl-2-pentanone	µg/L	<5U	<5U	<5U	<0.91U	<0.91U	<0.91U	<5U	<5U	<5U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U
	Acetone	µg/L	<10U	**2.6J**	<10U	<1.3U	<1.3U	<1.3U	<10U	<10U	<10U	<3U	<3U	<3U	<3U	<3U	<3U	<3U	<3U	<3U
	Benzene	µg/L	<5U	<5U	<5U	<0.16U	<0.41U	<0.41U	<5U	<5U	<5U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U
	Dichlorobromomethane	µg/L	<5U	<5U	<5U	<0.39U	<0.39U	<0.39U	<5U	<5U	<5U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U
	Bromoform	µg/L	<5U	<5U	<5U	<0.26U	<0.26U	<0.26U	<5U	<5U	<5U	<0.26U	<0.26U	<0.26U	<0.26UJ	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U
	Bromomethane	µg/L	<5U	<5U	<5U	<0.28U	<0.28U	<0.28U	<5U	<5U	<5U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U
	Carbon Disulfide	µg/L	<5U	<5U	<5U	<0.19U	<0.19U	<0.19U	<5U	<5U	<5U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	Carbon Tetrachloride	µg/L	<5U	<5U	<5U	<0.27U	<0.27U	<0.27U	<5U	<5U	<5U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U
	Chlorobenzene	µg/L	<5U	**0.52J**	<5U	<0.32U	<0.32U	<0.32U	<5U	<5U	<5U	<0.75U	<0.75U	<0.75U	<0.75U	<0.75U	<0.75U	<0.75U	<0.75U	<0.75U
	Chlorodibromomethane	µg/L	<5U	<5U	<5U	<0.32U	<0.32U	<0.32U	<5U	<5U	<5U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroethane	µg/L	<5U	<5U	<5U	<0.32U	<0.32U	<0.32U	**0.63J**	<5U	<5U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroform	µg/L	<5U	<5U	<5U	<0.34U	<0.34U	<0.34U	**3.6J**	<5U	<5U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U
	Chloromethane	µg/L	<5U	<5U	<5U	<0.35U	<0.35U	<0.35U	<5U	<5U	<5U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U
	cis-1,2-Dichloroethene	µg/L	<0.85U	**2.8**	**0.73J**	**0.56J**	**0.5J**	<0.38U	**73**	<1UJ	<1U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U
	cis-1,3-Dichloropropene	µg/L	<5U	<5U	<5U	<0.36U	<0.36U	<0.36U	<5U	<5U	<5U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U
	Methylene Chloride	µg/L	<5U	<5U	<5U	<0.44U	<0.44U	<0.44U	**4.9J**	<5U	<5U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U
	Ethylbenzene	µg/L	<5U	<5U	<5U	<0.18U	<0.18U	<0.18U	**1.3J**	<5U	<5U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U
	Styrene	µg/L	<5U	<5U	<5U	<0.18U	<0.18U	<0.18U	<5U	<5U	<5U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U
	Trichloroethene	µg/L	<5U	<5U	<5U	<0.18U	<0.46U	<0.46U	**7**	<5U	<5U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U	<0.46U
	Tetrachloroethene	µg/L	<5U	<5U	<5U	<0.36U	<0.36U	<0.36U	<5U	<5U	<5U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U
	Toluene	µg/L	**3J**	**6.4J**	**2.1J**	**0.83J**	**1.1J**	**0.93J**	**66**	<5U	<5U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U
	trans-1,2-Dichloroethene	µg/L	<1U	<1U	<1U	<0.13U	<0.42U	<0.42U	<1U	<1U	<1U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U
	trans-1,3-Dichloropropene	µg/L	<5U	<5U	<5U	<0.37U	<0.37U	<0.37U	<5U	<5U	<5U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U
	Vinyl Chloride	µg/L	<5U	<5U	<5U	<0.24U	<0.24U	<0.24U	**1.6J**	<5U	<5U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U
	Total Xylenes	µg/L	<5U	**0.96J**	<5U	<0.66U	<0.66U	<0.66U	**5.2**	<5U	<5U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U
	Total VOCS	µg/L	**3.6**	**15**	**2.9**	**1.4**	**1.6**	**0.93**	**180**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 3
MW-20A GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburgh, NY

		Sample Location	MW-20A																	
		Sample Date	12/27/2011	4/30/2012	11/20/2012	4/17/2013	10/21/2013	4/21/2014	10/22/2014	4/22/2015	10/19/2015	5/16/2016	10/26/2016	4/24/2017	10/17/2017	5/7/2018	10/15/2018	4/23/2019	10/7/2019	4/29/2020
	Parameters	Units																		
Volatile Organics	1,1,1-Trichloroethane	µg/L	<5U	<5U	<5U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U	<0.82U
	1,1,2,2-Tetrachloroethane	µg/L	<5U	<5U	<5U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,1,2-Trichloroethane	µg/L	<5U	<5U	<5U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U
	1,1-Dichloroethane	µg/L	**24J**	**25J**	**24**	**27**	**26**	**22**	**26**	**21**	**21**	**21**	**23**	**23**	**21**	**18**	**21**	**18**	**11**	**12**
	1,1-Dichloroethene	µg/L	<5U	<5U	<5U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U
	1,2-Dichlorobenzene	µg/L	**3.3J**	**3.8J**	**4.1J**	**4.3J**	**4J**	**3.9J**	**4.6J**	**4J**	**3.7J**	**3.7J**	**4J**	**3.2J**	**3J**	**2.6J**	**3.1J**	**2.5J**	**3.8J**	**1.9J**
	1,2-Dichloroethane	µg/L	<5U	**0.55J**	**0.51J**	**0.5J**	<0.21U	**0.35J**	**0.41J**	<0.21U	**0.35J**	**0.26J**	<0.21U	<0.21U	<0.21U	**0.21J**	<0.21U	<0.21U	<0.21U	<0.21U
	1,2-Dichloropropane	µg/L	<5U	<5U	<5U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U
	1,3-Dichlorobenzene	µg/L	**1.2J**	**1.4J**	**1.6J**	**1.8J**	**1.6J**	**1.7J**	**2.2J**	**1.9J**	**1.7J**	**1.8J**	**1.9J**	**1.6J**	**1.5J**	**1.3J**	**1.7J**	**1.4J**	**3.6J**	**1.1J**
	1,4-Dichlorobenzene	µg/L	**10**	**12**	**13**	**15**	**14**	**14**	**17**	**14**	**14**	**14**	**14**	**12**	**11**	**9.6**	**11**	**9**	**21**	**7.1**
	2-Butanone	µg/L	<5U	<5U	<5U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U
	2-Hexanone	µg/L	<5U	<5U	<5U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U
	4-Methyl-2-pentanone	µg/L	<5U	<5U	<5U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U
	Acetone	µg/L	**3.8J**	<10U	<10U	<3U	<3U	<3U	<3U	<3U	<3U	<3U	<3U	<3U	**3.4J**	<3U	<3U	<3U	<3U	<3U
	Benzene	µg/L	**0.65J**	**0.71J**	**0.73J**	**0.68J**	**0.64J**	**0.62J**	**0.75J**	**0.61J**	**0.55J**	**0.66J**	**0.63J**	**0.65J**	**0.62J**	**0.56J**	**0.55J**	**0.66J**	**2J**	**0.44J**
	Dichlorobromomethane	µg/L	<5U	<5U	<5U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U
	Bromoform	µg/L	<5U	<5U	<5U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26UJ	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U
	Bromomethane	µg/L	<5U	<5U	<5U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69UJ	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U
	Carbon Disulfide	µg/L	<5U	<5U	<5U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	Carbon Tetrachloride	µg/L	<5U	<5U	<5U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U
	Chlorobenzene	µg/L	**6.2**	**7J**	**7.1**	**7.5**	**7.3**	**6**	**7.1**	**5.9**	**6.1**	**5.6**	**5.9**	**5.6**	**5.7**	**5**	**6.5**	**5.2**	**12**	**4.3J**
	Chlorodibromomethane	µg/L	<5U	<5U	<5U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroethane	µg/L	**9.3**	**17**	**21**	**15**	**6.4**	**3.3J**	**3J**	**2.6J**	**1.3J**	**1.7J**	**1.8J**	<0.32UJ	**1.4J**	**1.1J**	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroform	µg/L	<5U	<5U	<5U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U
	Chloromethane	µg/L	<5U	<5U	<5U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35UJ	<0.35U
	cis-1,2-Dichloroethene	µg/L	**3.3**	**3.6J**	**3.7**	**3.9**	**3.8**	**3.3**	**3.9**	**3.1**	**3.3**	**3.1**	**3.7**	**3.3**	**3.1**	**2.6**	**2.7**	**2.6**	<0.81U	**2.4**
	cis-1,3-Dichloropropene	µg/L	<5U	<5U	<5U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U
	Methylene Chloride	µg/L	**0.65J**	**0.7J**	**0.53J**	**0.51J**	<0.44U	<0.44U	**0.49J**	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U
	Ethylbenzene	µg/L	<5U	<5U	<5U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	**1.2J**	<0.74U
	Styrene	µg/L	<5U	<5U	<5U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U
	Trichloroethene	µg/L	**2.4J**	**2.6J**	**2.4J**	**2.1J**	**1.8J**	**1.7J**	**1.8J**	<5U	**1.9J**	**2J**	**2J**	**2.3J**	**1.9J**	**1.5J**	**1.3J**	**1.7J**	**3.8J**	**1.4J**
	Tetrachloroethene	µg/L	**1.8J**	**1.9J**	**1.4J**	**0.65J**	**0.46J**	**0.47J**	**0.41J**	**0.38J**	**1J**	**0.66J**	**0.98J**	**0.86J**	**1.4J**	**0.91J**	<0.36U	**0.83J**	**1.2J**	**0.56J**
	Toluene	µg/L	<5U	<5U	<5UJ	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U
	trans-1,2-Dichloroethene	µg/L	<1U	<1U	<1U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9UJ	<0.9U
	trans-1,3-Dichloropropene	µg/L	<5U	<5U	<5U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U
	Vinyl Chloride	µg/L	<5U	<5U	<5U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U
	Total Xylenes	µg/L	<5U	<5U	<5U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U
	Total VOCS	µg/L	**67**	**77**	**81**	**79**	**66**	**58**	**68**	**54**	**55**	**55**	**58**	**53**	**55**	**44**	**48**	**42**	**60**	**21**

TABLE 3
MW-20B GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburgh, NY

	Sample Location		MW-20B																	
	Sample Date		12/27/2011	4/30/2012	11/20/2012	4/17/2013	10/21/2013	4/21/2014	10/22/2014	4/22/2015	10/19/2015	5/16/2016	10/26/2016	4/24/2017	10/17/2017	5/7/2018	10/15/2018	4/23/2019	10/7/2019	4/29/2020
	Parameters	Units																		
Volatile Organics	1,1,1-Trichloroethane	µg/L	1.6J	5.7	1.1J	<0.82U	4.8J	<0.82U	3.7J	<0.82U	1.8J	<0.82U	1.2J	2.6J	<0.82U	0.84J	<0.82U	<0.82U	<0.82U	<0.82U
	1,1,2,2-Tetrachloroethane	µg/L	<5U	<5U	<5U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,1,2-Trichloroethane	µg/L	<5U	<5U	<5U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U
	1,1-Dichloroethane	µg/L	<5U	43J	11	2.6J	28	1.9J	49	2.3J	6.1	<0.38U	3J	<0.38U	2.1J	<0.38U	1.1J	<0.38U	16	<0.38U
	1,1-Dichloroethene	µg/L	<5U	0.43J	<5U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U	<0.29U
	1,2-Dichlorobenzene	µg/L	<5U	6.3J	1.9J	1.1J	11	1J	9.2	0.93J	3.1J	<0.79U	2J	<0.79U	<0.79U	<0.79U	<0.79U	<0.79U	2.5J	<0.79U
	1,2-Dichloroethane	µg/L	<5U	<5U	<5U	<0.21U	<0.21U	<0.21U	0.42J	<0.21U	<0.21U	<0.21UJ	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,2-Dichloropropane	µg/L	<5U	<5U	<5U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U	<0.72U
	1,3-Dichlorobenzene	µg/L	<5U	3.8J	1.2J	0.88J	10	1J	7.5	1J	4.3J	<0.78U	4J	<0.78U	2.4J	<0.78U	<0.78U	<0.78U	1.5J	<0.78U
	1,4-Dichlorobenzene	µg/L	<5U	25	7.8	5.1	50	5	40	4.3J	14	1.8J	9.4	<0.84U	3.8J	<0.84U	1.5J	<0.84U	9.4	<0.84U
	2-Butanone	µg/L	<5U	1.7J	<5U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U	<1.3U
	2-Hexanone	µg/L	<5U	<5U	<5U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U	<1.2U
	4-Methyl-2-pentanone	µg/L	<5U	<5U	<5U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U	<2.1U
	Acetone	µg/L	<10U	<10U	<10U	<3U	<3U	<3U	<3U	<3U	<3U	<3U	3J	<3U	<3U	<3U	<3U	<3U	<3U	<3U
	Benzene	µg/L	<5U	7.7J	1.8J	1.9J	5.7	<0.41U	5.9	<0.41U	0.8J	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	<0.41U	0.47J	<0.41U
	Dichlorobromomethane	µg/L	<5U	<5U	<5U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U	<0.39U
	Bromoform	µg/L	<5U	<5U	<5U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26UJ	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U	<0.26U
	Bromomethane	µg/L	<5U	<5U	<5U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69UJ	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U	<0.69U
	Carbon Disulfide	µg/L	<5U	<5U	<5U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	Carbon Tetrachloride	µg/L	<5U	<5U	<5U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U
	Chlorobenzene	µg/L	<5U	20J	4.6J	2.2J	35	2J	31	1.7J	6.8	<0.75U	2.6J	<0.75U	1.5J	<0.75U	<0.75U	<0.75U	5.6	<0.75U
	Chlorodibromomethane	µg/L	<5U	<5U	<5U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroethane	µg/L	<5U	12	<5U	<0.32U	1.8J	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32UJ	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Chloroform	µg/L	<5U	<5U	<5U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U
	Chloromethane	µg/L	<5U	<5U	<5U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35UJ	<0.35U
	cis-1,2-Dichloroethene	µg/L	<1U	0.83J	1.1	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	<0.81U	2.7	<0.81U
	cis-1,3-Dichloropropene	µg/L	<5U	<5U	<5U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U
	Methylene Chloride	µg/L	<5U	<5U	3J	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U	<0.44U
	Ethylbenzene	µg/L	<5U	40J	<5U	<0.74U	22	<0.74U	19	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U	<0.74U
	Styrene	µg/L	<5U	<5U	<5U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U	<0.73U
	Trichloroethene	µg/L	8.3	1.2J	5.8	3.5J	0.96J	1.5J	1.5J	<5U	1.4J	2.4J	5.6	12	2.3J	5.4	2.2J	<0.46U	1.7J	4J
	Tetrachloroethene	µg/L	8.2	0.61J	1.6J	0.8J	0.91J	0.86J	1.1J	2.4J	0.86J	0.74J	0.59J	9.8	0.62J	5.1	0.69J	<0.36U	0.49J	2.8J
	Toluene	µg/L	<5U	690J	0.6J	<0.51U	150J	<0.51U	160J	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U	<0.51U
	trans-1,2-Dichloroethene	µg/L	<1U	<1U	<1U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9UJ	<0.9U
	trans-1,3-Dichloropropene	µg/L	<5U	<5U	<5U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U
	Vinyl Chloride	µg/L	<5U	3.4J	<5U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9UJ	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U	<0.9U
	Total Xylenes	µg/L	<5U	120	<5U	<0.66U	65	<0.66U	54	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U	<0.66U
	Total VOCS	µg/L	19	990	42	19	390	14	390	13	40	5	32	25	13	12	5.5	ND	41	6.8

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburgh, NY

Notes:

Sum of detected VOCs rounded up to nearest two significant digits

Detected parameters shown in **bold**

J - Analyte was detected at an estimated concentration

U - Analyte was not detected in the sample; value shown is the method detection limit (MDL)

UJ - The analyte was not detected; the MDL is an estimated value

ND - Not Detected

ug/L - micrograms per Liter

"-" - Sample was not analyzed for this parameter

TABLE 4
EX-1 GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

		Sample Location	EX-1							
		Sample Date	4/30/2008	7/24/2008	10/22/2008	4/27/2009	7/17/2009	10/29/2009	5/6/2010	7/22/2010
	Parameters	Units								
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	**290**	**21J**	**10**	**130**	**64**	**18**	**120**	**57**
	1,2-Dichlorobenzene	µg/L	**72**	**37**	**22**	**34**	**24**	**26**	**23**	**33**
	1,3-Dichlorobenzene	µg/L	**16**	**11**	**9**	**9.5**	**7.2**	**12**	**6**	**12**
	1,4-Dichlorobenzene	µg/L	-	**140J**	**110**	**110**	**94**	**120**	**62**	**120**
	1,4-Dioxane	µg/L	**32**	**95**	**67**	**11J**	**19**	**49**	**6.7J**	**63**
	2,4,5-Trichlorophenol	µg/L	<10U	<10U	<10U	<2.7U	<0.97U	<0.5U	<9.5U	<9.8U
	2,4,6-Trichlorophenol	µg/L	<3U	<3U	<3U	<3U	<0.97U	<0.64U	<3U	<3U
	2,4-Dichlorophenol	µg/L	<2U	<2U	**1J**	<0.83U	<0.77U	**1.9J**	<2.7U	**1.7J**
	2,4-Dimethylphenol	µg/L	**48**	**8**	**3**	**34**	**23**	**5.8**	**34**	**9.4**
	2,4-Dinitrophenol	µg/L	<43U	<43U	<43U	<2.1U	<2.2U	<2.3U	<41U	<42U
	2,4-Dinitrotoluene	µg/L	<5U	<5U	<5U	<1.3U	<0.44U	<0.47U	<5.5U	<5.7U
	2,6-Dinitrotoluene	µg/L	<1U	<1U	<1U	<1.8U	<0.5U	<0.42U	<1.8U	<1.9U
	2-Chloronaphthalene	µg/L	<1U	<1U	<1U	<1.5U	<0.082U	<0.48U	<1.8U	<1.9U
	2-Chlorophenol	µg/L	<3U	<3U	<3U	<1.1U	<0.5U	<0.55U	<3.1U	**0.72J**
	2-Methylnaphthalene	µg/L	**56**	**20**	**11**	**34**	**19**	**16**	**38**	**21**
	2-Methylphenol	µg/L	**12**	**4J**	**3J**	**20**	**14**	**8.5J**	**14**	**12**
	2-Nitroaniline	µg/L	<10U	<10U	<10U	<1.5U	<0.49U	<0.44U	<9.5U	**4.5J**
	2-Nitrophenol	µg/L	<3U	<3U	<3U	<1.5U	<0.59U	<0.5U	<3.4U	<3.5U
	3,3-Dichlorobenzidine	µg/L	<17U	<17U	<17U	<1.6U	<0.37U	<0.42U	<16U	<17U
	3-Nitroaniline	µg/L	<10U	<10U	<10U	<1.9U	<1.5U	<0.5U	<9.5U	<9.8U
	4,6-Dinitro-2-methylphenol	µg/L	<24U	<24U	<24U	<1.9U	<2.2U	<2.3U	<23U	<24U
	4-Bromophenyl phenyl ether	µg/L	<1U	<1U	<1U	<1.8U	<0.88U	<0.47U	<1.7U	<1.8U
	4-Chloro-3-Methylphenol	µg/L	<3U	<3U	<3U	<1.1U	<0.58U	<0.47U	<2.9U	<2.9U
	4-Chloroaniline	µg/L	**10**	**3**	<2U	<0.98U	<0.32U	**1.4J**	**6.2**	**2.2**
	4-Chlorophenyl phenyl ether	µg/L	<4U	<4U	<4U	<1.4U	<0.16U	<0.36U	<4.1U	<4.2U
	4-Methylphenol	µg/L	**36**	**18**	**9J**	**32**	**24**	**48**	**37**	**23**
	4-Nitroaniline	µg/L	<10U	<10U	<10U	<2.8U	<0.45U	<0.26U	<9.5U	<9.8U
	4-Nitrophenol	µg/L	<3U	<3U	<3U	<2.9U	<1.5U	<1.6U	<2.9U	<2.9U
	Acenaphthene	µg/L	**3**	**1J**	**1J**	**1.8J**	**1.2J**	**1.1J**	**2.2**	**1.5J**
	Acenaphthylene	µg/L	<3U	<3U	<3U	<1.2U	<0.046U	<0.4U	<3.3U	<3.4U
	Anthracene	µg/L	**0.4J**	<1U	**0.8J**	<1.5U	<0.055U	<0.29U	<1.7U	<1.8U
	Benz(a)anthracene	µg/L	<7U	<7U	<7U	<1.6U	<0.063U	<0.38U	<7.4U	<7.6U
	Benzo(a)pyrene	µg/L	<2U	<2U	<2U	<1.6U	<0.089U	<0.49U	<2.5U	<2.5U
	Benzo(b)fluoranthene	µg/L	<10U	<10U	<10U	<2.9U	<0.062U	<0.35U	<9.5U	<9.8U
	Benzo(g,h,i)perylene	µg/L	<4U	<4U	<4U	<2.9U	<0.076U	<0.36U	<3.9U	<4U
	Benzo(k)fluoranthene	µg/L	<2U	<0.4U	<2U	<1.4U	<0.065U	<0.76U	<2.4U	<2.5U
	Benzoic acid	µg/L	**510**	<95U	<100U	**260**	**170**	<100U	**350**	<98U
	Benzyl alcohol	µg/L	**6J**	<7U	<7U	<4.9U	<0.29U	**1.2J**	<6.7U	**2.4J**
	Bis(2-chloroethoxy) methane	µg/L	<5U	<5U	<5U	<1.2U	<0.37U	<0.36U	<5U	<5.2U
	Bis(2-chloroethyl)ether	µg/L	<5U	**45**	<5U	<1.7U	<0.18U	<0.42U	**1.7J**	<5.6U
	Bis(2-chloroisopropyl) ether	µg/L	<5U	<5U	<5U	<0.98U	<3.9U	<0.54U	<5.4U	<5.6U
	bis(2-Ethylhexyl)Phthalate	µg/L	<10U	<10U	<10U	<2.2U	<4.7U	<1.9U	<9.5U	<9.8U
	Butyl benzyl phthalate	µg/L	<10U	<10U	<10U	<1.6U	<1.7U	<0.44U	<9.5U	<9.8U
	Carbazole	µg/L	**2J**	**0.9J**	**0.6J**	**1.1J**	<0.087U	**0.7J**	**1.6J**	**0.91J**
	Chrysene	µg/L	<2U	<0.8U	<2U	<1.7U	<0.27U	<0.34U	<2.4U	<2.5U
	Dibenz(a,h)anthracene	µg/L	<10U	<10U	<10U	<1.8U	<0.2U	<0.44U	<9.5U	<9.8U
	Dibenzofuran	µg/L	<10U	**0.4J**	**0.3J**	<1.6U	<1.6U	<0.53U	**0.74J**	<9.8U
	Diethyl phthalate	µg/L	**10**	**4J**	**2J**	**3.9J**	<2.8U	<10U	**2.7J**	**3J**
	Dimethyl phthalate	µg/L	**3J**	<10U	<10U	<1.2U	<0.29U	<0.38U	<9.5U	<9.8U
	Di-n-butyl phthalate	µg/L	<6U	<2U	**1J**	**3J**	**1.8J**	**1.9J**	**4J**	<2.4U
	Di-n-octyl phthalate	µg/L	<10U	<10U	<10U	<1.8U	<0.24U	<0.49U	<9.5U	<9.8U
	Fluoranthene	µg/L	<2U	<2U	<2U	<2U	<0.096U	<0.42U	<2.1U	<2.2U
	Fluorene	µg/L	**1J**	**0.5J**	<1U	<1.8U	**0.4J**	**0.44J**	**0.83J**	**0.57J**
	Hexachlorobenzene	µg/L	<1U	<1U	<1U	<2.2U	<0.44U	<0.53U	<2.1U	<2.2U
	Hexachlorobutadiene	µg/L	<2U	<2U	<3U	<1.2U	<2.5U	<0.71U	<2.5U	<2.5U
	Hexachlorocyclopentadiene	µg/L	<10U	<10U	<10U	<1.9U	<2.5U	<0.61U	<9.5U	<9.8U
	Hexachloroethane	µg/L	<3U	<3U	<5U	<0.83U	<2.8U	<0.61U	<2.7U	<2.8U
	Indeno(1,2,3-c,d)pyrene	µg/L	<4U	<4U	<4U	<3.1U	<0.15U	<0.49U	<4.6U	<4.7U
	Isophorone	µg/L	**13**	**2J**	**1J**	**4.4**	**2.9**	<0.45U	**3.8**	**1.2J**
	Naphthalene	µg/L	**120**	**45**	<28U	**78**	**42**	**34**	**83**	**45**
	Nitrobenzene	µg/L	<2U	<2U	<2U	<2U	<0.53U	<0.3U	<1.9U	<2U
	N-nitrosodi-n-propylamine	µg/L	<10U	<10U	<10U	<0.98U	<0.44U	<0.56U	<4.8U	<4.9U
	N-Nitrosodiphenylamine	µg/L	**1J**	**0.5J**	**0.4J**	<1.3U	<0.25U	<0.53U	<1.8U	**0.52J**
	Pentachlorophenol	µg/L	<5U	<5U	<5U	<3.6U	<5U	<2.3U	<4.9U	<5U
	Phenanthrene	µg/L	**2J**	**1J**	<5U	<1.4U	**0.86J**	**0.85J**	**1.5J**	**0.99J**
	Phenol	µg/L	**28**	**4**	<2U	**19**	**13**	<0.41U	**20**	**4**
	Pyrene	µg/L	<1U	<1U	<1U	<1.9U	<0.067U	<0.35U	<1.8U	<1.9U
	Total SVOCS	µg/L	**1300**	**470**	**260**	**790**	**530**	**350**	**820**	**420**

TABLE 4
EX-1 GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

		Sample Location	EX-1									
		Sample Date	**10/28/2010**	**4/17/2013**	**4/21/2014**	**12/11/2014**	**4/22/2015**	**5/16/2016**	**4/24/2017**	**5/7/2018**	**4/22/2019**	**4/29/2020**
	Parameters	**Units**										
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	**12**	**56**	**14J**	**25**	**19**	**40**	**9.1**	**29**	**30**	**40**
	1,2-Dichlorobenzene	µg/L	**15**	**25J**	**21**	-	**7.7J**	**3.3**	**1.4J**	**4.2**	**9.4**	**12**
	1,3-Dichlorobenzene	µg/L	**6.8**	<11U	**15J**	-	**11J**	**8.4**	**3.7**	**6.5**	**12**	**23**
	1,4-Dichlorobenzene	µg/L	**98**	**150**	**100**	-	**41**	**16**	**6.8**	**21**	**51**	**58**
	1,4-Dioxane	µg/L	**22**	<26U	**13J**	-	**17J**	**19**	**11**	**22**	**6.3J**	**16**
	2,4,5-Trichlorophenol	µg/L	<9.4U	<11U	<4.5U	-	<4.5U	<0.44U	<0.48U	<0.48U	<0.48U	**0.55J**
	2,4,6-Trichlorophenol	µg/L	<2.9U	<15U	<5.7U	-	<5.7U	<0.56U	<0.61U	<0.61U	<0.61U	<0.61U
	2,4-Dichlorophenol	µg/L	<2.6U	<12U	<4.8U	-	<4.8U	<0.47U	<0.51U	<0.51U	<0.51U	**0.82J**
	2,4-Dimethylphenol	µg/L	**9**	<12U	**6.4J**	-	<4.7U	<0.46U	<0.5U	<0.5U	**1.6J**	**0.72J**
	2,4-Dinitrophenol	µg/L	<41U	<53U	<21U	-	<21U	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	2,4-Dinitrotoluene	µg/L	<5.5U	<11U	<4.2U	-	<4.2U	<0.41U	<0.45U	<0.45U	<0.45U	<0.45U
	2,6-Dinitrotoluene	µg/L	<1.8U	<9.5U	<3.7U	-	<3.8U	<0.37U	<0.4U	<0.4U	<0.4U	<0.4U
	2-Chloronaphthalene	µg/L	<1.8U	<11U	<4.3U	-	<4.3U	<0.43U	<0.46U	<0.46U	<0.46U	<0.46U
	2-Chlorophenol	µg/L	<3.1U	<13U	<4.9U	-	<5U	<0.49U	<0.53U	<0.53U	<0.53U	<0.53U
	2-Methylnaphthalene	µg/L	**12**	**28J**	**15J**	-	<5.6U	<0.55U	<0.6U	**1.5J**	**3J**	<0.6U
	2-Methylphenol	µg/L	**3.6J**	<9.5U	**7.6J**	-	**16J**	**5.9J**	**1.7J**	**3.2J**	**5.5J**	**1J**
	2-Nitroaniline	µg/L	<9.4U	<10U	<3.9U	-	<3.9U	<0.39U	<0.42U	<0.42U	<0.42U	<0.42U
	2-Nitrophenol	µg/L	<3.4U	<11U	<4.5U	-	<4.5U	<0.44U	<0.48U	<0.48U	<0.48U	<0.48U
	3,3-Dichlorobenzidine	µg/L	<16U	<9.5U	<3.7U	-	<3.8UJ	<0.37U	<0.4U	<0.4U	<0.4U	<0.4U
	3-Nitroaniline	µg/L	<9.4U	<11U	<4.5UJ	-	<4.5U	<0.44U	<0.48U	<0.48U	<0.48U	<0.48U
	4,6-Dinitro-2-methylphenol	µg/L	<23U	<52U	<21U	-	<21U	<2U	<2.2U	<2.2U	<2.2U	<2.2U
	4-Bromophenyl phenyl ether	µg/L	<1.7U	<11U	<4.2U	-	<4.2U	<0.42U	<0.45U	<0.45U	<0.45U	<0.45U
	4-Chloro-3-Methylphenol	µg/L	<2.8U	<11U	<4.2U	-	<4.2U	<0.42U	<0.45U	<0.45U	<0.45U	<0.45U
	4-Chloroaniline	µg/L	<1.9U	**15J**	<5.5UJ	-	<5.5U	<0.55U	<0.59U	<0.59U	<0.59U	<0.59U
	4-Chlorophenyl phenyl ether	µg/L	<4.1U	<8.3U	<3.3U	-	<3.3U	<0.32U	<0.35U	<0.35U	<0.35U	<0.35U
	4-Methylphenol	µg/L	**9.1J**	**9.2J**	**12J**	-	**18J**	**1.5J**	**0.46J**	**1.9J**	**4.6J**	<0.36U
	4-Nitroaniline	µg/L	<9.4U	<6U	<2.3U	-	<2.3U	<0.23U	<0.25U	<0.25U	<0.25U	<0.25U
	4-Nitrophenol	µg/L	<2.8U	<36U	<14U	-	<14U	<1.4U	<1.5U	<1.5U	<1.5U	<1.5U
	Acenaphthene	µg/L	**0.83J**	<9.8U	<3.8U	-	<3.8U	**0.65J**	<0.41U	**0.79J**	**0.92J**	**0.95J**
	Acenaphthylene	µg/L	<3.3U	<9.1U	<3.5U	-	<3.6U	<0.35U	<0.38U	<0.38U	<0.38U	<0.38U
	Anthracene	µg/L	<1.7U	<6.7U	<2.6U	-	<2.6U	<0.26U	<0.28U	<0.28U	<0.28U	<0.28U
	Benz(a)anthracene	µg/L	<7.4U	<8.6U	<3.4U	-	<3.4U	<0.33U	<0.36U	<0.36U	<0.36U	<0.36U
	Benzo(a)pyrene	µg/L	<2.5U	<11U	<4.4U	-	<4.4U	<0.43U	<0.47U	<0.47U	<0.47U	<0.47U
	Benzo(b)fluoranthene	µg/L	<9.4U	<8.1U	<3.2U	-	<3.2U	<0.31U	<0.34U	<0.34U	<0.34U	<0.34U
	Benzo(g,h,i)perylene	µg/L	<3.9U	<8.3U	<3.3UJ	-	<3.3U	<0.32U	<0.35U	<0.35U	<0.35U	<0.35U
	Benzo(k)fluoranthene	µg/L	<2.4U	<17U	<6.8U	-	<6.8U	<0.67U	<0.73U	<0.73U	<0.73U	<0.73U
	Benzoic acid	µg/L	<94U	<2400U	<930U	-	<940U	-	<100U	<100U	<100U	<100U
	Benzyl alcohol	µg/L	<6.6U	<10U	<4.1U	-	<4.1U	<6.5U	<0.44UJ	<0.44U	<0.44U	<0.44U
	Bis(2-chloroethoxy) methane	µg/L	<5U	<8.3U	<3.3U	-	<3.3U	<0.32U	<0.35U	<0.35U	<0.35U	<0.35U
	Bis(2-chloroethyl)ether	µg/L	<5.4U	<9.5U	<3.7U	-	<3.8U	<0.37U	<0.4U	<0.4U	<0.4U	<0.4U
	Bis(2-chloroisopropyl) ether	µg/L	<5.4U	<12U	<4.9U	-	<4.9U	<0.48U	<0.52U	<0.52U	<0.52U	<0.52U
	bis(2-Ethylhexyl)Phthalate	µg/L	<9.4UJ	<43U	<17U	-	<17U	<1.7U	<1.8U	<1.8U	<1.8U	<1.8U
	Butyl benzyl phthalate	µg/L	<9.4U	<10U	<3.9U	-	<3.9U	<0.39U	**0.61J**	<0.42U	<0.45U	<0.42U
	Carbazole	µg/L	**0.49J**	<7.2U	<2.8U	-	<2.8U	**0.28J**	<0.3U	<0.3U	**0.33J**	<0.3U
	Chrysene	µg/L	<2.4U	<7.9U	<3.1U	-	<3.1U	<0.31U	<0.33U	<0.33U	<0.33U	<0.33U
	Dibenz(a,h)anthracene	µg/L	<9.4U	<10U	<3.9U	-	<3.9U	<0.39U	<0.42U	<0.42U	<0.42U	<0.42U
	Dibenzofuran	µg/L	<9.4U	<12U	<4.8U	-	<4.8U	<0.47U	<0.51U	<0.51U	<0.51U	<0.51U
	Diethyl phthalate	µg/L	**1.3J**	<5.2U	<2.1U	-	<2.1U	**0.55J**	**0.38J**	<0.22U	<0.22U	**0.31J**
	Dimethyl phthalate	µg/L	<9.4U	<8.6U	<3.4U	-	<3.4U	<0.33U	<0.36U	<0.36U	<0.36U	<0.36U
	Di-n-butyl phthalate	µg/L	**0.97J**	<7.4U	<2.9U	-	**3.3J**	**0.68J**	**0.56J**	**0.7J**	**0.75J**	**0.82J**
	Di-n-octyl phthalate	µg/L	<9.4U	<11U	<4.4U	-	<4.4U	<0.43U	<0.47U	<0.47U	<0.47U	<0.47U
	Fluoranthene	µg/L	<2.1U	<9.5U	<3.7U	-	<3.8U	<0.37U	<0.4U	<0.4U	<0.4U	<0.4U
	Fluorene	µg/L	<1.8U	<8.6U	<3.4U	-	<3.4U	<0.33U	<0.36U	<0.36U	**0.36J**	<0.36U
	Hexachlorobenzene	µg/L	<2.1U	<12U	<4.8U	-	<4.8U	<0.47U	<0.51U	<0.51U	<0.51U	<0.51U
	Hexachlorobutadiene	µg/L	<2.4U	<16U	<6.3U	-	<6.4U	<0.63U	<0.68U	<0.68U	<0.68U	**0.84J**
	Hexachlorocyclopentadiene	µg/L	<9.4U	<14U	<5.5U	-	<5.5U	<0.55U	<0.59U	<0.59U	<0.59U	<0.59U
	Hexachloroethane	µg/L	<2.7U	<14U	<5.5U	-	<5.5U	<0.55U	<0.59U	<0.59U	<0.59U	<0.59U
	Indeno(1,2,3-c,d)pyrene	µg/L	<4.5U	<11U	<4.4U	-	<4.4U	<0.43U	<0.47U	<0.47U	<0.47U	<0.47U
	Isophorone	µg/L	**1.5J**	<10U	<4U	-	<4U	<0.4U	<0.43U	**1.8J**	**1.9J**	<0.43U
	Naphthalene	µg/L	**24**	**55**	**37**	-	**12J**	**1.6J**	<0.76U	**4.3**	**8.9**	**1.2J**
	Nitrobenzene	µg/L	<1.9U	<6.9U	<2.7U	-	<2.7U	<0.27U	<0.29U	<0.29U	<0.29U	<0.29U
	N-nitrosodi-n-propylamine	µg/L	<4.7U	<13U	<5U	-	<5.1U	<0.5U	<0.54U	<0.54U	<0.54U	<0.54U
	N-Nitrosodiphenylamine	µg/L	<1.8U	<12U	<4.8U	-	<4.8U	<0.47U	<0.51U	<0.51U	<0.51U	<0.51U
	Pentachlorophenol	µg/L	<4.8U	<52U	<21U	-	<21U	<2U	<2.2U	<2.2U	<2.2U	<2.2U
	Phenanthrene	µg/L	**0.65J**	<10U	<4.1U	-	<4.1U	<0.41U	<0.44U	<0.44U	<0.44U	**0.48J**
	Phenol	µg/L	**4.7**	<9.3U	<3.6U	-	**12J**	<0.36UJ	<0.39U	**1.5J**	**1.2J**	**0.41J**
	Pyrene	µg/L	<1.8U	<8.1U	<3.2U	-	<3.2U	<0.31U	<0.34U	<0.34U	<0.34U	<0.34U
	Total SVOCS	µg/L	**230**	**340**	**250**	-	**160**	**98**	**36**	**99**	**140**	**157.1**

TABLE 4
MW-1A GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

		Sample Location	MW-1A					
		Sample Date	4/22/2015	5/16/2016	4/25/2017	5/8/2018	4/23/2019	4/30/2020
	Parameters	Units						
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	<0.42U	<0.42U	<0.44U	<0.44U	<0.44U	<0.44U
	1,2-Dichlorobenzene	µg/L	<0.38U	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	1,3-Dichlorobenzene	µg/L	<0.46U	<0.46U	<0.48U	<0.48U	<0.48U	<0.48U
	1,4-Dichlorobenzene	µg/L	<0.44U	<0.44U	<0.46U	<0.46U	<0.46U	<0.46U
	1,4-Dioxane	µg/L	<1U	<1.1U	<1.1U	<1.1U	<1.1U	<1.1U
	2,4,5-Trichlorophenol	µg/L	<0.46U	<0.46U	<0.48U	<0.48U	<0.48U	<0.48U
	2,4,6-Trichlorophenol	µg/L	<0.58U	<0.58U	<0.61U	<0.61U	<0.61U	<0.61U
	2,4-Dichlorophenol	µg/L	<0.48U	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	2,4-Dimethylphenol	µg/L	<0.47U	<0.48U	<0.5U	<0.5U	<0.5U	<0.5U
	2,4-Dinitrophenol	µg/L	<2.1U	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	2,4-Dinitrotoluene	µg/L	<0.42U	<0.43U	<0.45U	<0.45U	<0.45U	<0.45U
	2,6-Dinitrotoluene	µg/L	<0.38U	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	2-Chloronaphthalene	µg/L	<0.44U	<0.44U	<0.46U	<0.46U	<0.46U	<0.46U
	2-Chlorophenol	µg/L	<0.5U	<0.51U	<0.53U	<0.53U	<0.53U	<0.53U
	2-Methylnaphthalene	µg/L	<0.57U	<0.57U	<0.6U	<0.6U	<0.6U	<0.6U
	2-Methylphenol	µg/L	<0.38U	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	2-Nitroaniline	µg/L	<0.4U	<0.4U	<0.42U	<0.42U	<0.42U	<0.42U
	2-Nitrophenol	µg/L	<0.46U	<0.46U	<0.48U	<0.48U	<0.48U	<0.48U
	3,3-Dichlorobenzidine	µg/L	<0.38UJ	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	3-Nitroaniline	µg/L	<0.46U	<0.46U	<0.48U	<0.48U	<0.48U	<0.48U
	4,6-Dinitro-2-methylphenol	µg/L	<2.1U	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	4-Bromophenyl phenyl ether	µg/L	<0.43U	<0.43U	<0.45U	<0.45U	<0.45U	<0.45U
	4-Chloro-3-Methylphenol	µg/L	<0.43U	<0.43U	<0.45U	<0.45U	<0.45U	<0.45U
	4-Chloroaniline	µg/L	<0.56U	<0.56U	<0.59U	<0.59U	<0.59U	<0.59U
	4-Chlorophenyl phenyl ether	µg/L	<0.33U	<0.34U	<0.35U	<0.35U	<0.35U	<0.35U
	4-Methylphenol	µg/L	<0.34U	<0.34U	<0.36U	<0.36U	<0.36U	<0.36U
	4-Nitroaniline	µg/L	<0.24U	<0.24U	<0.25U	<0.25U	<0.25U	<0.25U
	4-Nitrophenol	µg/L	<1.4U	<1.5U	<1.5U	<1.5U	<1.5U	<1.5U
	Acenaphthene	µg/L	<0.39U	<0.39U	<0.41U	<0.41U	<0.41U	<0.41U
	Acenaphthylene	µg/L	<0.36U	<0.36U	<0.38U	<0.38U	<0.38U	<0.38U
	Anthracene	µg/L	<0.27U	<0.27U	<0.28U	<0.28U	<0.28U	<0.28U
	Benz(a)anthracene	µg/L	<0.34U	<0.34U	<0.36U	<0.36U	<0.36U	<0.36U
	Benzo(a)pyrene	µg/L	<0.45U	<0.45U	<0.47U	<0.47U	<0.47U	<0.47U
	Benzo(b)fluoranthene	µg/L	<0.32U	<0.33U	<0.34U	<0.34U	<0.34U	<0.34U
	Benzo(g,h,i)perylene	µg/L	<0.33U	<0.34U	<0.35U	<0.35U	<0.35U	<0.35U
	Benzo(k)fluoranthene	µg/L	<0.69U	<0.7U	<0.73U	<0.73U	<0.73U	<0.73U
	Benzoic acid	µg/L	<95U	-	<100U	<100U	<100U	<100U
	Benzyl alcohol	µg/L	<6.6U	<6.7U	<0.44U	<0.44U	<0.44U	<0.44U
	Bis(2-chloroethoxy) methane	µg/L	<0.33U	<0.34U	<0.35U	<0.35U	<0.35U	<0.35U
	Bis(2-chloroethyl)ether	µg/L	<0.38U	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	Bis(2-chloroisopropyl) ether	µg/L	<0.49U	<0.5U	<0.52U	<0.52U	<0.52U	<0.52U
	bis(2-Ethylhexyl)Phthalate	µg/L	<1.7U	<1.7U	<1.8U	<1.8U	<1.8U	<1.8U
	Butyl benzyl phthalate	µg/L	<9.5U	<0.4U	<0.42U	<0.42U	<0.45U	<0.42U
	Carbazole	µg/L	<0.28U	<0.29U	<0.3U	<0.3U	<0.3U	<0.3U
	Chrysene	µg/L	<0.31U	<0.32U	<0.33U	<0.33U	<0.33U	<0.33U
	Dibenz(a,h)anthracene	µg/L	<0.4U	<0.4U	<0.42U	<0.42U	<0.42U	<0.42U
	Dibenzofuran	µg/L	<0.48U	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	Diethyl phthalate	µg/L	<0.21U	<0.21U	<0.22U	<0.22U	<0.22U	<0.22U
	Dimethyl phthalate	µg/L	<0.34U	<0.34U	<0.36U	<0.36U	<0.36U	<0.36U
	Di-n-butyl phthalate	µg/L	**0.48J**	<0.3U	<0.31U	<0.31U	<0.31U	<0.31U
	Di-n-octyl phthalate	µg/L	<0.45U	<0.45U	<0.47U	<0.47U	<0.47U	<0.47U
	Fluoranthene	µg/L	<0.38U	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	Fluorene	µg/L	<0.34U	<0.34U	<0.36U	<0.36U	<0.36U	<0.36U
	Hexachlorobenzene	µg/L	<0.48U	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	Hexachlorobutadiene	µg/L	<0.65U	<0.65U	<0.68U	<0.68U	<0.68U	<0.68U
	Hexachlorocyclopentadiene	µg/L	<0.56U	<0.56U	<0.59U	<0.59U	<0.59U	<0.59U
	Hexachloroethane	µg/L	<0.56U	<0.56U	<0.59U	<0.59U	<0.59U	<0.59U
	Indeno(1,2,3-c,d)pyrene	µg/L	<0.45U	<0.45U	<0.47U	<0.47U	<0.47U	<0.47U
	Isophorone	µg/L	<0.41U	<0.41U	<0.43U	<0.43U	<0.43U	<0.43U
	Naphthalene	µg/L	<0.72U	<0.73U	<0.76U	<0.76U	<0.76U	<0.76U
	Nitrobenzene	µg/L	<0.28U	<0.28U	<0.29U	<0.29U	<0.29U	<0.29U
	N-nitrosodi-n-propylamine	µg/L	<0.51U	<0.52U	<0.54U	<0.54U	<0.54U	<0.54U
	N-Nitrosodiphenylamine	µg/L	<0.48U	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	Pentachlorophenol	µg/L	<2.1U	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	Phenanthrene	µg/L	<0.42U	<0.42U	<0.44U	<0.44U	<0.44U	<0.44U
	Phenol	µg/L	<0.37U	**0.44J**	<0.39U	<0.39U	<0.39U	<0.39U
	Pyrene	µg/L	<0.32U	<0.33U	<0.34U	<0.34U	<0.34U	<0.34U
	Total SVOCS	µg/L	**0.48**	**0.44**	ND	ND	ND	ND

TABLE 4
MW-1B GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

	Sample Location		MW-1B								
	Sample Date		4/30/2008	7/24/2008	10/22/2008	4/27/2009	7/17/2009	10/29/2009	5/6/2010	7/22/2010	10/28/2010
	Parameters	Units									
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	<2U	**28J**	**10**	**8.8**	**20**	**19**	**8.7**	**30**	**13**
	1,2-Dichlorobenzene	µg/L	<2U	**22**	**8**	**5.8**	**12**	**15**	**4.6**	**18**	**7.3**
	1,3-Dichlorobenzene	µg/L	**1J**	**7**	**4**	**2.6**	**4.4**	**6.3**	**2.4**	**6.3**	**2.7**
	1,4-Dichlorobenzene	µg/L	**7**	**76J**	**36**	**24**	**44**	**59**	**19**	**56**	**27**
	1,4-Dioxane	µg/L	**18**	**53**	**25**	**5J**	**10**	**22**	**5.5J**	**29**	**9.3J**
	2,4,5-Trichlorophenol	µg/L	<10U	<10U	<10U	<2.6U	<0.94U	<0.46U	<9.6U	<9.5U	<9.4U
	2,4,6-Trichlorophenol	µg/L	<3U	<3U	<3U	<2.9U	<0.95U	<0.58U	<3U	<3U	<2.9U
	2,4-Dichlorophenol	µg/L	<2U	<2U	<2U	<0.8U	<0.75U	<0.49U	<2.7U	<2.7U	<2.6U
	2,4-Dimethylphenol	µg/L	<2U	**10**	**2J**	**2.6J**	**8.1**	**5.7**	**1.8J**	**7.8**	**2.1J**
	2,4-Dinitrophenol	µg/L	<43U	<43U	<43U	<2U	<2.1U	<2.1U	<41U	<41U	<41U
	2,4-Dinitrotoluene	µg/L	<5U	<5U	<5U	<1.2U	<0.43U	<0.43U	<5.6U	<5.5U	<5.5U
	2,6-Dinitrotoluene	µg/L	<1U	<1U	<1U	<1.7U	<0.49U	<0.38U	<1.8U	<1.8U	<1.8U
	2-Chloronaphthalene	µg/L	<1U	<1U	<1U	<1.4U	<0.08U	<0.44U	<1.8U	<1.8U	<1.8U
	2-Chlorophenol	µg/L	<3U	<3U	<3U	<1U	<0.48U	<0.5U	<3.2U	<3.1U	<3.1U
	2-Methylnaphthalene	µg/L	**4J**	**15**	<8U	**7.6J**	**12**	**13**	**11**	**17**	**10**
	2-Methylphenol	µg/L	<10U	**11**	**1J**	**2.7J**	**5.3J**	**5.9J**	**1.6J**	**9.7**	**2.1J**
	2-Nitroaniline	µg/L	<10U	<10U	<10U	<1.4U	<0.47U	<0.4U	<9.6U	**4.9J**	<9.4U
	2-Nitrophenol	µg/L	<3U	<3U	<3U	<1.4U	<0.57U	<0.46U	<3.5U	<3.4U	<3.4U
	3,3-Dichlorobenzidine	µg/L	<17U	<17U	<17U	<1.5U	<0.36U	<0.38U	<16U	<16U	<16U
	3-Nitroaniline	µg/L	<10U	<10U	<10U	<1.8U	<1.5U	<0.46U	<9.6U	<9.5U	<9.4U
	4,6-Dinitro-2-methylphenol	µg/L	<24U	<24U	<24U	<1.8U	<2.2U	<2.1U	<23U	<23U	<23U
	4-Bromophenyl phenyl ether	µg/L	<1U	<1U	<1U	<1.7U	<0.86U	<0.43U	<1.7U	<1.7U	<1.7U
	4-Chloro-3-Methylphenol	µg/L	<3U	**4**	**0.6J**	**2.5J**	<0.57U	**1.8J**	<2.9U	**2.4J**	<2.8U
	4-Chloroaniline	µg/L	<2U	**1J**	<2U	<0.94U	<0.31U	**0.79J**	<1.9U	**0.95J**	<1.9U
	4-Chlorophenyl phenyl ether	µg/L	<4U	<4U	<4U	<1.3U	<0.16U	<0.33U	<4.1U	<4.1U	<4.1U
	4-Methylphenol	µg/L	<10U	**24**	**2J**	**4.3J**	**11**	**12**	**2.7J**	**28**	**5.4J**
	4-Nitroaniline	µg/L	<10U	<10U	<10U	<2.7U	<0.43U	<0.24U	<9.6U	<9.5U	<9.4U
	4-Nitrophenol	µg/L	<3U	**1J**	<3U	<2.8U	<1.4U	<1.4U	<2.9U	<2.9U	<2.8U
	Acenaphthene	µg/L	**0.4J**	**0.6J**	**0.5J**	<1.3U	<0.11U	**0.54J**	**0.52J**	**0.76J**	<1.7U
	Acenaphthylene	µg/L	<3U	<3U	<3U	<1.1U	<0.045U	<0.36U	<3.4U	<3.3U	<3.3U
	Anthracene	µg/L	<1U	<1U	<1U	<1.4U	<0.053U	<0.27U	<1.7U	<1.7U	<1.7U
	Benz(a)anthracene	µg/L	<7U	<7U	<7U	<1.5U	<0.061U	<0.34U	<7.5U	<7.4U	<7.4U
	Benzo(a)pyrene	µg/L	<2U	**0.2J**	<2U	<1.5U	<0.087U	<0.45U	<2.5U	<2.5U	<2.5U
	Benzo(b)fluoranthene	µg/L	<10U	<10U	<10U	<2.8U	<0.06U	<0.32U	<9.6U	<9.5U	<9.4U
	Benzo(g,h,i)perylene	µg/L	<4U	<4U	<4U	<2.8U	<0.074U	<0.33U	<3.9U	<3.9U	<3.9U
	Benzo(k)fluoranthene	µg/L	<2U	<0.4U	<2U	<1.3U	<0.063U	<0.7U	<2.4U	<2.4U	<2.4U
	Benzoic acid	µg/L	<96U	<95U	<110U	<47U	<95U	<95U	<96U	<95U	<94U
	Benzyl alcohol	µg/L	<7U	**2J**	<7U	<4.7U	<0.28U	<0.42U	<6.7U	**2.4J**	<6.6U
	Bis(2-chloroethoxy) methane	µg/L	<5U	<5U	<5U	<1.1U	<0.36U	<0.33U	<5.1U	<5U	<5U
	Bis(2-chloroethyl)ether	µg/L	<5U	**21**	<5U	<1.6U	<0.17U	<0.38U	<5.5U	<5.4U	<5.4U
	Bis(2-chloroisopropyl) ether	µg/L	<5U	<5U	<5U	<0.94U	<3.8U	<0.5U	<5.5U	<5.4U	<5.4U
	bis(2-Ethylhexyl)Phthalate	µg/L	<10U	<10U	<10U	<2.1U	<4.5U	<1.7U	<9.6U	<9.5U	<9.4UJ
	Butyl benzyl phthalate	µg/L	<10U	<10U	<10U	<1.5U	<1.7U	<0.4U	<9.6U	<9.5U	<9.4U
	Carbazole	µg/L	**0.3J**	**0.7J**	**0.5J**	**0.4J**	<0.085U	**0.66J**	**0.59J**	**0.92J**	**0.6J**
	Chrysene	µg/L	<2U	<0.7U	<2U	<1.6U	<0.26U	<0.31U	<2.4U	<2.4U	<2.4U
	Dibenz(a,h)anthracene	µg/L	<10U	<10U	<10U	<1.7U	<0.19U	<0.4U	<9.6U	<9.5U	<9.4U
	Dibenzofuran	µg/L	<10U	**0.3J**	**0.4J**	<1.5U	<1.5U	<0.49U	<9.6U	<9.5U	<9.4U
	Diethyl phthalate	µg/L	**0.4J**	**3J**	**1J**	<1.6U	<1.8U	<9.5U	<9.6U	**2.2J**	**0.92J**
	Dimethyl phthalate	µg/L	<10U	<10U	<10U	<1.1U	<0.29U	<0.34U	<9.6U	<9.5U	<9.4U
	Di-n-butyl phthalate	µg/L	<10U	<2U	**1J**	<1.4U	<0.28U	**1.9J**	**0.9J**	<3.3U	**1.3J**
	Di-n-octyl phthalate	µg/L	<10U	<10U	<3U	<1.7U	<0.23U	<0.45U	<9.6U	<9.5U	<9.4U
	Fluoranthene	µg/L	<2U	<2U	<2U	<1.9U	<0.093U	<0.38U	<2.1U	<2.1U	<2.1U
	Fluorene	µg/L	**0.2J**	**0.3J**	<1U	<1.7U	<0.07U	<0.34U	<1.8U	<1.8U	<1.8U
	Hexachlorobenzene	µg/L	<1U	<1U	<1U	<2.1U	<0.42U	<0.49U	<2.1U	<2.1U	<2.1U
	Hexachlorobutadiene	µg/L	<2U	<2U	<3U	<1.1U	<2.5U	<0.65U	<2.5U	<2.5U	<2.4U
	Hexachlorocyclopentadiene	µg/L	<10U	<10U	<10U	<1.8U	<2.4U	<0.56U	<9.6U	<9.5U	<9.4U
	Hexachloroethane	µg/L	<3U	<3U	<5U	<0.8U	<2.7U	<0.56U	<2.7U	<2.7U	<2.7U
	Indeno(1,2,3-c,d)pyrene	µg/L	<4U	<4U	<4U	<3U	<0.15U	<0.45U	<4.6U	<4.6U	<4.5U
	Isophorone	µg/L	<2U	**2J**	<2U	<1.1U	**2J**	**1.5J**	<2.1U	**2.7**	<2.1U
	Naphthalene	µg/L	**9**	**39**	**22**	**20**	**30**	**34**	**23**	**41**	**22**
	Nitrobenzene	µg/L	<2U	<2U	<2U	<1.9U	<0.51U	<0.28U	<1.9U	<1.9U	<1.9U
	N-nitrosodi-n-propylamine	µg/L	<10U	<10U	<10U	<0.94U	<0.43U	<0.51U	<4.8U	<4.8U	<4.7U
	N-Nitrosodiphenylamine	µg/L	**0.4J**	**0.7J**	**0.4J**	<1.2U	<0.25U	<0.49U	<1.8U	**0.67J**	<1.8U
	Pentachlorophenol	µg/L	<5U	<5U	<6U	<3.5U	<4.9U	<2.1U	<4.9U	<4.9U	<4.8U
	Phenanthrene	µg/L	<5U	<5U	<5U	<1.3U	<0.11U	<0.42U	<4.8U	<4.8U	<4.7U
	Phenol	µg/L	<2U	**4**	<2U	<2.4U	<0.42U	<0.37U	<2.4U	**4.2**	**1J**
	Pyrene	µg/L	<1U	<1U	<1U	<1.8U	<0.065U	<0.32U	<1.8U	<1.8U	<1.8U
	Total SVOCS	µg/L	**41**	**330**	**120**	**87**	**160**	**200**	**83**	**270**	**110**

TABLE 4
MW-1B GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

		Sample Location	MW-1B							
		Sample Date	4/17/2013	4/21/2014	4/22/2015	5/16/2016	4/25/2017	5/8/2018	4/23/2019	4/30/2020
	Parameters	Units								
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	**29**	**5.1J**	**7.3J**	**24**	**5.9**	**3.9**	**1.8J**	**6.6**
	1,2-Dichlorobenzene	µg/L	**20**	**11J**	**5.5J**	**5.1**	**0.97J**	<1.6U	**0.4J**	**2.4**
	1,3-Dichlorobenzene	µg/L	**8.1J**	**11J**	**7.4J**	**6.5**	**2**	**1.8**	**0.76J**	**3.9**
	1,4-Dichlorobenzene	µg/L	**84**	**59**	**25J**	**28**	**4.2J**	**3.1**	**1.8J**	**11**
	1,4-Dioxane	µg/L	<10U	**15J**	**10J**	**14**	**9.2J**	<1.1U	**4.3J**	**9.3J**
	2,4,5-Trichlorophenol	µg/L	<4.6U	<4.5U	<4.4U	<0.46U	<0.48U	<0.48U	<0.48U	<0.48U
	2,4,6-Trichlorophenol	µg/L	<5.8U	<5.7U	<5.6U	<0.58U	<0.61U	<0.61U	<0.61U	<0.61U
	2,4-Dichlorophenol	µg/L	<4.8U	<4.8U	<4.7U	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	2,4-Dimethylphenol	µg/L	**8.2J**	<4.7U	<4.6U	<0.48U	<0.5U	<0.5U	<0.5U	<0.5U
	2,4-Dinitrophenol	µg/L	<21U	<21U	<20U	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	2,4-Dinitrotoluene	µg/L	<4.2U	<4.2U	<4.1U	<0.43U	<0.45U	<0.45U	<0.45U	<0.45U
	2,6-Dinitrotoluene	µg/L	<3.8U	<3.7U	<3.7U	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	2-Chloronaphthalene	µg/L	<4.4U	<4.3U	<4.2U	<0.44U	<0.46U	<0.46U	<0.46U	<0.46U
	2-Chlorophenol	µg/L	<5U	<5U	<4.9U	<0.51U	<0.53U	<0.53U	<0.53U	<0.53U
	2-Methylnaphthalene	µg/L	**19J**	**11J**	<5.5U	<0.57U	<0.6U	<0.6U	<0.6U	<0.6U
	2-Methylphenol	µg/L	**13J**	<3.7U	<3.7U	**0.58J**	<0.4U	<0.4U	<0.4U	<0.4U
	2-Nitroaniline	µg/L	<4U	<3.9U	<3.9U	<0.4U	<0.42U	<0.42U	<0.42U	<0.42U
	2-Nitrophenol	µg/L	<4.6U	<4.5U	<4.4U	<0.46U	<0.48U	<0.48U	<0.48U	<0.48U
	3,3-Dichlorobenzidine	µg/L	<3.8U	<3.7U	<3.7UJ	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	3-Nitroaniline	µg/L	<4.6U	<4.5UJ	<4.4U	<0.46U	<0.48U	<0.48U	<0.48U	<0.48U
	4,6-Dinitro-2-methylphenol	µg/L	<21U	<21U	<20U	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	4-Bromophenyl phenyl ether	µg/L	<4.3U	<4.2U	<4.1U	<0.43U	<0.45U	<0.45U	<0.45U	<0.45U
	4-Chloro-3-Methylphenol	µg/L	<4.3U	<4.2U	<4.1U	<0.43U	<0.45U	<0.45U	<0.45U	<0.45U
	4-Chloroaniline	µg/L	<5.6U	<5.5UJ	<5.4U	<0.56U	<0.59U	<0.59U	<0.59U	<0.59U
	4-Chlorophenyl phenyl ether	µg/L	<3.3U	<3.3U	<3.2U	<0.34U	<0.35U	<0.35U	<0.35U	<0.35U
	4-Methylphenol	µg/L	**13J**	<3.4U	<3.3U	**0.36J**	<0.36U	<0.36U	<0.36U	<0.36U
	4-Nitroaniline	µg/L	<2.4U	<2.3U	<2.3U	<0.24U	<0.25U	<0.25U	<0.25U	<0.25U
	4-Nitrophenol	µg/L	<14U	<14U	<14U	<1.5U	<1.5U	<1.5U	<1.5U	<1.5U
	Acenaphthene	µg/L	<3.9U	<3.8U	<3.8U	**0.46J**	<0.41U	**0.42J**	<0.41U	**0.54J**
	Acenaphthylene	µg/L	<3.6U	<3.6U	<3.5U	<0.36U	<0.38U	<0.38U	<0.38U	<0.38U
	Anthracene	µg/L	<2.7U	<2.6U	<2.6U	<0.27U	<0.28U	<0.28U	<0.28U	<0.28U
	Benz(a)anthracene	µg/L	<3.4U	<3.4U	<3.3U	<0.34U	<0.36U	<0.36U	<0.36U	<0.36U
	Benzo(a)pyrene	µg/L	<4.5U	<4.4U	<4.3U	<0.45U	<0.47U	<0.47U	<0.47U	<0.47U
	Benzo(b)fluoranthene	µg/L	<3.2U	<3.2U	<3.1U	<0.33U	<0.34U	<0.34U	<0.34U	<0.34U
	Benzo(g,h,i)perylene	µg/L	<3.3U	<3.3UJ	<3.2U	<0.34U	<0.35U	<0.35U	<0.35U	<0.35U
	Benzo(k)fluoranthene	µg/L	<6.9U	<6.8U	<6.7U	<0.7U	<0.73U	<0.73U	<0.73U	<0.73U
	Benzoic acid	µg/L	<950U	<940U	<920U	-	<100U	<100U	<100U	<100U
	Benzyl alcohol	µg/L	**11J**	<4.1U	<4U	<0.42U	<0.44U	<0.44U	<0.44U	<0.44U
	Bis(2-chloroethoxy) methane	µg/L	<3.3U	<3.3U	<3.2U	<0.34U	<0.35U	<0.35U	<0.35U	<0.35U
	Bis(2-chloroethyl)ether	µg/L	<3.8U	<3.7U	<3.7U	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	Bis(2-chloroisopropyl) ether	µg/L	<4.9U	<4.9U	<4.8U	<0.5U	<0.52U	<0.52U	<0.52U	<0.52U
	bis(2-Ethylhexyl)Phthalate	µg/L	<17U	<17U	<17U	<1.7U	<1.8U	<1.8U	<1.8U	<1.8U
	Butyl benzyl phthalate	µg/L	<4U	<3.9U	<3.9U	<0.4U	<0.42U	<0.42U	<0.42U	<0.42U
	Carbazole	µg/L	<2.8U	<2.8U	<2.8U	**0.37J**	**0.33J**	<0.3U	<0.3U	<0.3U
	Chrysene	µg/L	<3.1U	<3.1U	<3U	<0.32U	<0.33U	<0.33U	<0.33U	<0.33U
	Dibenz(a,h)anthracene	µg/L	<4U	<3.9U	<3.9U	<0.4U	<0.42U	<0.42U	<0.42U	<0.42U
	Dibenzofuran	µg/L	<4.8U	<4.8U	<4.7U	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	Diethyl phthalate	µg/L	<2.1U	<2.1U	<2U	**0.39J**	<0.22U	<0.22U	<0.22U	<0.22U
	Dimethyl phthalate	µg/L	<3.4U	<3.4U	<3.3U	<0.34U	<0.36U	<0.36U	<0.36U	<0.36U
	Di-n-butyl phthalate	µg/L	<2.9U	<2.9U	<2.8U	<0.3U	<0.31U	<0.31U	<0.31U	<0.31U
	Di-n-octyl phthalate	µg/L	<4.5U	<4.4U	<4.3U	<0.45U	<0.47U	<0.47U	<0.47U	<0.47U
	Fluoranthene	µg/L	<3.8U	<3.7U	<3.7U	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	Fluorene	µg/L	<3.4U	<3.4U	<3.3U	<0.34U	<0.36U	<0.36U	<0.36U	<0.36U
	Hexachlorobenzene	µg/L	<4.8U	<4.8U	<4.7U	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	Hexachlorobutadiene	µg/L	<6.5U	<6.4U	<6.2U	<0.65U	<0.68U	<0.68U	<0.68U	<0.68U
	Hexachlorocyclopentadiene	µg/L	<5.6U	<5.5U	<5.4U	<0.56U	<0.59U	<0.59U	<0.59U	<0.59U
	Hexachloroethane	µg/L	<5.6U	<5.5U	<5.4U	<0.56U	<0.59U	<0.59U	<0.59U	<0.59U
	Indeno(1,2,3-c,d)pyrene	µg/L	<4.5U	<4.4U	<4.3U	<0.45U	<0.47U	<0.47U	<0.47U	<0.47U
	Isophorone	µg/L	**4.5J**	<4U	<3.9U	**0.58J**	<0.43U	<0.43U	<0.43U	<0.43U
	Naphthalene	µg/L	**52**	**29**	**14J**	**5.3**	<0.76U	<0.76U	<0.76U	<0.76U
	Nitrobenzene	µg/L	<2.8U	<2.7U	<2.7U	<0.28U	<0.29U	<0.29U	<0.29U	<0.29U
	N-nitrosodi-n-propylamine	µg/L	<5.1U	<5.1U	<5U	<0.52U	<0.54U	<0.54U	<0.54U	<0.54U
	N-Nitrosodiphenylamine	µg/L	<4.8U	<4.8U	<4.7U	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	Pentachlorophenol	µg/L	<21U	<21U	<20U	**2.2J**	<2.2U	<2.2U	<2.2U	<2.2U
	Phenanthrene	µg/L	<4.2U	<4.1U	<4U	<0.42U	<0.44U	<0.44U	<0.44U	<0.44U
	Phenol	µg/L	<3.7U	<3.7U	<3.6U	**0.39J**	<0.39U	<0.39U	<0.39U	<0.39U
	Pyrene	µg/L	<3.2U	<3.2U	<3.1U	<0.33U	<0.34U	<0.34U	<0.34U	<0.34U
	Total SVOCS	µg/L	**270**	**150**	**70**	**89**	**23**	**11**	**9.1**	**33.7**

TABLE 4
MW-1C GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

		Sample Location	MW-1C								
		Sample Date	4/30/2008	7/24/2008	10/22/2008	4/27/2009	7/17/2009	10/29/2009	5/6/2010	7/22/2010	10/28/2010
	Parameters	Units									
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	<0.6U	<1U	0.5J	<0.71U	<0.11U	**2.1**	<1.8U	**0.68J**	<1.8U
	1,2-Dichlorobenzene	µg/L	<1U	<1U	<1U	<1.4U	<1.4U	**6.2**	<1.8U	<1.8U	<1.8U
	1,3-Dichlorobenzene	µg/L	<1U	0.5J	<1U	<1.1U	<0.13U	**4.5**	<1.8U	<1.8U	<1.8U
	1,4-Dichlorobenzene	µg/L	<2U	5	2J	<1.3U	1.6J	**30**	**1.9J**	**2.6J**	<4.2U
	1,4-Dioxane	µg/L	2J	11	<10U	<0.59U	<0.59U	**13**	**3.2J**	**4.7J**	<9.5U
	2,4,5-Trichlorophenol	µg/L	<10U	<10U	<10U	<2.6U	<0.93U	<0.46U	<9.5U	<9.4U	<9.5U
	2,4,6-Trichlorophenol	µg/L	<3U	<3U	<3U	<2.9U	<0.94U	<0.59U	<2.9U	<2.9U	<2.9U
	2,4-Dichlorophenol	µg/L	<2U	<2U	<2U	<0.8U	<0.74U	<0.49U	<2.7U	<2.6U	<2.7U
	2,4-Dimethylphenol	µg/L	<2U	<2U	<2U	<1.6U	<0.91U	**3.2**	<2.7U	<2.6U	<2.7U
	2,4-Dinitrophenol	µg/L	<43U	<43U	<43U	<2U	<2.1U	<2.1U	<41U	<41U	<41U
	2,4-Dinitrotoluene	µg/L	<5U	<5U	<5U	<1.2U	<0.42U	<0.43U	<5.5U	<5.5U	<5.5U
	2,6-Dinitrotoluene	µg/L	<1U	<1U	<1U	<1.7U	<0.48U	<0.38U	<1.8U	<1.8U	<1.8U
	2-Chloronaphthalene	µg/L	<1U	<1U	<1U	<1.4U	<0.079U	<0.44U	<1.8U	<1.8U	<1.8U
	2-Chlorophenol	µg/L	<3U	<3U	<3U	<1U	<0.48U	<0.51U	<3.1U	<3.1U	<3.1U
	2-Methylnaphthalene	µg/L	<10U	<10U	<10U	<1U	<0.077U	**2.1J**	<9.5U	<9.4U	<9.5U
	2-Methylphenol	µg/L	<10U	0.8J	<10U	<2.4U	<0.22U	**3.5J**	<9.5U	<9.4U	<9.5U
	2-Nitroaniline	µg/L	<10U	<10U	<10U	<1.4U	<0.47U	<0.4U	<9.5U	<9.4U	<9.5U
	2-Nitrophenol	µg/L	<3U	<3U	<3U	<1.4U	<0.57U	<0.46U	<3.4U	<3.4U	<3.4U
	3,3-Dichlorobenzidine	µg/L	<17U	0.4J	<17U	<1.5U	<0.35U	<0.38U	<16U	<16U	<16U
	3-Nitroaniline	µg/L	<10U	<10U	<10U	<1.8U	<1.5U	<0.46U	<9.5U	<9.4U	<9.5U
	4,6-Dinitro-2-methylphenol	µg/L	<24U	<24U	<24U	<1.8U	<2.1U	<2.1U	<23U	<23U	<23U
	4-Bromophenyl phenyl ether	µg/L	<1U	<1U	<1U	<1.7U	<0.85U	<0.43U	<1.7U	<1.7U	<1.7U
	4-Chloro-3-Methylphenol	µg/L	<3U	0.8J	<3U	<1U	<0.56U	<0.43U	<2.8U	<2.8U	<2.8U
	4-Chloroaniline	µg/L	<2U	<2U	<2U	<0.94U	<0.31U	<0.57U	<1.9U	<1.9U	<1.9U
	4-Chlorophenyl phenyl ether	µg/L	<4U	<4U	<4U	<1.3U	<0.16U	<0.34U	<4.1U	<4.1U	<4.1U
	4-Methylphenol	µg/L	<10U	1J	<10U	<0.55U	<0.55U	**3.9J**	<9.5U	<9.4U	<9.5U
	4-Nitroaniline	µg/L	<10U	<10U	<10U	<2.7U	<0.43U	<0.24U	<9.5U	<9.4U	<9.5U
	4-Nitrophenol	µg/L	<3U	<3U	<3U	<2.8U	<1.4U	<1.5U	<2.8U	<2.8U	<2.8U
	Acenaphthene	µg/L	0.2J	0.2J	<1U	<1.3U	<0.11U	<0.39U	<1.7U	<1.7U	<1.7U
	Acenaphthylene	µg/L	<3U	<3U	<3U	<1.1U	<0.044U	<0.37U	<3.3U	<3.3U	<3.3U
	Anthracene	µg/L	<1U	<1U	<1U	<1.4U	<0.053U	<0.27U	<1.7U	<1.7U	<1.7U
	Benz(a)anthracene	µg/L	<7U	0.3J	<7U	<1.5U	<0.06U	<0.35U	<7.4U	<7.4U	<7.4U
	Benzo(a)pyrene	µg/L	<2U	<2U	<2U	<1.5U	<0.086U	<0.45U	<2.5U	<2.5U	<2.5U
	Benzo(b)fluoranthene	µg/L	<10U	<10U	<10U	<2.8U	<0.059U	<0.33U	<9.5U	<9.4U	<9.5U
	Benzo(g,h,i)perylene	µg/L	<4U	<4U	<4U	<2.8U	<0.074U	<0.34U	<3.9U	<3.9U	<3.9U
	Benzo(k)fluoranthene	µg/L	<2U	<0.5U	<2U	<1.3U	<0.062U	<0.7U	<2.4U	<2.4U	<2.4U
	Benzoic acid	µg/L	<97U	<96U	<100U	<47U	<94U	<96U	<95U	<94U	<95U
	Benzyl alcohol	µg/L	<7U	<7U	<7U	<4.7U	<0.28U	<0.42U	<6.6U	<6.6U	<6.6U
	Bis(2-chloroethoxy) methane	µg/L	<5U	<5U	<5U	<1.1U	<0.35U	<0.34U	<5U	<5U	<5U
	Bis(2-chloroethyl)ether	µg/L	<5U	<5U	<5U	<1.6U	<0.17U	<0.38U	<5.4U	<5.4U	<5.4U
	Bis(2-chloroisopropyl) ether	µg/L	<5U	<5U	<5U	<0.94U	<3.8U	<0.5U	<5.4U	<5.4U	<5.4U
	bis(2-Ethylhexyl)Phthalate	µg/L	<10U	<10U	<10U	<2.1U	<4.5U	<1.7U	<9.5U	<9.4U	<9.5UJ
	Butyl benzyl phthalate	µg/L	<10U	<10U	<10U	<1.5U	<1.6U	<0.4U	<9.5U	<9.4U	<9.5U
	Carbazole	µg/L	<10U	<10U	<10U	<0.084U	<0.084U	<0.29U	<9.5U	<9.4U	<9.5U
	Chrysene	µg/L	<2U	<0.7U	<2U	<1.6U	<0.26U	<0.32U	<2.4U	<2.4U	<2.4U
	Dibenz(a,h)anthracene	µg/L	<10U	<10U	<10U	<1.7U	<0.19U	<0.4U	<9.5U	<9.4U	<9.5U
	Dibenzofuran	µg/L	<10U	<10U	<10U	<1.5U	<1.5U	<0.49U	<9.5U	<9.4U	<9.5U
	Diethyl phthalate	µg/L	<10U	0.3J	<10U	<1.6U	<0.1U	<9.6U	<9.5U	<9.4U	<9.5U
	Dimethyl phthalate	µg/L	<10U	<10U	<10U	<1.1U	<0.28U	<0.35U	<9.5U	<9.4U	<9.5U
	Di-n-butyl phthalate	µg/L	<10U	<0.3U	<10U	<1.4U	<0.28U	**0.91J**	<9.5U	<0.39U	<9.5U
	Di-n-octyl phthalate	µg/L	<10U	<10U	<3U	<1.7U	<0.23U	<0.45U	<9.5U	<9.4U	<9.5U
	Fluoranthene	µg/L	<2U	<2U	<2U	<1.9U	<0.092U	<0.38U	<2.1U	<2.1U	<2.1U
	Fluorene	µg/L	<1U	<1U	<1U	<1.7U	<0.07U	<0.35U	<1.8U	<1.8U	<1.8U
	Hexachlorobenzene	µg/L	<1U	<1U	<1U	<2.1U	<0.42U	<0.49U	<2.1U	<2.1U	<2.1U
	Hexachlorobutadiene	µg/L	<2U	<2U	<3U	<1.1U	<2.4U	<0.65U	<2.5U	<2.4U	<2.5U
	Hexachlorocyclopentadiene	µg/L	<10U	<10U	<10U	<1.8U	<2.4U	<0.57U	<9.5U	<9.4U	<9.5U
	Hexachloroethane	µg/L	<3U	<3U	<5U	<0.8U	<2.7U	<0.57U	<2.7U	<2.7U	<2.7U
	Indeno(1,2,3-c,d)pyrene	µg/L	<4U	<4U	<4U	<3U	<0.14U	<0.45U	<4.5U	<4.5U	<4.5U
	Isophorone	µg/L	<2U	<2U	<2U	<1.1U	<0.3U	<0.41U	<2.1U	<2.1U	<2.1U
	Naphthalene	µg/L	2	2	<1U	<1.2U	<0.11U	**10**	<1.5U	<1.5U	<1.5U
	Nitrobenzene	µg/L	<2U	<2U	<2U	<1.9U	<0.51U	<0.28U	<1.9U	<1.9U	<1.9U
	N-nitrosodi-n-propylamine	µg/L	<10U	<10U	<10U	<0.94U	<0.43U	<0.52U	<4.7U	<4.7U	<4.7U
	N-Nitrosodiphenylamine	µg/L	<1U	<1U	<1U	<1.2U	<0.25U	<0.49U	<1.8U	<1.8U	<1.8U
	Pentachlorophenol	µg/L	<5U	<5U	<5U	<3.5U	<4.8U	<2.1U	<4.9U	<4.8U	<4.9U
	Phenanthrene	µg/L	<5U	<5U	<5U	<1.3U	<0.11U	<0.42U	<4.7U	<4.7U	<4.7U
	Phenol	µg/L	<2U	<2U	<2U	<2.4U	<0.42U	<0.38U	<2.4U	<2.4U	<2.4U
	Pyrene	µg/L	<1U	<1U	<1U	<1.8U	<0.064U	<0.33U	<1.8U	<1.8U	<1.8U
	Total SVOCS	µg/L	4.2	23	2.5	ND	1.6	**80**	**5.1**	**8**	**ND**

TABLE 4
MW-1C GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

	Sample Location		MW-1C							
	Sample Date		4/17/2013	4/21/2014	4/22/2015	5/16/2016	4/25/2017	5/8/2018	4/23/2019	4/30/2020
	Parameters	Units								
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	<0.42U	**1.3J**	**0.94J**	<0.41U	<0.44U	<0.44U	<0.44U	<0.44U
	1,2-Dichlorobenzene	µg/L	**0.57J**	**2.7**	**0.77J**	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	1,3-Dichlorobenzene	µg/L	**0.46J**	**2.6**	**0.79J**	<0.45U	<0.48U	<0.48U	<0.48U	<0.48U
	1,4-Dichlorobenzene	µg/L	**4.3**	**14**	**3.6J**	**0.66J**	<0.46U	<0.46U	<0.46U	<0.46U
	1,4-Dioxane	µg/L	<1.1U	**6.8J**	**2.7J**	**1.3J**	<1.1U	<1.1U	<1.1U	<1.1U
	2,4,5-Trichlorophenol	µg/L	<0.46U	<0.45U	<0.44U	<0.45U	<0.48U	<0.48U	<0.48U	<0.48U
	2,4,6-Trichlorophenol	µg/L	<0.58U	<0.57U	<0.57U	<0.57U	<0.61U	<0.61U	<0.61U	<0.61U
	2,4-Dichlorophenol	µg/L	<0.49U	<0.47U	<0.47U	<0.48U	<0.51U	<0.51U	<0.51U	<0.51U
	2,4-Dimethylphenol	µg/L	<0.48U	<0.47U	<0.46U	<0.47U	<0.5U	<0.5U	<0.5U	<0.5U
	2,4-Dinitrophenol	µg/L	<2.1U	<2.1U	<2.1U	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	2,4-Dinitrotoluene	µg/L	<0.43U	<0.42U	<0.41U	<0.42U	<0.45U	<0.45U	<0.45U	<0.45U
	2,6-Dinitrotoluene	µg/L	<0.38U	<0.37U	<0.37U	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	2-Chloronaphthalene	µg/L	<0.44U	<0.43U	<0.43U	<0.43U	<0.46U	<0.46U	<0.46U	<0.46U
	2-Chlorophenol	µg/L	<0.51U	<0.49U	<0.49U	<0.5U	<0.53U	<0.53U	<0.53U	<0.53U
	2-Methylnaphthalene	µg/L	<0.57U	<0.56U	<0.56U	<0.56U	<0.6U	<0.6U	<0.6U	<0.6U
	2-Methylphenol	µg/L	<0.38U	<0.37U	<0.37U	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	2-Nitroaniline	µg/L	<0.4U	<0.39U	<0.39UJ	<0.39U	<0.42U	<0.42U	<0.42U	<0.42U
	2-Nitrophenol	µg/L	<0.46U	<0.45U	<0.44U	<0.45U	<0.48U	<0.48U	<0.48U	<0.48U
	3,3-Dichlorobenzidine	µg/L	<0.38U	<0.37U	<0.37UJ	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	3-Nitroaniline	µg/L	<0.46U	<0.45UJ	<0.44U	<0.45U	<0.48U	<0.48U	<0.48U	<0.48U
	4,6-Dinitro-2-methylphenol	µg/L	<2.1U	<2U	<2U	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	4-Bromophenyl phenyl ether	µg/L	<0.43U	<0.42U	<0.42U	<0.42U	<0.45U	<0.45U	<0.45U	<0.45U
	4-Chloro-3-Methylphenol	µg/L	<0.43U	<0.42U	<0.42U	<0.42U	<0.45U	<0.45U	<0.45U	<0.45U
	4-Chloroaniline	µg/L	<0.56U	<0.55UJ	<0.55UJ	<0.55U	<0.59U	<0.59U	<0.59U	<0.59U
	4-Chlorophenyl phenyl ether	µg/L	<0.33U	<0.33U	<0.32U	<0.33U	<0.35U	<0.35U	<0.35U	<0.35U
	4-Methylphenol	µg/L	<0.34U	<0.33U	<0.33U	<0.34U	<0.36U	<0.36U	**0.57J**	**81**
	4-Nitroaniline	µg/L	<0.24U	<0.23U	<0.23UJ	<0.23U	<0.25U	<0.25U	<0.25U	<0.25U
	4-Nitrophenol	µg/L	<1.5U	<1.4U	<1.4U	<1.4U	<1.5U	<1.5U	<1.5U	<1.5U
	Acenaphthene	µg/L	<0.39U	<0.38U	<0.38U	<0.38U	<0.41U	<0.41U	<0.41U	<0.41U
	Acenaphthylene	µg/L	<0.36U	<0.35U	<0.35U	<0.36U	<0.38U	<0.38U	<0.38U	<0.38U
	Anthracene	µg/L	<0.27U	<0.26U	<0.26U	<0.26U	<0.28U	<0.28U	<0.28U	<0.28U
	Benz(a)anthracene	µg/L	<0.34U	<0.33U	<0.33U	<0.34U	<0.36U	<0.36U	<0.36U	<0.36U
	Benzo(a)pyrene	µg/L	<0.45U	<0.44U	<0.44UJ	<0.44U	<0.47U	<0.47U	<0.47U	<0.47U
	Benzo(b)fluoranthene	µg/L	<0.33U	<0.32U	<0.32UJ	<0.32U	<0.34U	<0.34U	<0.34U	<0.34U
	Benzo(g,h,i)perylene	µg/L	<0.33U	<0.33UJ	<0.32UJ	<0.33U	<0.35U	<0.35U	<0.35U	<0.35U
	Benzo(k)fluoranthene	µg/L	<0.7U	<0.68U	<0.68UJ	<0.68U	<0.73U	<0.73U	<0.73U	<0.73U
	Benzoic acid	µg/L	<96U	<93U	<93UJ	-	<100U	<100U	<100U	<100U
	Benzyl alcohol	µg/L	<0.42U	<2.2U	<6.5U	<6.6U	<0.44U	<0.44U	<0.44U	<0.44U
	Bis(2-chloroethoxy) methane	µg/L	<0.33U	<0.33U	<0.32U	<0.33U	<0.35U	<0.35U	<0.35U	<0.35U
	Bis(2-chloroethyl)ether	µg/L	<0.38U	<0.37U	<0.37U	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	Bis(2-chloroisopropyl) ether	µg/L	<0.5U	<0.48U	<0.48U	<0.49U	<0.52U	<0.52U	<0.52U	<0.52U
	bis(2-Ethylhexyl)Phthalate	µg/L	<1.7U	<1.7U	<1.7UJ	<1.7U	<1.8U	<1.8U	<1.8U	<1.8U
	Butyl benzyl phthalate	µg/L	<0.4U	**0.47J**	<9.3U	<0.39U	<0.42U	<0.42U	<0.46U	<0.42U
	Carbazole	µg/L	<0.29U	<0.28U	<0.28U	<0.28U	<0.3U	<0.3U	<0.3U	<0.3U
	Chrysene	µg/L	<0.32U	<0.31U	<0.31UJ	<0.31U	<0.33U	<0.33U	<0.33U	<0.33U
	Dibenz(a,h)anthracene	µg/L	<0.4U	<0.39U	<0.39UJ	<0.39U	<0.42U	<0.42U	<0.42U	<0.42U
	Dibenzofuran	µg/L	<0.49U	<0.47U	<0.47U	<0.48U	<0.51U	<0.51U	<0.51U	<0.51U
	Diethyl phthalate	µg/L	<0.21U	**0.25J**	<0.2U	<0.21U	<0.22U	<0.22U	<0.22U	<0.22U
	Dimethyl phthalate	µg/L	<0.34U	<0.33U	<0.33U	<0.34U	<0.36U	<0.36U	<0.36U	<0.36U
	Di-n-butyl phthalate	µg/L	<0.3U	<0.29U	<0.29U	<0.29U	<0.31U	<0.31U	<0.31U	<0.31U
	Di-n-octyl phthalate	µg/L	<0.45U	<0.44U	<0.44UJ	<0.44U	<0.47U	<0.47U	<0.47U	<0.47U
	Fluoranthene	µg/L	<0.38U	<0.37U	<0.37U	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	Fluorene	µg/L	<0.34U	<0.33U	<0.33U	<0.34U	<0.36U	<0.36U	<0.36U	<0.36U
	Hexachlorobenzene	µg/L	<0.49U	<0.47U	<0.47U	<0.48U	<0.51U	<0.51U	<0.51U	<0.51U
	Hexachlorobutadiene	µg/L	<0.65U	<0.63U	<0.63U	<0.64U	<0.68U	<0.68U	<0.68U	<0.68U
	Hexachlorocyclopentadiene	µg/L	<0.56U	<0.55U	<0.55U	<0.55U	<0.59U	<0.59U	<0.59U	<0.59U
	Hexachloroethane	µg/L	<0.56U	<0.55U	<0.55U	<0.55U	<0.59U	<0.59U	<0.59U	<0.59U
	Indeno(1,2,3-c,d)pyrene	µg/L	<0.45U	<0.44U	<0.44UJ	<0.44U	<0.47U	<0.47U	<0.47U	<0.47U
	Isophorone	µg/L	<0.41U	<0.4U	<0.4U	<0.4U	<0.43U	<0.43U	<0.43U	<0.43U
	Naphthalene	µg/L	**0.95J**	**2.5**	<0.7U	<0.71U	<0.76U	<0.76U	<0.76U	<0.76U
	Nitrobenzene	µg/L	<0.28U	<0.27U	<0.27U	<0.27U	<0.29U	<0.29U	<0.29U	<0.29U
	N-nitrosodi-n-propylamine	µg/L	<0.52U	<0.5U	<0.5U	<0.51U	<0.54U	<0.54U	<0.54U	<0.54U
	N-Nitrosodiphenylamine	µg/L	<0.49U	<0.47U	<0.47U	<0.48U	<0.51U	<0.51U	<0.51U	<0.51U
	Pentachlorophenol	µg/L	<2.1U	<2U	<2U	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	Phenanthrene	µg/L	<0.42U	<0.41U	<0.41U	<0.41U	<0.44U	<0.44U	<0.44U	<0.44U
	Phenol	µg/L	<0.37U	<0.36U	<0.36U	<0.37U	<0.39U	<0.39U	**1.3J**	**13**
	Pyrene	µg/L	<0.33U	<0.32U	<0.32U	<0.32U	<0.34U	<0.34U	<0.34U	<0.34U
	Total SVOCS	µg/L	**6.3**	**31**	**8.8**	**2**	**ND**	ND	**2.4**	**94**

TABLE 4
MW-10 GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

	Sample Location		MW-10								
	Sample Date		4/30/2008	7/24/2008	10/22/2008	4/27/2009	7/17/2009	10/29/2009	5/6/2010	7/22/2010	10/28/2010
	Parameters	Units									
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	<0.3U	<1U	<1U	<0.71U	<0.11U	**1.8J**	<1.8U	<1.8U	<1.8U
	1,2-Dichlorobenzene	µg/L	**5**	<0.9U	**0.6J**	**1.9**	<1.4U	**0.81J**	**3.6**	**0.54J**	<1.8U
	1,3-Dichlorobenzene	µg/L	**0.8J**	<1U	<1U	<1.1U	<0.13U	<0.47U	**0.53J**	<1.8U	<1.8U
	1,4-Dichlorobenzene	µg/L	<15U	<2U	**1J**	**3.5J**	**1.2J**	**1.7J**	**6.5**	**1.2J**	**0.95J**
	1,4-Dioxane	µg/L	**530**	**34**	**11**	**64J**	**14**	**5.8J**	**150**	**13**	**3.6J**
	2,4,5-Trichlorophenol	µg/L	<10U	<10U	<10U	<2.6U	<0.94U	<0.47U	<9.5U	<9.7U	<9.5U
	2,4,6-Trichlorophenol	µg/L	<3U	<3U	<3U	<2.9U	<0.95U	<0.6U	<2.9U	<3U	<3U
	2,4-Dichlorophenol	µg/L	<2U	<2U	<2U	<0.8U	<0.75U	<0.5U	<2.7U	<2.7U	<2.7U
	2,4-Dimethylphenol	µg/L	<2U	<2U	<2U	<1.6U	<0.92U	<0.49U	<2.7U	<2.7U	<2.7U
	2,4-Dinitrophenol	µg/L	<43U	<43U	<43U	<2U	<2.1U	<2.2U	<41U	<42U	<41U
	2,4-Dinitrotoluene	µg/L	<5U	<5U	<5U	<1.2U	<0.43U	<0.44U	<5.5U	<5.6U	<5.5U
	2,6-Dinitrotoluene	µg/L	<1U	<1U	<1U	<1.7U	<0.49U	<0.39U	<1.8U	<1.8U	<1.8U
	2-Chloronaphthalene	µg/L	<1U	<1U	<1U	<1.4U	<0.08U	<0.45U	<1.8U	<1.8U	<1.8U
	2-Chlorophenol	µg/L	<3U	<3U	<3U	<1U	<0.48U	<0.52U	<3.1U	<3.2U	<3.1U
	2-Methylnaphthalene	µg/L	**0.4J**	<10U	<10U	<1U	<0.078U	<0.59U	<9.5U	<9.7U	<9.5U
	2-Methylphenol	µg/L	<10U	<10U	<10U	<2.4U	<0.22U	<0.39U	<9.5U	<9.7U	<9.5U
	2-Nitroaniline	µg/L	<10U	<10U	<10U	<1.4U	<0.47U	<0.41U	<9.5U	<9.7U	<9.5U
	2-Nitrophenol	µg/L	<3U	<3U	<3U	<1.4U	<0.57U	<0.47U	<3.4U	<3.5U	<3.4U
	3,3-Dichlorobenzidine	µg/L	<17U	<17U	<17U	<1.5U	<0.36U	<0.39U	<16U	<17U	<16U
	3-Nitroaniline	µg/L	<10U	<10U	<10U	<1.8U	<1.5U	<0.47U	<9.5U	<9.7U	<9.5U
	4,6-Dinitro-2-methylphenol	µg/L	<24U	<24U	<24U	<1.8U	<2.2U	<2.2U	<23U	<23U	<23U
	4-Bromophenyl phenyl ether	µg/L	<1U	<1U	<1U	<1.7U	<0.86U	<0.44U	<1.7U	<1.7U	<1.7U
	4-Chloro-3-Methylphenol	µg/L	<3U	<3U	<3U	<1U	<0.57U	<0.44U	<2.8U	<2.9U	<2.9U
	4-Chloroaniline	µg/L	<2U	<2U	<2U	<0.94U	<0.31U	<0.58U	<1.9U	<1.9U	<1.9U
	4-Chlorophenyl phenyl ether	µg/L	<4U	<4U	<4U	<1.3U	<0.16U	<0.34U	<4.1U	<4.2U	<4.1U
	4-Methylphenol	µg/L	<10U	<10U	<10U	<0.55U	<0.55U	<0.35U	<9.5U	<9.7U	<9.5U
	4-Nitroaniline	µg/L	<10U	<10U	<10U	<2.7U	<0.43U	<0.25U	<9.5U	<9.7U	<9.5U
	4-Nitrophenol	µg/L	<3U	<3U	<3U	<2.8U	<1.4U	<1.5U	<2.8U	<2.9U	<2.9U
	Acenaphthene	µg/L	**0.4J**	<1U	<1U	<1.3U	<0.11U	<0.4U	<1.7U	<1.7U	<1.7U
	Acenaphthylene	µg/L	<3U	<3U	<3U	<1.1U	<0.045U	<0.37U	<3.3U	<3.4U	<3.3U
	Anthracene	µg/L	<1U	<1U	<1U	<1.4U	<0.053U	<0.27U	<1.7U	<1.7U	<1.7U
	Benz(a)anthracene	µg/L	<7U	<7U	<7U	<1.5U	<0.061U	<0.35U	<7.4U	<7.6U	<7.4U
	Benzo(a)pyrene	µg/L	<2U	<2U	<2U	<1.5U	<0.087U	<0.46U	<2.5U	<2.5U	<2.5U
	Benzo(b)fluoranthene	µg/L	<10U	<10U	<10U	<2.8U	<0.06U	<0.33U	<9.5U	<9.7U	<9.5U
	Benzo(g,h,i)perylene	µg/L	<4U	<4U	<4U	<2.8U	<0.074U	<0.34U	<3.9U	<4U	<3.9U
	Benzo(k)fluoranthene	µg/L	<2U	<0.4U	<2U	<1.3U	<0.063U	<0.72U	<2.4U	<2.4U	<2.4U
	Benzoic acid	µg/L	<95U	<96U	<100U	<47U	<95U	<98U	<95U	<97U	<95U
	Benzyl alcohol	µg/L	<7U	<7U	<7U	<4.7U	<0.28U	<0.43U	<6.6U	<6.8U	<6.7U
	Bis(2-chloroethoxy) methane	µg/L	<5U	<5U	<5U	<1.1U	<0.36U	<0.34U	<5U	<5.1U	<5U
	Bis(2-chloroethyl)ether	µg/L	<5U	<5U	<5U	<1.6U	<0.17U	<0.39U	<5.4U	<5.5U	<5.4U
	Bis(2-chloroisopropyl) ether	µg/L	<5U	<5U	<5U	<0.94U	<3.8U	<0.51U	<5.4U	<5.5U	<5.4U
	bis(2-Ethylhexyl)Phthalate	µg/L	<10U	<10U	<10U	<2.1U	<4.5U	<1.8U	<9.5U	<9.7U	<9.5UJ
	Butyl benzyl phthalate	µg/L	<10U	<10U	<10U	<1.5U	<1.7U	<0.41U	<9.5U	<9.7U	<9.5U
	Carbazole	µg/L	<10U	<10U	<10U	<0.084U	<0.085U	<0.29U	<9.5U	<9.7U	<9.5U
	Chrysene	µg/L	<2U	<0.7U	<2U	<1.6U	<0.26U	<0.32U	<2.4U	<2.4U	<2.4U
	Dibenz(a,h)anthracene	µg/L	<10U	<10U	<10U	<1.7U	<0.19U	<0.41U	<9.5U	<9.7U	<9.5U
	Dibenzofuran	µg/L	<10U	<10U	<10U	<1.5U	<1.5U	<0.5U	<9.5U	<9.7U	<9.5U
	Diethyl phthalate	µg/L	**0.4J**	<10U	<10U	<1.6U	<0.1U	<0.22U	<9.5U	<9.7U	<9.5U
	Dimethyl phthalate	µg/L	<10U	<10U	<10U	<1.1U	<0.29U	<0.35U	<9.5U	<9.7U	<9.5U
	Di-n-butyl phthalate	µg/L	<10U	<10U	<10U	<1.4U	<0.28U	<0.3U	<9.5U	<0.66U	<9.5U
	Di-n-octyl phthalate	µg/L	<10U	<10U	<3U	<1.7U	<0.23U	<0.46U	<9.5U	<9.7U	<9.5U
	Fluoranthene	µg/L	<2U	<2U	<2U	<1.9U	<0.093U	<0.39U	<2.1U	<2.1U	<2.1U
	Fluorene	µg/L	<1U	<1U	<1U	<1.7U	<0.07U	<0.35U	<1.8U	<1.8U	<1.8U
	Hexachlorobenzene	µg/L	<1U	<1U	<1U	<2.1U	<0.42U	<0.5U	<2.1U	<2.1U	<2.1U
	Hexachlorobutadiene	µg/L	<2U	<2U	<3U	<1.1U	<2.5U	<0.67U	<2.5U	<2.5U	<2.5U
	Hexachlorocyclopentadiene	µg/L	<10U	<10U	<10U	<1.8U	<2.4U	<0.58U	<9.5U	<9.7U	<9.5U
	Hexachloroethane	µg/L	<3U	<3U	<5U	<0.8U	<2.7U	<0.58U	<2.7U	<2.7U	<2.7U
	Indeno(1,2,3-c,d)pyrene	µg/L	<4U	<4U	<4U	<3U	<0.15U	<0.46U	<4.5U	<4.7U	<4.6U
	Isophorone	µg/L	<2U	<2U	<2U	<1.1U	<0.3U	<0.42U	<2.1U	<2.1U	<2.1U
	Naphthalene	µg/L	**9**	<1U	<1U	<1.2U	<0.11U	<0.75U	**2**	<1.6U	<1.5U
	Nitrobenzene	µg/L	<2U	<2U	<2U	<1.9U	<0.51U	<0.28U	<1.9U	<1.9U	<1.9U
	N-nitrosodi-n-propylamine	µg/L	<10U	<10U	<10U	<0.94U	<0.43U	<0.53U	<4.7U	<4.9U	<4.8U
	N-Nitrosodiphenylamine	µg/L	<1U	<1U	<1U	<1.2U	<0.25U	<0.5U	<1.8U	<1.8U	<1.8U
	Pentachlorophenol	µg/L	<5U	<5U	<5U	<3.5U	<4.9U	<2.2U	<4.9U	<5U	<4.9U
	Phenanthrene	µg/L	<5U	<5U	<5U	<1.3U	<0.11U	<0.43U	<4.7U	<4.9U	<4.8U
	Phenol	µg/L	<2U	<2U	<2U	<2.4U	<0.42U	<0.38U	<2.4U	<2.4U	<2.4U
	Pyrene	µg/L	<1U	<1U	<1U	<1.8U	<0.065U	<0.33U	<1.8U	<1.8U	<1.8U
	Total SVOCS	µg/L	**550**	**34**	**13**	**70**	**16**	**11**	**170**	**15**	**4.6**

TABLE 4
MW-10 GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

		Sample Location	MW-10							
		Sample Date	4/17/2013	4/21/2014	4/22/2015	5/16/2016	4/24/2017	5/7/2018	4/22/2019	4/29/2020
	Parameters	Units								
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	<0.42U	**0.83J**	**4**	<0.41U	**0.68J**	<0.44U	**0.86J**	<8.8U
	1,2-Dichlorobenzene	µg/L	**0.58J**	**1.7J**	**1.5J**	**0.43J**	**1.5J**	**0.63J**	**1.8J**	<8.0U
	1,3-Dichlorobenzene	µg/L	**1.2J**	**0.78J**	**0.83J**	<0.44U	**0.51J**	<0.48U	<0.48U	<9.6U
	1,4-Dichlorobenzene	µg/L	<0.44U	**6.4**	**4.2**	**0.74J**	**3.7J**	**0.98J**	**3.1J**	<9.2U
	1,4-Dioxane	µg/L	<1.1U	**26**	**39**	**22**	**110**	**220**	**590**	**230**
	2,4,5-Trichlorophenol	µg/L	<0.46U	<0.45U	<0.44U	<0.44U	<0.48U	<0.48U	<0.48U	<9.6U
	2,4,6-Trichlorophenol	µg/L	<0.59U	<0.58U	<0.56U	<0.56U	<0.61U	<0.61U	<0.61U	<12U
	2,4-Dichlorophenol	µg/L	<0.49U	<0.48U	<0.46U	<0.47U	<0.51U	<0.51U	<0.51U	<10U
	2,4-Dimethylphenol	µg/L	<0.48U	**1.8J**	<0.46U	<0.46U	<0.5U	<0.5U	<0.5U	<10U
	2,4-Dinitrophenol	µg/L	<2.1U	<2.1U	<2U	<2.1U	<2.2U	<2.2U	<2.2U	<44U
	2,4-Dinitrotoluene	µg/L	<0.43U	<0.42U	<0.41U	<0.41U	<0.45U	<0.45U	<0.45U	<8.9U
	2,6-Dinitrotoluene	µg/L	<0.38U	<0.38U	<0.36U	<0.37U	<0.4U	<0.4U	<0.4U	<8U
	2-Chloronaphthalene	µg/L	<0.44U	<0.43U	<0.42U	<0.42U	<0.46U	<0.46U	<0.46U	<9.2U
	2-Chlorophenol	µg/L	<0.51U	<0.5U	<0.48U	<0.49U	<0.53U	<0.53U	<0.53U	<11U
	2-Methylnaphthalene	µg/L	<0.58U	<0.57U	<0.55U	<0.55U	<0.6U	<0.6U	<0.6U	<12U
	2-Methylphenol	µg/L	<0.38U	**0.71J**	<0.36U	<0.37U	<0.4U	<0.4U	<0.4U	<8U
	2-Nitroaniline	µg/L	<0.4U	<0.4U	<0.38U	<0.39U	<0.42U	<0.42U	<0.42U	<8.4U
	2-Nitrophenol	µg/L	<0.46U	<0.45U	<0.44U	<0.44U	<0.48U	<0.48U	<0.48U	<9.6U
	3,3-Dichlorobenzidine	µg/L	<0.38U	<0.38U	<0.36UJ	<0.37U	<0.4U	<0.4U	<0.4U	<8U
	3-Nitroaniline	µg/L	<0.46U	<0.45UJ	<0.44U	<0.44U	<0.48U	<0.48U	<0.48U	<9.6U
	4,6-Dinitro-2-methylphenol	µg/L	<2.1U	<2.1U	<2U	<2U	<2.2U	<2.2U	<2.2U	<44U
	4-Bromophenyl phenyl ether	µg/L	<0.43U	<0.42U	<0.41U	<0.42U	<0.45U	<0.45U	<0.45U	<9U
	4-Chloro-3-Methylphenol	µg/L	<0.43U	<0.42U	<0.41U	<0.42U	<0.45U	<0.45U	<0.45U	<9U
	4-Chloroaniline	µg/L	<0.57U	<0.56UJ	<0.54U	<0.54U	<0.59U	<0.59U	<0.59U	<12U
	4-Chlorophenyl phenyl ether	µg/L	<0.34U	<0.33U	<0.32U	<0.32U	<0.35U	<0.35U	<0.35U	<7U
	4-Methylphenol	µg/L	<0.35U	**0.5J**	<0.33U	<0.33U	<0.36U	<0.36U	<0.36U	<7.2U
	4-Nitroaniline	µg/L	<0.24U	<0.24U	<0.23U	<0.23U	<0.25U	<0.25U	<0.25U	<5U
	4-Nitrophenol	µg/L	<1.5U	<1.4U	<1.4U	<1.4U	<1.5U	<1.5U	<1.5U	<30U
	Acenaphthene	µg/L	<0.39U	<0.39U	<0.37U	<0.38U	<0.41U	<0.41U	<0.41U	<8.2U
	Acenaphthylene	µg/L	<0.37U	<0.36U	<0.35U	<0.35U	<0.38U	<0.38U	<0.38U	<7.6U
	Anthracene	µg/L	<0.27U	<0.26U	<0.26U	<0.26U	<0.28U	<0.28U	<0.28U	<5.6U
	Benz(a)anthracene	µg/L	<0.35U	<0.34U	<0.33U	<0.33U	<0.36U	<0.36U	<0.36U	<7.2U
	Benzo(a)pyrene	µg/L	<0.45U	<0.44U	<0.43U	<0.43U	<0.47U	<0.47U	<0.47U	<9.4U
	Benzo(b)fluoranthene	µg/L	<0.33U	<0.32U	<0.31U	<0.31U	<0.34U	<0.34U	<0.34U	<6.8U
	Benzo(g,h,i)perylene	µg/L	<0.34U	<0.33UJ	<0.32U	<0.32U	<0.35U	<0.35U	<0.35U	<7U
	Benzo(k)fluoranthene	µg/L	<0.7U	<0.69U	<0.67U	<0.67U	<0.73U	<0.73U	<0.73U	<15U
	Benzoic acid	µg/L	<96U	<94U	<91U	-	<100U	<100U	<100U	<2000U
	Benzyl alcohol	µg/L	<0.42U	<2.4U	<6.4U	<0.41U	<0.44U	<0.44U	<0.44U	<8.8U
	Bis(2-chloroethoxy) methane	µg/L	<0.34U	<0.33U	<0.32U	<0.32U	<0.35U	<0.35U	<0.35U	<7U
	Bis(2-chloroethyl)ether	µg/L	<0.38U	<0.38U	<0.36U	<0.37U	<0.4U	<0.4U	<0.4U	<8U
	Bis(2-chloroisopropyl) ether	µg/L	<0.5U	<0.49U	<0.47U	<0.48U	<0.52U	<0.52U	<0.52U	<10U
	bis(2-Ethylhexyl)Phthalate	µg/L	<1.7U	<1.7U	<1.6U	<1.7U	<1.8U	<1.8U	<1.8U	<36U
	Butyl benzyl phthalate	µg/L	<0.4U	<0.4U	<9.1U	<0.39U	<0.42U	<0.43U	<0.46U	<8.4U
	Carbazole	µg/L	<0.29U	<0.28U	<0.27U	<0.28U	<0.3U	<0.3U	<0.3U	<6U
	Chrysene	µg/L	<0.32U	<0.31U	<0.3U	<0.3U	<0.33U	<0.33U	<0.33U	<6.6U
	Dibenz(a,h)anthracene	µg/L	<0.4U	<0.4U	<0.38U	<0.39U	<0.42U	<0.42U	<0.42U	<8.4U
	Dibenzofuran	µg/L	<0.49U	<0.48U	<0.46U	<0.47U	<0.51U	<0.51U	<0.51U	<10U
	Diethyl phthalate	µg/L	<0.21U	**0.24J**	<0.2U	<0.2U	<0.22U	<0.22U	<0.22U	<4.4U
	Dimethyl phthalate	µg/L	<0.35U	<0.34U	<0.33U	<0.33U	<0.36U	<0.36U	<0.36U	<7.2U
	Di-n-butyl phthalate	µg/L	<0.3U	<0.29U	**0.29J**	<0.29U	<0.31U	<0.31U	<0.31U	<6.2U
	Di-n-octyl phthalate	µg/L	<0.45U	<0.44U	<0.43U	<0.43U	<0.47U	<0.47U	<0.47U	<9.4U
	Fluoranthene	µg/L	<0.38U	<0.38U	<0.36U	<0.37U	<0.4U	<0.4U	<0.4U	<8U
	Fluorene	µg/L	<0.35U	<0.34U	<0.33U	<0.33U	<0.36U	<0.36U	<0.36U	<7.2U
	Hexachlorobenzene	µg/L	<0.49U	<0.48U	<0.46U	<0.47U	<0.51U	<0.51U	<0.51U	<10U
	Hexachlorobutadiene	µg/L	<0.65U	<0.64U	<0.62U	<0.63U	<0.68U	<0.68U	<0.68U	<14U
	Hexachlorocyclopentadiene	µg/L	<0.57U	<0.56U	<0.54U	<0.54U	<0.59U	<0.59U	<0.59U	<12U
	Hexachloroethane	µg/L	<0.57U	<0.56U	<0.54U	<0.54U	<0.59U	<0.59U	<0.59U	<12U
	Indeno(1,2,3-c,d)pyrene	µg/L	<0.45U	<0.44U	<0.43U	<0.43U	<0.47U	<0.47U	<0.47U	<9.4U
	Isophorone	µg/L	<0.41U	<0.41U	<0.39U	<0.4U	<0.43U	<0.43U	<0.43U	<8.6U
	Naphthalene	µg/L	<0.73U	<0.72U	<0.69U	<0.7U	<0.76U	<0.76U	<0.76U	<15U
	Nitrobenzene	µg/L	<0.28U	<0.27U	<0.26U	<0.27U	<0.29U	<0.29U	<0.29U	<5.8U
	N-nitrosodi-n-propylamine	µg/L	<0.52U	<0.51U	<0.49U	<0.5U	<0.54U	<0.54U	<0.54U	<11U
	N-Nitrosodiphenylamine	µg/L	<0.49U	<0.48U	<0.46U	<0.47U	<0.51U	<0.51U	<0.51U	<10U
	Pentachlorophenol	µg/L	<2.1U	<2.1U	<2U	<2U	<2.2U	<2.2U	<2.2U	<44U
	Phenanthrene	µg/L	<0.42U	<0.42U	<0.4U	<0.41U	<0.44U	<0.44U	<0.44U	<8.8U
	Phenol	µg/L	<0.37U	<0.37U	<0.36U	<0.36U	<0.39U	<0.39U	<0.39U	<7.8U
	Pyrene	µg/L	<0.33U	<0.32U	<0.31U	<0.31U	<0.34U	<0.34U	<0.34U	<6.8U
	Total SVOCS	µg/L	**1.8**	**39**	**50**	**24**	**120**	**230**	**600**	**230**

TABLE 4
MW-11 GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

		Sample Location	MW-11								
		Sample Date	4/30/2008	7/24/2008	10/22/2008	4/27/2009	7/17/2009	10/29/2009	5/6/2010	7/22/2010	10/28/2010
	Parameters	Units									
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	<0.8U	<0.9U	**0.7J**	**1.6J**	<0.11U	<0.43U	<1.8U	<1.9U	<1.8U
	1,2-Dichlorobenzene	µg/L	<1U	<1U	<1U	<1.4U	<1.4U	<0.39U	<1.8U	<1.9U	<1.8U
	1,3-Dichlorobenzene	µg/L	<1U	<1U	<1U	<1.1U	<0.13U	<0.47U	<1.8U	<1.9U	<1.8U
	1,4-Dichlorobenzene	µg/L	<0.5U	<0.4U	**0.4J**	<1.3U	<0.15U	<0.45U	<4.3U	<4.3U	<4.2U
	1,4-Dioxane	µg/L	<10U	<10U	<10U	<0.59U	<0.6U	<1.1U	<9.7U	<9.9U	<9.5U
	2,4,5-Trichlorophenol	µg/L	<10U	<10U	<10U	<2.6U	<0.94U	<0.47U	<9.7U	<9.9U	<9.5U
	2,4,6-Trichlorophenol	µg/L	<3U	<3U	<3U	<2.9U	<0.95U	<0.59U	<3U	<3.1U	<3U
	2,4-Dichlorophenol	µg/L	<2U	<2U	<2U	<0.8U	<0.75U	<0.5U	<2.7U	<2.8U	<2.7U
	2,4-Dimethylphenol	µg/L	<2U	<2U	<2U	<1.6U	<0.92U	<0.49U	<2.7U	<2.8U	<2.7U
	2,4-Dinitrophenol	µg/L	<43U	<43U	<43U	<2U	<2.1U	<2.2U	<42U	<42U	<41U
	2,4-Dinitrotoluene	µg/L	<5U	<5U	<5U	<1.2U	<0.43U	<0.43U	<5.6U	<5.7U	<5.5U
	2,6-Dinitrotoluene	µg/L	<1U	<1U	<1U	<1.7U	<0.49U	<0.39U	<1.8U	<1.9U	<1.8U
	2-Chloronaphthalene	µg/L	<1U	<1U	<1U	<1.4U	<0.08U	<0.45U	<1.8U	<1.9U	<1.8U
	2-Chlorophenol	µg/L	<3U	<3U	<3U	<1U	<0.48U	<0.51U	<3.2U	<3.3U	<3.1U
	2-Methylnaphthalene	µg/L	**0.3J**	<10U	<10U	<1U	<0.078U	<0.58U	<9.7U	<9.9U	<9.5U
	2-Methylphenol	µg/L	<10U	<10U	<10U	<2.4U	<0.22U	<0.39U	<9.7U	<9.9U	<9.5U
	2-Nitroaniline	µg/L	<10U	<10U	<10U	<1.4U	<0.47U	<0.41U	<9.7U	<9.9U	<9.5U
	2-Nitrophenol	µg/L	<3U	<3U	<3U	<1.4U	<0.57U	<0.47U	<3.5U	<3.5U	<3.4U
	3,3-Dichlorobenzidine	µg/L	<17U	<17U	<17U	<1.5U	<0.36U	<0.39U	<17U	<17U	<16U
	3-Nitroaniline	µg/L	<10U	<10U	<10U	<1.8U	<1.5U	<0.47U	<9.7U	<9.9U	<9.5U
	4,6-Dinitro-2-methylphenol	µg/L	<24U	<24U	<24U	<1.8U	<2.2U	<2.1U	<23U	<24U	<23U
	4-Bromophenyl phenyl ether	µg/L	<1U	<1U	<1U	<1.7U	<0.86U	<0.44U	<1.7U	<1.8U	<1.7U
	4-Chloro-3-Methylphenol	µg/L	<3U	<3U	<3U	<1U	<0.57U	<0.44U	<2.9U	<3U	<2.9U
	4-Chloroaniline	µg/L	<2U	<2U	<2U	<0.94U	<0.31U	<0.57U	<1.9U	<2U	<1.9U
	4-Chlorophenyl phenyl ether	µg/L	<4U	<4U	<4U	<1.3U	<0.16U	<0.34U	<4.2U	<4.2U	<4.1U
	4-Methylphenol	µg/L	<10U	<10U	<10U	<0.55U	<0.55U	<0.35U	<9.7U	<9.9U	<9.5U
	4-Nitroaniline	µg/L	<10U	<10U	<10U	<2.7U	<0.43U	<0.24U	<9.7U	<9.9U	<9.5U
	4-Nitrophenol	µg/L	<3U	<3U	<3U	<2.8U	<1.4U	<1.5U	<2.9U	<3U	<2.9U
	Acenaphthene	µg/L	<1U	<1U	<1U	<1.3U	<0.11U	<0.4U	<1.7U	<1.8U	<1.7U
	Acenaphthylene	µg/L	<3U	<3U	<3U	<1.1U	<0.045U	<0.37U	<3.4U	<3.4U	<3.3U
	Anthracene	µg/L	<1U	<1U	<1U	<1.4U	<0.053U	<0.27U	<1.7U	<1.8U	<1.7U
	Benz(a)anthracene	µg/L	<7U	<7U	<7U	<1.5U	<0.061U	<0.35U	<7.6U	<7.7U	<7.4U
	Benzo(a)pyrene	µg/L	<2U	<2U	<2U	<1.5U	<0.087U	<0.46U	<2.5U	<2.6U	<2.5U
	Benzo(b)fluoranthene	µg/L	<10U	<10U	<10U	<2.8U	<0.06U	<0.33U	<9.7U	<9.9U	<9.5U
	Benzo(g,h,i)perylene	µg/L	<4U	<4U	<4U	<2.8U	<0.074U	<0.34U	<4U	<4U	<3.9U
	Benzo(k)fluoranthene	µg/L	<2U	<0.4U	<2U	<1.3U	<0.063U	<0.71U	<2.4U	<2.5U	<2.4U
	Benzoic acid	µg/L	<95U	<100U	<100U	<47U	<95U	<97U	<97U	<99U	<95U
	Benzyl alcohol	µg/L	<7U	<7U	<7U	<4.7U	<0.28U	<0.43U	<6.8U	<6.9U	<6.7U
	Bis(2-chloroethoxy) methane	µg/L	<5U	<5U	<5U	<1.1U	<0.36U	<0.34U	<5.1U	<5.2U	<5U
	Bis(2-chloroethyl)ether	µg/L	<5U	<5U	<5U	<1.6U	<0.17U	<0.39U	<5.5U	<5.6U	<5.4U
	Bis(2-chloroisopropyl) ether	µg/L	<5U	<5U	<5U	<0.94U	<3.8U	<0.5U	<5.5U	<5.6U	<5.4U
	bis(2-Ethylhexyl)Phthalate	µg/L	<10U	<10U	<10U	<2.1U	<4.5U	<1.7U	<9.7U	<9.9U	**4J**
	Butyl benzyl phthalate	µg/L	<10U	<10U	<10U	<1.5U	<1.7U	<0.41U	<9.7U	<9.9U	<9.5U
	Carbazole	µg/L	<10U	<10U	<10U	<0.084U	<0.085U	<0.29U	<9.7U	<9.9U	<9.5U
	Chrysene	µg/L	<2U	<0.7U	<2U	<1.6U	<0.26U	<0.32U	<2.4U	<2.5U	<2.4U
	Dibenz(a,h)anthracene	µg/L	<10U	<10U	<10U	<1.7U	<0.19U	<0.41U	<9.7U	<9.9U	<9.5U
	Dibenzofuran	µg/L	<10U	<10U	<10U	<1.5U	<1.5U	<0.5U	<9.7U	<9.9U	<9.5U
	Diethyl phthalate	µg/L	<10U	<10U	<10U	<1.6U	<0.1U	<0.21U	<9.7U	<9.9U	<9.5U
	Dimethyl phthalate	µg/L	<10U	<10U	<10U	<1.1U	<0.29U	<0.35U	<9.7U	<9.9U	<9.5U
	Di-n-butyl phthalate	µg/L	<10U	<10U	<10U	<1.4U	<0.28U	<0.3U	<9.7U	<0.39U	<9.5U
	Di-n-octyl phthalate	µg/L	<10U	<10U	<10U	<1.7U	<0.23U	<0.46U	<9.7U	<9.9U	<9.5U
	Fluoranthene	µg/L	<2U	<2U	<2U	<1.9U	<0.093U	<0.39U	<2.1U	<2.2U	<2.1U
	Fluorene	µg/L	<1U	<1U	<1U	<1.7U	<0.07U	<0.35U	<1.8U	<1.9U	<1.8U
	Hexachlorobenzene	µg/L	<1U	<1U	<1U	<2.1U	<0.42U	<0.5U	<2.1U	<2.2U	<2.1U
	Hexachlorobutadiene	µg/L	<2U	<3U	<3U	<1.1U	<2.5U	<0.66U	<2.5U	<2.6U	<2.5U
	Hexachlorocyclopentadiene	µg/L	<10U	<10U	<10U	<1.8U	<2.4U	<0.57U	<9.7U	<9.9U	<9.5U
	Hexachloroethane	µg/L	<3U	<3U	<5U	<0.8U	<2.7U	<0.57U	<2.7U	<2.8U	<2.7U
	Indeno(1,2,3-c,d)pyrene	µg/L	<4U	<4U	<4U	<3U	<0.15U	<0.46U	<4.7U	<4.7U	<4.6U
	Isophorone	µg/L	<2U	<2U	<2U	<1.1U	<0.3U	<0.42U	<2.1U	<2.2U	<2.1U
	Naphthalene	µg/L	<0.5U	<0.2U	<0.4U	<1.2U	<0.11U	<0.74U	<1.6U	<1.6U	<1.5U
	Nitrobenzene	µg/L	<2U	<2U	<2U	<1.9U	<0.51U	<0.28U	<1.9U	<2U	<1.9U
	N-nitrosodi-n-propylamine	µg/L	<10U	<10U	<10U	<0.94U	<0.43U	<0.52U	<4.9U	<4.9U	<4.8U
	N-Nitrosodiphenylamine	µg/L	<1U	<1U	<1U	<1.2U	<0.25U	<0.5U	<1.8U	<1.9U	<1.8U
	Pentachlorophenol	µg/L	<5U	<5U	<5U	<3.5U	<4.9U	<2.1U	<5U	<5.1U	<4.9U
	Phenanthrene	µg/L	<5U	<5U	<5U	<1.3U	<0.11U	<0.43U	<4.9U	<4.9U	<4.8U
	Phenol	µg/L	<2U	<2U	<2U	<2.4U	<0.42U	<0.38U	<2.4U	<2.5U	<2.4U
	Pyrene	µg/L	<1U	<1U	<1U	<1.8U	<0.065U	<0.33U	<1.8U	<1.9U	<1.8U
	Total SVOCS	µg/L	**0.3**	ND	**1.1**	**1.6**	ND	ND	ND	ND	**4**

TABLE 4
MW-11 GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

	Sample Location		MW-11							
	Sample Date		4/17/2013	4/21/2014	4/22/2015	5/16/2016	4/24/2017	5/7/2018	4/22/2019	4/29/2020
	Parameters	Units								
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	<0.42U	<0.42U	<0.41U	<0.4U	<0.44U	<0.44U	<0.44U	<0.44U
	1,2-Dichlorobenzene	µg/L	<0.38U	<0.38U	<0.37U	<0.37U	<0.4U	<0.4U	<0.4U	<0.4U
	1,3-Dichlorobenzene	µg/L	<0.46U	<0.46U	<0.44U	<0.44U	<0.48U	<0.48U	<0.48U	<0.48U
	1,4-Dichlorobenzene	µg/L	<0.44U	<0.44U	<0.43U	<0.42U	<0.46U	<0.46U	<0.46U	<0.46U
	1,4-Dioxane	µg/L	<1U	<1U	<1U	<1U	<1.1U	<1.1U	<1.1U	<1.1U
	2,4,5-Trichlorophenol	µg/L	<0.46U	<0.46U	<0.44U	<0.44U	<0.48U	<0.48U	<0.48U	<0.48U
	2,4,6-Trichlorophenol	µg/L	<0.58U	<0.58U	<0.56U	<0.56U	<0.61U	<0.61U	<0.61U	<0.61U
	2,4-Dichlorophenol	µg/L	<0.48U	<0.48U	<0.47U	<0.47U	<0.51U	<0.51U	<0.51U	<0.51U
	2,4-Dimethylphenol	µg/L	<0.47U	<0.47U	<0.46U	<0.46U	<0.5U	<0.5U	<0.5U	<0.5U
	2,4-Dinitrophenol	µg/L	<2.1U	<2.1U	<2.1U	<2U	<2.2U	<2.2U	<2.2U	<2.2U
	2,4-Dinitrotoluene	µg/L	<0.42U	<0.42U	<0.41U	<0.41U	<0.45U	<0.45U	<0.45U	<0.45U
	2,6-Dinitrotoluene	µg/L	<0.38U	<0.38U	<0.37U	<0.37U	<0.4U	<0.4U	<0.4U	<0.4U
	2-Chloronaphthalene	µg/L	<0.44U	<0.44U	<0.43U	<0.42U	<0.46U	<0.46U	<0.46U	<0.46U
	2-Chlorophenol	µg/L	<0.5U	<0.5U	<0.49U	<0.49U	<0.53U	<0.53U	<0.53U	<0.53U
	2-Methylnaphthalene	µg/L	<0.57U	<0.57U	<0.56U	<0.55U	<0.6U	<0.6U	<0.6U	<0.6U
	2-Methylphenol	µg/L	<0.38U	<0.38U	<0.37U	<0.37U	<0.4U	<0.4U	<0.4U	<0.4U
	2-Nitroaniline	µg/L	<0.4U	<0.4U	<0.39U	<0.39U	<0.42U	<0.42U	<0.42U	<0.42U
	2-Nitrophenol	µg/L	<0.46U	<0.46U	<0.44U	<0.44U	<0.48U	<0.48U	<0.48U	<0.48U
	3,3-Dichlorobenzidine	µg/L	<0.38U	<0.38U	<0.37UJ	<0.37U	<0.4U	<0.4U	<0.4U	<0.4U
	3-Nitroaniline	µg/L	<0.46U	<0.46UJ	<0.44U	<0.44U	<0.48U	<0.48U	<0.48U	<0.48U
	4,6-Dinitro-2-methylphenol	µg/L	<2.1U	<2.1U	<2U	<2U	<2.2U	<2.2U	<2.2U	<2.2U
	4-Bromophenyl phenyl ether	µg/L	<0.43U	<0.43U	<0.42U	<0.41U	<0.45U	<0.45U	<0.45U	<0.45U
	4-Chloro-3-Methylphenol	µg/L	<0.43U	<0.43U	<0.42U	<0.41U	<0.45U	<0.45U	<0.45U	<0.45U
	4-Chloroaniline	µg/L	<0.56U	<0.56UJ	<0.55U	<0.54U	<0.59U	<0.59U	<0.59U	<0.59U
	4-Chlorophenyl phenyl ether	µg/L	<0.33U	<0.33U	<0.32U	<0.32U	<0.35U	<0.35U	<0.35U	<0.35U
	4-Methylphenol	µg/L	<0.34U	<0.34U	<0.33U	<0.33U	<0.36U	<0.36U	<0.36U	<0.36U
	4-Nitroaniline	µg/L	<0.24U	<0.24U	<0.23U	<0.23U	<0.25U	<0.25U	<0.25U	<0.25U
	4-Nitrophenol	µg/L	<1.4U	<1.4U	<1.4U	<1.4U	<1.5U	<1.5U	<1.5U	<1.5U
	Acenaphthene	µg/L	<0.39U	<0.39U	<0.38U	<0.38U	<0.41U	<0.41U	<0.41U	<0.41U
	Acenaphthylene	µg/L	<0.36U	<0.36U	<0.35U	<0.35U	<0.38U	<0.38U	<0.38U	<0.38U
	Anthracene	µg/L	<0.27U	<0.27U	<0.26U	<0.26U	<0.28U	<0.28U	<0.28U	<0.28U
	Benz(a)anthracene	µg/L	<0.34U	<0.34U	<0.33U	<0.33U	<0.36U	<0.36U	<0.36U	<0.36U
	Benzo(a)pyrene	µg/L	<0.45U	<0.45U	<0.44U	<0.43U	<0.47U	<0.47U	<0.47U	<0.47U
	Benzo(b)fluoranthene	µg/L	<0.32U	<0.32U	<0.31U	<0.31U	<0.34U	<0.34U	<0.34U	<0.34U
	Benzo(g,h,i)perylene	µg/L	<0.33U	<0.33UJ	<0.32U	<0.32U	<0.35U	<0.35U	<0.35U	<0.35U
	Benzo(k)fluoranthene	µg/L	<0.69U	<0.69U	<0.68U	<0.67U	<0.73U	<0.73U	<0.73U	<0.73U
	Benzoic acid	µg/L	<95U	<95U	<93U	-	-	<100U	<100U	<100U
	Benzyl alcohol	µg/L	<0.42U	<2.8U	<6.5U	<0.4U	<0.44U	<0.44U	<0.44U	<0.44U
	Bis(2-chloroethoxy) methane	µg/L	<0.33U	<0.33U	<0.32U	<0.32U	<0.35U	<0.35U	<0.35U	<0.35U
	Bis(2-chloroethyl)ether	µg/L	<0.38U	<0.38U	<0.37U	<0.37U	<0.4U	<0.4U	<0.4U	<0.4U
	Bis(2-chloroisopropyl) ether	µg/L	<0.49U	<0.49U	<0.48U	<0.48U	<0.52U	<0.52U	<0.52U	<0.52U
	bis(2-Ethylhexyl)Phthalate	µg/L	<1.7U	<1.7U	<1.7U	<1.7U	<1.8U	**33**	<1.8U	<1.8U
	Butyl benzyl phthalate	µg/L	<0.4U	**1.3J**	<9.3U	<0.39U	<0.42U	<0.49U	<0.42U	<0.42U
	Carbazole	µg/L	<0.28U	<0.28U	<0.28U	<0.28U	<0.3U	<0.3U	<0.3U	<0.3U
	Chrysene	µg/L	<0.31U	<0.31U	<0.31U	<0.3U	<0.33U	<0.33U	<0.33U	<0.33U
	Dibenz(a,h)anthracene	µg/L	<0.4U	<0.4U	<0.39U	<0.39U	<0.42U	<0.42U	<0.42U	<0.42U
	Dibenzofuran	µg/L	<0.48U	<0.48U	<0.47U	<0.47U	<0.51U	<0.51U	<0.51U	<0.51U
	Diethyl phthalate	µg/L	<0.21U	<0.21U	<0.2U	<0.2U	<0.22U	<0.22U	<0.22U	<0.22U
	Dimethyl phthalate	µg/L	<0.34U	<0.34U	<0.33U	<0.33U	<0.36U	<0.36U	<0.36U	<0.36U
	Di-n-butyl phthalate	µg/L	<0.29U	<0.29U	<0.29U	<0.28U	<0.31U	<0.31U	<0.31U	<0.31U
	Di-n-octyl phthalate	µg/L	<0.45U	<0.45U	<0.44U	<0.43U	<0.47U	<0.47U	<0.47U	<0.47U
	Fluoranthene	µg/L	<0.38U	<0.38U	<0.37U	<0.37U	<0.4U	<0.4U	<0.4U	<0.4U
	Fluorene	µg/L	<0.34U	<0.34U	<0.33U	<0.33U	<0.36U	<0.36U	<0.36U	<0.36U
	Hexachlorobenzene	µg/L	<0.48U	<0.48U	<0.47U	<0.47U	<0.51U	<0.51U	<0.51U	<0.51U
	Hexachlorobutadiene	µg/L	<0.65U	<0.65U	<0.63U	<0.62U	<0.68U	<0.68U	<0.68U	<0.68U
	Hexachlorocyclopentadiene	µg/L	<0.56U	<0.56U	<0.55U	<0.54U	<0.59U	<0.59U	<0.59U	<0.59U
	Hexachloroethane	µg/L	<0.56U	<0.56U	<0.55U	<0.54U	<0.59U	<0.59U	<0.59U	<0.59U
	Indeno(1,2,3-c,d)pyrene	µg/L	<0.45U	<0.45U	<0.44U	<0.43U	<0.47U	<0.47U	<0.47U	<0.47U
	Isophorone	µg/L	<0.41U	<0.41U	<0.4U	<0.39U	<0.43U	<0.43U	<0.43U	<0.43U
	Naphthalene	µg/L	<0.72U	<0.72U	<0.7U	<0.7U	<0.76U	<0.76U	<0.76U	<0.76U
	Nitrobenzene	µg/L	<0.28U	<0.28U	<0.27U	<0.27U	<0.29U	<0.29U	<0.29U	<0.29U
	N-nitrosodi-n-propylamine	µg/L	<0.51U	<0.51U	<0.5U	<0.5U	<0.54U	<0.54U	<0.54U	<0.54U
	N-Nitrosodiphenylamine	µg/L	<0.48U	<0.48U	<0.47U	<0.47U	<0.51U	<0.51U	<0.51U	<0.51U
	Pentachlorophenol	µg/L	<2.1U	<2.1U	<2U	<2U	<2.2U	<2.2U	<2.2U	<2.2U
	Phenanthrene	µg/L	<0.42U	<0.42U	<0.41U	<0.4U	<0.44U	<0.44U	<0.44U	<0.44U
	Phenol	µg/L	<0.37U	<0.37U	<0.36U	<0.36U	<0.39U	<0.39U	<0.39U	<0.39U
	Pyrene	µg/L	<0.32U	<0.32U	<0.31U	<0.31U	<0.34U	<0.34U	<0.34U	<0.34U
	Total SVOCS	µg/L	ND	**1.3**	ND	ND	ND	**33**	ND	ND

TABLE 4
MW-20A GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

		Sample Location	MW-20A					
		Sample Date	12/27/2011	4/30/2012	11/20/2012	4/17/2013	4/21/2014	4/22/2015
	Parameters	Units						
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	**1.2J**	<1.8U	**1.4J**	**1.5J**	**0.89J**	**1.3J**
	1,2-Dichlorobenzene	µg/L	**2.1**	**2.6**	**2.9**	**3.3**	**2.1**	**3**
	1,3-Dichlorobenzene	µg/L	**7.6J**	**0.9J**	**9.8**	**1.2J**	**0.88J**	**1.4J**
	1,4-Dichlorobenzene	µg/L	**7.5J**	**8.8**	**9.6**	**11**	**7.3**	**10**
	1,4-Dioxane	µg/L	**20J**	**17**	**17**	**15**	**18**	**19**
	2,4,5-Trichlorophenol	µg/L	<9.4U	<9.4U	<9.4U	<0.45U	<0.45U	<0.45U
	2,4,6-Trichlorophenol	µg/L	<2.9U	<2.9U	<2.9U	<0.58U	<0.57U	<0.57U
	2,4-Dichlorophenol	µg/L	<2.6U	<2.6U	<2.6U	<0.48U	<0.48U	<0.48U
	2,4-Dimethylphenol	µg/L	<2.6U	<2.6U	<2.6U	<0.47U	<0.47U	<0.47U
	2,4-Dinitrophenol	µg/L	<41U	<41U	<41U	<2.1U	<2.1U	<2.1U
	2,4-Dinitrotoluene	µg/L	<5.5U	<5.5U	<5.5U	<0.42U	<0.42U	<0.42U
	2,6-Dinitrotoluene	µg/L	<1.8U	<1.8U	<1.8U	<0.38U	<0.38U	<0.38U
	2-Chloronaphthalene	µg/L	<1.8U	<1.8U	<1.8U	<0.44U	<0.43U	<0.43U
	2-Chlorophenol	µg/L	<3.1U	<3.1U	<3.1U	<0.5U	<0.5U	<0.5U
	2-Methylnaphthalene	µg/L	<9.4U	<9.4U	<9.4U	<0.57U	<0.56U	<0.56U
	2-Methylphenol	µg/L	<9.4U	<9.4U	<9.4U	<0.38U	<0.38U	<0.38U
	2-Nitroaniline	µg/L	<9.4U	<9.4U	<9.4U	<0.4U	<0.39U	<0.39U
	2-Nitrophenol	µg/L	<3.4U	<3.4U	<3.4U	<0.45U	<0.45U	<0.45U
	3,3-Dichlorobenzidine	µg/L	<16U	<16U	<16U	<0.38U	<0.38U	<0.38UJ
	3-Nitroaniline	µg/L	<9.4U	<9.4U	<9.4U	<0.45U	<0.45UJ	<0.45U
	4,6-Dinitro-2-methylphenol	µg/L	<23U	<23U	<23U	<2.1U	<2.1U	<2.1U
	4-Bromophenyl phenyl ether	µg/L	<1.7U	<1.7U	<1.7U	<0.43U	<0.42U	<0.42U
	4-Chloro-3-Methylphenol	µg/L	<2.8U	<2.8U	<2.8U	<0.43U	<0.42U	<0.42U
	4-Chloroaniline	µg/L	<1.9U	<1.9U	<1.9U	<0.56U	<0.55UJ	<0.55U
	4-Chlorophenyl phenyl ether	µg/L	<4.1U	<4.1U	<4.1U	<0.33U	<0.33U	<0.33U
	4-Methylphenol	µg/L	<9.4U	<9.4U	**2.7J**	<0.34U	<0.34U	<0.34U
	4-Nitroaniline	µg/L	<9.4U	<9.4U	<9.4U	<0.24U	<0.23U	<0.23U
	4-Nitrophenol	µg/L	<2.8U	<2.8U	<2.8U	<1.4U	<1.4U	<1.4U
	Acenaphthene	µg/L	<1.7U	<1.7U	<1.7U	<0.39U	<0.38U	<0.38U
	Acenaphthylene	µg/L	<3.3U	<3.3U	<3.3U	<0.36U	<0.36U	<0.36U
	Anthracene	µg/L	<1.7U	<1.7U	<1.7U	<0.27U	<0.26U	<0.26U
	Benz(a)anthracene	µg/L	<7.4U	<7.4U	<7.4U	<0.34U	<0.34U	<0.34U
	Benzo(a)pyrene	µg/L	<2.5U	<2.5U	<2.5U	<0.45U	<0.44U	<0.44U
	Benzo(b)fluoranthene	µg/L	<9.4U	<9.4U	<9.4U	<0.32U	<0.32U	<0.32U
	Benzo(g,h,i)perylene	µg/L	<3.9U	<3.9U	<3.9U	<0.33U	<0.33UJ	<0.33U
	Benzo(k)fluoranthene	µg/L	<2.4U	<2.4U	<2.4U	<0.69U	<0.69U	<0.69U
	Benzoic acid	µg/L	<94U	<94U	<94U	<95U	<94U	<94U
	Benzyl alcohol	µg/L	<6.6U	<6.6U	<6.6U	<0.42U	<2.3U	<6.6U
	Bis(2-chloroethoxy) methane	µg/L	<5U	<5U	<5U	<0.33U	<0.33U	<0.33U
	Bis(2-chloroethyl)ether	µg/L	<5.4U	<5.4U	<5.4U	<0.38U	<0.38U	<0.38U
	Bis(2-chloroisopropyl) ether	µg/L	<5.4U	<5.4U	<5.4U	<0.49U	<0.49U	<0.49U
	bis(2-Ethylhexyl)Phthalate	µg/L	<9.4U	<9.4U	<9.4U	<1.7U	<1.7U	<1.7U
	Butyl benzyl phthalate	µg/L	<9.4U	<9.4U	<9.4U	<0.4U	**0.53J**	<0.39U
	Carbazole	µg/L	<9.4U	<9.4U	<9.4UJ	<0.28U	<0.28U	<0.28U
	Chrysene	µg/L	<2.4U	<2.4U	<2.4U	<0.31U	<0.31U	<0.31U
	Dibenz(a,h)anthracene	µg/L	<9.4U	<9.4U	<9.4U	<0.4U	<0.39U	<0.39U
	Dibenzofuran	µg/L	<9.4U	<9.4U	<9.4U	<0.48U	<0.48U	<0.48U
	Diethyl phthalate	µg/L	<9.4U	<9.4U	**0.32J**	<0.21U	<0.21U	<0.21U
	Dimethyl phthalate	µg/L	<9.4U	<9.4U	<9.4U	<0.34U	<0.34U	<0.34U
	Di-n-butyl phthalate	µg/L	<2.2U	<9.4U	<9.4U	<0.29U	<0.29U	**0.37J**
	Di-n-octyl phthalate	µg/L	<9.4U	<9.4U	<9.4U	<0.45U	<0.44U	<0.44U
	Fluoranthene	µg/L	<2.1U	<2.1U	<2.1U	<0.38U	<0.38U	<0.38U
	Fluorene	µg/L	<1.8U	<1.8U	<1.8U	<0.34U	<0.34U	<0.34U
	Hexachlorobenzene	µg/L	<2.1U	<2.1U	<2.1U	<0.48U	<0.48U	<0.48U
	Hexachlorobutadiene	µg/L	<2.4U	<2.4U	<2.4U	<0.64U	<0.64U	<0.64U
	Hexachlorocyclopentadiene	µg/L	<9.4U	<9.4U	<9.4U	<0.56U	<0.55U	<0.55U
	Hexachloroethane	µg/L	<2.7U	<2.7U	<2.7U	<0.56U	<0.55U	<0.55U
	Indeno(1,2,3-c,d)pyrene	µg/L	<4.5U	<4.5U	<4.5U	<0.45U	<0.44U	<0.44U
	Isophorone	µg/L	<2.1U	<2.1U	<2.1U	<0.41U	<0.4U	<0.4U
	Naphthalene	µg/L	<1.5U	<1.5U	**1.5**	<0.72U	<0.71U	<0.71U
	Nitrobenzene	µg/L	<1.9U	<1.9U	<1.9U	<0.27U	<0.27U	<0.27U
	N-nitrosodi-n-propylamine	µg/L	<4.7U	<4.7U	<4.7U	<0.51U	<0.51U	<0.51U
	N-Nitrosodiphenylamine	µg/L	<1.8U	<1.8U	<1.8U	<0.48U	<0.48U	<0.48U
	Pentachlorophenol	µg/L	<4.8U	<4.8U	<4.8U	<2.1U	<2.1U	<2.1U
	Phenanthrene	µg/L	<4.7U	<4.7U	<4.7U	<0.42U	<0.41U	<0.41U
	Phenol	µg/L	<2.4UJ	<2.4U	**1.3J**	<0.37U	<0.37U	<0.37U
	Pyrene	µg/L	<1.8U	<1.8U	<1.8U	<0.32U	<0.32U	<0.32U
	Total SVOCS	µg/L	**39**	**30**	**47**	**32**	**30**	**36**

TABLE 4
MW-20A GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

		Sample Location	MW-20A				
		Sample Date	5/16/2016	4/24/2017	5/7/2018	4/23/2019	4/29/2020
	Parameters	Units					
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	**1.5J**	**0.95J**	**1.1J**	**1.1J**	**1J**
	1,2-Dichlorobenzene	µg/L	**3.1**	**2.3**	**2**	**2.3**	**2**
	1,3-Dichlorobenzene	µg/L	**1.5J**	**1J**	**1J**	**1.2J**	**1.1J**
	1,4-Dichlorobenzene	µg/L	**11**	**7.6**	**7**	**7.9**	**7.2**
	1,4-Dioxane	µg/L	**15**	**18**	**11**	**11**	**11**
	2,4,5-Trichlorophenol	µg/L	<0.46U	<0.48U	<0.48U	<0.48U	<0.48U
	2,4,6-Trichlorophenol	µg/L	<0.59U	<0.61U	<0.61U	<0.61U	<0.61U
	2,4-Dichlorophenol	µg/L	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	2,4-Dimethylphenol	µg/L	<0.48U	<0.5U	<0.5U	<0.5U	<0.5U
	2,4-Dinitrophenol	µg/L	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	2,4-Dinitrotoluene	µg/L	<0.43U	<0.45U	<0.45U	<0.45U	<0.45U
	2,6-Dinitrotoluene	µg/L	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	2-Chloronaphthalene	µg/L	<0.44U	<0.46U	<0.46U	<0.46U	<0.46U
	2-Chlorophenol	µg/L	<0.51U	<0.53U	<0.53U	<0.53U	<0.53U
	2-Methylnaphthalene	µg/L	<0.58U	<0.6U	<0.6U	<0.6U	<0.6U
	2-Methylphenol	µg/L	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	2-Nitroaniline	µg/L	<0.4U	<0.42U	<0.42U	<0.42U	<0.42U
	2-Nitrophenol	µg/L	<0.46U	<0.48U	<0.48U	<0.48U	<0.48U
	3,3-Dichlorobenzidine	µg/L	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	3-Nitroaniline	µg/L	<0.46U	<0.48U	<0.48U	<0.48U	<0.48U
	4,6-Dinitro-2-methylphenol	µg/L	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	4-Bromophenyl phenyl ether	µg/L	<0.43U	<0.45U	<0.45U	<0.45U	<0.45U
	4-Chloro-3-Methylphenol	µg/L	<0.43U	<0.45U	<0.45U	<0.45U	<0.45U
	4-Chloroaniline	µg/L	<0.57U	<0.59U	<0.59U	<0.59U	<0.59U
	4-Chlorophenyl phenyl ether	µg/L	<0.34U	<0.35U	<0.35U	<0.35U	<0.35U
	4-Methylphenol	µg/L	<0.35U	<0.36U	<0.36U	<0.36U	<0.36U
	4-Nitroaniline	µg/L	<0.24U	<0.25U	<0.25U	<0.25U	<0.25U
	4-Nitrophenol	µg/L	<1.5U	<1.5U	<1.5U	<1.5U	<1.5U
	Acenaphthene	µg/L	<0.39U	<0.41U	<0.41U	<0.41U	<0.41U
	Acenaphthylene	µg/L	<0.36U	<0.38U	<0.38U	<0.38U	<0.38U
	Anthracene	µg/L	<0.27U	<0.28U	<0.28U	<0.28U	<0.28U
	Benz(a)anthracene	µg/L	<0.35U	<0.36U	<0.36U	<0.36U	<0.36U
	Benzo(a)pyrene	µg/L	<0.45U	<0.47U	<0.47U	<0.47U	<0.47U
	Benzo(b)fluoranthene	µg/L	<0.33U	<0.34U	<0.34U	<0.34U	<0.34U
	Benzo(g,h,i)perylene	µg/L	<0.34U	<0.35U	<0.35U	<0.35U	<0.35U
	Benzo(k)fluoranthene	µg/L	<0.7U	<0.73U	<0.73U	<0.73U	<0.73U
	Benzoic acid	µg/L	-	<100U	<100U	<100U	<100U
	Benzyl alcohol	µg/L	<0.42U	<0.44U	<0.44U	<0.44U	<0.44U
	Bis(2-chloroethoxy) methane	µg/L	<0.34U	<0.35U	<0.35U	<0.35U	<0.35U
	Bis(2-chloroethyl)ether	µg/L	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	Bis(2-chloroisopropyl) ether	µg/L	<0.5U	<0.52U	<0.52U	<0.52U	<0.52U
	bis(2-Ethylhexyl)Phthalate	µg/L	<1.7U	<1.8U	<1.8U	<1.8U	<1.8U
	Butyl benzyl phthalate	µg/L	<0.4U	<0.42U	<0.42U	<0.46U	<0.42U
	Carbazole	µg/L	<0.29U	<0.3U	<0.3U	<0.3U	<0.3U
	Chrysene	µg/L	<0.32U	<0.33U	<0.33U	<0.33U	<0.33U
	Dibenz(a,h)anthracene	µg/L	<0.4U	<0.42U	<0.42U	<0.42U	<0.42U
	Dibenzofuran	µg/L	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	Diethyl phthalate	µg/L	<0.21U	<0.22U	<0.22U	<0.22U	<0.22U
	Dimethyl phthalate	µg/L	<0.35U	<0.36U	<0.36U	<0.36U	<0.36U
	Di-n-butyl phthalate	µg/L	<0.3U	<0.31U	<0.31U	<0.31U	<0.31U
	Di-n-octyl phthalate	µg/L	<0.45U	<0.47U	<0.47U	<0.47U	<0.47U
	Fluoranthene	µg/L	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	Fluorene	µg/L	<0.35U	<0.36U	<0.36U	<0.36U	<0.36U
	Hexachlorobenzene	µg/L	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	Hexachlorobutadiene	µg/L	<0.65U	<0.68U	<0.68U	<0.68U	<0.68U
	Hexachlorocyclopentadiene	µg/L	<0.57U	<0.59U	<0.59U	<0.59U	<0.59U
	Hexachloroethane	µg/L	<0.57U	<0.59U	<0.59U	<0.59U	<0.59U
	Indeno(1,2,3-c,d)pyrene	µg/L	<0.45U	<0.47U	<0.47U	<0.47U	<0.47U
	Isophorone	µg/L	<0.41U	<0.43U	<0.43U	<0.43U	<0.43U
	Naphthalene	µg/L	<0.73U	<0.76U	<0.76U	<0.76U	<0.76U
	Nitrobenzene	µg/L	<0.28U	<0.29U	<0.29U	<0.29U	<0.29U
	N-nitrosodi-n-propylamine	µg/L	<0.52U	<0.54U	<0.54U	<0.54U	<0.54U
	N-Nitrosodiphenylamine	µg/L	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	Pentachlorophenol	µg/L	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	Phenanthrene	µg/L	<0.42U	<0.44U	<0.44U	<0.44U	<0.44U
	Phenol	µg/L	<0.37U	<0.39U	<0.39U	<0.39U	<0.39U
	Pyrene	µg/L	<0.33U	<0.34U	<0.34U	<0.34U	<0.34U
	Total SVOCS	µg/L	**33**	**30**	**23**	**24**	**22.3**

TABLE 4
MW-20B GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

		Sample Location	MW-20B					
		Sample Date	**12/27/2011**	**4/30/2012**	**11/20/2012**	**4/17/2013**	**4/21/2014**	**4/22/2015**
	Parameters	**Units**						
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	<1.8U	**2.9**	**0.8J**	**0.84J**	**0.5J**	**0.74J**
	1,2-Dichlorobenzene	µg/L	<1.8U	**3.4**	**1.8**	**0.83J**	**0.9J**	**0.67J**
	1,3-Dichlorobenzene	µg/L	<1.8U	**2.3**	**1.2J**	**0.58J**	**0.91J**	**0.72J**
	1,4-Dichlorobenzene	µg/L	<4.2U	**17**	**8.2**	**3.7J**	**4.4**	**3.2J**
	1,4-Dioxane	µg/L	<9.4U	**9J**	**6.9J**	<1.1U	**1.6J**	**1.5J**
	2,4,5-Trichlorophenol	µg/L	<9.4U	<9.4U	<9.4U	<0.46U	<0.45U	<0.48U
	2,4,6-Trichlorophenol	µg/L	<2.9U	<2.9U	<2.9U	<0.59U	<0.58U	<0.61U
	2,4-Dichlorophenol	µg/L	<2.6U	<2.6U	<2.6U	<0.49U	<0.48U	<0.51U
	2,4-Dimethylphenol	µg/L	<2.6U	**2J**	<2.6U	<0.48U	<0.47U	<0.5U
	2,4-Dinitrophenol	µg/L	<41U	<41U	<41U	<2.1U	<2.1U	<2.2U
	2,4-Dinitrotoluene	µg/L	<5.5U	<5.5U	<5.5U	<0.43U	<0.42U	<0.45U
	2,6-Dinitrotoluene	µg/L	<1.8U	<1.8U	<1.8U	<0.39U	<0.38U	<0.4U
	2-Chloronaphthalene	µg/L	<1.8U	<1.8U	<1.8U	<0.44U	<0.43U	<0.46U
	2-Chlorophenol	µg/L	<3.1U	<3.1U	<3.1U	<0.51U	<0.5U	<0.53U
	2-Methylnaphthalene	µg/L	<9.4U	**1.3J**	<9.4U	<0.58U	<0.57U	<0.6U
	2-Methylphenol	µg/L	<9.4U	<9.4U	<9.4U	<0.39U	<0.38U	<0.4U
	2-Nitroaniline	µg/L	<9.4U	<9.4U	<9.4U	<0.41U	<0.4U	<0.42U
	2-Nitrophenol	µg/L	<3.4U	<3.4U	<3.4U	<0.46U	<0.45U	<0.48U
	3,3-Dichlorobenzidine	µg/L	<16U	<16U	<16U	<0.39U	<0.38U	<0.4UJ
	3-Nitroaniline	µg/L	<9.4U	<9.4U	<9.4U	<0.46U	<0.45UJ	<0.48U
	4,6-Dinitro-2-methylphenol	µg/L	<23U	<23U	<23U	<2.1U	<2.1U	<2.2U
	4-Bromophenyl phenyl ether	µg/L	<1.7U	<1.7U	<1.7U	<0.43U	<0.42U	<0.45U
	4-Chloro-3-Methylphenol	µg/L	<2.8U	<2.8U	<2.8U	<0.43U	<0.42U	<0.45U
	4-Chloroaniline	µg/L	<1.9U	<1.9U	<1.9U	<0.57U	<0.56UJ	<0.59U
	4-Chlorophenyl phenyl ether	µg/L	<4.1U	<4.1U	<4.1U	<0.34U	<0.33U	<0.35U
	4-Methylphenol	µg/L	<9.4U	<9.4U	<9.4UJ	<0.35U	<0.34U	<0.36U
	4-Nitroaniline	µg/L	<9.4U	<9.4U	<9.4U	<0.24U	<0.24U	<0.25U
	4-Nitrophenol	µg/L	<2.8U	<2.8U	<2.8U	<1.5U	<1.4U	<1.5U
	Acenaphthene	µg/L	<1.7U	<1.7U	<1.7U	<0.4U	<0.39U	<0.41U
	Acenaphthylene	µg/L	<3.3U	<3.3U	<3.3U	<0.37U	<0.36U	<0.38U
	Anthracene	µg/L	<1.7U	<1.7U	<1.7U	<0.27U	<0.26U	<0.28U
	Benz(a)anthracene	µg/L	**1.2J**	<7.4U	<7.4U	<0.35U	<0.34U	<0.36U
	Benzo(a)pyrene	µg/L	**0.52J**	<2.5U	<2.5U	<0.45U	<0.44U	<0.47U
	Benzo(b)fluoranthene	µg/L	**0.68J**	<9.4U	<9.4U	<0.33U	<0.32U	<0.34U
	Benzo(g,h,i)perylene	µg/L	<3.9U	<3.9U	<3.9U	<0.34U	<0.33UJ	<0.35U
	Benzo(k)fluoranthene	µg/L	<2.4U	<2.4U	<2.4U	<0.71U	<0.69U	<0.73U
	Benzoic acid	µg/L	<94U	<94U	<94U	<97U	<94U	<100U
	Benzyl alcohol	µg/L	<6.6U	<6.6U	<6.6U	<0.42U	<2.2U	<7U
	Bis(2-chloroethoxy) methane	µg/L	<5U	<5U	<5U	<0.34U	<0.33U	<0.35U
	Bis(2-chloroethyl)ether	µg/L	<5.4U	<5.4U	<5.4U	<0.39U	<0.38U	<0.4U
	Bis(2-chloroisopropyl) ether	µg/L	<5.4U	<5.4U	<5.4U	<0.5U	<0.49U	<0.52U
	bis(2-Ethylhexyl)Phthalate	µg/L	<9.4U	<9.4U	<9.4U	<1.7U	<1.7U	<1.8U
	Butyl benzyl phthalate	µg/L	<9.4U	<9.4U	<9.4U	<0.41U	<0.4U	<10U
	Carbazole	µg/L	<9.4U	<9.4U	<9.4UJ	<0.29U	<0.28U	<0.3U
	Chrysene	µg/L	**0.83J**	<2.4U	<2.4U	<0.32U	<0.31U	<0.33U
	Dibenz(a,h)anthracene	µg/L	<9.4U	<9.4U	<9.4U	<0.41U	<0.4U	<0.42U
	Dibenzofuran	µg/L	<9.4U	<9.4U	<9.4U	<0.49U	<0.48U	<0.51U
	Diethyl phthalate	µg/L	<9.4U	**0.86J**	<9.4U	<0.21U	<0.21U	<0.22U
	Dimethyl phthalate	µg/L	<9.4U	<9.4U	<9.4U	<0.35U	<0.34U	<0.36U
	Di-n-butyl phthalate	µg/L	<1.9U	<9.4U	<9.4U	<0.3U	**0.3J**	**0.35J**
	Di-n-octyl phthalate	µg/L	<9.4U	<9.4U	<9.4U	<0.45U	<0.44U	<0.47U
	Fluoranthene	µg/L	**3.5**	<2.1U	<2.1U	<0.39U	<0.38U	<0.4U
	Fluorene	µg/L	<1.8U	<1.8U	<1.8U	<0.35U	<0.34U	<0.36U
	Hexachlorobenzene	µg/L	<2.1U	<2.1U	<2.1U	<0.49U	<0.48U	<0.51U
	Hexachlorobutadiene	µg/L	<2.4U	<2.4U	<2.4U	<0.66U	<0.64U	<0.68U
	Hexachlorocyclopentadiene	µg/L	<9.4U	<9.4U	<9.4U	<0.57U	<0.56U	<0.59U
	Hexachloroethane	µg/L	<2.7U	<2.7U	<2.7U	<0.57U	<0.56U	<0.59U
	Indeno(1,2,3-c,d)pyrene	µg/L	<4.5U	<4.5U	<4.5U	<0.45U	<0.44U	<0.47U
	Isophorone	µg/L	<2.1U	<2.1U	<2.1U	<0.42U	<0.41U	<0.43U
	Naphthalene	µg/L	<1.5U	**6.2**	<1.5U	<0.73U	<0.72U	<0.76U
	Nitrobenzene	µg/L	<1.9U	<1.9U	<1.9U	<0.28U	<0.27U	<0.29U
	N-nitrosodi-n-propylamine	µg/L	<4.7U	<4.7U	<4.7U	<0.52U	<0.51U	<0.54U
	N-Nitrosodiphenylamine	µg/L	<1.8U	<1.8U	<1.8U	<0.49U	<0.48U	<0.51U
	Pentachlorophenol	µg/L	<4.8U	<4.8U	<4.8U	<2.1U	<2.1U	<2.2U
	Phenanthrene	µg/L	**1.8J**	<4.7U	<4.7U	<0.42U	<0.41U	<0.44U
	Phenol	µg/L	<2.4UJ	<2.4U	<2.4U	<0.38U	<0.37U	<0.39U
	Pyrene	µg/L	**2.1**	<1.8U	<1.8U	<0.33U	<0.32U	<0.34U
	Total SVOCS	µg/L	**11**	**45**	**19**	**6**	**8.7**	**7.2**

TABLE 4
MW-20B GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

		Sample Location	MW-20B				
		Sample Date	5/16/2016	4/24/2017	5/7/2018	4/23/2019	4/29/2020
	Parameters	Units					
Semivolatile Organics	1,2,4-Trichlorobenzene	µg/L	**0.75J**	<0.44U	**0.59J**	<0.44U	<0.44U
	1,2-Dichlorobenzene	µg/L	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	1,3-Dichlorobenzene	µg/L	<0.46U	<0.48U	<0.48U	<0.48U	<0.48U
	1,4-Dichlorobenzene	µg/L	**1.2J**	**0.61J**	**0.49J**	<0.46U	**0.61J**
	1,4-Dioxane	µg/L	<1.1U	<1.1U	<1.1U	<1.1U	<1.1U
	2,4,5-Trichlorophenol	µg/L	<0.46U	<0.48U	<0.48U	<0.48U	<0.48U
	2,4,6-Trichlorophenol	µg/L	<0.58U	<0.61U	<0.61U	<0.61U	<0.61U
	2,4-Dichlorophenol	µg/L	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	2,4-Dimethylphenol	µg/L	<0.48U	<0.5U	<0.5U	<0.5U	<0.5U
	2,4-Dinitrophenol	µg/L	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	2,4-Dinitrotoluene	µg/L	<0.43U	<0.45U	<0.45U	<0.45U	<0.45U
	2,6-Dinitrotoluene	µg/L	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	2-Chloronaphthalene	µg/L	<0.44U	<0.46U	<0.46U	<0.46U	<0.46U
	2-Chlorophenol	µg/L	<0.51U	<0.53U	<0.53U	<0.53U	<0.53U
	2-Methylnaphthalene	µg/L	<0.57U	<0.6U	<0.6U	<0.6U	<0.6U
	2-Methylphenol	µg/L	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	2-Nitroaniline	µg/L	<0.4U	<0.42U	<0.42U	<0.42U	<0.42U
	2-Nitrophenol	µg/L	<0.46U	<0.48U	<0.48U	<0.48U	<0.48U
	3,3-Dichlorobenzidine	µg/L	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	3-Nitroaniline	µg/L	<0.46U	<0.48U	<0.48U	<0.48U	<0.48U
	4,6-Dinitro-2-methylphenol	µg/L	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	4-Bromophenyl phenyl ether	µg/L	<0.43U	<0.45U	<0.45U	<0.45U	<0.45U
	4-Chloro-3-Methylphenol	µg/L	<0.43U	<0.45U	<0.45U	<0.45U	<0.45U
	4-Chloroaniline	µg/L	<0.56U	<0.59U	<0.59U	<0.59U	<0.59U
	4-Chlorophenyl phenyl ether	µg/L	<0.33U	<0.35U	<0.35U	<0.35U	<0.35U
	4-Methylphenol	µg/L	<0.34U	<0.36U	<0.36U	<0.36U	<0.36U
	4-Nitroaniline	µg/L	<0.24U	<0.25U	<0.25U	<0.25U	<0.25U
	4-Nitrophenol	µg/L	<1.5U	<1.5U	<1.5U	<1.5U	<1.5U
	Acenaphthene	µg/L	<0.39U	<0.41U	<0.41U	<0.41U	<0.41U
	Acenaphthylene	µg/L	<0.36U	<0.38U	<0.38U	<0.38U	<0.38U
	Anthracene	µg/L	<0.27U	<0.28U	<0.28U	<0.28U	<0.28U
	Benz(a)anthracene	µg/L	<0.34U	<0.36U	<0.36U	<0.36U	<0.36U
	Benzo(a)pyrene	µg/L	<0.45U	<0.47U	<0.47U	<0.47U	<0.47U
	Benzo(b)fluoranthene	µg/L	<0.33U	<0.34U	<0.34U	<0.34U	<0.34U
	Benzo(g,h,i)perylene	µg/L	<0.33U	<0.35U	<0.35U	<0.35U	<0.35U
	Benzo(k)fluoranthene	µg/L	<0.7U	<0.73U	<0.73U	<0.73U	<0.73U
	Benzoic acid	µg/L	-	<100U	<100U	<100U	<100U
	Benzyl alcohol	µg/L	<0.42U	<0.44U	<0.44U	<0.44U	<0.44U
	Bis(2-chloroethoxy) methane	µg/L	<0.33U	<0.35U	<0.35U	<0.35U	<0.35U
	Bis(2-chloroethyl)ether	µg/L	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	Bis(2-chloroisopropyl) ether	µg/L	<0.5U	<0.52U	<0.52U	<0.52U	<0.52U
	bis(2-Ethylhexyl)Phthalate	µg/L	<1.7U	<1.8U	<1.8U	<1.8U	<1.8U
	Butyl benzyl phthalate	µg/L	<0.4U	<0.42U	<0.44U	<0.42U	<0.42U
	Carbazole	µg/L	<0.29U	<0.3U	<0.3U	<0.3U	<0.3U
	Chrysene	µg/L	<0.32U	<0.33U	<0.33U	<0.33U	<0.33U
	Dibenz(a,h)anthracene	µg/L	<0.4U	<0.42U	<0.42U	<0.42U	<0.42U
	Dibenzofuran	µg/L	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	Diethyl phthalate	µg/L	<0.21U	<0.22U	<0.22U	<0.22U	<0.22U
	Dimethyl phthalate	µg/L	<0.34U	<0.36U	<0.36U	<0.36U	<0.36U
	Di-n-butyl phthalate	µg/L	<0.3U	<0.31U	<0.31U	<0.31U	<0.31U
	Di-n-octyl phthalate	µg/L	<0.45U	<0.47U	<0.47U	<0.47U	<0.47U
	Fluoranthene	µg/L	<0.38U	<0.4U	<0.4U	<0.4U	<0.4U
	Fluorene	µg/L	<0.34U	<0.36U	<0.36U	<0.36U	<0.36U
	Hexachlorobenzene	µg/L	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	Hexachlorobutadiene	µg/L	<0.65U	<0.68U	<0.68U	<0.68U	<0.68U
	Hexachlorocyclopentadiene	µg/L	<0.56U	<0.59U	<0.59U	<0.59U	<0.59U
	Hexachloroethane	µg/L	<0.56U	<0.59U	<0.59U	<0.59U	<0.59U
	Indeno(1,2,3-c,d)pyrene	µg/L	<0.45U	<0.47U	<0.47U	<0.47U	<0.47U
	Isophorone	µg/L	<0.41U	<0.43U	<0.43U	<0.43U	<0.43U
	Naphthalene	µg/L	<0.73U	<0.76U	<0.76U	<0.76U	<0.76U
	Nitrobenzene	µg/L	<0.28U	<0.29U	<0.29U	<0.29U	<0.29U
	N-nitrosodi-n-propylamine	µg/L	<0.52U	<0.54U	<0.54U	<0.54U	<0.54U
	N-Nitrosodiphenylamine	µg/L	<0.49U	<0.51U	<0.51U	<0.51U	<0.51U
	Pentachlorophenol	µg/L	<2.1U	<2.2U	<2.2U	<2.2U	<2.2U
	Phenanthrene	µg/L	<0.42U	<0.44U	<0.44U	<0.44U	<0.44U
	Phenol	µg/L	<0.37U	<0.39U	<0.39U	<0.39U	<0.39U
	Pyrene	µg/L	<0.33U	<0.34U	<0.34U	<0.34U	<0.34U
	Total SVOCS	µg/L	**2**	**0.61**	**1.1**	ND	**0.61**

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS

Cortese Landfill Site
Narrowsburg, New York

Notes:

Sum of detected SVOCs rounded up to nearest two significant digits

Detected parameters shown in **bold**

J - Analyte was detected at an estimated concentration

U - Analyte was not detected in the sample; value shown is the method detection limit (MDL)

UJ - Analyte was not detected; the MDL is an estimated value

ND - Not Detected

ug/L - micrograms per Liter

TABLE 5
EX-1 GROUNDWATER ANALYTICAL RESULTS -
METALS, LEACHATE INDICATOR, TPH, AND FIELD WATER QUALITY PARAMETERS

Cortese Landfill Site
Narrowsburg, NY

Parameter	EX-1										
	4/17/2013	10/21/2013	4/21/2014	10/22/2014	12/11/2014	1/22/2015	2/26/2015	3/19/2015	4/22/2015	7/27/2015	10/19/2015
Metals (µg/L)											
Arsenic (6010C)	**44**	**33**	-	**33**	-	-	-	-	**25**	**82**	**83**
Iron (6010C)	**56,000**	**54,700**	-	**50,000**	**41,000**	**32,000J**	**49,000**	**35,000**	**31,300J**	**59,700**	**45,500**
Manganese (6010C)	**8,000**	**8,400**	-	**9,600**	-	-	-	-	**8,300**	**20,000J**	**13,900**
Electron Donor/Acceptor and Leachate Indicator Parameters (mg/L)											
Alkalinity (310.2)	**151**	**135J**	-	**119**	-	-	-	-	<4U	**47.7**	**85.3J**
Ammonia Nitrogen (350.1)	**8.3**	**9J**	-	**7.1J**	-	-	-	-	**5.4**	**6.6**	**7.3**
Total Organic Carbon (5310D)	**8.5**	**7.2**	-	**4.6**	-	-	-	-	**10J**	**4.9**	**3.8J**
Nitrate-Nitrite (353.2)	**0.034J**	<0.05U	-	<0.02UJ	-	-	-	-	<0.02U	<0.02U	<0.02U
Sulfate (D-516-90)	<1.5U	<12.4U	-	<1.5U	-	-	-	-	**83.5**	**130**	**76.1**
Field Geochemistry											
Dissolved Oxygen (mg/L)	-	-	-	-	-	-	-	-	-	-	-
Conductivity (µS/cm)	-	-	**465**	**561**	**0.433**	-	**0.623**	-	**439**	**654**	**611**
pH	-	-	**6.03**	**6.19**	**6.48**	-	**5.65**	-	**6.29**	**6.11**	**6.37**
Oxidation-Reduction Potential (mV)	-	-	**-142**	**-171**	**28**	-	**-27**	-	**-63**	**-74**	**-133**
Turbidity (NTU)	-	-	**3.7**	**2**	**160**	-	**54.5**	-	**10.7**	**8.3**	**7.6**
Total Petroleum Hydrocarbons (mg/L)											
Gasoline Range Organics (8015D)	**4.2**	**2.1J**	-	**1.2**	-	-	-	-	**2.3J**	-	**0.096**
Diesel Range Organics (8015D)	**1.6**	**2.2**	-	<1.2U	-	-	-	-	**2.5**	-	**0.47J**

TABLE 5
EX-1 GROUNDWATER ANALYTICAL RESULTS -
METALS, LEACHATE INDICATOR, TPH, AND FIELD WATER QUALITY PARAMETERS

Cortese Landfill Site
Narrowsburg, NY

Parameter	EX-1													
	5/16/2016	7/18/2016	10/26/2016	4/24/2017	7/31/2017	10/17/2017	5/7/2018	7/19/2018	10/15/2018	4/22/2019	7/22/2019	10/7/2019	4/29/2020	7/7/2020
Metals (µg/L)														
Arsenic (6010C)	**18**	**22**	**18**	**22**	**10**	**23**	**37**	**47**	**60**	**87**	**110**	**94**	**52**	**79**
Iron (6010C)	**21,000**	**11,900**	**9800**	**10,400**	**15,200**	**13,600**	**32,800**	**38,500**	**39,600**	**38,000**	**46,000**	**47,400**	**20,800**	**40,800**
Manganese (6010C)	**11,800**	**17,800**	**16,000**	**13,300**	**26,000**	**21,600**	**18,400**	**26,600**	**21,000**	**14,000**	**18,600**	**19,600**	**7,900**	**15,500**
Electron Donor/Acceptor and Leachate Indicator Parameters (mg/L)														
Alkalinity (310.2)	**57.9J**	**8.5**	**6.9**	**10.7J**	**16.6J+**	**18.8**	**26.7J+**	**27.8**	**56.1**	**98.4**	**63.3**	**93.1**	**83.5**	**75.2**
Ammonia Nitrogen (350.1)	**5.7**	**6.2**	**5.6**	**3.1**	**2.5**	**2.1**	**2.7**	**3.3J+**	**3.4**	**3.2**	**2.6**	**3.2**	**2.8**	**2.9**
Total Organic Carbon (5310D)	**4.9**	**3.3**	**2.8**	**3.5**	**4**	**3.7**	**7.7**	**7**	**6.1**	**10.6J**	**11.1**	**9.2**	**6.1**	**7.6**
Nitrate-Nitrite (353.2)	<0.02U	**0.25**	**1.2**	**0.34**	**0.25**	**1.3J-**	<0.02U	<0.02U	<0.02U	<0.02U	**0.064**	0.029U	**3**	**0.031J**
Sulfate (D-516-90)	**105**	**128**	**105**	**74.9**	**142**	**122**	**81.7**	**146**	**82.6**	**25**	**52**	**67.6**	**20**	**35.3**
Field Geochemistry														
Dissolved Oxygen (mg/L)	-	-	-	-	-	-	**0.14**	**0.1**	**0.16**	**0.51**	**0.57**	**3.32**	**0.4**	**0.17**
Conductivity (µS/cm)	**391**	**459**	**272**	**350**	**542**	**520**	**4.69**	**620**	**560**	**431**	**510**	**201**	**289**	**421**
pH	**6.08**	**5.76**	**5.99**	**5.92**	**6.02**	**6.25**	**6.15**	**5.89**	**6.38**	**6.2**	**6.4**	**6.31**	**6.54**	**6.63**
Oxidation-Reduction Potential (mV)	**65**	**40**	**10**	**35**	**31**	**-18**	**-131**	**-97**	**-35**	**141**	**66**	**-2**	**27**	**4**
Turbidity (NTU)	**8.6**	**18**	**19**	**2.3**	**7.6**	**8.8**	**6**	**4.5**	**7.7**	**5**	**3.6**	**10**	**14**	**29**
Total Petroleum Hydrocarbons (mg/L)														
Gasoline Range Organics (8015D)	**1.1**	-	**0.019J**	**0.33**	-	0.02U	**0.3**	-	**0.22**	**0.73**	-	**0.21J**	**0.23**	-
Diesel Range Organics (8015D)	**0.96**	-	<0.29U	**0.86**	-	<0.31U	**1.3**	-	**0.89**	**2.4**	-	**0.91**	**0.71**	-

TABLE 5
MW-1A GROUNDWATER ANALYTICAL RESULTS -
METALS, LEACHATE INDICATOR, TPH, AND FIELD WATER QUALITY PARAMETERS

Cortese Landfill Site
Narrowsburg, NY

Parameter	MW-1A					
	4/22/2015	**5/16/2016**	**4/25/2017**	**5/8/2018**	**4/23/2019**	**4/30/2020**
Metals (µg/L)						
Arsenic (6010C)	<5.6U	<5.6U	<5.6U	<5.6U	<5.6U	<5.6U
Iron (6010C)	**2900J**	**830**	**1,300**	**2,100**	**530**	**3,800**
Manganese (6010C)	**2,000**	**1,600**	**1,700**	**1,600**	**1,800**	**1,600**
Electron Donor/Acceptor and Leachate Indicator Parameters (mg/L)						
Alkalinity (310.2)	**99.9**	**346**	**105**	**93.2**	**94.6**	**89.6**
Ammonia Nitrogen (350.1)	<0.009U	<0.009U	<0.009U	<0.009U	**0.013J**	**0.064**
Total Organic Carbon (5310D)	<0.43U	<1U	<0.43U	<0.47U	**0.55J**	<0.43U
Nitrate-Nitrite (353.2)	<0.02U	<0.02U	<0.02U	<0.02U	<0.02U	**0.029J**
Sulfate (D-516-90)	**18.8**	**18.5**	**19.1**	**20**	**15.7**	**22.5**
Field Geochemistry						
Dissolved Oxygen (mg/L)	**-**	**-**	**-**	**0.16**	**0.3**	**1.46**
Conductivity (µS/cm)	**238**	**237**	**229**	**221**	**215**	**202**
pH	**6.93**	**7.02**	**6.97**	**6.97**	**7.24**	**7.01**
Oxidation-Reduction Potential (mV)	**30**	**210**	**9**	**183**	**-14**	**44**
Turbidity (NTU)	**58**	**21**	**31**	**1.2**	**11**	**48**
Total Petroleum Hydrocarbons (mg/L)						
Gasoline Range Organics (8015D)	<0.0042U	<0.0042U	<0.0042U	<0.011U	0.0048U	<0.0042U
Diesel Range Organics (8015D)	<0.29U	<0.29U	<0.31U	<0.31U	<0.31U	<0.31U

TABLE 5
MW-1B GROUNDWATER ANALYTICAL RESULTS -
METALS, LEACHATE INDICATOR, TPH, AND FIELD WATER QUALITY PARAMETERS

Cortese Landfill Site
Narrowsburg, NY

Parameter	MW-1B								
	4/17/2013	10/21/2013	4/21/2014	10/22/2014	4/22/2015	7/27/2015	10/19/2015	5/16/2016	7/18/2016
Metals (µg/L)									
Arsenic (6010C)	**48**	**33**	-	**28**	**34**	**38**	**30**	**38**	**32**
Iron (6010C)	**38,300**	**33,900**	-	**35,300**	**19,900J**	**40,700**	**27,400**	**38,300**	**28,100**
Manganese (6010C)	**8,100**	**7,300**	-	**7,900**	**4,800**	**9700J**	**7,200**	**9,900**	**8,300**
Electron Donor/Acceptor and Leachate Indicator Parameters (mg/L)									
Alkalinity (310.2)	**133**	**116J**	-	**133**	**65.9**	**43.5**	**42.4J**	**107**	**45.6**
Ammonia Nitrogen (350.1)	**8.7**	**7.5J**	-	**6.7J**	**5**	**5.7**	**6.1**	**7.1**	**5.9**
Total Organic Carbon (5310D)	**7.4**	**4.8J**	-	**9.9J**	**2.7**	**4.8**	**3.1J**	**6.7**	**4.3**
Nitrate-Nitrite (353.2)	**0.082**	<0.02UJ	-	**0.039J**	<0.02U	**1.9**	<0.02U	<0.02U	<0.02U
Sulfate (D-516-90)	<1.5U	<6.3U	-	<1.5U	**24.9**	**87.3**	**45.2**	**86.1**	**69.2**
Field Geochemistry									
Dissolved Oxygen (mg/L)	-	-	-	-	-	-	-	-	-
Conductivity (µS/cm)	-	-	**339**	**466**	**322**	**516**	**428**	**491**	**418**
pH	-	-	**6.11**	**5.77**	**6.32**	**5.31**	**6.12**	**5.86**	**5.72**
Oxidation-Reduction Potential (mV)	-	-	**-136**	**-130**	**-67**	**-2**	**-45**	**73**	**17**
Turbidity (NTU)	-	-	**1.4**	**0.9**	**5.7**	**0.4**	**0.5**	**3.8**	**1.1**
Total Petroleum Hydrocarbons (mg/L)									
Gasoline Range Organics (8015D)	**5.1**	**2J**	-	**2.6**	**0.094J**	-	**0.11**	**0.18**	-
Diesel Range Organics (8015D)	**2.3**	**2.4**	-	**1.3J**	**0.63**	-	**0.54**	**0.95**	-

TABLE 5
MW-1B GROUNDWATER ANALYTICAL RESULTS - METALS, LEACHATE INDICATOR, TPH, AND FIELD WATER QUALITY PARAMETERS

Cortese Landfill Site
Narrowsburg, NY

Parameter	MW-1B											
	10/26/2016	4/25/2017	7/31/2017	10/17/2017	5/8/2018	7/19/2018	10/15/2018	4/23/2019	7/22/2019	10/7/2019	4/30/2020	7/7/2020
Metals (µg/L)												
Arsenic (6010C)	**27**	**39**	**39**	**30**	**37**	**41**	**38**	**32**	**36**	**35**	**36**	**28**
Iron (6010C)	**17,200**	**16,700**	**32,800**	**20,000**	**32,500**	**36,800**	**26,300**	**13,100**	**24,300**	**28,300**	**17,700**	**23,600**
Manganese (6010C)	**5,600**	**5,300**	**12,200**	**8,300**	**13,600**	**17,400**	**12,100**	**5,700**	**10,100**	**13,900**	**8,500**	**11,500**
Electron Donor/Acceptor and Leachate Indicator Parameters (mg/L)												
Alkalinity (310.2)	**27.6**	**32.9J+**	**43.6J+**	**38.3**	**96.7**	**99.8**	**68.7**	**49.8**	**65.8**	**113**	**88.6**	**114**
Ammonia Nitrogen (350.1)	**4.2**	**4.6**	**7.2**	**4.7**	**5.7**	**5.8**	**6.1**	**3.9J-**	**4.9**	**6.6**	**5.2**	**5.8**
Total Organic Carbon (5310D)	**2.2**	**1.9**	**4.7**	**2.3**	**4.4**	**7.6**	**3.8**	**2J**	**4.3**	**6.1**	**3.6**	**5.9**
Nitrate-Nitrite (353.2)	**0.02J**	<0.02U	**0.02J**	<0.02U	**0.027J**	<0.02U	<0.02U	<0.02U	0.043U	0.03U	**0.021J**	<0.02U
Sulfate (D-516-90)	**41.6**	**34**	**110**	**61.2**	**95.2**	**106**	**63.3**	**25.3**	**37.5**	**50.1**	**21.5**	**18**
Field Geochemistry												
Dissolved Oxygen (mg/L)	-	-	-	-	**0.55**	**0.27**	**1.4**	**0.55**	**2.72**	**2.02**	**0.78**	**0.39**
Conductivity (µS/cm)	**313**	**247**	**505**	**385**	**509**	**574**	**466**	**212**	**344**	**464**	**268**	**353**
pH	**6.45**	**5.43**	**5.88**	**6.3**	**5.91**	**5.7**	**6.23**	**5.72**	**5.91**	**5.33**	**6.35**	**5.25**
Oxidation-Reduction Potential (mV)	**-46**	**20**	**-29**	**-26**	**4**	**49**	**-30**	**-51**	**-19**	**138**	**23**	**56**
Turbidity (NTU)	**1.9**	**5.4**	**2.1**	**26**	**11**	**1.6**	**6**	**4.6**	**1.5**	**1.4**	**1.8**	**3.1**
Total Petroleum Hydrocarbons (mg/L)												
Gasoline Range Organics (8015D)	**0.028**	**0.029**	-	0.0053U	<0.02U	-	**0.048**	0.0088U	-	**0.14**	**0.032**	-
Diesel Range Organics (8015D)	<0.3U	**0.43J**	-	<0.31U	<0.31U	-	**0.55**	<0.31U	-	**0.69**	<0.31U	-

TABLE 5
MW-1C GROUNDWATER ANALYTICAL RESULTS - METALS, LEACHATE INDICATOR, TPH, AND FIELD WATER QUALITY PARAMETERS

Cortese Landfill Site
Narrowsburg, NY

Parameters	MW-1C										
	4/17/2013	10/21/2013	4/21/2014	10/22/2014	10/22/2014	4/22/2015	7/27/2015	10/19/2015	5/16/2016	7/18/2016	10/26/2016
Metals (µg/L)											
Arsenic (6010C)	**61**	**73**	-	**78**	**73**	**44**	**21**	**22**	<5.6U	<5.6U	<5.6U
Iron (6010C)	**66,500**	**62,300**	-	**64,900**	**64,900**	**25,900J**	**7,700**	**5,700**	**1,300**	**140J**	**360**
Manganese (6010C)	**9,600**	**9,200**	-	**13,700**	**13,700**	**9,200**	**28,200J**	**20,900**	**26,400**	**35,800**	**24,200**
Electron Donor/Acceptor and Leachate Indicator Parameters (mg/L)											
Alkalinity (310.2)	**184**	**105**	-	**181**	**172**	**37.3J**	**37.1**	**85.5J**	**12.5**	**7.6**	**27**
Ammonia Nitrogen (350.1)	**11.3**	**11.8J**	-	**8J**	**8.1J**	**27.8**	**6.7J**	**4.9**	**0.81**	**0.26**	**0.46**
Total Organic Carbon (5310D)	**6.3**	**6.1J**	-	**5.5J**	**5.4J**	**10.6J**	**2.6**	**3J**	**3.4**	**2**	**1.9**
Nitrate-Nitrite (353.2)	**0.066**	<0.02UJ	-	<0.02UJ	<0.02UJ	**0.73J**	**8.5**	**0.9**	**7.3**	**13.7**	**4.5**
Sulfate (D-516-90)	<1.5U	<5U	-	<1.5U	<1.5U	**190**	**120**	**61**	**96.7**	**105**	**80.5**
Field Geochemistry											
Dissolved Oxygen (mg/L)	-	-	-	-	-	-	-	-	-	-	-
Conductivity (µS/cm)	-	-	**330**	-	**539**	**706**	**486**	**340**	**332**	**411**	**321**
pH	-	-	**6.23**	-	**5.86**	**6.25**	**6.09**	**6.15**	**5.61**	**5.79**	**6.01**
Oxidation-Reduction Potential (mV)	-	-	**-45**	-	**-2**	**-16**	**-189**	**-129**	**141**	**156**	**139**
Turbidity (NTU)	-	-	**2.8**	-	**2.3**	**12**	**1**	**0.4**	**5.4**	**3.1**	**10**
Total Petroleum Hydrocarbons (mg/L)											
Gasoline Range Organics (8015D)	**0.039**	**0.011J**	-	**0.027**	**0.028**	<0.025U	-	<0.0042U	**0.011J**	-	<0.0042U
Diesel Range Organics (8015D)	<0.3U	**1.3J**	-	<1.2U	<1.1U	<0.3U	-	<0.29U	<0.3U	-	<0.29U

TABLE 5
MW-1C GROUNDWATER ANALYTICAL RESULTS - METALS, LEACHATE INDICATOR, TPH, AND FIELD WATER QUALITY PARAMETERS

Cortese Landfill Site
Narrowsburg, NY

Parameters	MW-1C										
	4/25/2017	7/31/2017	10/17/2017	5/8/2018	7/19/2018	10/15/2018	4/23/2019	7/22/2019	10/7/2019	4/30/2020	7/7/2020
Metals (µg/L)											
Arsenic (6010C)	<5.6U	<5.6U	<5.6U	<5.6U	<5.6U	**30**	**36**	**84**	**58**	**90**	**120**
Iron (6010C)	**120J**	**80J**	**170**	**210**	**440**	**8,400**	**7,700**	**31,100**	**16,700**	**25,500**	**48,800**
Manganese (6010C)	**4,300**	**28,600**	**9,600**	**3,000**	**8,400**	**1,500**	**6,900**	**22,800**	**16,800**	**16,000**	**25,900**
Electron Donor/Acceptor and Leachate Indicator Parameters (mg/L)											
Alkalinity (310.2)	<4U	**12.9J+**	**6.1**	**26.8J+**	**21.4**	**58.9**	**36.8**	**109**	**94.8**	**62.5**	**128**
Ammonia Nitrogen (350.1)	**0.047J**	**0.064**	**0.025J**	**0.027J**	**0.021J**	**0.16**	**0.3**	**0.65**	**0.82J+**	**0.85**	**1.70**
Total Organic Carbon (5310D)	**1**	**2.4**	**1.5**	**2.2**	**1.9**	**6.9**	**6J**	**5.2**	**3.7**	**64.3**	**26.6**
Nitrate-Nitrite (353.2)	**2**	**6.1J+**	**4**	**1.6**	**0.41J-**	<0.02U	**0.086J-**	**0.06J-**	0.036U	**0.044J**	**0.04J**
Sulfate (D-516-90)	**15.3**	**117**	**43.9**	**16.4**	**44.2**	**17**	**10.2**	**40.4**	**21.6**	<1.5U	**2.1J**
Field Geochemistry											
Dissolved Oxygen (mg/L)	-	-	-	**1.34**	**0.77**	**0.49**	**0.5**	**0.98**	**2.8**	**0.78**	**0.30**
Conductivity (µS/cm)	**94**	**364**	**181**	**114**	**170**	**183**	**180**	**383**	**273**	**277.00**	**449**
pH	**4.47**	**5.22**	**5.31**	**3.69**	**3.6**	**5.45**	**5.49**	**5.77**	**5.02**	**5.95**	**6.26**
Oxidation-Reduction Potential (mV)	**343**	**281**	**77**	**305**	**260**	**82**	**209**	**153**	**157**	**20.00**	**52**
Turbidity (NTU)	**3.2**	**1.9**	**27**	**14**	**2.7**	**52**	**5.8**	**5.7**	**2.7**	**724.00**	**66**
Total Petroleum Hydrocarbons (mg/L)											
Gasoline Range Organics (8015D)	<0.0042U	-	<0.0042U	<0.011U	-	<0.0045U	0.0046UJ	-	<0.0042U	**0.074**	-
Diesel Range Organics (8015D)	<0.31U	-	<0.31U	<0.31U	-	<0.31U	<0.31U	-	<0.31U	**0.58**	-

TABLE 5
MW-10 GROUNDWATER ANALYTICAL RESULTS - METALS, LEACHATE INDICATOR, TPH, AND FIELD WATER QUALITY PARAMETERS

Cortese Landfill Site
Narrowsburg, NY

Parameters	MW-10										
	4/17/2013	10/21/2013	4/21/2014	10/22/2014	4/22/2015	7/27/2015	10/19/2015	5/16/2016	7/18/2016	10/26/2016	4/24/2017
Metals (µg/L)											
Arsenic (6010C)	**54**	**54**	-	**52**	**40**	**43**	**33**	**40**	**33**	**24**	**66**
Iron (6010C)	**31,500**	**24,500**	-	**29,400**	**21,200J**	**20,000**	**15,100**	**18,500**	**13,500**	**10,200**	**32,600**
Manganese (6010C)	**17,700**	**14,600**	-	**16,600**	**13,900**	**15,400J**	**12,200**	**12,600**	**10,200**	**9700**	**21,200**
Electron Donor/Acceptor and Leachate Indicator Parameters (mg/L)											
Alkalinity (310.2)	**108**	**103J**	-	**66.6**	**70.1**	**7**	**32.8J**	**11.1**	**34.9**	**28.3**	**47J+**
Ammonia Nitrogen (350.1)	**4.5**	**2.8J**	-	**2.1J**	**1.9**	**1.3J**	**1.5**	**2**	**1.4**	**1**	**3.2**
Total Organic Carbon (5310D)	**3.5**	<1.9U	-	**2.5J**	**2.7J**	**2.2**	**1.3**	**2.3**	**1.5**	**1.3**	**2.8**
Nitrate-Nitrite (353.2)	**0.035J**	<0.02UJ	-	<0.02UJ	**0.2J**	**2.1J**	<0.02U	**0.031J**	<0.02U	**0.029J**	**0.1**
Sulfate (D-516-90)	**5.5**	**19.7J**	-	**15.6**	**49.3**	**38.6**	**26.7**	**43.7**	**30.5J**	**27.9**	**101**
Field Geochemistry											
Dissolved Oxygen (mg/L)	-	-	-	-	-	-	-	-	-	-	-
Conductivity (µS/cm)	-	-	**629**	**519**	**515**	**511**	**434**	**462**	**392**	**350**	**530**
pH	-	-	**6.09**	**5.64**	**5.95**	**5.21**	**5.83**	**6.24**	**4.81**	**5.64**	**5.91**
Oxidation-Reduction Potential (mV)	-	-	**-30**	**34**	**15**	**57**	**39**	**77**	**83**	**64**	**-11**
Turbidity (NTU)	-	-	**20**	**128**	**5.5**	**3.4**	**9.4**	**6.7**	**6.1**	**2.3**	**13**
Total Petroleum Hydrocarbons (mg/L)											
Gasoline Range Organics (8015D)	**0.014J**	<0.000084UJ	-	<0.013U	**0.059J**	-	<0.0042U	**0.0071J**	-	<0.0042U	**0.026**
Diesel Range Organics (8015D)	<0.3U	<1.2U	-	<1.1U	<0.29U	-	<0.28U	<0.29U	-	<0.31U	<0.31U

TABLE 5
MW-10 GROUNDWATER ANALYTICAL RESULTS -
METALS, LEACHATE INDICATOR, TPH, AND FIELD WATER QUALITY PARAMETERS

Cortese Landfill Site
Narrowsburg, NY

Parameters	MW-10									
	7/31/2017	10/17/2017	5/7/2018	7/19/2018	10/15/2018	4/22/2019	7/22/2019	10/7/2019	4/29/2020	7/7/2020
Metals (µg/L)										
Arsenic (6010C)	**28**	**20**	**66**	**56**	**35**	**48**	**42**	**44**	**34**	**34**
Iron (6010C)	**18,500**	**11,300**	**27,700**	**23,100**	**14,800**	**38,700**	**27,900**	**19,600**	**19,000**	**22,000**
Manganese (6010C)	**14,100**	**10,900**	**19,200**	**16,100**	**12,400**	**21,900**	**15,800**	**12,500**	**12,000**	**14,100**
Electron Donor/Acceptor and Leachate Indic										
Alkalinity (310.2)	**61.5J+**	**50.5**	**45.3J+**	**61.1**	**48.3**	**84.9**	**73.4**	**66**	**79.5**	**71.4B**
Ammonia Nitrogen (350.1)	**1.7**	**1.4**	**2.2**	**1.7**	**1.4**	**4.6**	**3.1**	**2.5**	**2.4**	**2.4B**
Total Organic Carbon (5310D)	**1.8**	**1**	**2.6**	**1.8**	**1.7**	**4.8J**	**3.4**	**2**	**3**	**2.3**
Nitrate-Nitrite (353.2)	<0.02U	<0.02U	**0.081**	<0.02U	<0.02U	<0.02U	0.041U	0.032U	**0.026J**	**0.027J,B**
Sulfate (D-516-90)	**49.5**	**33.5**	**66.1**	**56.6**	**31.8**	**96.9J-**	**57.9**	**32.8**	**38.1**	**38.9**
Field Geochemistry										
Dissolved Oxygen (mg/L)	-	-	**0.3**	**0.42**	**0.43**	**0.63**	**2.12**	**1.57**	**0.48**	**0.44**
Conductivity (µS/cm)	**482**	**450**	**549**	**499**	**463**	**513**	**411**	**366**	**363**	**355**
pH	**5.84**	**6.03**	**5.96**	**5.25**	**5.84**	**5.85**	**5.54**	**6.23**	**6.35**	**5.95**
Oxidation-Reduction Potential (mV)	**19**	**4**	**86**	**159**	**65**	**195**	**182**	**115**	**52**	**95**
Turbidity (NTU)	**4.2**	**1.7**	**19**	**14**	**4.9**	**5**	**4.6**	**1.6**	**5.6**	**11**
Total Petroleum Hydrocarbons (mg/L)										
Gasoline Range Organics (8015D)	-	<0.0042U	<0.02U	-	<0.0098U	**0.059**	-	<0.0042U	**0.032**	-
Diesel Range Organics (8015D)	-	<0.31U	<0.32U	-	<0.31U	<0.31U	-	<0.31U	<0.31U	-

TABLE 5
MW-11 GROUNDWATER ANALYTICAL RESULTS - METALS, LEACHATE INDICATOR, TPH, AND FIELD WATER QUALITY PARAMETERS

Cortese Landfill Site
Narrowsburg, NY

Parameters	MW-11								
	4/17/2013	**10/21/2013**	**4/21/2014**	**4/22/2015**	**5/16/2016**	**4/24/2017**	**5/7/2018**	**4/22/2019**	**4/29/2020**
Metals (µg/L)									
Arsenic (6010C)	<5.6U	<5.6U	-	<5.6U	<5.6U	<5.6U	<5.6U	<5.6U	<5.6U
Iron (6010C)	**550**	**780**	-	**670**	**710**	**820**	**1,200**	**1,600**	**1,400**
Manganese (6010C)	**1,000**	**950**	-	**930**	**1,000**	**1,100**	**1,200**	**1,400**	**1,100**
Electron Donor/Acceptor and Leachate Indicator Parameters (mg/L)									
Alkalinity (310.2)	**82.6**	**94.3J**	-	**87.2**	**81**	**86.9**	**86.5**	**84**	**86**
Ammonia Nitrogen (350.1)	**0.012J**	<0.009UJ	-	<0.009U	<0.009UJ	<0.009U	<0.009U	<0.009U	<0.009U
Total Organic Carbon (5310D)	**0.45J**	<0.43U	-	<0.43U	<1U	<0.43U	<0.44U	<0.43UJ	<0.43U
Nitrate-Nitrite (353.2)	<0.02U	<0.05U	-	<0.05U	<0.02U	<0.02U	<0.02U	<0.02UJ	<0.02U
Sulfate (D-516-90)	**7.2**	**14J**	-	**11.4**	**15**	**14.6**	**15.2**	**10.6**	**11.8**
Field Geochemistry									
Dissolved Oxygen (mg/L)	-	-	-	-	-	-	**0.19**	**0.37**	**0.56**
Conductivity (µS/cm)	-	-	**181**	**180**	**186**	**185**	**184**	**193**	**182**
pH	-	-	**7.95**	**7.44**	**7.48**	**6.27**	**6.73**	**6.49**	**7.23**
Oxidation-Reduction Potential (mV)	-	-	**-189**	**-110**	**-14**	**-57**	**-107**	**158**	**46**
Turbidity (NTU)	-	-	**0.7**	**0.5**	**1.8**	**0.9**	**1.8**	**1.1**	**3.1**
Total Petroleum Hydrocarbons (mg/L)									
Gasoline Range Organics (8015D)	<0.0042U	<0.000084UJ	-	<0.0042U	<0.0042U	<0.0042U	**0.38**	0.0045U	<0.0042U
Diesel Range Organics (8015D)	<0.29U	<1.2U	-	<0.29U	<0.33U	<0.31U	<0.31U	<0.31U	**0.31J**

TABLE 5
MW-20A GROUNDWATER ANALYTICAL RESULTS - METALS, LEACHATE INDICATOR, TPH, AND FIELD WATER QUALITY PARAMETERS

Cortese Landfill Site
Narrowsburg, NY

Parameters	MW-20A																
	4/30/2012	**11/20/2012**	**4/17/2013**	**10/21/2013**	**4/21/2014**	**10/22/2014**	**4/22/2015**	**10/19/2015**	**5/16/2016**	**10/26/2016**	**4/24/2017**	**10/17/2017**	**5/7/2018**	**10/15/2018**	**4/23/2019**	**10/7/2019**	**4/29/2020**
Metals (µg/L)																	
Arsenic (6010C)	<10U	**6.6J**	**8.3J**	**7.3J**	-	**8.5J**	<5.6U	<5.6U	<5.6U	<5.6U	<5.6U	<5.6U	<5.6U	**10**	<5.6U	**17**	<5.6U
Iron (6010C)	**450J**	**310**	**840**	**280**	-	**270**	**280**	**1,100**	**600**	**500**	**2,100**	**3,000**	**2,700**	**4,100**	**2,500**	**23,800**	**800**
Manganese (6010C)	**1,400**	**730**	**670**	**360**	-	**470**	**430**	**410**	**550**	**420**	**740**	**560**	**860**	**1,100**	**1,100**	**12,000**	**850**
Electron Donor/Acceptor and Leachate Indicator Parameters (mg/L)																	
Alkalinity (310.2)	**102J**	**88.5J**	**151**	**136J**	-	**131**	**108**	**111J**	**114**	**115**	**109**	**97.7**	**101**	**135**	**105**	**86.4**	**104**
Ammonia Nitrogen (350.1)	**0.071**	**0.35**	**0.088**	**0.1J**	-	**0.15**	**0.037J**	**0.11**	**0.052**	**0.076**	**0.087**	**0.21**	**0.11**	**0.21**	**0.14**	**1.6**	**0.14**
Total Organic Carbon (5310D)	**3.9**	**3.3**	**2.2**	<1.7U	-	**2.3J**	**1.4**	**1.2**	**1.3**	**1.3**	1U	**1.1**	<0.77U	**1.2**	**1.1J**	**3.5**	**0.68J**
Nitrate-Nitrite (353.2)	<0.05U	<0.05U	<0.02U	<0.05U	-	<0.02UJ	<0.02U	<0.02U	<0.02U	**0.021J**	<0.02U	<0.02U	<0.02U	<0.02U	<0.02UJ	0.029U	<0.02U
Sulfate (D-516-90)	**24.3J**	**12.1**	**4.8J**	<5U	-	**2.2J**	<1.5U	**6.3**	**9.5**	**3.7J**	**2J**	**8**	**14.7**	**9**	**9.9**	**34.9**	**12.5**
Field Geochemistry																	
Dissolved Oxygen (mg/L)	-	-	-	-	-	-	-	-	-	-	-	-	**0.02**	**0.63**	**0.97**	**2.16**	**0.93**
Conductivity (µS/cm)	-	-	-	-	**249**	**247**	**246**	**228**	**238**	**223**	**244**	**225**	**226**	**260**	**250**	**231**	**220**
pH	-	-	-	-	**8.56**	**6.62**	**8.44**	**8.16**	**7.93**	**8**	**6.98**	**7.27**	**6.89**	**6.04**	**5.81**	**4.79**	**7.00**
Oxidation-Reduction Potential (mV)	-	-	-	-	**-224**	**-167**	**-44**	**-219**	**14**	**135**	**-45**	**-67**	**-29**	**50**	**224**	**183**	**71**
Turbidity (NTU)	-	-	-	-	**5.2**	**4.1**	**3.2**	**9.1**	**7.5**	**13**	**70**	**62**	**15.6**	**87**	**26**	**25**	**11**
Total Petroleum Hydrocarbons (mg/L)																	
Gasoline Range Organics (8015D)	**0.068J**	**0.031**	**0.021J**	**0.011J**	-	-	-	-	-	-	-	-	-	-	-	-	-
Diesel Range Organics (8015D)	<0.48U	<0.47U	<0.29U	**1.3J**	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 5
MW-20B GROUNDWATER ANALYTICAL RESULTS - METALS, LEACHATE INDICATOR, TPH, AND FIELD WATER QUALITY PARAMETERS

Cortese Landfill Site
Narrowsburg, NY

Parameters	MW-20B																
	4/30/2012	11/20/2012	4/17/2013	10/21/2013	4/22/2014	10/22/2014	4/22/2015	10/19/2015	5/16/2016	10/26/2016	4/24/2017	10/17/2017	5/7/2018	10/15/2018	4/23/2019	10/7/2019	4/29/2020
Metals (µg/L)																	
Arsenic (6010C)	24	26	24	28	-	27	11	25	14	30	<5.6U	26	7.4J	19	5.8J	<5.6U	13
Iron (6010C)	25,500J	17,400	16,400	30,900	-	28,300	8,300	23,100	10,200	18,200	2,600	20,500	6,300	12,100	6,700	3,400	6,800
Manganese (6010C)	10,300	6,800	7,200	10,300	-	9,800	2,900	8,000	3,900	6,700	2,100	7,500	2,600	4,800	3,100	910	3,500
Electron Donor/Acceptor and Leachate Indicator Parameters (mg/L)																	
Alkalinity (310.2)	66J	52.2J	34.9	102J	-	102	27.4	85J	43.9	33.6	21.6	43.8	16.3	26.8J+	15.6	112	16.2
Ammonia Nitrogen (350.1)	1.6	2.4	1.6	5.3	-	4.8	1.7	4.8	1.9	4.4	1.1	4.3	1.6	1.8	0.7	0.18	0.6
Total Organic Carbon (5310D)	1.8J	<1U	1.5	<2.4U	-	3.1J	<1U	2.2J	1.1	2.2	1U	2.3	<0.74U	1.5	0.85J	0.5J	0.45J
Nitrate-Nitrite (353.2)	<0.05U	0.031J	<0.02U	<0.02U	-	0.038J	<0.02U	<0.02U	<0.02U	0.03J	0.08J-	<0.02U	0.057	<0.02U	<0.02U	0.031U	<0.02U
Sulfate (D-516-90)	<5.7U	5.3	4.4J	<5U	-	<1.5U	6.1	39.1	8.7	37.6	13.2	64.2	11.8	19.4	5.8	9.1	9.3
Field Geochemistry																	
Dissolved Oxygen (mg/L)	-	-	-	-	-	-	-	-	-	-	-	-	0.16	0.65	0.58	2.66	0.75
Conductivity (µS/cm)	-	-	-	-	139	365	140	346	134	300	89	363	101	172	99	318	99
pH	-	-	-	-	6.01	5.72	5.83	6.2	6.04	5.93	5.46	5.11	5.08	6.11	5.61	4.46	6.08
Oxidation-Reduction Potential (mV)	-	-	-	-	4	-1	11	-160	60	-39	89	73	53	35	-22	199	74
Turbidity (NTU)	-	-	-	-	1.4	2	1.7	1.8	4.8	4.5	0.8	3.7	4.6	11	1.4	1.2	4.5
Total Petroleum Hydrocarbons (mg/L)																	
Gasoline Range Organics (8015D)	0.92J	0.072	0.083	0.6J	-	-	-	-	-	-	-	-	-	-	-	-	-
Diesel Range Organics (8015D)	0.6	<0.47U	<0.29U	1.7J	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 5
GROUNDWATER ANALYTICAL RESULTS -
METALS, LEACHATE INDICATOR, TPH, AND FIELD WATER QUALITY PARAMETERS

Cortese Landfill Site
Narrowsburg, NY

Notes:

J - Analyte was detected at an estimated concentration

J+ - Analyte was detected at an estimated concentration, result may be biased high

U - Analyte was not detected in the sample; value shown is the method detection limit (MDL)

"-" - Sample was not analyzed for this parameter

mg/L - miligrams per Liter

µg/L - micrograms per Liter

µS/cm - microSiemens per centimeter

mV - miliVolts

NTU - Nephelometric Turbidity Units

TABLE 6
LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL) MEASUREMENTS

Cortese Landfill Site
Narrowsburg, NY

Monitoring Well ID	LNAPLThickness (feet)													
	Oct 2005	26-Apr-06	27-Jul-06	10-Oct-06	1-Apr-07	1-Jul-07	1-Oct-07	1-Apr-08	1-Jul-08	1-Oct-08	1-Apr-09	1-Jul-09	1-Oct-09	1-May-10
MW-1C	NM	NM	NM	NM	NM	NM	NM	ND	ND	NM	ND	ND	NM	NM
MW-9	NM	NM	NM	NM	NM	NM	NM	ND	ND	NM	ND	ND	NM	NM
MW-10	ND	ND	ND	ND	NM	NM	NM	ND	ND	NM	ND	ND	NM	NM
MW-11	NM	NM	NM	NM	NM	NM	NM	NM	NM	ND	NM	NM	ND	ND
MW-12	NM	NM	NM	NM	NM	NM	NM	ND	ND	ND	ND	ND	ND	ND
MW-13	NM	NM	NM	NM	NM	NM	NM	0.14	ND	0.08	0.43	0.74	ND	11.07 (1)
MW-14	NM	NM	NM	NM	NM	NM	NM	ND	ND	ND	ND	ND	ND	ND
MW-15	NM	NM	NM	NM	NM	NM	NM	ND	ND	ND	ND	ND	ND	ND
EX-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-1	ND	ND	ND	ND	ND	ND	ND	0.03	ND	ND	ND	ND	ND	ND
S-2	0.15	0.16	0.12	ND	ND	ND	0.04	ND	0.05	0.17	NQ	NQ	NQ	NQ

Monitoring Well ID	LNAPLThickness (feet)													
	Jul 2010	Oct 2010	Apr 2011	Oct 2011	Apr 2012	Nov 2012	Apr 2013	Oct 2013	21-Apr-14	30-Sep-14	16-Oct-14	21-Oct-14	27-Oct-14	13-Nov-14
MW-10	NM	NM	NM	NM	NM	NM	NM	NM	NM	ND	ND	NM	ND	ND
MW-11	ND	ND	ND	ND	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-12	ND	ND	ND	ND	NM	NM	NM	NM	NM	ND	ND	NM	ND	ND
MW-13	0.05	ND	0.90	0.90	0.40	0.20	0.75	0.22	1.25	ND	ND	ND	ND	ND
MW-14	ND	ND	ND	ND	NM	NM	NM	NM	NM	ND	ND	NM	ND	ND
MW-15	ND	ND	ND	ND	NM	NM	NM	NM	NM	ND	ND	NM	ND	ND
MW-16	NM	NM	NM	NM	0.12	0.01	0.03	0.65	ND	4.56	4.44	0.02	1.92	1.32
EX-1	ND	ND	ND	ND	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
S-1	ND	ND	ND	ND	NM	NM	NM	NM	NM	ND	ND	NM	ND	ND
S-2	0.27	0.39	ND	0.60	0.31	0.79	0.05	0.03	0.12	2.40	3.24	0.12	1.44	1.32

Monitoring Well ID	LNAPLThickness (feet)													
	25-Nov-14	11-Dec-14	23-Dec-14	8-Jan-15	22-Jan-15	5-Feb-15	19-Feb-15	5-Mar-15	19-Mar-15	3-Apr-15	21-Apr-15	27-Jul-15	19-Oct-15	16-May-16
MW-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NM	NM	NM	ND
MW-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NM	NM	NM	ND
MW-13	ND	0.36	0.12	ND	0.01	0.02	0.02	0.02	0.02	0.02	NM	NM	NM	ND
MW-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NM	NM	NM	ND
MW-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NM	NM	NM	ND
MW-16	0.12	0.24	0.12	ND	ND	0.02	0.02	0.02	0.02	0.02	NM	0.01	0.25	0.44
S-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NM	NM	NM	ND
S-2	0.12	ND	ND	ND	ND	0.01	0.02	0.02	0.02	0.02	NM	0.01	0.04	ND

Monitoring Well ID	LNAPLThickness (feet)												
	18-Jul-16	26-Oct-16	24-Apr-17	31-Jul-17	17-Oct-17	7-May-18	19-Jul-18	15-Oct-18	22-Apr-19	22-Jul-19	7-Oct-19	29-Apr-20	7-Jul-20
MW-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

LNAPL - Light non-aqueous phase liquid

NM - LNAPL Level not measured

ND - LNAPL Level checked but not detected

NQ - LNAPL encountered but not quantifiable

(1) Measured value is suspected to be erroneous.

TABLE 7
SUMMARY OF TO-15 ANALYSES OF VGAC MONITORING POINTS

Cortese Landfill Site
Narrowsburg, New York

Chemical Group	Analyte	Units	Sample Location	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503
			Sample Date	9/3/2014	9/5/2014	9/8/2014	9/19/2014	9/25/2014	9/30/2014	10/9/2014	10/16/2014	10/24/2014	10/27/2014	11/6/2014	11/13/2014	11/19/2014	11/21/2014	11/25/2014	12/4/2014	12/11/2014	12/18/2014	12/23/2014	12/30/2014
			Dilution	1510	1520	2490	2760	4580	3880	5810	1090	843	847	1650	1380	1600	2690	4760	2900	3070	2300	2190	1430
			VGAC Threshold Concentrations																				
BTEX	Benzene	µg/m3	163	1,600	1,500	1,900	<260U	<420U	<360U	2,000J	540J	520J	420J	820J	660J	1,100	1,400J	1,700J	1,000J	1,000J	840J	670J	510J
	Toluene	µg/m3	6,272,345	110,000	140,000	210,000	210,000	440,000	330,000	410,000	110,000	100,000	91,000	190,000	130,000	170,000	370,000	370,000	270,000	310,000	300,000	260,000	210,000
	Ethylbenzene	µg/m3	1,254,469	6,100	6,900	12,000	9,600	21,000	19,000	29,000	8,500	8,300	7,200	14,000	10,000	15,000	21,000	19,000	15,000	18,000	15,000	11,000	9,800
	m+p-Xylenes	µg/m3	125,447	21,000	24,000	42,000	34,000	74,000	70,000	100,000	30,000	32,000	27,000	56,000	39,000	53,000	75,000	77,000	58,000	68,000	51,000	40,000	32,000
	o-Xylene	µg/m3	125,447	4,900	5,400	11,000	8,400	19,000	18,000	28,000	8,600	9,300	8,100	16,000	12,000	16,000	23,000	21,000	18,000	26,000	17,000	13,000	11,000
	Total Xylenes	µg/m3	125,447	26,000	29,000	53,000	42,000	92,000	88,000	130,000	39,000	41,000	36,000	73,000	50,000	68,000	97,000	99,000	75,000	96,000	69,000	53,000	44,000
Chlorinated Aliphatics	1,1,1-Trichloroethane	µg/m3	6,272,345	24,000	28,000	31,000	36,000	52,000	45,000	31,000	9,500	6,600	6,100	14,000	11,000	28,000	73,000	120,000	67,000	77,000	64,000	50,000	35,000
	1,1,2-Trichloroethane	µg/m3	1,756	<140U	<140U	<230U	<560U	<920U	<780U	<1200U	<220U	<170U	<170U	<330U	<280U	<320U	<540U	<960U	<590U	<620U	<460U	<440U	<290U
	1,1-Dichloroethane	µg/m3	790	5,000	4,800	6,100	4,900	6,400	4,900	3,300J	730J	700	480J	1,100J	740J	2,200	5,000	4,900	2,900	2,600	2,000	1,500J	1,200
	1,1-Dichloroethene	µg/m3	87,813	<140U	<140U	<240U	<110U	<180U	<150U	<230U	<43U	<33U	<34U	<65U	<55U	<63U	<110U	<190U	<110U	<120U	<91U	<87U	<57U
	1,2-Dichloroethane	µg/m3	48	<100U	<100U	<170U	<580U	<960U	<820U	<1200U	<230U	<180U	<180U	<350U	<290U	<340U	<570U	<1000U	<610U	<650U	<480U	<460U	<300U
	1,2-Dichloroethene	µg/m3	79,032	56,000	59,000	79,000	63,000	91,000	71,000	52,000	12,000	11,000	9,100	22,000	16,000	40,000	91,000	120,000	71,000	59,000	44,000	33,000	25,000
	1,2-Dichloropropane	µg/m3	5,018	<220U	<220U	<370U	<450U	<740U	<630U	<940U	<180U	<140U	<140U	<270U	<220U	<260U	<440U	<770U	<470U	<500U	<370U	<350U	<230U
	Carbon Tetrachloride	µg/m3	213	<200U	<200U	<330U	<190U	<320U	<270U	<400U	<75U	<58U	<59U	<110U	<95U	<110U	560J	1,300J	810J	3,000J	2,900	2,400J	1,800
	Chloroethane	µg/m3	12,544,690	2,600	<120U	<200U	<440U	<740U	<620U	<940U	<180U	<140U	<140U	<270U	<220U	<260U	690J	<770U	<470U	<490U	<370U	<350U	<230U
	Chloroform	µg/m3	54	<180U	<190U	<300U	<510U	<850U	<720U	2,400J	530J	440J	350J	840J	570J	1,100J	2,400J	8,100	4,800	7,200	6,000	4,500	3,500
	Chloromethane	µg/m3	112,902	<420U	<430U	<700U	<340U	<570U	<480U	<720U	<140U	<100U	<100U	<200U	<170U	<200U	<330U	<590U	<360U	<380U	<280U	<270U	<180U
	cis-1,2-Dichloroethene	µg/m3	79,032	57,000	60,000	78,000	64,000	91,000	71,000	53,000	12,000	12,000	9,200	22,000	16,000	41,000	91,000	120,000	73,000	58,000	43,000	32,000	25,000
	Methylene Chloride	µg/m3	2,634	2,800	3,700	5,600	<1200U	<1900U	<1600U	3,400J	1,400J	1,400J	1,000J	1,900J	1,300J	3,000	6,500	11,000	6,500	8,200	5,300	4,300	3,400
	Trichloroethene	µg/m3	627	23,000	49,000	71,000	91,000	170,000	140,000	130,000	30,000	28,000	27,000	59,000	38,000	60,000	170,000	260,000	210,000	270,000	240,000	200,000	150,000
	Tetrachloroethene	µg/m3	1,254	4,400	6,600	10,000	13,000	27,000	23,000	31,000	8,100	7,700	6,500	19,000	13,000	12,000	22,000	27,000	21,000	20,000	20,000	19,000	16,000
	trans-1,2-Dichloroethene	µg/m3	79,032	<170U	<170U	<290U	<300U	<490U	<420U	<620U	<120U	<90U	<91U	<180U	<150U	<170U	<290U	<510U	<310U	<330U	<250U	<230U	<150U
	Vinyl Chloride	µg/m3	138	6,100	3,300	5,000	<180U	<300U	<260U	660J	210J	190J	120J	200J	150J	3,100	2,800	820J	650J	<200U	230J	180J	130J
Chlorinated Aromatics	1,2-Dichlorobenzene	µg/m3	250,894	<130U	<130U	<210U	<300U	<500U	<420U	4,700J	1,100J	1,500	1,100	3,000	2,700	2,900	4,900	6,000	2,600J	11,000	3,000	2,800	2,200
	1,3-Dichlorobenzene	µg/m3	12,545	<130U	<130U	<210U	<330U	<550U	<470U	1,500J	360J	450J	350J	980J	990J	1,100J	1,700J	2,000J	970J	3,700	980J	1,000J	770J
	1,4-Dichlorobenzene	µg/m3	113	<130U	<130U	5,800	<320U	<520U	5,100	11,000	2,800	3,700	2,900	7,500	7,200	8,200	13,000	15,000	6,800	30,000	7,500	7,300	5,700
	Chlorobenzene	µg/m3	137,992	2,600	3,400	7,300	6,100	12,000	11,000	20,000	6,700	6,800	5,900	12,000	8,800	9,700	11,000	12,000	7,100	8,900	5,500	4,800	4,000
Halogenated Hydrocarbons	1,2-Dibromoethane	µg/m3	2	<230U	<230U	<380U	<380U	<630U	<540U	<800U	<150U	<120U	<120U	<230U	<190U	<220U	<370U	<660U	<400U	<420U	<320U	<300U	<200U
	2-chlorotoluene	µg/m3	777,771	<100U	<100U	<170U	<440U	<740U	<620U	<930U	<170U	<140U	370J	<260U	<220U	<260U	<430U	<760U	<470U	<490U	<370U	<350U	<230U
	Benzyl chloride	µg/m3	25	<630U	<630U	<1000U	<260U	<430U	<360U	<540U	<100U	<79U	<79U	<150U	<130U	<150U	<250U	<440U	<270U	<290U	<210U	<200U	<130U
	Dichlorobromomethane	µg/m3	87,813	<170U	<170U	<280U	<540U	<890U	<750U	<1100U	<210U	<160U	<160U	<320U	<270U	<310U	<520U	<920U	<560U	<600U	<450U	<430U	<280U
	Bromoform	µg/m3	1,142	<160U	<160U	<260U	<710U	<1200U	<1000U	<1500U	<280U	<220U	<220U	<430U	<360U	<410U	<700U	<1200U	<750U	<790U	<590U	<570U	<370U
	Bromomethane	µg/m3	6,272	<160U	<170U	<270U	<470U	<780U	<660U	<990U	<190U	<140U	<140U	<280U	<240U	<270U	<460U	<810U	<500U	<520U	<390U	<370U	<240U
	Chlorodibromomethane	µg/m3		<260U	<260U	<420U	<470U	<780U	<660U	<990U	<190U	<140U	<140U	<280U	<240U	<270U	<460U	<810U	<490U	<520U	<390U	<370U	<240U
	Dichlorodifluoromethane	µg/m3	15,053,628	<220U	<230U	<370U	<760U	<1300U	<1100U	<1600U	<300U	<230U	<230U	<460U	<380U	<440U	<740U	<1300U	<800U	<850U	<640U	<610U	<400U
	Hexachlorobutadiene	µg/m3	56	<350U	<360U	<580U	<1100U	<1800U	<1500U	<2200U	<420U	<320U	<330U	<630U	570J	<610U	<1000U	<1800U	<1100U	<1200U	<880U	<840U	<550U
	Trichlorofluoromethane	µg/m3	6,272,345	<250U	<260U	<420U	<700U	<1200U	<980U	<1500U	<280U	<210U	<210U	<420U	<350U	<400U	<680U	<1200U	<730U	<780U	<580U	<550U	<360U
Alkylbenzenes	1,2,4-trimethylbenzene	µg/m3	7,527	3,400	4,500	14,000	7,500	16,000	16,000	27,000	7,900	9,500	8,400	20,000	17,000	17,000	28,000	32,000	20,000	64,000	23,000	20,000	16,000
	1,3,5-trimethylbenzene	µg/m3	363,796	1,600	1,900	5,300	3,200	6,800	7,000	11,000	3,300	3,600	3,300	7,700	6,700	7,000	11,000	12,000	8,700	22,000	11,000	9,600	7,500
	Isopropylbenzene	µg/m3	501,788	<120U	<120U	<200U	<260U	<430U	<360U	3,100J	990J	930	850	2,000	1,600	1,700	2,900	<440U	2,200J	<290U	2,400	2,000J	1,600
	n-propylbenzene	µg/m3	1,254,469	<590U	<600U	3,000	<370U	4,600	<510U	7,000	2,100	2,400	2,100	4,600	3,700	4,200	6,700	6,300	5,000	8,600	5,500	4,500	3,800
	Styrene	µg/m3	1,254,469	<120U	<120U	<190U	<190U	<310U	<260U	<400U	<74U	<57U	<58U	<110U	<94U	<110U	<180U	<320U	<200U	<210U	<160U	<150U	<97U
	tert-butylbenzene	µg/m3		<140U	<140U	<230U	<300U	<500U	<430U	<640U	<120U	<93U	<93U	<180U	<150U	<180U	<300U	<520U	<320U	<340U	<250U	<240U	<160U
PAH/Phenols	Naphthalene	µg/m3	3,763	<1600U	<1600U	<2600U	<430U	<720U	<610U	<910U	<170U	<130U	<130U	<260U	<220U	<250U	<420U	<750U	<460U	<480U	<360U	<340U	<220U
Solvents	1,4-Dioxane	µg/m3	163	<1100U	<1100U	<1800U	<1600U	<2600U	<2200U	<3300U	<630U	<490U	<490U	<950U	<800U	<920U	<1600U	<2700U	<1700U	<1800U	<1300U	<1300U	<820U
	2-Butanone	µg/m3	6,272,345	<1100U	<1100U	<1800U	<750U	<1200U	<1100U	<1600U	<300U	950J	990J	1,400J	<370U	<430U	<730U	<1300U	<790U	<830U	<620U	<590U	<390U
	2-Hexanone	µg/m3	37,634	<1200U	<1200U	<2000U	<1900U	<3200U	<2700U	<4000U	<760U	<590U	<590U	<1100U	<960U	<1100U	<1900U	<3300U	<2000U	<2100U	<1600U	<1500U	<1000U
	4-Methyl-2-pentanone	µg/m3	3,763,407	<170U	<170U	<280U	<2000U	<3400U	<2900U	<4300U	<800U	710J	<620U	<1200U	<1000U	<1200U	<2000U	<3500U	<2100U	<2300U	<1700U	<1600U	<1100U
	Acetone	µg/m3	37,634,070	<4500U	<4500U	<7400U	<4500U	<7500U	<6400U	<9500U	<1800U	<1400U	<1400U	<2700U	<2300U	<2600U	<4400U	<7800U	<4800U	<5000U	<3800U	<3600U	<2300U
	Allyl chloride	µg/m3	1,254	<160U	<160U	<260U	<1400U	<2300U	<1900U	<2900U	<550U	<420U	<420U	<830U	<690U	<800U	<1300U	<2400U	<1500U	<1500U	<1200U	<1100U	<720U
	Carbon Disulfide	µg/m3	878,128	<310U	<310U	<510U	<260U	<430U	<360U	<540U	<100U	<79U	<79U	<150U	<130U	<150U	<250U	<440U	<270U	<290U	<210U	<200U	<130U
	Cyclohexane	µg/m3	7,526,814	7,800	7,300	8,500	9,300	12,000	11,000	4,400	1,700	1,400	1,400	2,900	2,000	4,600	11,000	<160U	7,100	6,900	5,100	3,600	2,800
	Heptane	µg/m3	4,892,429	13,000	14,000	21,000	22,000	35,000	28,000	22,000	5,100	4,900	3,600	8,600	4,900	16,000	36,000	21,000	14,000	10,000	8,700	5,600	4,300
	Hexane	µg/m3	878,128	73,000	60,000	85,000	69,000	83,000	73,000	43,000	9,300	9,400	6,700	16,000	10,000	76,000	150,000	79,000	45,000	27,000	21,000	13,000	11,000
	MTBE	µg/m3	3,763,407	<120U	<120U	<200U	<220U	<360U	<310U	<460U	<86U	<67U	<67U	<130U	<110U	<130U	<210U	<380U	<230U	<240U	<180U	<170U	<110U
	Tetrahydrofuran	µg/m3	439,064	<200U	<210U	<340U	<1500U	<2400U	<2100U	<3100U	<580U	<450U	<450U	<880U	<730U	<850U	<1400U	<2500U	<1500U	<1600U	<1200U	<1200U	<760U
VOCs	1,3-Butadiene	µg/m3	41	<140U	<140U	<230U	<220U	<360U	<310U	<460U	<87U	<67U	<67U	<130U	<110U	<130U	<210U	<380U	<230U	<240U	<180U	<170U	<110U
	Chlorodifluoromethane	µg/m3	62,723,450	<260U	<260U	<420U	<780U	<1300U	<1100U	<1600U	<310U	<240U	<240U	<470U	<390U	<450U	<760U	<1300U	<820U	<870U	<650U	<620U	<400U
	Methyl Methacrylate	µg/m3	878,128	<190U	<190U	<310U	<1100U	<1800U	<1500U	<2300U	<430U	<330U	<330U	<650U	<540U	<630U	<1100U	<1900U	<1100U	<1200U	<900U	<860U	<560U
	Vinyl bromide (bromoethene)	µg/m3	3,763	<200U	<200U	<330U	<240U	<400U	<340U	<510U	<95U	<74U	<74U	<140U	<120U	<140U	<240U	<420U	<250U	<270U	<200U	<190U	<130U
	1,2-Dichlorotetrafluoroethane	µg/m3	21,325,973	<370U	<370U	<610U	<1000U	<1700U	<1400U	<2100U	<400U	<310U	<310U	<600U	<500U	<580U	<980U	<1700U	<1100U	<1100U	<840U	<800U	<520U
	2,2,4-Trimethylpentane	µg/m3	4,139,748	<190U	<190U	<310U	<300U	<490U	<420U	<620U	<120U	<91U	<91U	350J	220J	<170U	<290U	<510U	<310U	<330U	<250U	<240U	<150U
	Butane	µg/m3	71,504,733	<1000U	<1000U	<1700U	<1200U	<2000U	<1700U	<2500U	<470U	<360U	<360U	<710U	<590U	<680U	<1200U	<2000U	<1200U	<1300U	<980U	<940U	<610U
	2-Propanol	µg/m3	8,781,283	<800U	<800U	<1300U	<1000U	<1700U	<1400U	<2100U	<400U	<310U	<310U	<610U	<510U	<590U	<990U	<1800U	<1100U	<1100U	<850U	<810U	<530U
	tert-Butyl alcohol	µg/m3	903,218	<1500U	<1500U	<2500U	<1000U	<1700U	<1400U	<2100U	<400U	<310U	<310U	<600U	<500U	<580U	<980U	<1700U	<1100U	<1100U	<840U	<800U	<520U
	Field Screening PID	ppmv		41	40	98	95	85	57	115	115	68	85	175	165	195	195	215	275	195	110	130	135
	Total Detected VOCs	µg/m3		467,900	534,000	839,600	727,000	1,348,200	1,113,600	1,314,260	351,280	351,250	306,850	685,790	504,500	768,000	1,476,650	1,608,620	1,082,690	1,329,200	1,061,150	879,550	679,910
	Total Flow Rate	CFM		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	VOC Mass Flow Rate	lb/hr		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 7
SUMMARY OF TO-15 ANALYSES OF VGAC MONITORING POINTS

Cortese Landfill Site
Narrowsburg, New York

Chemical Group	Analyte	Units	Sample Location	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503
			Sample Date	1/8/2015	1/15/2015	1/22/2015	1/29/2015	2/5/2015	2/12/2015	2/19/2015	2/26/2015	3/5/2015	3/12/2015	3/19/2015	3/26/2015	4/3/2015	11/10/2015	11/16/2015	11/24/2015	12/2/2015	12/9/2015	12/15/2015	12/23/2015
			Dilution	964	1090	1360	1320	990	888	305	199	562	935	1190	844	871	466	425	277	277	263	188	181
			VGAC Threshold Concentrations																				
BTEX	Benzene	µg/m3	163	500J	290J	320J	250J	360J	200J	180J	110J	290J	270J	360J	220J	390J	420	360	270	250	270	190	180
	Toluene	µg/m3	6,272,345	150,000J	140,000	120,000	130,000	140,000	80,000	35,000	18,000	56,000	85,000	110,000	90,000	83,000	47,000	45,000	32,000	28,000	23,000	19,000	16,000
	Ethylbenzene	µg/m3	1,254,469	8,400	6,400	5,600	6,300	6,800	3,700	1,900	890	3,800	5,000	5,800	4,200	5,200	2800	2300	2000	1800	1300	1500	1000
	m+p-Xylenes	µg/m3	125,447	29,000	20,000	19,000	21,000	23,000	13,000	6,600	3,600	14,000	16,000	19,000	14,000	18,000	7600	7200	6900	6700	4600	5400	3800
	o-Xylene	µg/m3	125,447	10,000	8,000	7,800	8,600	10,000	6,100	3,500	2,500	6,800	7,500	9,300	7,100	8,200	3,000	2,900	3,000	3,000	2,300	2,500	1,900
	Total Xylenes	µg/m3	125,447	39,000	28,000	27,000	29,000	33,000	19,000	10,000	6,100	20,000	23,000	29,000	21,000	26,000	11,000	9,900	9,900	9,500	7,100	7,700	5,700
Chlorinated Aliphatics	1,1,1-Trichloroethane	µg/m3	6,272,345	31,000	27,000	26,000	22,000	33,000	15,000	8,200	3,900	11,000	18,000	21,000	14,000	24,000	13,000	6,700	3,500	2,400	2,400	1,500	1,100
	1,1,2-Trichloroethane	µg/m3	1,756	<190U	<220U	<270U	<270U	<200U	<180U	<62U	<40U	<110U	<190U	<240U	<170U	<180U	<99U	<90U	<59U	<59U	<56U	<40U	<39U
	1,1-Dichloroethane	µg/m3	790	1,100	830J	900J	760J	1,100	500J	370	300	610	710J	860J	670	1,100	1,500	690	400	330	360	210	190
	1,1-Dichloroethene	µg/m3	87,813	<38U	<43U	<54U	<52U	<39U	<35U	<12U	<7.9U	<22U	<37U	<47U	<33U	110J	<67U	<61U	<40U	<40U	<38U	<27U	<26U
	1,2-Dichloroethane	µg/m3	48	<200U	<230U	<290U	<280U	<210UJ	<190U	<64U	<42U	<120U	<200U	<250U	<180U	<180U	<77U	<71U	<46U	<46U	<44U	<31U	<30U
	1,2-Dichloroethene	µg/m3	79,032	21,000	17,000	16,000	15,000	19,000	9,500	4,400	5,200	11,000	13,000	16,000	12,000	15,000	31,000	15,000	8,700	7,100	7,900	5,200	4,400
	1,2-Dichloropropane	µg/m3	5,018	<160U	<180U	<220U	<210U	<160U	<140U	<49U	<32U	<91U	<150U	<190U	<140U	<140U	<58U	<53U	<35U	<35U	<33U	<23U	<23U
	Carbon Tetrachloride	µg/m3	213	1,500	1200J	990J	820J	1,500	470J	410	120J	390J	690J	900J	570J	1,200	130J	<86U	<56U	<56U	<53U	<38U	<36U
	Chloroethane	µg/m3	12,544,690	<160U	<180U	<220U	<210U	<160U	<140U	<49U	<32U	<90U	<150U	<190U	<140U	<140U	<100U	<95U	<62U	<62U	<59U	<42U	<41U
	Chloroform	µg/m3	54	2,900	2,400	2,200	2,000	3,200	1,300	810	460	1,000	1,800	2,100	1,600	2,500	1,000	720	410	280	270	170J	140J
	Chloromethane	µg/m3	112,902	<120U	<140U	<170U	<160U	<120U	<110U	<38U	<25U	<70U	<120U	<150U	<100U	<110U	<89U	<82U	<53U	<53U	<51U	<36U	<35U
	cis-1,2-Dichloroethene	µg/m3	79,032	21,000	17,000	16,000	15,000	19,000	9,700	4,400	5,000	12,000	14,000	16,000	12,000	15,000	31,000	15,000	8,600	7,200	8,100	5,000	4,400
	Methylene Chloride	µg/m3	2,634	2,900	2,400	2,600	2200J	2,800	1300J	640	540	1,500	1,800	2,700	1,700	3,000	2,300	1,700	850	830	960	570	640
	Trichloroethene	µg/m3	627	110,000	110,000	94,000	100,000	120,000	53,000	26,000	20,000	49,000	54,000	75,000	57,000	60,000	21,000	23,000	16,000	12,000	12,000	8,100	6,600
	Tetrachloroethene	µg/m3	1,254	14,000	13,000	13,000	15,000	17,000	9,300	4,600	2,900	9,100	9,700	12,000	8,700	9,900	3,400	3,600	4,300	3,800	3,600	2,800	2,400
	trans-1,2-Dichloroethene	µg/m3	79,032	<100U	<120U	<150U	<140U	<110U	<95U	<33U	<21U	<60U	<100U	<130U	<90U	<93U	<79U	<72U	<47U	<47U	<45U	<32U	<31U
	Vinyl Chloride	µg/m3	138	130J	86J	140J	<88U	140J	<59U	<20U	100	<37U	79J	110J	85J	120J	1,400	280	140	110J	150	67J	56J
Chlorinated Aromatics	1,2-Dichlorobenzene	µg/m3	250,894	1,700	1,600	2,100	1,700	1,800	1,200	970	530	2,100	1,400	2,200	870J	1,800	510J	580	710	740	390	810	520
	1,3-Dichlorobenzene	µg/m3	12,545	630J	530J	670J	610J	610J	<110U	440	220J	690	460J	670J	270J	<100U	200J	240J	280J	290J	180J	280	200J
	1,4-Dichlorobenzene	µg/m3	113	4,600	3,700	5,100	4,200	4,200	2,500	2,600	1,500	4,800	3,200	4,800	1,900	3,500	1,200	1,500	1,900	2,000	1,100	2,000	1,200
	Chlorobenzene	µg/m3	137,992	3,700	2,600	3,000	2,700	2,900	1,600	1,600	910	2,400	2,400	2,700	2,200	2,700	1,900	2,400	2,400	1,900	1,700	1,400	1,100
Halogenated Hydrocarbons	1,2-Dibromoethane	µg/m3	2	<130U	<150U	<190U	<180U	<140U	<120U	<42U	<28U	<78U	<130U	<160U	<120U	<120U	<140U	<130U	<83U	<83U	<79U	<56U	<54U
	2-chlorotoluene	µg/m3	777,771	<150U	<170U	<220U	<210U	<160U	<140U	<49U	<32U	<90U	<150U	<190U	<140U	590J	<80U	<73U	120J	<47U	<45U	<32U	<31U
	Benzyl chloride	µg/m3	25	<90U	<100U	<130U	<120U	<92U	<83U	<28U	<19U	<52U	<87U	<110U	<79U	<81U	<130U	<120U	<76U	<76U	<72U	<52U	<50U
	Dichlorobromomethane	µg/m3	87,813	<190U	<210U	<260U	<260U	<190U	<170U	<59U	<39U	<110U	<180U	<230U	<160U	<170U	<94U	<85U	<56U	<56U	<53U	<38U	<36U
	Bromoform	µg/m3	1,142	<250U	<280U	<350U	<340U	<260U	<230U	<79U	<51U	<150U	<240U	<310U	<220U	<230U	<270U	<250U	<160U	<160U	<150U	<110U	<100U
	Bromomethane	µg/m3	6,272	<160U	<190U	<230U	<230U	<170U	<150U	<52U	<34U	<96U	<160U	<200U	<140U	<150U	<100U	<92U	<60U	<60U	<57U	<41U	<39U
	Chlorodibromomethane	µg/m3		<160U	<190U	<230U	<220U	<170U	<150U	<52U	<34U	<96U	<160U	<200U	<140U	<150U	<170U	<160U	<100U	<100U	<99U	<70U	<68U
	Dichlorodifluoromethane	µg/m3	15,053,628	<270U	<300U	<380U	<370U	<270U	<250U	<84U	84J	230J	<260U	<330U	<230U	<240U	450J	<170U	<110U	<110U	100J	<74U	<72U
	Hexachlorobutadiene	µg/m3	56	<370U	<420U	<520U	<510U	<380U	<340U	<120U	<76U	<220U	<360U	<460U	<320U	410J	<410U	<370U	<240U	<240U	<230U	<160U	<160U
	Trichlorofluoromethane	µg/m3	6,272,345	<240U	<280U	<340U	<330U	<250U	<220U	<77U	160J	300J	<240U	<300U	<210U	<220U	<99U	<91U	<59U	<59U	<56U	<40U	<39U
Alkylbenezenes	1,2,4-trimethylbenzene	µg/m3	7,527	11,000	12,000	11,000	12,000	13,000	8,100	4,700	2,600	5,900	10,000	12,000	7,600	9,900	2,500	2,500	2,900	3,200	1,300	3,100	1,500
	1,3,5-trimethylbenzene	µg/m3	363,796	6,100	6,100	6,200	6,900	7,800	4,800	3,000	2,100	3,800	6,000	7,100	4,700	6,200	1,500	1,500	1,800	1,900	1,100	1,800	1,100
	Isopropylbenzene	µg/m3	501,788	1,100	1,100	1,000J	1200J	1,300	<83U	<28U	<19U	630	<87U	1100J	830	880	320J	290J	300	320	200J	<28U	160J
	n-propylbenzene	µg/m3	1,254,469	2,400	2,500	2,200	2,600	2,800	1,800	1,100	390	1,200	2,200	2,600	1,800	2,500	690	640	670	760	360	650	290
	Styrene	µg/m3	1,254,469	<66U	<74U	<93U	<90U	<67U	<61U	<21U	<14U	<38U	<64U	<81U	<58U	<59U	<85U	<78U	<51U	<51U	<48U	<34U	<33U
	tert-butylbenzene	µg/m3		<110U	<120U	<150U	<140U	<110U	<97U	<33U	<22U	<62U	<100U	<130U	<93U	<96U	<110U	<100U	<67U	<67U	<64U	<45U	<44U
PAH/Phenols	Naphthalene	µg/m3	3,763	<150U	<170U	<210U	<210U	<160U	<140U	<48U	<31U	<88U	<150U	<190U	<130U	<140U	<140U	<130U	<83U	<83U	<79U	<56U	<54U
Solvents	1,4-Dioxane	µg/m3	163	<560U	<630U	<780U	<760U	<570U	<510U	<180U	<110U	<320U	<540U	<690U	<490U	<500U	<940U	<860U	<560U	<560U	<530U	<380U	<370U
	2-Butanone	µg/m3	6,272,345	<260U	<300U	<370U	<360U	<270U	<240U	<83U	<54U	<150U	<250U	<320U	<230U	<240U	<71U	100J	200J	<42U	<40U	<29U	<28U
	2-Hexanone	µg/m3	37,634	<670U	<760U	<950U	<920U	<690U	<620U	<210U	<140U	<390U	<650U	<830U	<590U	<610U	<110U	<99U	<65U	<65U	<61U	<44U	<42U
	4-Methyl-2-pentanone	µg/m3	3,763,407	<710U	<800U	<1,000U	<970U	<730U	<650U	<220U	<150U	<410U	<690U	<880U	<620U	<640U	220J	<87U	230J	170J	<54U	110J	<37U
	Acetone	µg/m3	37,634,070	<1600U	<1800U	<2200U	<2200U	<1600UJ	<1500U	<500U	<330U	<920U	<1500U	<2,000U	<1400U	<1400U	<950U	1300J	<570U	<570U	<540U	<380U	<370U
	Allyl chloride	µg/m3	1,254	<480U	<550U	<680U	<660U	<500U	<440U	<150U	<100U	<280U	<470U	<600U	<420U	<440U	<99U	<90U	<59U	<59U	<56U	<40U	<39U
	Carbon Disulfide	µg/m3	878,128	<90U	<100U	<130U	<120U	<92U	<83U	<28U	48J	<53U	<87U	<110U	<79U	<81U	<62U	<57U	<37U	<37U	<35U	<25U	<24U
	Cyclohexane	µg/m3	7,526,814	2,200	2,000	1,900	1,600	2,400	1,400	820	560	<19U	<32U	1,900	1,600	2,900	2,100	1,000	630	490	550	310	260
	Heptane	µg/m3	4,892,429	2,700	2,300	2,100	2,000	2,200	1,300	680	490	960	1,500	1,800	1,400	1,600	4,500	2,300	1,000	860	910	600	590
	Hexane	µg/m3	878,128	7,800	6,500	7,100	5,300	7,300	4,300	1,400	2,000	3,800	6,200	6,900	5,400	7,600	16,000	5,700	2,900	2,500	3,000	1,700	1,800
	MTBE	µg/m3	3,763,407	<76U	<86U	<110U	<100U	<79U	<70U	<24U	<16U	<45U	<74U	<94U	<67U	<69U	<150U	<140U	<89U	<89U	<84U	<60U	<58U
	Tetrahydrofuran	µg/m3	439,064	<510U	<580U	<720U	<700U	<530U	<470U	<160U	<110U	<300U	<500U	<630U	<450U	<460U	<1900U	<1800U	<1100U	<1100U	<1100U	<780U	<750U
VOCs	1,3-Butadiene	µg/m3	41	<77U	<87U	<110U	<110U	<79U	<71U	<24U	<16U	<45U	<74U	<95U	<67U	<69U	<92U	<84U	<55U	<55U	<52U	<37U	<36U
	Chlorodifluoromethane	µg/m3	62,723,450	<270U	<310U	<380U	<370U	<280U	<250U	<86U	<56U	<160U	<260U	<340U	<240U	<250U	350J	130J	56J	<56U	<53U	<38U	<36U
	Methyl Methacrylate	µg/m3	878,128	<380U	<430U	<530U	<520U	<390U	<350U	<120U	<78U	<220U	<370U	<470U	<330U	<340U	<76U	<70U	<45U	<45U	<43U	<31U	<30U
	Vinyl bromide (bromoethene)	µg/m3	3,763	<84U	<95U	<120U	<120U	<87U	<78U	<27U	<17U	<49U	<82U	<100U	<74U	<76U	<90U	<82U	<53U	<53U	<51U	<36U	<35U
	1,2-Dichlorotetrafluoroethane	µg/m3	21,325,973	<350U	<400U	<490U	<480U	<360U	<320U	<110U	<72U	430J	<340U	<430U	<310U	<320U	490J	130J	<74U	<74U	91J	<50U	<48U
	2,2,4-Trimethylpentane	µg/m3	4,139,748	<100U	<120U	<150U	<140U	<110U	<95U	<33U	63J	<60U	<100U	<130U	<91U	<94U	210J	140J	71J	58J	61J	<34U	36J
	Butane	µg/m3	71,504,733	<410U	<470U	<580U	<560U	<420U	<380U	<130U	110J	<240U	<400U	<510U	<360U	<370U	810	220J	84J	58J	83J	44J	40J
	2-Propanol	µg/m3	8,781,283	<360U	<400U	<500U	<490U	<370U	<330U	<110U	<73U	<210U	<340U	<440U	<310U	<320U	<1100U	<1000U	<670U	<670U	<630U	<450U	<440U
	tert-Butyl alcohol	µg/m3	903,218	<350U	<400U	<490U	<480U	<360U	<320U	<110U	<72U	<200U	<340U	<430U	<310U	<320U	<1200U	<1100U	<710U	<710U	<680U	<480U	<470U
Field Screening PID		ppmv		160	145	150	140	130	100	NA	65	85	140	150	125		30	44	50	50	45	50	50
Total Detected VOCs		µg/m3		527,160	478,536	447,520	461,040	531,030	279,270	137,750	87,625	249,590	336,199	420,000	300,475	354,460	220,170	163,650	117,431	102,436	86,785	77,411	58,712
Total Flow Rate		CFM		638	608	664	650	645	623	NA	610	580	515	517	445		684	584	613	621	584	589	571
VOC Mass Flow Rate		lb/hr		1.259	1.089	1.112	1.121	1.282	0.651	NA	0.200	0.542	0.648	0.813	0.500		0.56	0.36	0.27	0.24	0.19	0.17	0.13

TABLE 7
SUMMARY OF TO-15 ANALYSES OF VGAC MONITORING POINTS

Cortese Landfill Site
Narrowsburg, New York

Chemical Group	Analyte	Units	Sample Location	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503
			Sample Date	12/29/2015	1/6/2016	1/13/2016	1/20/2016	1/27/2016	2/3/2016	2/10/2016	2/17/2016	3/2/2016	3/9/2016	3/23/2016	3/30/2016	4/13/2016	4/20/2016	5/4/2016	5/11/2016	5/25/2016	6/1/2016	6/15/2016
			Dilution	158	124	172.596	150	53.1	85	209	57.2	83.5	78	231	282	148	121	74.2	142	106	233	173
			VGAC Threshold Concentrations																			
BTEX	Benzene	µg/m3	163	230	180	240	230	150	170	230	110	170	140	190	190	150	130	47	110	120	68J	90J
	Toluene	µg/m3	6,272,345	16,000	10,000	14,000	11,000	4,600	9,200	12,000	6,000	5,400	7,900	13,000	18,000	14,000	12,000	5,300	14,000	9,700	11,000	19,000
	Ethylbenzene	µg/m3	1,254,469	1200	900	1,200	840	370	710	1,300	720	280	520	820	800	770	610	170	640	490	430	800
	m+p-Xylenes	µg/m3	125,447	4300	3,400	4,500	3,300	1,500	3,100	5,000	2,100	1,200	2,200	2,800	2,500	2,700	2,200	500	2,100	1,600	1,500	2,500
	o-Xylene	µg/m3	125,447	2,000	1,500	2,000	1,600	1,100	1,500	2,900	1,000	750	1,100	1,500	1,700	1,800	1,400	320	1,500	1,000	1,400	2,200
	Total Xylenes	µg/m3	125,447	6,300	4,800	6,300	4,900	2,600	4,600	8,100	3,200	1,900	3,300	4,300	4,200	4,500	3,600	840	3,500	2,700	2,900	4,700
Chlorinated Aliphatics	1,1,1-Trichloroethane	µg/m3	6,272,345	870	560	690	680	910	590	1,100	390	760	300	2,500	8,200	5,400	4,300	1,000	6,600	680	6,100	5,400
	1,1,2-Trichloroethane	µg/m3	1,756	63J	<26U	<37U	<32U	<11U	<18U	<44U	<12U	<18U	<17U	<49U	<60U	<31U	<26U	<16U	<30U	<23U	<50U	<37U
	1,1-Dichloroethane	µg/m3	790	210	130	180	170	220	110	190	91	180	79	420	560	350	290	63	330	100	310	290
	1,1-Dichloroethene	µg/m3	87,813	<23U	<18U	<25U	<21U	10J	<12U	<30U	<8.2U	14J	<11U	120J	43J	59J	<17U	<11U	46J	<15U	80J	<25U
	1,2-Dichloroethane	µg/m3	48	<26U	<21U	<29U	<25U	<8.8U	<14U	<35U	<9.5U	<14U	<13U	<38U	<47U	<25U	<20U	<12U	<24U	<18U	<39U	<29U
	1,2-Dichloroethene	µg/m3	79,032	5,200	3500	4400	4800	4000	3700	4800	2200	5200	2900	11,000	21,000	13,000	9900	2400	9100	2,600	11,000	7,900
	1,2-Dichloropropane	µg/m3	5,018	<20U	<15U	<22U	<19U	<6.6U	<11U	<26U	<7.1U	<10U	<9.7U	<29U	<35U	<18U	<15U	<9.3U	<18U	<13U	<29U	<22U
	Carbon Tetrachloride	µg/m3	213	<32U	<25U	<35U	<30U	<11U	<17U	<42U	<12U	<17U	<16U	49J	180J	190	170	28J	280	25J	120J	170J
	Chloroethane	µg/m3	12,544,690	<35U	<28U	<39U	<34U	<12U	<19U	<47U	<13U	<19U	<17U	<52U	<63U	<33U	<27U	<17U	<32U	<24U	<52U	<39U
	Chloroform	µg/m3	54	140J	84J	100J	110J	120	81J	150J	58	99	51J	160J	800	610	510	130	720	100	480	480
	Chloromethane	µg/m3	112,902	<30U	<24U	<33U	<29U	<10U	<16U	<40U	<11U	<16U	<15U	<44U	<54U	<28U	<23U	<14U	<27U	<20U	<45U	<33U
	cis-1,2-Dichloroethene	µg/m3	79,032	5,000	3500	4500	4900	4000	3700	4700	2200	5000	2900	12,000	21,000	13,000	9800	2400	9300	2600	11,000	8,100
	Methylene Chloride	µg/m3	2,634	720	510	800	630	670	440	690	470	420	330	720	1900	1100	950	170	1100	420	700	530
	Trichloroethene	µg/m3	627	6,100	4,200	5,500	5,600	5,800	4,400	8,700	2,700	5,300	3,100	5,000	13,000	13,000	11,000	3900	15,000	4,500	15,000	19,000
	Tetrachloroethene	µg/m3	1,254	2,100	1500	1,800	1,900	1,700	1,700	2,600	620	2,300	1,500	1,400	2,300	2,400	2200	830	2,400	1,800	3,200	3,900
	trans-1,2-Dichloroethene	µg/m3	79,032	38J	<21U	<29U	<26U	21J	<14U	<36U	10J	26J	<13U	<39U	<48U	<25U	<21U	<13U	<24U	<18U	<40U	<29U
	Vinyl Chloride	µg/m3	138	73J	41J	53J	74J	120	45	42J	24J	87	21J	650	170	150	130	9.1J	100	18J	110J	75J
Chlorinated Aromatics	1,2-Dichlorobenzene	µg/m3	250,894	490	410	550	480	400	480	1300	330	300	430	310	700	650	530	38J	460	430	350	630
	1,3-Dichlorobenzene	µg/m3	12,545	190J	140J	180J	180	150	180	420	120	120	160	130J	230J	200	<40U	<25U	<47U	130	110J	180J
	1,4-Dichlorobenzene	µg/m3	113	1,100	960	1200	1300	1100	1200	3200	860	780	1000	890	1500	1200	1000	110	820	860	620	1,000
	Chlorobenzene	µg/m3	137,992	930	740	930	810	590	660	1100	760	380	480	570	530	450	350	95	290	220	200J	290
Halogenated Hydrocarbons	1,2-Dibromoethane	µg/m3	2	<47U	<37U	<52U	<45U	<16U	<25U	<63U	<17U	<25U	<23U	<69U	<85U	<44U	<36U	<22U	<43U	<32U	<70U	<52U
	2-chlorotoluene	µg/m3	777,771	78J	<21U	<29U	<26U	<9.1U	47J	<36U	<9.8U	<14U	<13U	<39U	<48U	<25U	<21U	<13U	<24U	<18U	<40U	<30U
	Benzyl chloride	µg/m3	25	<43U	<34U	<47U	<41U	<15U	<23U	<57U	<16U	<23U	<21U	<63U	<77U	<41U	<33U	<20U	<39U	<29U	<64U	<47U
	Dichlorobromomethane	µg/m3	87,813	<32U	<25U	<35U	<30U	<11U	<17U	<42U	<11U	<17U	<16U	<46U	<57U	<30U	<24U	<15U	<29U	<21U	<47U	<35U
	Bromoform	µg/m3	1,142	<91UJ	<72U	<100U	<87U	<31U	<49U	<120U	<33U	<48U	<45U	<130U	<160U	<86U	<70U	<43U	<82U	<61U	<130U	<100U
	Bromomethane	µg/m3	6,272	<34U	<27U	<38U	<33U	<12U	<18U	<45U	<12U	<18U	<17U	<50U	<61U	<32U	<26U	<16U	<31U	<23U	<51U	<38U
	Chlorodibromomethane	µg/m3		<59U	<46U	<65U	<56U	<20U	<32U	<78U	<21U	<31U	<29U	<87U	<110U	<55U	<45U	<28U	<53U	<40U	<87U	<65U
	Dichlorodifluoromethane	µg/m3	15,053,628	<63U	51J	<68U	66J	120J	<34U	130J	50J	230	110J	<91U	<110U	<59U	<48U	<29U	<56U	<42U	<92U	76J
	Hexachlorobutadiene	µg/m3	56	<140U	<110U	<150U	<130U	88J	<74U	<180U	85J	<73U	<68U	<200U	<250U	<130U	<110U	<65U	<120U	<93U	<200U	160J
	Trichlorofluoromethane	µg/m3	6,272,345	47J	<26U	<37U	37J	89	28J	66J	32J	48J	24J	<49U	<60U	32J	29J	<16U	<30U	<23U	<50U	<37U
Alkylbenezenes	1,2,4-trimethylbenzene	µg/m3	7,527	1,900	1400	1900	1100	550	1300	1700	960	400	910	1000	1200	1200	870	70J	810	670	640	1,200
	1,3,5-trimethylbenzene	µg/m3	363,796	1,200	810	1100	840	490	850	1100	770	330	670	830	1100	1200	890	99	1,000	640	1100	1,700
	Isopropylbenzene	µg/m3	501,788	200	<18U	180	120J	69	130	180J	98	53J	<12U	140J	170J	160	120	23J	150	94J	140J	220
	n-propylbenzene	µg/m3	1,254,469	450	320	440	260	120	300	340	230	99	230	290	330	310	230	31J	260	210	200J	<37U
	Styrene	µg/m3	1,254,469	<29U	<23U	<32U	<27U	<9.7U	<16U	<38U	<10U	<15U	<14U	<42U	<52U	68J	<22U	<14U	<26U	<19U	<43U	<32U
	tert-butylbenzene	µg/m3		<38U	<30U	<42U	<36U	<13U	<21U	<50U	<14U	<20U	<19U	<56U	<68U	<36U	<29U	<18U	<34U	<26U	<56U	<42U
PAH/Phenols	Naphthalene	µg/m3	3,763	<47U	<37U	<52U	<45U	18J	<25U	<62U	<17U	<25U	<23U	<69U	<84U	<44U	<36U	<22U	44J	<32U	<70U	65J
Solvents	1,4-Dioxane	µg/m3	163	<320U	<250U	<350U	<300U	<110U	<170U	<420U	<120U	<170U	<160U	<470U	<570U	<300U	<240U	<150U	<290U	<210U	<470U	<350U
	2-Butanone	µg/m3	6,272,345	130J	<19U	<26U	<23U	<8.1U	<13U	<32U	28J	<13U	<12U	<35U	<43U	<23U	<19U	<11U	<22U	<16U	<36U	<27U
	2-Hexanone	µg/m3	37,634	<37U	<29U	<40U	<35U	<12U	<20U	<49U	<13U	<20U	<18U	<54U	<66U	<35U	<28U	<17U	<33U	<25U	<54U	<40U
	4-Methyl-2-pentanone	µg/m3	3,763,407	140J	62J	100J	<31U	<11U	49J	<43U	50J	20J	51J	<47U	140J	110J	<25U	<15U	<29U	61J	<48U	<35U
	Acetone	µg/m3	37,634,070	<320U	<250U	<350U	<310U	<110U	<170U	<430U	<120U	<170U	<160U	<470U	<580U	<300U	<250U	<150U	<290U	<220U	<480U	<350U
	Allyl chloride	µg/m3	1,254	58J	<26U	<37U	<32U	<11U	<18U	<44U	<12U	<18U	<17U	<49U	<60U	<32U	<26U	<16U	<30U	<23U	<50U	<37U
	Carbon Disulfide	µg/m3	878,128	26J	<17U	<23U	20J	27J	<11U	<28U	9.9J	20J	<10U	<31U	<38U	<20U	<16U	<9.9U	<19U	<14U	<31U	<23U
	Cyclohexane	µg/m3	7,526,814	280	180	240	260	300	160	220	130	240	110	580	660	590	450	100	660	120	860	490
	Heptane	µg/m3	4,892,429	680	390	620	660	570	370	370	370	430	290	850	680	530	380	120	400	290	530	330
	Hexane	µg/m3	878,128	2,200	1,400	2,100	2,000	2,600	1,100	1,200	940	1,500	870	5,000	2,500	2,200	1,600	320	1,700	780	2900	1,200
	MTBE	µg/m3	3,763,407	<51U	<40U	<55U	<48U	<17U	<27U	<67U	<18U	<27U	<25U	<74U	<90U	<47U	<39U	<24U	<46U	<34U	<75U	<56U
	Tetrahydrofuran	µg/m3	439,064	<650U	<510U	<710U	<620U	<220U	<350U	<860U	<240U	<340U	<320U	<950U	<1200U	<610U	<500U	<310U	<590U	<440U	<960U	<710U
VOCs	1,3-Butadiene	µg/m3	41	<31U	<24U	<34U	<30U	<10U	<17U	<41U	<11U	<16U	<15U	<45U	<56U	<29U	<24U	<15U	<28U	<21U	<46U	<34U
	Chlorodifluoromethane	µg/m3	62,723,450	<32U	<25U	<35U	<30U	<11U	<17U	<42U	<12U	<17U	<16U	<47U	<57U	<30U	<24U	<15U	<29U	<21U	<47U	<35U
	Methyl Methacrylate	µg/m3	878,128	<26U	<20U	<28U	<25U	<8.7U	<14U	<34U	<9.4U	<14U	<13U	<38U	170J	<24U	<20U	<12U	<23U	43J	<38U	<28U
	Vinyl bromide (bromoethene)	µg/m3	3,763	<30U	<24U	<33U	<29U	<10U	<16U	<40U	<11U	<16U	<15U	<44U	<54U	<28U	<23U	<14U	<27U	<20U	<45U	<33U
	1,2-Dichlorotetrafluoroethane	µg/m3	21,325,973	<42U	<33U	<46U	70J	25J	34J	200J	34J	330	190	<61U	<75U	<39U	35J	<20U	<38U	<28U	<62U	<46U
	2,2,4-Trimethylpentane	µg/m3	4,139,748	<29U	<23U	35J	32J	34J	21J	<38U	<10U	<15U	<14U	48J	<51U	<27U	27J	<14U	33J	<19U	<42U	<32U
	Butane	µg/m3	71,504,733	56J	<23U	46J	48J	110	26J	87J	32J	120	19J	<43U	<52U	35J	30J	<14U	<26U	<20U	<43U	<32U
	2-Propanol	µg/m3	8,781,283	<380U	<300U	<420U	<360U	<130U	<200U	<500U	<140U	<200U	<190U	<560U	<680U	<360U	<290U	<180U	<340U	<260U	<560U	<420U
	tert-Butyl alcohol	µg/m3	903,218	<410U	<320U	<440U	<390U	<140U	<220U	<540U	<150U	<220U	<200U	<600U	<730U	<380U	<310U	<190U	<370U	<270U	<600U	<450U
	Field Screening PID	ppmv		45	35	40	30	30	30	25	10	15	15	30	25	30	30	45	25	25	35	30
	Total Detected VOCs	µg/m3		63,031	45,188	58,184	50,007	38,221	43,294	66,015	29,265	35,045	33,355	68,647	112,183	87,254	69,066	19,209	78,423	36,341	78,348	99,336
	Total Flow Rate	CFM		573	591	582	554	566	582	567	581	587	227	575	578	592	561	537	580	576	567	567
	VOC Mass Flow Rate	lb/hr		0.14	0.10	0.13	0.10	0.08	0.09	0.14	0.06	0.08	0.03	0.15	0.24	0.19	0.14	0.04	0.17	0.08	0.17	0.21

TABLE 7
SUMMARY OF TO-15 ANALYSES OF VGAC MONITORING POINTS

Cortese Landfill Site
Narrowsburg, New York

Chemical Group	Analyte	Units	Sample Location	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP503
			Sample Date	6/22/2016	7/6/2016	7/20/2016	8/10/2016	8/17/2016	9/7/2016	9/14/2016	10/5/2016	10/12/2016	11/2/2016	11/16/2016	12/14/2016	12/21/2016	1/18/2017	1/25/2017	3/1/2017	3/8/2017	4/12/2017	4/19/2017	5/24/2017
			Dilution	206	560	153	201	253	252	201	112	174	65.6	224	59.6	60.2	17	87.8	44.4	46.9	29.6	41.2	60.1
			VGAC Threshold Concentrations																				
BTEX	Benzene	µg/m3	163	73J	190J	64J	58J	45J	67J	71J	48J	55J	42	39J	27J	28J	34	29J	110	43	12J	<3.7U	11J
	Toluene	µg/m3	6,272,345	14,000	28,000	17,000	20,000	17,000	17,000	15,000	11,000	12,000	7600	12,000	3,800	5,600	1,600	3,200	4,300	880	1,100	240	640
	Ethylbenzene	µg/m3	1,254,469	570	1200	680	760	710	660	600	410	420	330	560	200	260	110	160	210	51	91	25J	53
	m+p-Xylenes	µg/m3	125,447	1,900	3800	2,300	2,600	2,500	2,500	2,100	1,400	1,500	1,100	2,200	740	900	270	530	660	200	220	34J	70J
	o-Xylene	µg/m3	125,447	1,600	2700	1,900	2,200	2,100	2,200	1,800	1,200	1,400	1,200	1,800	690	840	390	590	430	200	180	86	94
	Total Xylenes	µg/m3	125,447	3,500	6600	4,200	4,900	4,600	4,700	3,900	2,600	2,900	2,300	4,000	1,400	1,700	660	1,100	1,100	400	400	120J	170J
Chlorinated Aliphatics	1,1,1-Trichloroethane	µg/m3	6,272,345	4,600	7100	5,200	4,500	4,200	5,900	5,000	5,900	5,300	2,500	3,800	2,500	2,400	800	2,200	2,400	1,800	1,200	1,500	1,700
	1,1,2-Trichloroethane	µg/m3	1,756	<44U	<120U	<33U	<43U	<54U	<54U	<43U	<24U	<37U	<14U	<48U	<5.5U	<5.6U	<1.6U	<8.1U	<4.1U	<4.4U	<2.7U	<3.8U	<5.6U
	1,1-Dichloroethane	µg/m3	790	260	350J	250	200	230	260	280	240	310	140	240	150	150	75	150	250	230	100	130	130
	1,1-Dichloroethene	µg/m3	87,813	<29U	<80U	<22U	<29U	<36U	<36U	<29U	<16U	<25U	<9.4U	<32U	17J	13J	7.8J	15J	19J	20J	9.6J	12J	<8.3U
	1,2-Dichloroethane	µg/m3	48	<34U	<93U	<25U	<33U	<42U	<42U	<33U	<19U	<29U	<11U	<37U	<8.2U	<8.3U	<2.3U	<12U	<6.1U	<6.5U	<4.1U	<5.7U	<8.3U
	1,2-Dichloroethene	µg/m3	79,032	6,300	7,900	5,900	4,800	4,800	5,600	4,800	4,800	4,800	2,800	3,800	2,600	2,700	1,300	3,400	3,900	3,100	1,700	1,900	2,400
	1,2-Dichloropropane	µg/m3	5,018	<26U	<70U	<19U	<25U	<32U	<31U	<25U	<14U	<22U	<8.2U	<28U	<9.6U	<9.7U	<2.7U	<14U	<7.2U	<7.6U	<4.8U	<6.7U	<9.7U
	Carbon Tetrachloride	µg/m3	213	130J	240J	150J	140J	140J	220J	150J	200	180J	110	160J	91	110J	42	110J	100	50J	43	96	67J
	Chloroethane	µg/m3	12,544,690	<46U	<130U	<34U	<45U	<57U	<57U	<45U	<25U	<39U	<15U	<50U	<20U	<21U	<5.8U	<30U	<15U	<16U	<10U	<14U	<21U
	Chloroform	µg/m3	54	420	620	420	390	340	470	420	450	470	220	360	210	220	76	210	260	220	86	160	190
	Chloromethane	µg/m3	112,902	<40U	<110U	<29U	<39U	<49U	<48U	<39U	<22U	<33U	<13U	<43U	<20U	<20U	<5.6U	<29U	<15U	<15U	<9.8U	<14U	<20U
	cis-1,2-Dichloroethene	µg/m3	79,032	6500	8,000	5,800	4,900	4,800	5,700	4,900	4,600	4,900	2,800	3,800	2,600	2,700	1,300	3,400	3,900	3100	1,700	1,900	2,400
	Methylene Chloride	µg/m3	2,634	540	880J	440	350	390J	400J	500	530	550	380	410	230J	250	190	260	530	460	140	140	200
	Trichloroethene	µg/m3	627	13,000	17,000	15,000	13,000	13,000	16,000	14,000	12,000	16,000	7,600	11,000	6,500	7,800	2,800	7,400	8,500	7,800	5,200	5,300	4,800
	Tetrachloroethene	µg/m3	1,254	3,300	3,900	3,300	3,500	3,400	5,100	2,900	2,800	3,900	1,700	3,000	1,700	1,600	840	1,300	1,600	1,100	740	760	810
	trans-1,2-Dichloroethene	µg/m3	79,032	<35U	<95U	<26U	<34U	<43U	<43U	<34U	<19U	<30U	<11U	<38U	<12U	<12U	<3.4U	<17U	<8.8U	14J	<5.9U	<8.2U	<12U
	Vinyl Chloride	µg/m3	138	110	46J	46J	29J	32J	41J	<16U	33J	54J	22J	31J	36	21J	24	42J	48	70	31	29	26J
Chlorinated Aromatics	1,2-Dichlorobenzene	µg/m3	250,894	360	850	320	380	480	530	340	220	310	240	320	150	190	110	200	150	110	59	23J	30J
	1,3-Dichlorobenzene	µg/m3	12,545	100J	260J	110J	110J	140J	160J	110J	67J	96J	93	<74U	48J	55J	42	55J	36J	<14U	24J	<12U	<18U
	1,4-Dichlorobenzene	µg/m3	113	530	1,600	530	610	740	830	570	370	540	400	500	240	330	200	330	270	230	120	61	66J
	Chlorobenzene	µg/m3	137,992	180J	320J	200	220	230J	240	200	140	240	150	220	78	96	38	71J	63	41J	24J	13J	19J
Halogenated Hydrocarbons	1,2-Dibromoethane	µg/m3	2	<62U	<170U	<46U	<60U	<76U	<76U	<60U	<34U	<52U	<20U	<67U	<11U	<11U	<3U	<16U	<7.8U	<8.3U	<5.2U	<7.3U	<11U
	2-chlorotoluene	µg/m3	777,771	<35U	<96U	<26U	<34U	<43U	<43U	<34U	<19U	<30U	<11U	<38U	<11U	<11U	<3.1U	<16U	<8U	<8.5U	<5.4U	<7.5U	<11U
	Benzyl chloride	µg/m3	25	<57U	<150U	<42U	<55U	<69U	<69U	<55U	<31U	<48U	<18U	<61U	<21U	<21U	<5.9U	<30U	<15U	<16U	<10U	<14U	<21U
	Dichlorobromomethane	µg/m3	87,813	<41U	<110U	<31U	<40U	<51U	<51U	<40U	<23U	<35U	<13U	<45U	<24U	<24U	<6.7U	<35U	<18U	<19U	<12U	<16U	<24U
	Bromoform	µg/m3	1,142	<120U	<320U	<89U	<120U	<150U	<150U	<120U	<65U	<100U	<38U	<130U	<22U	<22U	<6.2U	<32U	<16U	<17U	<11U	<15U	<22U
	Bromomethane	µg/m3	6,272	<45U	<120U	<33U	<44U	<55U	<55U	<44U	<24U	<38U	<14U	<49U	<8.3U	<8.4U	<2.4U	<12U	<6.2U	<6.6U	<4.1U	<5.8U	<8.4U
	Chlorodibromomethane	µg/m3		<77U	<210U	<57U	<75U	<95U	<94U	<75U	<42U	<65U	<25U	<84U	<8.6U	<8.7U	<2.5U	<13U	<6.4U	<6.8U	<4.3U	<6U	<8.7U
	Dichlorodifluoromethane	µg/m3	15,053,628	<81U	<220U	<61U	<80U	<100U	<100U	<80U	45J	<69U	67J	<89U	55J	58J	83	38J	110	550	<6.9U	17J	21J
	Hexachlorobutadiene	µg/m3	56	<180U	<490U	<130U	<180U	<220U	250J	<180U	110J	190J	110J	<200U	74J	130	62	130J	87J	87J	60J	81J	69J
	Trichlorofluoromethane	µg/m3	6,272,345	<44U	<120U	<33U	<43U	<54U	<54U	<43U	43J	<37U	42J	<48U	48J	41J	49	40J	59	79	<5.2U	<7.2U	<10U
Alkylbenezenes	1,2,4-trimethylbenzene	µg/m3	7,527	1,100	2,200	1,500	2,000	2,000	2,000	1,600	1,200	770	860	1,300	470	650	110	480	120	65	66	17J	24J
	1,3,5-trimethylbenzene	µg/m3	363,796	1,400	2,100	1,700	2,100	2,100	2,300	1,800	1,400	1,200	1,200	1,900	760	1,000	350	730	190	100	67	31J	54J
	Isopropylbenzene	µg/m3	501,788	140J	310J	240	290	270	260	210	<17U	<26U	1,600	<33U	66	89	<3.3U	56J	<8.5U	14J	11J	<7.9U	<12U
	n-propylbenzene	µg/m3	1,254,469	250	480J	<32U	<42U	<53U	410	370	260	180	<14U	310	130	160	<3.3U	99	45	23J	20J	<8.1U	<12U
	Styrene	µg/m3	1,254,469	<38U	<100U	<28U	<37U	<46U	75J	<37U	<21U	<32U	41J	<41U	<8.9U	<9U	<2.5U	<13U	<6.6U	<7U	<4.4U	<6.1U	<9U
	tert-butylbenzene	µg/m3		<50U	<140U	<37U	<49U	<61U	<61U	<49U	<27U	<42U	<16U	<54U	<12U	<12U	<3.5U	<18U	<9U	<9.5U	<6U	<8.4U	<12U
PAH/Phenols	Naphthalene	µg/m3	3,763	<62U	<170U	<46U	<60U	<76U	<75U	<60U	<33U	<52U	<20U	<67U	<31U	<32U	<8.9U	<46U	<23U	<25U	27J	<22U	<32U
Solvents	1,4-Dioxane	µg/m3	163	<420U	<1100U	<310U	<410U	<510U	<510U	<410U	<230U	<350U	<130U	<450U	<160U	<160U	<47U	<240U	<120U	<130U	<81U	<110U	<160U
	2-Butanone	µg/m3	6,272,345	<32U	<86U	<23U	<31U	<39U	<39U	<31U	<17U	<27U	<10U	<34U	<19U	<20U	<5.5U	<28U	<14U	<15U	<9.6U	<13U	<19U
	2-Hexanone	µg/m3	37,634	<48U	<130U	<36U	<47U	<59U	<59U	<47U	<26U	<41U	<15U	<52U	<21U	<21U	<6U	<31U	<16U	<17U	<10U	<15U	<21U
	4-Methyl-2-pentanone	µg/m3	3,763,407	<42U	<110U	<31U	<41U	<52U	<52U	<41U	<23U	<36U	<13U	<46U	<16U	<16U	<4.5U	<23U	<12U	<12U	12J	<11U	<16U
	Acetone	µg/m3	37,634,070	<420U	<1100U	<310U	<410U	<520U	<510U	<410U	<230U	<360U	<130U	<460U	<180U	<190U	<52U	<270U	<140U	<140U	<91U	<130U	<190U
	Allyl chloride	µg/m3	1,254	<44U	<120U	<33U	<43U	<54U	<54U	<43U	<24U	<37U	<14U	<48U	<12U	<12U	<3.4U	<17U	<8.8U	<9.2U	<5.8U	<8.1U	<12U
	Carbon Disulfide	µg/m3	878,128	<28U	<75U	<20U	<27U	<34U	<34U	<27U	<15U	<23U	<8.8U	<30U	7.1J	<5.2U	<1.5U	<7.7U	<3.9U	15J	<2.6U	<3.6U	<5.2U
	Cyclohexane	µg/m3	7,526,814	500	560	470	420	400	520	450	<15U	560	230	330	250	190	100	170	220	200	110	99	84
	Heptane	µg/m3	4,892,429	250	560	230	170	150J	200J	200	280	240	120	89J	65	73	89	55J	210	140	56	29J	23J
	Hexane	µg/m3	878,128	1,100	1,600	1,000	770	690	950	860	1,200	1,200	470	620	290	350	330	330	1,100	850	230	150	130
	MTBE	µg/m3	3,763,407	<66U	<180U	<49U	<64U	<81U	<81U	<64U	<36U	<56U	<21U	<72U	<8.8U	<8.9U	<2.5U	<13U	<6.6U	<6.9U	<4.4U	<6.1U	<8.9U
	Tetrahydrofuran	µg/m3	439,064	<850U	<2300U	<630U	<830U	<1000U	<1000U	<830U	<460U	<720U	<270U	<920U	<210U	<210U	<60U	<310U	<160U	<170U	<100U	<150U	<210U
VOCs	1,3-Butadiene	µg/m3	41	<41U	<110U	<30U	<40U	<50U	<50U	<40U	<22U	<34U	<13U	<44U	<4.9U	<4.9U	<1.4U	<7.2U	<3.6U	<3.8U	<2.4U	<3.4U	<4.9U
	Chlorodifluoromethane	µg/m3	62,723,450	<42U	<110U	<31U	<41U	<51U	<51U	<41U	<23U	<35U	<13U	<45U	<42U	<43U	<12U	<62U	<31U	<33U	<21U	<29U	<43U
	Methyl Methacrylate	µg/m3	878,128	<34U	<92U	<25U	<33U	<41U	130J	<33U	<18U	<29U	98J	<37U	<27U	<27U	<7.7U	<40U	<20U	<21U	<13U	<19U	<27U
	Vinyl bromide (bromoethene)	µg/m3	3,763	<40U	<110U	<29U	<39U	<49U	<49U	<39U	<22U	<33U	<13U	<43U	<5.7U	<5.8U	<1.6U	<8.5U	<4.3U	<4.5U	<2.8U	<4U	<5.8U
	1,2-Dichlorotetrafluoroethane	µg/m3	21,325,973	<55U	<150U	<41U	<53U	<67U	<67U	<53U	42J	<46U	40J	<60U	32J	32J	59	34J	1,200	380	<8.5U	<12U	<17U
	2,2,4-Trimethylpentane	µg/m3	4,139,748	<38U	<100U	39J	<37U	<46U	<46U	<37U	<20U	<32U	26J	<41U	<12U	<12U	<3.4U	<18U	22J	26J	<5.9U	<8.3U	<12U
	Butane	µg/m3	71,504,733	<38U	<100U	<28U	<37U	<47U	<47U	<37U	<21U	<32U	<12U	<42U	21J	16J	23	<9.6U	100	150	<3.2U	17J	<6.6U
	2-Propanol	µg/m3	8,781,283	<500U	<1300U	<370U	<480U	<610U	<610U	<480U	<270U	<420U	<160U	<540U	23J	<19U	<5.4U	48J	<14U	<15U	15J	<13U	<19U
	tert-Butyl alcohol	µg/m3	903,218	<530U	<1400U	<390U	<520U	<650U	<650U	<520U	<290U	<450U	<170U	<580U	<310U	<310U	<88U	<450U	<230U	<240U	<150U	<210U	<310U
	Field Screening PID	ppmv		25	40	35	40	25	30	30	30	25	30	30	25	25	15	25	25	15	10	10	15
	Total Detected VOCs	µg/m3		69,073	116,026	75,929	78,587	75,667	86,993	66,451	59,362	66,145	41,130	54,929	29,005	35,111	14,123	30,623	33,903	25,032	16,244	14,318	14,479
	Total Flow Rate	CFM		571	549	595	574	560	551	552	572	581	588	594	604	604	614	628	561	590	574	585	549
	VOC Mass Flow Rate	lb/hr		0.15	0.24	0.17	0.17	0.16	0.18	0.14	0.13	0.14	0.09	0.12	0.07	0.08	0.03	0.07	0.07	0.06	0.03	0.03	0.03

TABLE 7
SUMMARY OF TO-15 ANALYSES OF VGAC MONITORING POINTS

Cortese Landfill Site
Narrowsburg, New York

Chemical Group	Analyte	Units	Sample Location	SP503	SP503	SP503	SP503	SP503	SP503	SP503	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504
			Sample Date	5/31/2017	7/5/2017	7/12/2017	8/16/2017	8/23/2017	10/11/2017	10/18/2017 *	9/3/2014	9/5/2014	9/8/2014	9/19/2014	9/25/2014	9/30/2014	10/9/2014	10/16/2014	10/24/2014	10/27/2014
			Dilution	35.2	21.1	14.1	30.4	14.9	20.5	297.58	8	10	21.5	1	3.03	4	8	14.1	9.09	1
			VGAC Threshold Concentrations																	
BTEX	Benzene	µg/m3	163	9.2J	11J	13	19J	26	45	30J	<0.49U	<0.61U	<1.3U	<0.093U	<0.28U	<0.37U	<0.74U	<1.3U	<0.84U	<0.093U
	Toluene	µg/m3	6,272,345	470	740	590	1,500	680	1,600	2,800	<0.51U	<0.64U	<1.4U	80	3.2	7.7	23	6.7J	5.6J	1.7
	Ethylbenzene	µg/m3	1,254,469	42	33	23	52	20	49	98J	<0.45U	<0.56U	<1.2U	8.4	<0.26U	<0.35U	2.1J	<1.2U	<0.79U	0.16J
	m+p-Xylenes	µg/m3	125,447	51J	84	80	160	130	220	230J	<0.8U	<1U	<2.1U	32	<0.33U	<0.43U	6.3J	<1.5U	1.4J	0.28J
	o-Xylene	µg/m3	125,447	87	83	70	160	130	250	300	<0.56U	<0.69U	<1.5U	9.7	<0.24U	<0.31U	1.5J	<1.1U	<0.71U	<0.078U
	Total Xylenes	µg/m3	125,447	140	170	150	320	260	470	530J	<1.2U	<1.5U	<3.2U	41	<0.54U	<0.71U	7.6	<2.5U	<1.6U	0.28J
Chlorinated Aliphatics	1,1,1-Trichloroethane	µg/m3	6,272,345	2,100	600	300	840	530	940	2,100	<0.92U	<1.1U	<2.5U	3.2	4.1	<0.65U	1.4J	<2.3U	4.8J	<0.16U
	1,1,2-Trichloroethane	µg/m3	1,756	<3.3U	<2U	<1.3U	<2.8U	<1.4U	<1.9U	<28U	<0.74U	<0.93U	<2U	<0.2U	<0.61U	<0.81U	<1.6U	<2.8U	<1.8U	<0.2U
	1,1-Dichloroethane	µg/m3	790	120	78	53	100	110	140	190J	<1.2U	<1.5U	<3.3U	<0.11U	<0.34U	<0.45U	<0.91U	<1.6U	23	<0.11U
	1,1-Dichloroethene	µg/m3	87,813	18J	<2.9U	3.1J	10J	7.1J	8.6J	<41U	<0.76U	<0.95U	<2U	<0.04U	<0.12U	<0.16U	<0.32U	<0.56U	2.8J	<0.04U
	1,2-Dichloroethane	µg/m3	48	<4.8U	<2.9U	<1.9U	<4.2U	<2.1U	<2.8U	<41U	<0.55U	<0.69U	<1.5U	<0.21U	<0.64U	<0.84U	<1.7U	<3U	<1.9U	<0.21U
	1,2-Dichloroethene	µg/m3	79,032	2,500	1,400	680	1,700	1,400	2200	3400	<2U	<2.5U	<5.5U	5.2	14	<0.84U	2.8J	<3U	13	<0.21U
	1,2-Dichloropropane	µg/m3	5,018	<5.7U	<3.4U	<2.3U	<4.9U	<2.4U	<3.3U	<48U	<1.2U	<1.5U	<3.2U	<0.16U	<0.49U	<0.65U	<1.3U	<2.3U	<1.5U	<0.16U
	Carbon Tetrachloride	µg/m3	213	90	13J	5J	19J	8.9J	18J	62J	<1.1U	<1.3U	<2.8U	<0.069U	<0.21U	<0.28U	<0.55U	<0.98U	<0.63U	<0.069U
	Chloroethane	µg/m3	12,544,690	<12U	8.6J	<4.8U	<10U	<5.1U	<7U	<100U	<0.63U	150	230	<0.16U	<0.49U	<0.64U	<1.3U	170	680	<0.16U
	Chloroform	µg/m3	54	190	74	43	91	81	100	210J	<0.98U	<1.2U	<2.6U	<0.19U	<0.56U	<0.74U	<1.5U	<2.6U	2.1J	<0.19U
	Chloromethane	µg/m3	112,902	<12U	<7U	<4.7U	<10U	<4.9U	<6.8U	<98U	<2.2U	<2.8U	<6U	<0.12U	<0.38U	<0.5U	2.2J	<1.7U	<1.1U	0.32J
	cis-1,2-Dichloroethene	µg/m3	79,032	2,500	1,400	680	1,700	1,400	2,200	3,400	<1.2U	<1.5U	<3.2U	5	14	<0.48U	2.8J	<1.7U	13	<0.12U
	Methylene Chloride	µg/m3	2,634	180	120	140	220	290	250	250J	<3.5U	<4.3U	74	<0.42U	<1.3U	<1.7U	<3.3U	58	900	1J
	Trichloroethene	µg/m3	627	6,000	2,300	1,600	2,600	3,000	3,400	5,100	<1U	<1.3U	<2.8U	18	<0.49U	<0.64U	8.2J	<2.3U	<1.5U	0.27J
	Tetrachloroethene	µg/m3	1,254	1200	650	580	660	1,400	1,800	1,600	<0.87U	<1.1U	<2.3U	6.8	<0.62U	<0.81U	2.4J	<2.9U	<1.8U	<0.2U
	trans-1,2-Dichloroethene	µg/m3	79,032	<7U	<4.2U	3.4J	<6U	11J	8.7J	<59U	<0.92U	<1.1U	<2.5U	<0.11U	<0.32U	<0.43U	<0.86U	<1.5U	<0.97U	<0.11U
	Vinyl Chloride	µg/m3	138	31	23	11	35	22	25	<14U	550	650	1,800	<0.066U	<0.2U	<0.27U	530	1,200	250	<0.066U
Chlorinated Aromatics	1,2-Dichlorobenzene	µg/m3	250,894	34J	33	27	44	43	68	<81U	<0.67U	<0.84U	<1.8U	3	<0.33U	<0.43U	<0.87U	<1.5U	<0.98U	<0.11U
	1,3-Dichlorobenzene	µg/m3	12,545	16J	16J	14J	18J	24	35	<89U	<0.67U	<0.84U	<1.8U	<0.12U	<0.36U	<0.48U	<0.96U	<1.7U	<1.1U	<0.12U
	1,4-Dichlorobenzene	µg/m3	113	77	61	52	82	83	100	<110U	<0.67U	<0.84U	<1.8U	6.5	<0.35U	<0.46U	<0.91U	<1.6U	<1U	0.17J
	Chlorobenzene	µg/m3	137,992	19J	14J	8.4J	15J	14	20	39J	<0.3U	<0.37U	<0.8U	4.9	<0.25U	<0.33U	1.5J	<1.2U	<0.75U	0.19J
Halogenated Hydrocarbons	1,2-Dibromoethane	µg/m3	2	<6.2U	<3.7U	<2.5U	<5.4U	<2.6U	<3.6U	<53U	<1.2U	<1.5U	<3.3U	<0.14U	<0.42U	<0.55U	<1.1U	<2U	<1.3U	<0.14U
	2-chlorotoluene	µg/m3	777,771	<6.4U	<3.8U	<2.6U	<5.5U	<2.7U	<3.7U	<54U	<0.54U	<0.67U	<1.4U	<0.16U	<0.49U	<0.64U	<1.3U	<2.3U	<1.5U	<0.16U
	Benzyl chloride	µg/m3	25	<12U	<7.3U	<4.9U	<11U	64	<7.1U	<100U	<3.3U	<4.1U	<8.9U	<0.093U	<0.28U	<0.37U	<0.75U	<1.3U	<0.85U	<0.093U
	Dichlorobromomethane	µg/m3	87,813	<14U	<8.3U	<5.6U	<12U	<5.9U	<8.1U	<120U	<0.91U	<1.1U	<2.4U	<0.19U	<0.59U	<0.78U	<1.6U	<2.7U	<1.8U	<0.19U
	Bromoform	µg/m3	1,142	<13U	<7.6U	<5.1U	<11U	<5.4U	<7.4U	<110U	<0.83U	<1U	<2.2U	<0.26U	<0.78U	<1U	<2.1	<3.6U	<2.3U	<0.26U
	Bromomethane	µg/m3	6,272	<4.9U	<2.9U	<2U	<4.2U	<2.1U	<2.9U	<42U	<0.87U	<1.1U	<2.3U	<0.17U	<0.52U	<0.68U	<1.4U	<2.4U	<1.6U	<0.17U
	Chlorodibromomethane	µg/m3		<5.1U	<3.1U	<2U	<4.4U	<2.2U	<3U	<43U	<1.4U	<1.7U	<3.7U	<0.17U	<0.52U	<0.68U	<1.4U	<2.4U	<1.5U	<0.17U
	Dichlorodifluoromethane	µg/m3	15,053,628	25J	28J	20J	39J	82	31J	<69U	160	<1.5U	130	<0.28U	<0.84U	<1.1U	97	470	200	<0.28U
	Hexachlorobutadiene	µg/m3	56	110	72	49	72	93	100	<200U	<1.9U	<2.3U	<5U	6.5	<1.2U	<1.5U	<3.1U	<5.4U	<3.5U	<0.38U
	Trichlorofluoromethane	µg/m3	6,272,345	12J	16J	13J	16J	34	23J	<52U	<1.3U	<1.7U	<3.6U	<0.25U	<0.77U	<1U	<2U	<3.6U	5J	<0.25U
Alkylbenezenes	1,2,4-trimethylbenzene	µg/m3	7,527	22J	19J	21	55	41	110	<83U	<0.55U	<0.69U	<1.5U	16	<0.24U	<0.31U	1.2J	2.8J	<0.72U	<0.079U
	1,3,5-trimethylbenzene	µg/m3	363,796	56	48	49	130	80	230	170J	<0.47U	<0.59U	<1.3U	5.8	<0.28U	<0.37U	<0.75U	<1.3U	<0.85U	<0.093U
	Isopropylbenzene	µg/m3	501,788	<6.7U	<4U	4.2J	9.8J	<2.9U	<3.9U	<57U	<0.63U	<0.79U	<1.7U	12	<0.28U	8.7	9.1	11J	1.5J	0.9J
	n-propylbenzene	µg/m3	1,254,469	9.9J	<4.1U	4.9J	<6U	<2.9U	<4U	<59U	<3.1U	<3.9U	<8.5U	3.4	<0.4U	<0.53U	<1.1U	<1.9U	<1.2U	<0.13U
	Styrene	µg/m3	1,254,469	<5.2U	<3.1U	<2.1U	<4.5U	<2.2U	<3.1U	<44U	<0.61U	<0.77U	<1.6U	<0.068U	<0.21U	<0.27U	<0.55U	<0.96U	<0.62U	<0.068U
	tert-butylbenzene	µg/m3		<7.1U	<4.3U	<2.9U	<6.2U	<3U	<4.2U	<60U	<0.75U	<0.93U	<2U	<0.11U	<0.33U	<0.44U	<0.88U	<1.5U	<1U	<0.11U
PAH/Phenols	Naphthalene	µg/m3	3,763	<18U	<11U	<7.4U	<16U	<7.8U	<11U	<160U	<8.4U	<10U	<23U	3.7	<0.48U	<0.63U	<1.3U	<2.2U	<1.4U	<0.16U
Solvents	1,4-Dioxane	µg/m3	163	<96U	<58U	<39U	<83U	<41U	<56U	<820U	<5.8U	<7.2U	<15U	<0.58U	<1.7U	<2.3U	<4.6U	<8.1U	<5.2U	<0.58U
	2-Butanone	µg/m3	6,272,345	<11U	<6.8U	<4.6U	<9.9U	<4.8U	<6.7U	<97U	<5.7U	<7.1U	<15U	<0.27U	9.7	<1.1U	<2.2U	<3.8U	<2.5U	1.1J
	2-Hexanone	µg/m3	37,634	<12U	<7.4U	<5U	<11U	<5.3U	<7.2U	<100U	<6.6U	<8.2U	<18U	<0.7U	<2.1U	<2.8U	<5.6U	<9.8U	<6.3U	<0.7U
	4-Methyl-2-pentanone	µg/m3	3,763,407	<9.4U	<5.6U	<3.8U	<8.1U	<4U	<5.5U	<79U	<0.88U	<1.1U	<2.4U	<0.74U	<2.2U	<2.9U	<5.9U	<10U	<6.7U	<0.74U
	Acetone	µg/m3	37,634,070	<110U	<65U	<44U	<94U	<46U	<63U	<920U	<24U	<30U	<64U	<1.6U	<5U	<6.6U	<13U	<23U	<15U	6.5J
	Allyl chloride	µg/m3	1,254	<6.9U	<4.2U	<2.8U	<6U	<2.9U	<4U	<59U	<0.85U	<1.1U	<2.3U	<0.5U	<1.5U	<2U	<4U	<7.1U	<4.6U	<0.5U
	Carbon Disulfide	µg/m3	878,128	<3.1U	<1.8U	2.6J	<2.7U	5.9J	<1.8U	<26U	<1.6U	<2.1U	<4.4U	<0.093U	<0.28U	<0.37U	<0.75U	<1.3U	9.4J	0.22J
	Cyclohexane	µg/m3	7,526,814	130	39	32	63	77	94	140J	<0.69U	<0.86U	<1.9U	0.89	<0.1U	<0.14U	<0.28U	<0.49U	3.8J	<0.034U
	Heptane	µg/m3	4,892,429	19J	13J	22	31	63	42	<83U	<1.5U	<1.9U	<4.1U	4	<0.46U	<0.61U	<1.2U	<2.1U	<1.4U	<0.15U
	Hexane	µg/m3	878,128	94	100	130	160	330	230	200J	<0.96U	<1.2U	<2.6U	4.1	<0.3U	<0.39U	1.8J	<1.4U	<0.9U	<0.099U
	MTBE	µg/m3	3,763,407	<5.2U	<3.1U	<2.1U	<4.5U	<2.2U	<3U	<44U	<0.63U	<0.79U	<1.7U	<0.079U	<0.24U	<0.32U	<0.63U	<1.1U	<0.72U	<0.079U
	Tetrahydrofuran	µg/m3	439,064	<120U	<75U	<50U	<110U	<53U	<73U	<1100U	<1.1U	<1.4U	<2.9U	<0.53U	<1.6U	<2.1U	<4.2U	<7.5U	<4.8U	<0.53U
VOCs	1,3-Butadiene	µg/m3	41	<2.9U	<1.7U	<1.2U	<2.5U	<1.2U	<1.7U	<24U	<0.74U	<0.93U	<2U	<0.08U	<0.24U	<0.32U	<0.64U	<1.1U	<0.72U	<0.08U
	Chlorodifluoromethane	µg/m3	62,723,450	<25U	<15U	<10U	<22U	<11U	<15U	<210U	86	370	400	5.9	320	310	200	150	52	<0.28U
	Methyl Methacrylate	µg/m3	878,128	<16U	<9.5U	<6.4U	<14U	<6.7U	<9.2U	<130U	<0.98U	<1.2U	<2.6U	<0.39U	<1.2U	<1.6U	<3.1U	<5.5U	<3.6U	<0.39U
	Vinyl bromide (bromoethene)	µg/m3	3,763	<3.4U	<2U	<1.4U	<2.9U	<1.4U	<2U	<29U	<1U	<1.3U	<2.8U	<0.087U	<0.27U	<0.35U	<0.7U	<1.2U	<0.8U	<0.087U
	1,2-Dichlorotetrafluoroethane	µg/m3	21,325,973	35J	46	31	22J	46	34	<85U	<2U	<2.4U	<5.3U	<0.36U	<1.1U	<1.5U	<2.9U	62	24	<0.36U
	2,2,4-Trimethylpentane	µg/m3	4,139,748	10J	<4.2U	4.7J	<6.1U	12J	13J	<60U	<1U	<1.3U	<2.7U	<0.11U	<0.33U	<0.43U	<0.86U	<1.5U	<0.98U	<0.11U
	Butane	µg/m3	71,504,733	13J	<2.3U	11J	7.8J	26	12J	<33U	<5.4U	<6.7U	<14U	<0.43U	<1.3U	<1.7U	<3.4U	<6U	16	<0.43U
	2-Propanol	µg/m3	8,781,283	<11U	<6.7U	<4.5U	<9.7U	<4.8U	<6.6U	<95U	<4.2U	<5.3U	<11U	<0.37U	<1.1U	<1.5U	<2.9U	<5.2U	<3.4U	0.81J
	tert-Butyl alcohol	µg/m3	903,218	<180U	<110U	<73U	<160U	<77U	<110U	<1500U	<8U	<9.9U	<21U	<0.36U	<1.1U	<1.5U	<2.9U	<5.1U	<3.3U	<0.36U
	Field Screening PID	ppmv		15	15	15	10	15	20	NM	0	0	0	0	0	0	0	0	0	0
	Total Detected VOCs	µg/m3		17,884	9,103	6,070	11,624	11,208	15,827		796	1,170	2,634	419	346	342	908	2,146	2,207	15
	Total Flow Rate	CFM		553	552	552	552	570	546	546	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	VOC Mass Flow Rate	lb/hr		0.04	0.02	0.01	0.02	0.02	0.03		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 7
SUMMARY OF TO-15 ANALYSES OF VGAC MONITORING POINTS

Cortese Landfill Site
Narrowsburg, New York

Chemical Group	Analyte	Units	Sample Location	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504
			Sample Date	11/6/2014	11/13/2014	11/19/2014	11/21/2014	11/25/2014	12/4/2014	12/11/2014	12/18/2014	12/23/2014	12/30/2014	1/8/2015	1/15/2015	1/22/2015	1/29/2015	2/5/2015	2/12/2015	2/19/2015
			Dilution	1	1	1	5.56	2	8	2.5	6.06	10	4.54	1.5	4	8	1	1	1.5	1.5
			VGAC Threshold Concentrations																	
BTEX	Benzene	µg/m3	163	<0.093U	<0.093U	<0.093U	<0.52U	0.68J	<0.74U	0.72J	<0.56U	<0.93U	<0.42U	<0.14U	<0.37U	<0.74U	<0.093U	<0.093U	<0.14U	0.61J
	Toluene	µg/m3	6,272,345	0.4J	3.3	8.6	570	180	30	190	6.3	59	5.1	4.5	3.6	28	4.3	2.1	5	34
	Ethylbenzene	µg/m3	1,254,469	<0.087U	0.42J	1.7	13	14	2.9J	13	<0.53U	11	0.6J	1.4	3.1J	<0.69U	0.88	0.81J	0.48J	14
	m+p-Xylenes	µg/m3	125,447	<0.11U	1.8J	6.6	43	57	11J	49	<0.66U	53	2.5J	7.9	5.2J	59	3	4.6	1.5J	69
	o-Xylene	µg/m3	125,447	<0.078U	0.71J	2.5	9	20	4.1J	19	<0.47U	28	1.1J	5	2.1J	39	1.2	2.9	0.69J	49
	Total Xylenes	µg/m3	125,447	<0.18U	2.5	9	52	76	15	66	<1.1U	81	3.6J	13	7.3	99	4.2	7.3	2.3	120
Chlorinated Aliphatics	1,1,1-Trichloroethane	µg/m3	6,272,345	<0.16U	0.21J	<0.16U	<0.91U	35	470	54	49	<1.6U	4.5J	0.91J	26	<1.3U	<0.16U	1J	1.8	<0.25U
	1,1,2-Trichloroethane	µg/m3	1,756	<0.2U	<0.2U	<0.2U	<1.1U	<0.4U	<1.6U	<0.5U	<1.2U	<2U	<0.92U	<0.3U	<0.81U	<1.6U	<0.2U	<0.2U	<0.3U	<0.3U
	1,1-Dichloroethane	µg/m3	790	<0.11U	<0.11U	<0.11U	<0.63U	1.6	24	2.2	2.2J	<1.1U	<0.51U	<0.17U	1.3J	<0.91U	<0.11U	<0.11U	<0.17U	<0.17U
	1,1-Dichloroethene	µg/m3	87,813	<0.04U	<0.04U	<0.04U	<0.22U	<0.079U	3.4J	<0.099U	<0.24U	<0.4U	<0.18U	<0.059U	<0.16U	<0.32U	<0.04U	<0.04U	<0.059U	<0.059U
	1,2-Dichloroethane	µg/m3	48	<0.21U	<0.21U	<0.21U	<1.2U	<0.42U	<1.7U	<0.53U	<1.3U	<2.1U	<0.96U	<0.32U	<0.84U	<1.7U	<0.21U	<0.21UJ	<0.32U	<0.32U
	1,2-Dichloroethene	µg/m3	79,032	0.26J	0.4J	1.2	5.2	40	32	44	8.7	<2.1U	<0.95U	<0.32U	2.7J	<1.7U	<0.21U	<0.21U	<0.32U	<0.32U
	1,2-Dichloropropane	µg/m3	5,018	<0.16U	<0.16U	<0.16U	<0.9U	<0.32U	<1.3U	<0.4U	<0.98U	<1.6U	<0.73U	<0.24U	<0.65U	<1.3U	<0.16U	<0.16U	<0.24U	<0.24U
	Carbon Tetrachloride	µg/m3	213	<0.069U	<0.069U	<0.069U	<0.38U	<0.14U	7.2J	1.8J	1.6J	<0.69U	<0.31U	<0.1U	1.4J	<0.55U	<0.069U	<0.069U	<0.1U	<0.1U
	Chloroethane	µg/m3	12,544,690	<0.16U	<0.16U	<0.16U	<0.89U	<0.32U	54	<0.4U	41	<1.6U	16	0.39J	<0.64U	<1.3U	<0.16U	<0.16U	<0.24U	<0.24U
	Chloroform	µg/m3	54	<0.19U	<0.19U	<0.19U	<1U	2.6	11	4.8	<1.1U	<1.9U	<0.84U	<0.28U	<0.74U	<1.5U	<0.19U	<0.19U	<0.28U	<0.28U
	Chloromethane	µg/m3	112,902	1.3	<0.12U	3	<0.69U	<0.25U	<0.99U	<0.31U	4.9J	<1.2U	3.8J	<0.19U	6.2	<0.99U	3	<0.12U	3.1	<0.19U
	cis-1,2-Dichloroethene	µg/m3	79,032	0.26J	0.4J	1.2	5.2	41	32	42	8.6	<1.2U	<0.54U	<0.18U	2.7J	<0.95U	<0.12U	<0.12U	<0.18U	<0.18U
	Methylene Chloride	µg/m3	2,634	<0.42U	<0.42U	0.71J	4.3J	3.8	360	11	230	7.2J	23	3.6	34	<3.3U	0.89J	<1.7U	2.9	<0.63U
	Trichloroethene	µg/m3	627	0.24J	0.85J	2.2	<0.9U	90	18	160	10	23	3.9J	1.6J	1.3J	6.9J	1.1	1.1	2.3	8.2
	Tetrachloroethene	µg/m3	1,254	<0.2U	0.36J	0.86J	3.4J	14	3J	16	<1.2U	7.1J	<0.92U	1.1J	<0.81U	7.6J	0.48J	0.4J	0.69J	11
	trans-1,2-Dichloroethene	µg/m3	79,032	<0.11U	<0.11U	<0.11U	<0.6U	<0.21U	<0.86U	<0.27U	<0.65U	<1.1U	<0.49U	<0.16U	<0.43U	<0.86U	<0.11U	<0.11U	<0.16U	<0.16U
	Vinyl Chloride	µg/m3	138	1.1	<0.066U	<0.066U	41	0.29J	520	0.71J	370	<0.66U	210	1.9	200	<0.53U	50	0.79	70	1.6
Chlorinated Aromatics	1,2-Dichlorobenzene	µg/m3	250,894	<0.11U	2.1	2	<0.6U	15	2.3J	14	<0.66U	79	0.89J	12	<0.43U	67	0.6J	3.7	<0.16U	49
	1,3-Dichlorobenzene	µg/m3	12,545	<0.12U	0.57J	0.48J	<0.67U	4.5	<0.96U	4.3	<0.73U	21	<0.55U	3.4	<0.48U	20	0.21J	1.1J	<0.18U	22
	1,4-Dichlorobenzene	µg/m3	113	0.13J	4.3	4.2	<0.64U	35	5.1J	33	<0.69U	160	1.9J	25	2.9J	150	1.3	7.9	0.55J	130
	Chlorobenzene	µg/m3	137,992	<0.083U	0.33J	1.4	<0.46U	9.2	1.5J	6.2	<0.5U	4.6J	<0.38U	0.31J	<0.33U	5.9J	0.35J	0.15J	0.24J	8.7
Halogenated Hydrocarbons	1,2-Dibromoethane	µg/m3	2	<0.14U	<0.14U	<0.14U	<0.77U	<0.28U	<1.1U	<0.35U	<0.84U	<1.4U	<0.63U	<0.21U	<0.55U	<1.1U	<0.14U	<0.14U	<0.21U	<0.21U
	2-chlorotoluene	µg/m3	777,771	<0.16U	<0.16U	<0.16U	<0.89U	<0.32U	<1.3U	<0.4U	<0.97U	<1.6U	<0.73U	<0.24U	<0.64U	<1.3U	<0.16U	<0.16U	<0.24U	<0.24U
	Benzyl chloride	µg/m3	25	<0.093U	<0.093U	<0.093U	<0.52U	<0.19U	<0.75U	<0.23U	<0.56U	<0.93U	<0.42U	<0.14U	<0.37U	<0.75U	<0.093U	<0.093U	<0.14U	<0.14U
	Dichlorobromomethane	µg/m3	87,813	<0.19U	<0.19U	<0.19U	<1.1U	<0.39U	<1.6U	<0.49U	<1.2U	<1.9U	<0.88U	<0.29U	<0.78U	<1.6U	<0.19U	<0.19U	<0.29U	<0.29U
	Bromoform	µg/m3	1,142	<0.26U	<0.26U	<0.26U	<1.4U	<0.52U	<2.1U	<0.65U	<1.6U	<2.6U	<1.2U	<0.39U	<1U	<2.1U	<0.26U	<0.26U	<0.39U	<0.39U
	Bromomethane	µg/m3	6,272	<0.17U	<0.17U	<0.17U	<0.95U	<0.34U	<1.4U	<0.43U	<1U	<1.7U	<0.78U	<0.26U	<0.68U	<1.4U	<0.17U	<0.17U	<0.26U	<0.26U
	Chlorodibromomethane	µg/m3		<0.17U	<0.17U	<0.17U	<0.95U	<0.34U	<1.4U	<0.43U	<1U	<1.7U	<0.77U	<0.26U	<0.68U	<1.4U	<0.17U	<0.17U	<0.26U	<0.26U
	Dichlorodifluoromethane	µg/m3	15,053,628	2.3J	<0.28U	3.3	52	<0.55U	200	<0.69U	120	<2.8U	130	0.74J	130	<2.2U	50	<0.28U	77	1.6J
	Hexachlorobutadiene	µg/m3	56	<0.38U	4	1.5J	<2.1U	2.1J	<3.1U	8.8	<2.3U	19J	<1.7U	5.4	<1.5U	15J	<0.38U	4.3	<0.58U	16
	Trichlorofluoromethane	µg/m3	6,272,345	<0.25U	<0.25U	<0.25U	<1.4U	<0.51U	5J	<0.63U	<1.5U	<2.5U	<1.1U	<0.38U	<1U	<2U	<0.25U	<0.25U	<0.38U	<0.38U
Alkylbenezenes	1,2,4-trimethylbenzene	µg/m3	7,527	<0.079U	9.7	8	0.82J	47	9.1	81	1.4J	370	4J	74	3.6J	320	2.8	28	0.91J	220
	1,3,5-trimethylbenzene	µg/m3	363,796	<0.093U	2.6	2.5	<0.52U	17	3.4J	28	<0.57U	130	1.3J	30	1.2J	140	1.2	13	0.41J	110
	Isopropylbenzene	µg/m3	501,788	<0.093U	<0.093U	0.76J	0.95J	<0.19U	1.5J	<0.23U	<0.57U	5.8J	<0.42U	<0.14U	<0.37U	<0.75U	0.3J	<0.093U	<0.14U	<0.14U
	n-propylbenzene	µg/m3	1,254,469	<0.13U	0.74J	1.3	<0.74U	8.9	1.8J	11	<0.8U	31	<0.6U	6.4	<0.53U	32	0.46J	2.7	<0.2U	32
	Styrene	µg/m3	1,254,469	<0.068U	<0.068U	<0.068U	<0.38U	<0.14U	<0.55U	<0.17U	<0.41U	<0.68U	<0.31U	<0.1U	<0.27U	<0.55U	<0.068U	<0.068U	<0.1U	<0.1U
	tert-butylbenzene	µg/m3		<0.11U	<0.11U	<0.11U	<0.61U	<0.22U	<0.88U	<0.27U	<0.67U	<1.1U	<0.5U	<0.16U	<0.44U	<0.88U	<0.11U	<0.11U	<0.16U	<0.16U
PAH/Phenols	Naphthalene	µg/m3	3,763	<0.16U	2.2J	1.2J	<0.87U	2.7J	<1.3U	13	<0.95U	49	<0.71U	14	8.3J	40	<0.16U	8.7	<0.24U	8.4
Solvents	1,4-Dioxane	µg/m3	163	<0.58U	<0.58U	<0.58U	<3.2U	<1.2U	<4.6U	<1.4U	<3.5U	<5.8U	<2.6U	<0.86U	<2.3U	<4.6U	<0.58U	<0.58U	<0.86U	8.4J
	2-Butanone	µg/m3	6,272,345	<0.27U	1.4J	<0.27U	<1.5U	<0.54U	<2.2U	<0.68U	<1.6U	<2.7U	<1.2U	<0.41U	38	<2.2U	<0.27U	<0.27U	4.6	6.9
	2-Hexanone	µg/m3	37,634	<0.7U	<0.7U	<0.7U	<3.9U	<1.4U	<5.6U	<1.7U	<4.2U	<7U	<3.2U	<1U	<2.8U	<5.6U	<0.7U	<0.7U	<1U	<1U
	4-Methyl-2-pentanone	µg/m3	3,763,407	<0.74U	<0.74U	<0.74U	<4.1U	<1.5U	<5.9U	<1.8U	<4.5U	<7.4U	<3.3U	<1.1U	3.9J	<5.9U	<0.74U	<0.74U	<1.1U	1.2J
	Acetone	µg/m3	37,634,070	<1.6U	6J	<1.6U	<9.1U	6.9J	<13U	<4.1U	<9.9U	<16U	<7.4U	<2.5U	42J	<13U	<1.6U	<1.6UJ	17J	9.1J
	Allyl chloride	µg/m3	1,254	<0.5U	<0.5U	<0.5U	<2.8U	<1U	<4U	<1.3U	<3U	<5U	<2.3U	<0.75U	<2U	<4U	<0.5U	<0.5U	<0.75U	<0.75U
	Carbon Disulfide	µg/m3	878,128	0.32J	<0.093U	<0.093U	<0.52U	0.74J	1.3J	<0.23U	<0.57U	<0.93U	<0.42U	<0.14U	24	<0.75U	<0.093U	<0.093U	5.2	<0.14U
	Cyclohexane	µg/m3	7,526,814	<0.034U	<0.034U	<0.034U	<0.19U	<0.069U	110	5.2	5.7	<0.34U	<0.16U	<0.052U	2.4J	<0.28U	<0.034U	<0.034U	<0.052U	<0.052U
	Heptane	µg/m3	4,892,429	<0.15U	<0.15U	<0.15U	<0.84U	13	8.6	4.9	<0.92U	<1.5U	<0.69U	<0.23U	<0.61U	<1.2U	<0.15U	<0.15U	<0.23U	<0.23U
	Hexane	µg/m3	878,128	<0.099U	0.16J	1.8	<0.55U	27	280	15	9.4	<0.99U	<0.45U	<0.15U	3.5	<0.79U	<0.099U	<0.099U	<0.15U	<0.15U
	MTBE	µg/m3	3,763,407	<0.079U	<0.079U	<0.079U	<0.44U	<0.16U	<0.63U	<0.2U	<0.48U	<0.79U	<0.36U	<0.12U	<0.32U	<0.63U	<0.079U	<0.079U	<0.12U	<0.12U
	Tetrahydrofuran	µg/m3	439,064	<0.53U	<0.53U	<0.53U	<3U	<1.1U	<4.2U	<1.3U	<3.2U	<5.3U	<2.4U	<0.8U	5.9J	<4.2U	<0.53U	<0.53U	<0.8U	3.6J
VOCs	1,3-Butadiene	µg/m3	41	<0.08U	<0.08U	<0.08U	<0.44U	<0.16U	<0.64U	<0.2U	<0.48U	<0.8U	<0.36U	<0.12U	<0.32U	<0.64U	<0.08U	<0.08U	<0.12U	<0.12U
	Chlorodifluoromethane	µg/m3	62,723,450	22	<0.28U	59	48	<0.57U	23	<0.71U	15	<2.8U	8	<0.42U	8.8	<2.3U	6.9	<0.28U	5.4	<0.42U
	Methyl Methacrylate	µg/m3	878,128	<0.39U	<0.39U	<0.39U	<2.2U	<0.79U	<3.1U	<0.98U	<2.4U	<3.9U	<1.8U	<0.59U	<1.6U	<3.1U	<0.39U	<0.39U	<0.59U	<0.59U
	Vinyl bromide (bromoethene)	µg/m3	3,763	<0.087U	<0.087U	<0.087U	<0.49U	<0.17U	<0.7U	<0.22U	<0.53U	<0.87U	<0.4U	<0.13U	<0.35U	<0.7U	<0.087U	<0.087U	<0.13U	<0.13U
	1,2-Dichlorotetrafluoroethane	µg/m3	21,325,973	<0.36U	<0.36U	<0.36U	<2U	<0.73U	37	<0.91U	24	<3.6U	<1.7U	<0.55U	<1.5U	<2.9U	<0.36U	<0.36U	<0.55U	<0.55U
	2,2,4-Trimethylpentane	µg/m3	4,139,748	<0.11U	<0.11U	<0.11U	<0.6U	<0.21U	<0.86U	<0.27U	<0.65U	<1.1U	<0.49U	<0.16U	<0.43U	<0.86U	<0.11U	<0.11U	0.8J	<0.16U
	Butane	µg/m3	71,504,733	<0.43U	<0.43U	<0.43U	<2.4U	<0.86U	5J	<1.1U	<2.6U	<4.3U	<1.9U	<0.64U	<1.7U	<3.4U	<0.43U	<0.43U	<0.64U	<0.64U
	2-Propanol	µg/m3	8,781,283	0.6J	0.75J	<0.37U	<2.1U	1.3J	<2.9U	<0.92U	<2.2U	<3.7U	<1.7U	<0.55U	21J	<2.9U	<0.37U	<0.37U	<0.55U	2.5J
	tert-Butyl alcohol	µg/m3	903,218	<0.36U	<0.36U	<0.36U	<2U	<0.73U	<2.9U	<0.91U	<2.2U	<3.6U	<1.7U	<0.55U	<1.5U	<2.9U	<0.36U	<0.36U	<0.55U	<0.55U
Field Screening PID		ppmv		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NA
Total Detected VOCs		µg/m3		29	193	200	849	1,050	2,412	1,631	927	3,657	447	815	620	2,987	155	409	214	1,561
Total Flow Rate		CFM		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	638	638	608	664	650	645	623
VOC Mass Flow Rate		lb/hr		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00	0.0015	0.0068	0.004	0.001	0.005	0.004

TABLE 7
SUMMARY OF TO-15 ANALYSES OF VGAC MONITORING POINTS

Cortese Landfill Site
Narrowsburg, New York

Chemical Group	Analyte	Units	Sample Location	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504
			Sample Date	2/26/2015	3/5/2015	3/12/2015	3/19/2015	3/26/2015	4/3/2015	11/10/2015	11/16/2015	11/24/2015	12/2/2015	12/9/2015	12/15/2015	12/23/2015	12/29/2015	1/6/2016	1/13/2016	1/20/2016	1/27/2016	2/3/2016
			Dilution	1	1	1	71.7	1.5	1	1	2	1	1	1	1.5	1	1	1	1	1	1	1
			VGAC Threshold Concentrations																			
BTEX	Benzene	µg/m3	163	<0.093U	<0.093U	<0.093U	<6.6U	<0.14U	0.13J	<0.13U	<0.27U	<0.13U	<0.13U	<0.13U	<0.2U	<0.13U	<0.13U	0.69	<0.13U	<0.13U	<0.13U	0.15J
	Toluene	µg/m3	6,272,345	7.1	2	1.6	86	4.6	16	0.6J	<0.7U	<0.35U	3.4	<0.35U	0.67J	<0.35U	<0.35U	1.6	<0.35U	<0.35U	0.69J	0.39J
	Ethylbenzene	µg/m3	1,254,469	1.5	0.37J	0.19J	56J	0.76J	1.9	<0.14U	<0.29U	<0.14U	0.93	<0.14U	<0.21U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U
	m+p-Xylenes	µg/m3	125,447	5.3	1.5J	0.66J	300	2.9J	6.5	<0.31U	<0.62U	<0.31U	3.3	<0.31U	<0.46U	<0.31U	<0.31U	<0.31U	<0.31U	<0.31U	<0.31U	<0.31U
	o-Xylene	µg/m3	125,447	3.2	0.87	0.38J	250	1.7	3.5	<0.16U	<0.32U	<0.16U	1.1	<0.16U	<0.24U	<0.16U	<0.16U	<0.16U	<0.16U	<0.16U	0.17J	<0.16U
	Total Xylenes	µg/m3	125,447	8.4	2.4	1	560	4.6	10	<0.16U	<0.32U	<0.16U	4.3	<0.16U	<0.24U	<0.16U	<0.16U	<0.16U	<0.16U	<0.16U	0.17J	<0.16U
Chlorinated Aliphatics	1,1,1-Trichloroethane	µg/m3	6,272,345	<0.16U	0.75J	3.7	<12U	19	1.2	<0.25U	<0.5U	<0.25U	<0.25U	<0.25U	<0.38U	<0.25U	<0.25U	<0.25U	<0.25U	<0.25U	<0.25U	<0.25U
	1,1,2-Trichloroethane	µg/m3	1,756	<0.2U	<0.2U	<0.2U	<14U	<0.3U	<0.2U	<0.21U	<0.43U	<0.21U	<0.21U	<0.21U	<0.32U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,1-Dichloroethane	µg/m3	790	<0.11U	<0.11U	0.22J	<8.1U	0.9J	<0.11U	<0.1U	<0.2U	<0.1U	<0.1U	<0.1U	<0.15U	<0.1U	<0.1U	<0.1U	<0.1U	<0.1U	<0.1U	<0.1U
	1,1-Dichloroethene	µg/m3	87,813	<0.04U	<0.04U	<0.04U	<2.8U	<0.059U	<0.04U	<0.14U	<0.29U	<0.14U	<0.14U	<0.14U	<0.21U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U
	1,2-Dichloroethane	µg/m3	48	<0.21U	<0.21U	<0.21U	<15U	<0.32U	<0.21U	<0.17U	<0.33U	<0.17U	<0.17U	<0.17U	<0.25U	<0.17U	<0.17U	0.71J	<0.17U	<0.17U	<0.17U	<0.17U
	1,2-Dichloroethene	µg/m3	79,032	<0.21U	<0.21U	0.56J	<15U	0.59J	1.3	<0.14U	<0.28U	<0.14U	<0.14U	<0.14U	<0.21U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	0.67J	<0.14U
	1,2-Dichloropropane	µg/m3	5,018	<0.16U	<0.16U	<0.16U	<12U	<0.24U	<0.16U	<0.12U	<0.25U	<0.12U	<0.12U	<0.12U	<0.19U	<0.12U	<0.12U	<0.12U	<0.12U	<0.12U	<0.12U	<0.12U
	Carbon Tetrachloride	µg/m3	213	<0.069U	<0.069U	<0.069U	<5U	0.75J	0.75J	<0.2U	<0.4U	<0.2U	<0.2U	<0.2U	<0.3U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U
	Chloroethane	µg/m3	12,544,690	<0.16U	<0.16U	0.46J	<12U	3.7	<0.16U	<0.22U	<0.45U	<0.22U	<0.22U	<0.22U	<0.34U	<0.22U	0.88J	1.3J	<0.22U	<0.22U	<0.22U	<0.22U
	Chloroform	µg/m3	54	<0.19U	<0.19U	<0.19U	<13U	0.59J	<0.19U	<0.4U	<0.8U	<0.4U	<0.4U	<0.4U	<0.6U	<0.4U	<0.4U	<0.4U	<0.4U	<0.4U	<0.4U	<0.4U
	Chloromethane	µg/m3	112,902	2.5	<0.12U	3.3	<8.9U	3	3.7	2.5	2.2	0.21J	2.2	1.3	1.7	2	2.1	2	1.7	1.5	5.2	1.4
	cis-1,2-Dichloroethene	µg/m3	79,032	<0.12U	<0.12U	0.56J	<8.5U	0.58J	1.3	<0.14U	<0.28U	<0.14U	<0.14U	<0.14U	<0.21U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	0.66J	<0.14U
	Methylene Chloride	µg/m3	2,634	1.2J	0.71J	3.5	<30U	16	0.89J	1.1J	<1.3U	<0.63U	<0.63U	<0.63U	<0.94U	1.5J	3.8	3.8	0.87J	1.3J	2.1	2.6
	Trichloroethene	µg/m3	627	1.7	1J	0.58J	17J	1.2J	6.2	<0.21U	<0.42U	<0.21U	<0.21U	<0.21U	<0.31U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	0.94J	<0.21U
	Tetrachloroethene	µg/m3	1,254	1.2J	0.42J	<0.2U	18J	0.63J	1.9	<0.16U	<0.31U	<0.16U	0.16J	<0.16U	<0.23U	<0.16U	0.29J	0.22J	<0.16U	<0.16U	0.29J	0.38J
	trans-1,2-Dichloroethene	µg/m3	79,032	<0.11U	<0.11U	<0.11U	<7.7U	<0.16U	<0.11U	<0.17U	<0.34U	<0.17U	<0.17U	<0.17U	<0.26U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U
	Vinyl Chloride	µg/m3	138	3.5	0.87	12	<4.8U	83	<0.066U	<0.082U	17	<0.082U	59	47	100	56	47	30	22	27	26	31
Chlorinated Aromatics	1,2-Dichlorobenzene	µg/m3	250,894	3.3	1.2	0.24J	300	1.7J	2.2	<0.33U	<0.66U	<0.33U	<0.33U	<0.33U	<0.5U	<0.33U	<0.33U	<0.33U	<0.33U	<0.33U	<0.33U	<0.33U
	1,3-Dichlorobenzene	µg/m3	12,545	1.1J	0.25J,B	<0.12U	58J	0.47J	0.69J	<0.33U	<0.66U	<0.33U	<0.33U	<0.33U	<0.5U	<0.33U	<0.33U	<0.33U	<0.33U	<0.33U	<0.33U	<0.33U
	1,4-Dichlorobenzene	µg/m3	113	6.9	2B	0.48J	540	3.3	4.1	<0.34U	<0.69U	<0.34U	0.8J	<0.34U	<0.51U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U
	Chlorobenzene	µg/m3	137,992	0.91	0.16J	<0.083U	15J	0.41J	1.1	<0.23U	<0.45U	<0.23U	<0.23U	<0.23U	<0.34U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U
Halogenated Hydrocarbons	1,2-Dibromoethane	µg/m3	2	<0.14U	<0.14U	<0.14U	<9.9U	<0.21U	<0.14U	<0.3U	<0.6U	<0.3U	<0.3U	<0.3U	<0.45U	<0.3U	<0.3U	<0.3U	<0.3U	<0.3U	<0.3U	<0.3U
	2-chlorotoluene	µg/m3	777,771	<0.16U	<0.16U	<0.16U	<12U	<0.24U	<0.16U	<0.17U	<0.34U	<0.17U	<0.17U	<0.17U	<0.26U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U
	Benzyl chloride	µg/m3	25	<0.093U	<0.093U	<0.093U	<6.7U	<0.14U	<0.093U	<0.27U	<0.55U	<0.27U	<0.27U	<0.27U	<0.41U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U
	Dichlorobromomethane	µg/m3	87,813	<0.19U	<0.19U	<0.19U	<14U	<0.29U	<0.19U	<0.2U	<0.4U	<0.2U	<0.2U	<0.2U	<0.3U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U
	Bromoform	µg/m3	1,142	<0.26U	<0.26U	<0.26U	<19U	<0.39U	<0.26U	<0.58U	<1.2U	<0.58U	<0.58U	<0.58U	<0.87U	<0.58U	<0.58U	<0.58U	<0.58U	<0.58U	<0.58U	<0.58U
	Bromomethane	µg/m3	6,272	<0.17U	<0.17U	<0.17U	<12U	<0.26U	<0.17U	<0.22U	<0.43U	<0.22U	<0.22U	<0.22U	<0.33U	<0.22U	<0.22U	<0.22U	<0.22U	<0.22U	<0.22U	<0.22U
	Chlorodibromomethane	µg/m3		<0.17U	<0.17U	<0.17U	<12U	<0.26U	<0.17U	<0.37U	<0.75U	<0.37U	<0.37U	<0.37U	<0.56U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U
	Dichlorodifluoromethane	µg/m3	15,053,628	10	<0.28U	38	<20U	90	<0.28U	<0.4U	<0.79U	<0.4U	78	35	67	25	22	20	18	43	52	41
	Hexachlorobutadiene	µg/m3	56	<0.38U	2.1	<0.38U	<28U	0.92J	1.8J	<0.87U	<1.7U	<0.87U	<0.87U	<0.87U	<1.3U	<0.87U	<0.87U	<0.87U	<0.87U	<0.87U	<0.87U	<0.87U
	Trichlorofluoromethane	µg/m3	6,272,345	<0.25U	<0.25U	<0.25U	<18U	<0.38U	<0.25U	<0.21U	<0.43U	<0.21U	<0.21U	<0.21U	<0.32U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
Alkylbenzenes	1,2,4-trimethylbenzene	µg/m3	7,527	9.1	2.9	1.1	1500	4.9	7.8	<0.21U	<0.42U	<0.21U	0.76J	<0.21U	<0.32U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,3,5-trimethylbenzene	µg/m3	363,796	4.6	1.3	0.51J	770	2.3	4.4	<0.19U	<0.38U	<0.19U	0.24J	<0.19U	<0.29U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	Isopropylbenzene	µg/m3	501,788	0.66J	0.13J	<0.093U	37J	0.33J	0.52J	<0.15U	<0.29U	<0.15U	0.85J	0.19J	<0.22U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U
	n-propylbenzene	µg/m3	1,254,469	1.6	<0.13U	<0.13U	170	0.66J	1.6	<0.21U	<0.42U	<0.21U	<0.21U	<0.21U	<0.32U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	Styrene	µg/m3	1,254,469	<0.068U	<0.068U	<0.068U	<4.9U	<0.1U	<0.068U	<0.18U	<0.37U	<0.18U	<0.18U	<0.18U	<0.27U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U
	tert-butylbenzene	µg/m3		<0.11U	<0.11U	<0.11U	<7.9U	<0.16U	<0.11U	<0.24U	<0.48U	<0.24U	<0.24U	<0.24U	<0.36U	<0.24U	<0.24U	<0.24U	<0.24U	<0.24U	<0.24U	<0.24U
PAH/Phenols	Naphthalene	µg/m3	3,763	<0.16U	3.2	<0.16U	<11U	0.92J	<0.16U	<0.3U	<0.6U	<0.3U	0.38J	<0.3U	<0.45U	<0.3U	<0.3U	<0.3U	0.59J	<0.3U	<0.3U	<0.3U
Solvents	1,4-Dioxane	µg/m3	163	<0.58UJ	<0.58U	<0.58U	<41U	<0.86U	<0.58U	<2U	<4U	<2U	<2U	<2U	<3U	<2U	<2U	<2U	<2U	<2U	<2U	<2U
	2-Butanone	µg/m3	6,272,345	<0.27U	0.89J	1.7	<19U	<0.41U	2.3	<0.15U	0.52J	<0.15U	2.6	0.44J	0.76J	0.44J	1J	<0.15U	1.3J	0.88J	0.54J	1.3J
	2-Hexanone	µg/m3	37,634	<0.7U	<0.7U	<0.7U	<50U	<1U	<0.7U	<0.23U	<0.47U	<0.23U	0.26J	<0.23U	<0.35U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U	0.24J
	4-Methyl-2-pentanone	µg/m3	3,763,407	3.3	<0.74U	<0.74U	<53U	<1.1U	<0.74U	<0.2U	<0.41U	<0.2U	3.4	0.31J	<0.31U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U
	Acetone	µg/m3	37,634,070	6.6J	3.5J	<1.6U	<120U	3.4J	9.3J	20	<4.1U	4.9J	7.1J	<2U	3.4J	2.1J	5.2J	5.2J	9.9J	3.2J	5.3J	6.6J
	Allyl chloride	µg/m3	1,254	<0.5U	<0.5U	<0.5U	<36U	<0.75U	<0.5U	<0.21U	<0.43U	<0.21U	<0.21U	<0.21U	<0.32U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	Carbon Disulfide	µg/m3	878,128	<0.093U	<0.093U	0.84J	<6.7U	<0.14U	0.87J	<0.13U	<0.27U	<0.13U	1.5J	<0.13U	<0.2U	<0.13U	<0.13U	<0.13U	0.62J	<0.13U	0.76J	29
	Cyclohexane	µg/m3	7,526,814	<0.034U	<0.034U	0.53J	<2.5U	3.3	0.33J	<0.13U	<0.27U	<0.13U	<0.13U	<0.13U	<0.2U	<0.13U	<0.13U	<0.13U	<0.13U	<0.13U	<0.13U	<0.13U
	Heptane	µg/m3	4,892,429	<0.15U	<0.15U	<0.15U	<11U	<0.23U	0.26J	<0.16U	<0.33U	<0.16U	<0.16U	<0.16U	<0.25U	<0.16U	<0.16U	0.62J	<0.16U	<0.16U	<0.16U	<0.16U
	Hexane	µg/m3	878,128	<0.099U	<0.099U	0.57J	<7.1U	2.7	0.31J	<0.19U	<0.38U	<0.19U	<0.19U	<0.19U	<0.29U	<0.19U	<0.19U	0.56J	<0.19U	<0.19U	0.36J	<0.19U
	MTBE	µg/m3	3,763,407	<0.079U	<0.079U	<0.079U	<5.7U	<0.12U	<0.079U	<0.32U	<0.64U	<0.32U	<0.32U	<0.32U	<0.48U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Tetrahydrofuran	µg/m3	439,064	0.65J	<0.53U	<0.53U	<38U	<0.8U	<0.53U	<4.1U	<8.3U	<4.1U	<4.1U	<4.1U	<6.2U	<4.1U	<4.1U	<4.1U	<4.1U	<4.1U	<4.1U	<4.1U
VOCs	1,3-Butadiene	µg/m3	41	<0.08U	<0.08U	<0.08U	<5.7U	<0.12U	<0.08U	<0.2U	<0.39U	<0.2U	<0.2U	<0.2U	<0.3U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U
	Chlorodifluoromethane	µg/m3	62,723,450	7.9	<0.28U	11	<20U	7.7	<0.28U	85	170	0.22J	21	7.6	9.8	7.8	7.4	4.8	4.1	3.4	3.2	2.7
	Methyl Methacrylate	µg/m3	878,128	<0.39U	<0.39U	<0.39U	<28U	<0.59U	<0.39U	<0.16U	<0.33U	<0.16U	<0.16U	<0.16U	<0.25U	<0.16U	<0.16U	<0.16U	<0.16U	<0.16U	<0.16U	<0.16U
	Vinyl bromide (bromoethene)	µg/m3	3,763	<0.087U	<0.087U	<0.087U	<6.3U	<0.13U	<0.087U	<0.19U	<0.38U	<0.19U	<0.19U	<0.19U	<0.29U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	1,2-Dichlorotetrafluoroethane	µg/m3	21,325,973	<0.36U	<0.36U	<0.36U	<26U	6.8	<0.36U	<0.27U	<0.53U	<0.27U	<0.27U	<0.27U	<0.4U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U
	2,2,4-Trimethylpentane	µg/m3	4,139,748	<0.11U	<0.11U	<0.11U	<7.7U	<0.16U	<0.11U	<0.18U	<0.36U	<0.18U	<0.18U	<0.18U	<0.27U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U
	Butane	µg/m3	71,504,733	<0.43U	<0.43U	<0.43U	<31U	<0.64U	<0.43U	0.98J	<0.37U	<0.19U	<0.19U	<0.19U	<0.28U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	0.27J
	2-Propanol	µg/m3	8,781,283	16	0.58J	<0.37U	<26U	0.87J	0.59J	<2.4U	<4.8U	<2.4U	<2.4U	<2.4U	<3.6U	<2.4U	<2.4U	<2.4U	<2.4U	<2.4U	<2.4U	4.2J
	tert-Butyl alcohol	µg/m3	903,218	<0.36U	<0.36U	<0.36U	<26U	<0.55U	<0.36U	<2.6U	<5.2U	<2.6U	<2.6U	<2.6U	<3.9U	<2.6U	<2.6U	<2.6U	<2.6U	<2.6U	<2.6U	<2.6U
	Field Screening PID	ppmv		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Detected VOCs	µg/m3		151	137	95	17,007	312	158	110	190	5	192	92	183	95	91	73	60	80	100	121
	Total Flow Rate	CFM		NA	610	580	515	517	445	684	584	613	621	584	589	571	573	591	582	554	566	582
	VOC Mass Flow Rate	lb/hr		NA	0.000	0.0002	0.033	0.001	0.0003	0.0003	0.0004	0.0000	0.0004	0.0002	0.0004	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	0.0003

TABLE 7
SUMMARY OF TO-15 ANALYSES OF VGAC MONITORING POINTS

Cortese Landfill Site
Narrowsburg, New York

Chemical Group	Analyte	Units	Sample Location	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504
			Sample Date	2/10/2016	2/17/2016	3/2/2016	3/9/2016	3/23/2016	3/30/2016	4/13/2016	4/20/2016	5/4/2016	5/11/2016	5/25/2016
			Dilution	1	1.5	1	1	1	5	1	1	1	1	1
			VGAC Threshold Concentrations											
BTEX	Benzene	µg/m3	163	<0.13U	<0.2U	0.32J	<0.13U	<0.13U	<0.67U	0.14J	<0.13U	<0.13U	0.17J	0.16J
	Toluene	µg/m3	6,272,345	<0.35U	<0.53U	<0.35U	0.62J	<0.35U	<1.8U	<0.35U	0.39J	0.77	0.52J	<0.35U
	Ethylbenzene	µg/m3	1,254,469	<0.14U	<0.21U	<0.14U	<0.14U	<0.14U	<0.72U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U
	m+p-Xylenes	µg/m3	125,447	<0.31U	<0.46U	<0.31U	<0.31U	<0.31U	<1.5U	<0.31U	<0.31U	0.56J	0.46J	<0.31U
	o-Xylene	µg/m3	125,447	<0.16U	<0.24U	<0.16U	<0.16U	<0.16U	<0.8U	<0.16U	<0.16U	0.44J	0.23J	<0.16U
	Total Xylenes	µg/m3	125,447	<0.16U	<0.24U	<0.16U	<0.16U	<0.16U	<0.8U	<0.16U	<0.16U	1J	0.71J	<0.16U
Chlorinated Aliphatics	1,1,1-Trichloroethane	µg/m3	6,272,345	<0.25U	1.1J	<0.25U	0.5J	<0.25U	<1.3U	<0.25U	<0.25U	<0.25U	0.31J	<0.25U
	1,1,2-Trichloroethane	µg/m3	1,756	<0.21U	<0.32U	<0.21U	<0.21U	<0.21U	<1.1U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,1-Dichloroethane	µg/m3	790	<0.1U	0.22J	<0.1U	<0.1U	<0.1U	<0.51U	<0.1U	<0.1U	0.13J	0.23J	<0.1U
	1,1-Dichloroethene	µg/m3	87,813	<0.14U	<0.21U	<0.14U	<0.14U	<0.14U	<0.71U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U
	1,2-Dichloroethane	µg/m3	48	<0.17U	<0.25U	<0.17U	<0.17U	<0.17U	<0.83U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U
	1,2-Dichloroethene	µg/m3	79,032	<0.14U	<0.21U	<0.14U	<0.14U	<0.14U	1J	0.18J	<0.14U	0.39J	0.35J	<0.14U
	1,2-Dichloropropane	µg/m3	5,018	<0.12U	<0.19U	<0.12U	<0.12U	<0.12U	<0.62U	<0.12U	<0.12U	<0.12U	<0.12U	<0.12U
	Carbon Tetrachloride	µg/m3	213	<0.2U	<0.3U	<0.2U	<0.2U	<0.2U	<1U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U
	Chloroethane	µg/m3	12,544,690	<0.22U	<0.34U	<0.22U	<0.22U	0.75J	<1.1U	<0.22U	6.1	6.8	11	3.9
	Chloroform	µg/m3	54	<0.4U	<0.6U	<0.4U	<0.4U	<0.4U	<2U	<0.4U	<0.4U	<0.4U	<0.4U	<0.4U
	Chloromethane	µg/m3	112,902	0.87J	1.6	1.1	0.83J	1.2	1.9J	2.1	2	2.3	5.2	1.1
	cis-1,2-Dichloroethene	µg/m3	79,032	<0.14U	<0.21U	<0.14U	<0.14U	<0.14U	1J	0.18J	<0.14U	0.39J	0.35J	<0.14U
	Methylene Chloride	µg/m3	2,634	2.9	13	<0.63U	3.5	2.9	8.1J	14	24	33	130	7.9
	Trichloroethene	µg/m3	627	<0.21U	<0.31U	<0.21U	<0.21U	<0.21U	<1U	<0.21U	<0.21U	<0.21U	<0.21U	0.26J
	Tetrachloroethene	µg/m3	1,254	<0.16U	<0.23U	<0.16U	0.21J	<0.16U	<0.78U	<0.16U	<0.16U	<0.16U	<0.16U	<0.16U
	trans-1,2-Dichloroethene	µg/m3	79,032	<0.17U	<0.26U	<0.17U	<0.17U	<0.17U	<0.85U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U
	Vinyl Chloride	µg/m3	138	13	43	0.63	27	20	180	94	65	77	81	20
Chlorinated Aromatics	1,2-Dichlorobenzene	µg/m3	250,894	<0.33U	<0.5U	<0.33U	<0.33U	<0.33U	<1.7U	<0.33U	<0.33U	<0.33U	<0.33U	<0.33U
	1,3-Dichlorobenzene	µg/m3	12,545	<0.33U	<0.5U	<0.33U	<0.33U	<0.33U	<1.7U	<0.33U	<0.33U	<0.33U	<0.33U	<0.33U
	1,4-Dichlorobenzene	µg/m3	113	0.44J	0.53J	<0.34U	<0.34U	<0.34U	<1.7U	<0.34U	<0.34U	<0.34U	<0.34U	<0.34U
	Chlorobenzene	µg/m3	137,992	<0.23U	<0.34U	<0.23U	<0.23U	<0.23U	<1.1U	<0.23U	<0.23U	<0.23U	<0.23U	<0.23U
Halogenated Hydrocarbons	1,2-Dibromoethane	µg/m3	2	<0.3U	<0.45U	<0.3U	<0.3U	<0.3U	<1.5U	<0.3U	<0.3U	<0.3U	<0.3U	<0.3U
	2-chlorotoluene	µg/m3	777,771	<0.17U	<0.26U	<0.17U	<0.17U	<0.17U	<0.85U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U
	Benzyl chloride	µg/m3	25	<0.27U	<0.41U	<0.27U	<0.27U	<0.27U	<1.4U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U
	Dichlorobromomethane	µg/m3	87,813	<0.2U	<0.3U	<0.2U	<0.2U	<0.2U	<1U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U
	Bromoform	µg/m3	1,142	<0.58U	<0.87U	<0.58U	<0.58U	<0.58U	<2.9U	<0.58U	<0.58U	<0.58U	<0.58U	<0.58U
	Bromomethane	µg/m3	6,272	<0.22U	<0.33U	<0.22U	<0.22U	<0.22U	<1.1U	<0.22U	<0.22U	<0.22U	<0.22U	<0.22U
	Chlorodibromomethane	µg/m3		<0.37U	<0.56U	<0.37U	<0.37U	<0.37U	<1.9U	<0.37U	<0.37U	<0.37U	<0.37U	<0.37U
	Dichlorodifluoromethane	µg/m3	15,053,628	13	67	6.8	60	52	19	28	19	23	27	17
	Hexachlorobutadiene	µg/m3	56	<0.87U	<1.3U	<0.87U	<0.87U	<0.87U	<4.4U	<0.87U	<0.87U	<0.87U	<0.87U	<0.87U
	Trichlorofluoromethane	µg/m3	6,272,345	<0.21U	0.45J	<0.21U	<0.21U	<0.21U	<1.1U	<0.21U	<0.21U	<0.21U	0.3J	<0.21U
Alkylbenezenes	1,2,4-trimethylbenzene	µg/m3	7,527	0.24J	<0.32U	<0.21U	<0.21U	<0.21U	<1.1U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	1,3,5-trimethylbenzene	µg/m3	363,796	<0.19U	<0.29U	<0.19U	<0.19U	<0.19U	<0.96U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	Isopropylbenzene	µg/m3	501,788	<0.15U	<0.22U	<0.15U	<0.15U	<0.15U	<0.74U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U
	n-propylbenzene	µg/m3	1,254,469	<0.21U	<0.32U	<0.21U	<0.21U	<0.21U	<1.1U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	Styrene	µg/m3	1,254,469	<0.18U	<0.27U	<0.18U	<0.18U	<0.18U	<0.92U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U
	tert-butylbenzene	µg/m3		<0.24U	<0.36U	<0.24U	<0.24U	<0.24U	<1.2U	<0.24U	<0.24U	<0.24U	<0.24U	<0.24U
PAH/Phenols	Naphthalene	µg/m3	3,763	<0.3U	<0.45U	<0.3U	<0.3U	<0.3U	<1.5U	<0.3U	<0.3U	<0.3U	0.48J,B	<0.3U
Solvents	1,4-Dioxane	µg/m3	163	<2U	<3U	<2U	<2U	<2U	<10U	<2U	<2U	<2U	22	<2U
	2-Butanone	µg/m3	6,272,345	1.1J	1.8J	0.99J	1J	0.56J	0.8J	2.4	1.4J	1.7	2.3	1.1J
	2-Hexanone	µg/m3	37,634	<0.23U	<0.35U	<0.23U	<0.23U	<0.23U	<1.2U	<0.23U	<0.23U	<0.23U	0.38J	<0.23U
	4-Methyl-2-pentanone	µg/m3	3,763,407	<0.2U	<0.31U	<0.2U	<0.2U	<0.2U	<1U	<0.2U	0.71J	0.49J	0.57J	0.46J
	Acetone	µg/m3	37,634,070	4.5J	6.1J	4.9J	4.7J	<2U	<10U	21	8J	9.1J	42	6.5J
	Allyl chloride	µg/m3	1,254	<0.21U	<0.32U	<0.21U	<0.21U	<0.21U	<1.1U	<0.21U	<0.21U	<0.21U	<0.21U	<0.21U
	Carbon Disulfide	µg/m3	878,128	0.41J	<0.2U	0.18J	<0.13U	<0.13U	<0.67U	1.2J	0.4J	3	0.46J	0.18J
	Cyclohexane	µg/m3	7,526,814	<0.13U	1J	<0.13U	<0.13U	<0.13U	<0.67U	<0.13U	<0.13U	<0.13U	<0.13U	<0.13U
	Heptane	µg/m3	4,892,429	<0.16U	0.69J	<0.16U	<0.16U	<0.16U	<0.82U	<0.16U	<0.16U	<0.16U	<0.16U	<0.16U
	Hexane	µg/m3	878,128	<0.19U	3	<0.19U	<0.19U	<0.19U	<0.95U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	MTBE	µg/m3	3,763,407	<0.32U	<0.48U	<0.32U	<0.32U	<0.32U	<1.6U	<0.32U	<0.32U	<0.32U	<0.32U	<0.32U
	Tetrahydrofuran	µg/m3	439,064	<4.1U	<6.2U	<4.1U	<4.1U	<4.1U	<21U	<4.1U	<4.1U	<4.1U	<4.1U	<4.1U
VOCs	1,3-Butadiene	µg/m3	41	<0.2U	<0.3U	<0.2U	<0.2U	<0.2U	<0.98U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U
	Chlorodifluoromethane	µg/m3	62,723,450	1.5J	5.7	4.9	1.7J	5.3	2.9J	3.6	3.5	2.3	4.2	1.6J
	Methyl Methacrylate	µg/m3	878,128	<0.16U	<0.25U	<0.16U	<0.16U	<0.16U	<0.82U	<0.16U	<0.16U	<0.16U	<0.16U	<0.16U
	Vinyl bromide (bromoethene)	µg/m3	3,763	<0.19U	<0.29U	<0.19U	<0.19U	<0.19U	<0.96U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	1,2-Dichlorotetrafluoroethane	µg/m3	21,325,973	<0.27U	4.4	<0.27U	<0.27U	<0.27U	<1.3U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U
	2,2,4-Trimethylpentane	µg/m3	4,139,748	<0.18U	<0.27U	<0.18U	<0.18U	<0.18U	<0.91U	<0.18U	<0.18U	0.75J	<0.18U	<0.18U
	Butane	µg/m3	71,504,733	<0.19U	<0.28U	<0.19U	<0.19U	<0.19U	<0.93U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U
	2-Propanol	µg/m3	8,781,283	<2.4U	<3.6U	<2.4U	<2.4U	<2.4U	<12U	<2.4U	<2.4U	<2.4U	<2.4U	<2.4U
	tert-Butyl alcohol	µg/m3	903,218	<2.6U	<3.9U	<2.6U	<2.6U	<2.6U	<13U	<2.6U	<2.6U	<2.6U	<2.6U	<2.6U
	Field Screening PID	ppmv		0	0	0	0	0	0	0	0	0	0	0
	Total Detected VOCs	µg/m3		38	152	20	100	83	215	168	131	163	332	61
	Total Flow Rate	CFM		567	581	587	227	575	578	592	561	537	580	576
	VOC Mass Flow Rate	lb/hr		0.0001	0.0003	0.0000	0.0001	0.0002	0.0005	0.0004	0.0003	0.0003	0.0007	0.0001

Chemical Group	Analyte	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504
	Sample Date	6/1/2016	6/15/2016	6/22/2016	7/6/2016	7/20/2016	8/10/2016	8/17/2016	9/7/2016	9/14/2016	10/5/2016	10/12/2016
	Dilution	1	1	1	1	5.82	2	4	2.99	2	2	5
BTEX	Benzene	<0.13U	0.16J	<0.13U	0.64	<0.78U	0.31J	<0.54U	<0.4U	<0.27U	2.3	<0.67U
	Toluene	<0.35U	0.81	0.89	2	<2U	1.7	<1.4U	<1U	<0.7U	<0.7U	<1.8U
	Ethylbenzene	0.23J	0.17J	<0.14U	0.26J	<0.83U	<0.29U	<0.57U	<0.43U	<0.29U	<0.29U	<0.72U
	m+p-Xylenes	0.69J	0.83J	<0.31U	0.85J	<1.8U	<0.62U	<1.2U	1.1J	<0.62U	<0.62U	<1.5U
	o-Xylene	0.26J	0.78J	0.2J	0.6J	<0.94U	<0.32U	<0.64U	1.7J	<0.32U	<0.32U	<0.8U
	Total Xylenes	0.96J	1.6J	0.2J	1.5J	<0.94U	<0.32U	<0.64U	2.8J	<0.32U	<0.32U	<0.8U
Chlorinated Aliphatics	1,1,1-Trichloroethane	<0.25U	0.37J	0.38J	<0.25U	<1.5U	<0.5U	<1U	<0.75U	<0.5U	1.7J	<1.3U
	1,1,2-Trichloroethane	<0.21U	<0.21U	<0.21U	<0.21U	<1.2U	<0.43U	<0.85U	<0.64U	<0.43U	<0.43U	<1.1U
	1,1-Dichloroethane	<0.1U	<0.1U	0.14J	<0.1U	<0.59U	<0.2U	<0.4U	<0.3U	<0.2U	<0.2U	<0.51U
	1,1-Dichloroethene	<0.14U	<0.14U	<0.14U	<0.14U	<0.83U	<0.29U	<0.57U	<0.43U	<0.29U	<0.29U	<0.71U
	1,2-Dichloroethane	<0.17U	<0.17U	<0.17U	<0.17U	<0.97U	<0.33U	<0.66U	<0.5U	<0.33U	<0.33U	<0.83U
	1,2-Dichloroethene	<0.14U	<0.14U	0.35J	<0.14U	<0.81U	<0.28U	<0.56U	<0.41U	<0.28U	<0.28U	<0.69U
	1,2-Dichloropropane	<0.12U	<0.12U	<0.12U	<0.12U	<0.73U	<0.25U	<0.5U	<0.37U	<0.25U	<0.25U	<0.62U
	Carbon Tetrachloride	<0.2U	<0.2U	<0.2U	<0.2U	<1.2U	<0.4U	<0.81U	<0.6U	<0.4U	<0.4U	<1U
	Chloroethane	2.8	8.8	12	10	12	11	9.6	12	12	13	8.1
	Chloroform	<0.4U	<0.4U	<0.4U	<0.4U	<2.3U	<0.8U	<1.6U	<1.2U	<0.8U	<0.8U	<2U
	Chloromethane	1.4	2.6	3	3.1	3.6J	3.5	3.1J	5.1	4.4	5.5	<0.96U
	cis-1,2-Dichloroethene	<0.14U	<0.14U	0.35J	<0.14U	<0.81U	<0.28U	<0.56U	<0.41U	<0.28U	<0.28U	<0.69U
	Methylene Chloride	11	37	120	37	190	160	350	210	290	240	150
	Trichloroethene	<0.21U	0.26J	0.29J	0.38J	<1.2U	<0.42U	<0.84U	<0.63U	<0.42U	<0.42U	<1U
	Tetrachloroethene	<0.16U	<0.16U	<0.16U	<0.16U	<0.91U	<0.31U	<0.62U	<0.47U	<0.31U	<0.31U	<0.78U
	trans-1,2-Dichloroethene	<0.17U	<0.17U	<0.17U	<0.17U	<0.99U	<0.34U	<0.68U	<0.51U	<0.34U	<0.34U	<0.85U
	Vinyl Chloride	52	62	48	65	43	32	30	49	37	39	21
Chlorinated Aromatics	1,2-Dichlorobenzene	<0.33U	<0.33U	<0.33U	<0.33U	<1.9U	<0.66U	<1.3U	<0.99U	<0.66U	<0.66U	<1.7U
	1,3-Dichlorobenzene	<0.33U	<0.33U	<0.33U	<0.33U	<1.9U	<0.66U	<1.3U	<0.99U	<0.66U	<0.66U	<1.7U
	1,4-Dichlorobenzene	<0.34U	<0.34U	<0.34U	<0.34U	<2U	1.8J	<1.4U	<1U	<0.69U	<0.69U	<1.7U
	Chlorobenzene	<0.23U	0.81J	<0.23U	<0.23U	<1.3U	<0.45U	<0.9U	<0.67U	<0.45U	<0.45U	<1.1U
Halogenated Hydrocarbons	1,2-Dibromoethane	<0.3U	<0.3U	<0.3U	<0.3U	<1.7U	<0.6U	<1.2U	<0.9U	<0.6U	<0.6U	<1.5U
	2-chlorotoluene	<0.17U	<0.17U	<0.17U	<0.17U	<0.99U	<0.34U	<0.68U	<0.51U	<0.34U	<0.34U	<0.85U
	Benzyl chloride	<0.27	<0.27U	<0.27U	<0.27U	<1.6U	<0.55U	<1.1U	<0.82U	<0.55U	<0.55U	<1.4U
	Dichlorobromomethane	<0.2U	<0.2U	<0.2U	<0.2U	<1.2U	<0.4U	<0.8U	<0.6U	<0.4U	<0.4U	<1U
	Bromoform	<0.58U	<0.58U	<0.58U	<0.58U	<3.4U	<1.2U	<2.3U	<1.7U	<1.2U	<1.2U	<2.9U
	Bromomethane	<0.22U	<0.22U	<0.22U	<0.22U	<1.3U	<0.43U	<0.87U	<0.65U	<0.43U	<0.43U	<1.1U
	Chlorodibromomethane	<0.37U	<0.37U	<0.37U	<0.37U	<2.2U	<0.75U	<1.5U	<1.1U	<0.75U	<0.75U	<1.9U
	Dichlorodifluoromethane	17	68	41	28	28	40	59	44	40	48	28
	Hexachlorobutadiene	<0.87U	<0.87U	<0.87U	<0.87U	<5.1U	<1.7U	<3.5U	<2.6U	<1.7U	<1.7U	<4.4U
	Trichlorofluoromethane	<0.21U	0.4J	0.74J	<0.21U	<1.2U	0.75J	3.4J	2.1J	2.8	2.4	1.9J
Alkylbenezenes	1,2,4-trimethylbenzene	<0.21U	0.3J	<0.21U	<0.21U	<1.2U	<0.42U	<0.85U	<0.63U	<0.42U	<0.42U	<1.1U
	1,3,5-trimethylbenzene	<0.19U	0.26J	<0.19U	<0.19U	<1.1U	<0.38U	<0.77U	<0.57U	<0.38U	<0.38U	<0.96U
	Isopropylbenzene	0.36J	0.86J	<0.15U	0.16J	<0.86U	<0.29U	<0.59U	<0.44U	<0.29U	<0.29U	<0.74U
	n-propylbenzene	<0.21U	<0.21U	<0.21U	<0.21U	<1.2U	<0.42U	<0.85U	<0.63U	<0.42U	<0.42U	<1.1U
	Styrene	<0.18U	<0.18U	<0.18U	<0.18U	<1.1U	<0.37U	<0.73U	<0.55U	<0.37U	<0.37U	<0.92U
	tert-butylbenzene	<0.24U	<0.24U	<0.24U	<0.24U	<1.4U	<0.48U	<0.97U	<0.72U	<0.48U	<0.48U	<1.2U
PAH/Phenols	Naphthalene	<0.3U	0.33J	<0.3U	<0.3U	<1.7U	<0.6U	<1.2U	<0.89U	<0.6U	<0.6U	<1.5U
Solvents	1,4-Dioxane	<2U	<2U	<2U	<2U	<12U	<4U	<8.1U	<6U	<4U	<4U	<10U
	2-Butanone	1.2J	1.5J	1.4J	3.6	<0.89U	3.1	<0.61U	1.5J	0.86J	<0.31U	<0.77U
	2-Hexanone	<0.23U	0.3J	<0.23U	0.42J	<1.4U	0.6J	<0.93U	<0.7U	<0.47U	<0.47U	<1.2U
	4-Methyl-2-pentanone	3.1	2.4	0.53J	1.4J	<1.2U	1.2J	<0.82U	<0.61U	0.98J	0.76J	<1U
	Acetone	13	11J	5.4J	17	<12U	13J	<8.2U	7.7J	5.6J	10J	<10U
	Allyl chloride	<0.21U	<0.21U	<0.21U	<0.21U	<1.2U	<0.43U	<0.85U	<0.64U	<0.43U	<0.43U	<1.1U
	Carbon Disulfide	0.17J	2	0.62J	3.1	<0.78U	2.3J	<0.54U	3.2J	<0.27U	<0.27U	0.93J
	Cyclohexane	<0.13U	<0.13U	<0.13U	0.44J	<0.78U	0.38J	<0.54U	<0.4U	<0.27U	0.33J	<0.67U
	Heptane	<0.16U	0.31J	<0.16U	<0.16U	<0.95U	<0.33U	<0.66U	<0.49U	<0.33U	<0.33U	<0.82U
	Hexane	<0.19U	<0.19U	<0.19U	0.59J	<1.1U	<0.38U	<0.76U	<0.57U	<0.38U	<0.38U	<0.95U
	MTBE	<0.32U	<0.32U	<0.32U	<0.32U	<1.9U	<0.64U	<1.3U	<0.96U	<0.64U	<0.64U	<1.6U
	Tetrahydrofuran	<4.1U	<4.1U	<4.1U	<4.1U	<24U	<8.3U	<17U	<12U	<8.3U	<8.3U	<21U
VOCs	1,3-Butadiene	<0.2U	<0.2U	<0.2U	<0.2U	<1.1U	<0.39U	<0.79U	<0.59U	<0.39U	<0.39U	<0.98U
	Chlorodifluoromethane	2.4	3.5	5.5	5	4.9J	4.1	4.6J	4.9J	4.9	5.7	3.9J
	Methyl Methacrylate	<0.16U	<0.16U	<0.16U	<0.16U	<0.95U	<0.33U	<0.66U	<0.49U	<0.33U	<0.33U	<0.82U
	Vinyl bromide (bromoethene)	<0.19U	<0.19U	<0.19U	<0.19U	<1.1U	<0.38U	<0.77U	<0.58U	<0.38U	<0.38U	<0.96U
	1,2-Dichlorotetrafluoroethane	1.5	<0.27U	7.8	2	10	22	49	47	39	29	24
	2,2,4-Trimethylpentane	<0.18U	<0.18U	<0.18U	<0.18U	<1.1U	<0.36U	<0.73U	<0.54U	<0.36U	<0.36U	<0.91U
	Butane	<0.19U	<0.19U	<0.19U	<0.19U	<1.1U	<0.37U	3J	<0.55U	3.2	<0.37U	<0.93U
	2-Propanol	<2.4U	<2.4U	<2.4U	<2.4U	<14U	<4.8U	<9.6U	<7.2U	<4.8U	<4.8U	<12U
	tert-Butyl alcohol	<2.6U	<2.6U	<2.6U	<2.6U	<15U	<5.2U	<10U	<7.7U	<5.2U	<5.2U	<13U
	Field Screening PID	0	0	0	0	0	0	0	0	0	0	0
	Total Detected VOCs	108	209	249	184	297	298	519	395	443	399	247
	Total Flow Rate	567	567	571	549	595	574	560	551	552	572	581
	VOC Mass Flow Rate	0.0004	0.0005	0.0004	0.0007	0.0006	0.0011	0.0008	0.0009	0.0009	0.0005	0.0002

TABLE 7
SUMMARY OF TO-15 ANALYSES OF VGAC MONITORING POINTS

Cortese Landfill Site
Narrowsburg, New York

Chemical Group	Analyte	Units	Sample Location	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP504	SP505	SP505	SP505	SP505	SP505
			Sample Date	11/2/2016	11/16/2016	12/14/2016	12/21/2016	1/18/2017	1/25/2017	3/1/2017	3/8/2017	4/12/2017	4/19/2017	5/24/2017	5/31/2017	7/5/2017	7/12/2017	8/16/2017	8/23/2017	10/11/2017	10/18/2017 *	9/25/2014	9/30/2014	10/9/2014	10/16/2014	10/24/2014
			Dilution	1.5	2.5	1.5	1.5	1	1	1	1	1	1	1	1	1	1	2	1	1	2	3.03	4	2	2.99	6.9
			VGAC Threshold Concentrations																							
BTEX	Benzene	µg/m3	163	<0.2U	0.45J	0.31J	0.19J	0.43J	0.13J	0.32J	0.5J	<0.089U	<0.089U	<0.089U	<0.089U	<0.089U	<0.089U	<0.18U	<0.089U	<0.089U	<0.18U	<0.28U	<0.37U	<0.19U	1.6J	<0.64U
	Toluene	µg/m3	6,272,345	0.61J	<0.88U	1.7	1.7	3	1.5	0.59J	0.72J	<0.13U	<0.13U	<0.13U	<0.13U	0.77	0.48J	<0.26U	<0.13U	0.85	1.5J	3.2	<0.38U	1.2J	2.2J	<0.65U
	Ethylbenzene	µg/m3	1,254,469	<0.21U	<0.36U	<0.22U	<0.22U	0.47J	0.2J	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.3U	<0.15U	<0.15U	1.2J	<0.26U	<0.35U	<0.17U	0.89J	<0.6U
	m+p-Xylenes	µg/m3	125,447	<0.46U	<0.77U	0.75J	0.98J	1.8J	0.5J	<0.33U	<0.33U	<0.33U	<0.33U	<0.33U	<0.33U	<0.33U	<0.33U	<0.67U	<0.33U	<0.33U	5.3	<0.33U	<0.43U	0.39J	2J	<0.75U
	o-Xylene	µg/m3	125,447	<0.24U	<0.4U	<0.26U	<0.26U	0.78J	0.35J	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U	<0.35U	<0.17U	0.22J	1.4J	<0.24U	<0.31U	<0.16U	0.83J	<0.54U
	Total Xylenes	µg/m3	125,447	<0.24U	<0.4U	0.74J	0.96J	2.6J	0.87J	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U	<0.35U	<0.17U	0.22J	6.6	<0.54U	<0.71U	0.4J	2.8	<1.2U
Chlorinated Aliphatics	1,1,1-Trichloroethane	µg/m3	6,272,345	51	13	75	65	11	3.2	5.3	1.9	<0.14U	<0.14U	0.39J	<0.14U	<0.14U	0.24J	<0.28U	<0.14U	<0.14U	<0.28U	4.1	<0.65U	0.53J	<0.49U	5J
	1,1,2-Trichloroethane	µg/m3	1,756	<0.32U	<0.53U	<0.14U	<0.14U	<0.093U	<0.093U	<0.093U	<0.093U	<0.093U	<0.093U	<0.093U	<0.093U	<0.093U	<0.093U	<0.19U	<0.093U	<0.093U	<0.19U	<0.61U	<0.81U	<0.4U	<0.6U	<1.4U
	1,1-Dichloroethane	µg/m3	790	3.5	1.3J	5.7	5.5	1.4	0.68J	1.2	0.46J	<0.069U	<0.069U	<0.069U	<0.069U	<0.069U	<0.069U	0.29J	<0.069U	<0.069U	<0.14U	<0.34U	<0.45U	<0.23U	0.56J	23
	1,1-Dichloroethene	µg/m3	87,813	<0.21U	1.1J	0.62J	0.49J	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.28U	<0.14U	<0.14U	<0.28U	<0.12U	<0.16U	<0.079U	<0.12U	2.4J
	1,2-Dichloroethane	µg/m3	48	<0.25U	<0.41U	<0.21U	<0.21U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.28U	<0.14U	<0.14U	<0.28U	<0.64U	<0.84U	<0.42U	<0.63U	<1.5U
	1,2-Dichloroethene	µg/m3	79,032	4.8	2.3J	23	13	0.71J	1.3J	4	1.4J	0.17J	<0.11U	0.59J	<0.11U	<0.11U	0.2J	<0.23U	<0.11U	<0.11U	<0.23U	14	8.7	1.3J	1.3J	6.3
	1,2-Dichloropropane	µg/m3	5,018	<0.19U	<0.31U	<0.24U	<0.24U	<0.16U	<0.16U	<0.16U	<0.16U	<0.16U	<0.16U	<0.16U	<0.16U	<0.16U	<0.16U	<0.32U	<0.16U	<0.16U	<0.32U	<0.49U	<0.65U	<0.32U	<0.48U	<1.1U
	Carbon Tetrachloride	µg/m3	213	1.4J	<0.5U	2.9	2.7J	0.46J	0.12J	0.16J	<0.069U	<0.069U	<0.069U	<0.069U	<0.069U	<0.069U	<0.069U	<0.14U	<0.069U	<0.069U	<0.14U	<0.21U	<0.28U	<0.14U	<0.21U	<0.48U
	Chloroethane	µg/m3	12,544,690	10	8	6.7	5.1	7.7	5.7	4	1.6	1.4	<0.34U	3.4	4.7	3.9	4	8.6	4.5	5.3	5.3	<0.49U	<0.64U	3.1	130	720
	Chloroform	µg/m3	54	2.1	<1U	4.5	3.3	0.38J	0.35J	0.65J	0.23J	<0.12U	<0.12U	<0.12U	0.64UJ	<0.12U	<0.12U	2U	<0.12U	<0.12U	<0.24U	<0.56U	<0.74U	<0.37U	<0.55U	2.3J
	Chloromethane	µg/m3	112,902	4.1	4.1	3.4	2.7	4.7	3.9	1.4	1.1	1.8	1.1	2.5	2.8	2.6	1.5	4.1	1.4	3	6.9	<0.38U	<0.5U	1.9J	2.1J	2.5J
	cis-1,2-Dichloroethene	µg/m3	79,032	4.6	2.3	22	14	0.7J	1.3	4.1	1.4	0.17J	<0.11U	0.6J	<0.11U	<0.11U	0.2J	<0.23U	<0.11U	<0.11U	<0.23U	14	8.8	1.3J	1.3J	6.4
	Methylene Chloride	µg/m3	2,634	180	150	92J	99	65	45	26	10	7.6	2.9	13	32	20B	42	140	110	190	190	<1.3U	<1.7U	<0.83U	58	950
	Trichloroethene	µg/m3	627	0.88J	3.5	6.3	4	<0.049U	<0.049U	0.59J	0.14J	0.38J	<0.049U	0.45J	0.19J	<0.049U	0.64J	<0.098U	<0.049U	<0.049U	<0.098U	<0.49U	<0.64U	19	0.72J	<1.1U
	Tetrachloroethene	µg/m3	1,254	<0.23U	<0.39U	0.52J	0.37J	<0.066U	<0.066U	0.16J	<0.066U	<0.066U	<0.066U	<0.066U	<0.066U	<0.066U	1.2J	<0.13U	<0.066U	0.13J	<0.13U	<0.62U	<0.81U	<0.41U	0.85J	<1.4U
	trans-1,2-Dichloroethene	µg/m3	79,032	<0.26U	<0.43U	<0.3U	<0.3U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.4U	<0.2U	<0.2U	<0.4U	<0.32U	<0.43U	<0.21U	<0.32U	<0.74U
	Vinyl Chloride	µg/m3	138	35	24	23	18	43	26	27	11	28	12	25	25	20	21	20	14	30	24	<0.2U	<0.27U	54	200	90
Chlorinated Aromatics	1,2-Dichlorobenzene	µg/m3	250,894	<0.5U	<0.83U	<0.41U	<0.41U	<0.27U	0.63J	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.54U	<0.27U	<0.27U	<0.54U	<0.33U	<0.43U	<0.22U	<0.32U	<0.75U
	1,3-Dichlorobenzene	µg/m3	12,545	<0.5U	<0.83U	<0.45U	<0.45U	<0.3U	<0.3U	<0.3U	<0.3U	<0.3U	<0.3U	<0.3U	<0.3U	<0.3U	<0.3U	<0.6U	<0.3U	<0.3U	<0.6U	<0.36U	<0.48U	<0.24U	<0.36U	<0.83U
	1,4-Dichlorobenzene	µg/m3	113	<0.51U	<0.86U	<0.57U	<0.57U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.38U	<0.76U	<0.38U	<0.38U	<0.76U	<0.35U	<0.46U	<0.23U	<0.34U	<0.79U
	Chlorobenzene	µg/m3	137,992	<0.34U	<0.56U	<0.17U	<0.17U	<0.12U	<0.12U	<0.12U	<0.12U	<0.12U	<0.12U	<0.12U	<0.12U	<0.12U	<0.12U	<0.23U	<0.12U	<0.12U	<0.23U	<0.25U	<0.33U	<0.17U	<0.25U	<0.57U
Halogenated Hydrocarbons	1,2-Dibromoethane	µg/m3	2	<0.45U	<0.75U	<0.27U	<0.27U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.35U	<0.18U	<0.18U	<0.35U	<0.42U	<0.55U	<0.28U	<0.41U	<0.95U
	2-chlorotoluene	µg/m3	777,771	<0.26U	<0.43U	<0.27U	<0.27U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.18U	<0.36U	<0.18U	<0.18U	<0.36U	<0.49U	<0.64U	<0.32U	<0.48U	<1.1U
	Benzyl chloride	µg/m3	25	<0.41U	<0.69U	<0.52U	<0.52U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.69U	<0.35U	<0.35U	<0.69U	<0.28U	<0.37U	<0.19U	<0.28U	<0.64U
	Dichlorobromomethane	µg/m3	87,813	<0.3U	<0.5U	<0.59U	<0.59U	<0.4U	<0.4U	<0.4U	<0.4U	<0.4U	<0.4U	<0.4U	<0.4U	<0.4U	<0.4U	<0.79U	<0.4U	<0.4U	<0.79U	<0.59U	<0.78U	<0.39U	<0.58U	<1.3U
	Bromoform	µg/m3	1,142	<0.87U	<1.4U	<0.54U	<0.54U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.36U	<0.72U	<0.36U	<0.36U	<0.72U	<0.78U	<1U	<0.52U	<0.77U	<1.8U
	Bromomethane	µg/m3	6,272	<0.33U	<0.54U	<0.21U	<0.21U	0.21J	0.16J	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.28U	<0.14U	<0.14U	<0.28U	<0.52U	<0.68U	<0.34U	<0.51U	<1.2U
	Chlorodibromomethane	µg/m3		<0.56U	<0.94U	<0.22U	<0.22U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.14U	<0.29U	<0.14U	<0.14U	<0.29U	<0.52U	<0.68U	<0.34U	<0.51U	<1.2U
	Dichlorodifluoromethane	µg/m3	15,053,628	44	47	47	31	63	35	20	15	16	4.8	20	21	30	37	37	34	27	19	<0.84U	<1.1U	74	390	210
	Hexachlorobutadiene	µg/m3	56	<1.3U	<2.2U	<1U	<1U	<0.68U	<0.68U	<0.68U	<0.68U	<0.68U	<0.68U	<0.68U	<0.68U	<0.68U	<0.68U	<1.4U	<0.68U	<0.68U	<1.4U	<1.2U	<1.5U	<0.77U	<1.1U	<2.6U
	Trichlorofluoromethane	µg/m3	6,272,345	5.7	3.2	6.4	5.3	5.8	2.5	0.96J	0.49J	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U	<0.17U	1.9J	0.91J	2.1	2.5	<0.77U	<1U	<0.51U	0.84J	5.1J
Alkylbenzenes	1,2,4-trimethylbenzene	µg/m3	7,527	<0.32U	<0.53U	0.61J	<0.42U	0.85J	0.36J	<0.28U	<0.28U	<0.28U	<0.28U	<0.28U	<0.28U	<0.28U	<0.28U	<0.56U	<0.28U	<0.28U	<0.56U	<0.24U	<0.31U	<0.16U	<0.24U	<0.54U
	1,3,5-trimethylbenzene	µg/m3	363,796	<0.29U	<0.48U	<0.29U	<0.29U	0.42J	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.39U	<0.2U	<0.2U	<0.39U	<0.28U	<0.37U	<0.19U	<0.28U	<0.64U
	Isopropylbenzene	µg/m3	501,788	<0.22U	<0.37U	<0.29U	<0.29U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	<0.19U	0.36J	<0.38U	<0.19U	<0.19U	<0.38U	<0.28U	<0.37U	<0.19U	<0.28U	<0.64U
	n-propylbenzene	µg/m3	1,254,469	<0.32U	<0.53U	<0.29U	<0.29U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.39U	<0.2U	<0.2U	<0.39U	<0.4U	<0.53U	<0.27U	<0.4U	<0.92U
	Styrene	µg/m3	1,254,469	<0.27U	<0.46U	<0.22U	<0.22U	<0.15U	0.31J	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.3U	<0.15U	<0.15U	<0.3U	<0.21U	<0.27U	<0.14U	<0.2U	<0.47U
	tert-butylbenzene	µg/m3		<0.36U	<0.6U	<0.3U	<0.3U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.41U	<0.2U	<0.2U	<0.41U	<0.33U	<0.44U	<0.22U	<0.33U	<0.76U
PAH/Phenols	Naphthalene	µg/m3	3,763	<0.45U	<0.75U,*	<0.79U	<0.79U	3.7	<0.52U	<0.52U	0.6J	<0.52U	<0.52U	<0.52U	<0.52U	<0.52U	<0.52U	<1U	<0.52U	<0.52U	<1U	<0.48U	<0.63U	<0.31U	<0.47U	<1.1U
Solvents	1,4-Dioxane	µg/m3	163	<3U	11J	<4.1U	<4.1U	<2.7U	<2.7U	<2.7U	<2.7U	<2.7U	<2.7U	<2.7U	<2.7U	<2.7U	<2.7U	<5.5U	<2.7U	<2.7U	<5.5U	<1.7U	<2.3U	<1.2U	<1.7U	<4U
	2-Butanone	µg/m3	6,272,345	2.8	4.5	4.5	0.63J	11	8.2	<0.32U	2.4	1.9	0.52J	<0.32U	1J	1.2J	0.42J	1J	<0.32U	0.69J	1.2J	9.7	<1.1U	6.5	5.5	<1.9U
	2-Hexanone	µg/m3	37,634	<0.35U	2.1J	<0.53U	<0.53U	2.5	<0.35U	<0.35U	0.37J	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.35U	<0.7U	<0.35U	<0.35U	<0.7U	<2.1U	<2.8U	<1.4U	<2.1U	<4.8U
	4-Methyl-2-pentanone	µg/m3	3,763,407	<0.31U	0.97J	<0.4U	<0.4U	0.89J	0.73J	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	<0.27U	0.31J	<0.53U	<0.27U	<0.27U	<0.53U	<2.2U	<2.9U	<1.5U	<2.2U	<5.1U
	Acetone	µg/m3	37,634,070	16J	26J	15J	<4.6U	63	23	<3.1U	13	8.6J	3.5J	<3.1U	5.4J	4.7J	<3.1U	6.7J	<3.1U	4.3J	25	<5U	<6.6U	10J	<4.9U	30J
	Allyl chloride	µg/m3	1,254	<0.32U	<0.53U	<0.3U	<0.3U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.39U	<0.2U	<0.2U	<0.39U	<1.5U	<2U	<1U	<1.5U	<3.5U
	Carbon Disulfide	µg/m3	878,128	0.52J	83	0.95J	0.43J	9.7	4	<0.087U	33	0.12J	0.54J	<0.087U	3.2	<0.087U	0.19J	0.62J	<0.087U	<0.087U	2.3J	<0.28U	<0.37U	<0.19U	<0.28U	5.8J
	Cyclohexane	µg/m3	7,526,814	9.5	1.3J	9.9	8.2	3.8	0.39J	0.48J	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.31U	<0.15U	<0.15U	<0.31U	<0.1U	<0.14U	<0.069U	<0.1U	3.7J
	Heptane	µg/m3	4,892,429	<0.25U	<0.41U	<0.42U	0.6J	<0.28U	<0.28U	<0.28U	<0.28U	<0.28U	<0.28U	<0.28U	<0.28U	<0.28U	<0.28U	<0.56U	<0.28U	<0.28U	<0.56U	<0.46U	<0.61U	<0.3U	1.2J	<1U
	Hexane	µg/m3	878,128	1.5	<0.48U	6.6	9.3	1.9	<0.16U	0.48J	0.77	<0.16U	<0.16U	<0.16U	<0.16U	0.71	<0.16U	<0.32U	<0.16U	<0.16U	<0.32U	<0.3U	<0.39U	0.36J	1.9J	<0.68U
	MTBE	µg/m3	3,763,407	<0.48U	<0.8U	<0.22U	<0.22U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.15U	<0.3U	<0.15U	<0.15U	<0.3U	<0.24U	<0.32U	<0.16U	<0.24U	<0.55U
	Tetrahydrofuran	µg/m3	439,064	<6.2U	<10U	<5.3U	<5.3U	<3.5U	<3.5U	<3.5U	<3.5U	<3.5U	<3.5U	8.2J	<3.5U	<3.5U	<3.5U	<7.1U	<3.5U	<3.5U	140	<1.6U	<2.1U	13J	12J	9J
VOCs	1,3-Butadiene	µg/m3	41	<0.3U	<0.49U	<0.12U	<0.12U	<0.082U	<0.082U	0.19J	<0.082U	<0.082U	<0.082U	<0.082U	<0.082U	<0.082U	<0.082U	<0.16U	<0.082U	<0.082U	<0.16U	<0.24U	<0.32U	<0.16U	<0.24U	<0.55U
	Chlorodifluoromethane	µg/m3	62,723,450	5	4.1J	2.7	2.3J	5.4	4.8	1.3J	1.7J	1.9	1.3J	3.3	3.4	2.6	2.4	3.8	2.3	3.9	4.6	320	320	160	130	55
	Methyl Methacrylate	µg/m3	878,128	<0.25U	<0.41U	<0.68U	<0.68U	<0.45U	<0.45U	<0.45U	<0.45U	<0.45U	<0.45U	<0.45U	<0.45U	<0.45U	<0.45U	<0.9U	<0.45U	<0.45U	<0.9U	<1.2U	<1.6U	<0.79U	<1.2U	<2.7U
	Vinyl bromide (bromoethene)	µg/m3	3,763	<0.29U	<0.48U	<0.14U	<0.14U	<0.096U	<0.096U	<0.096U	<0.096U	<0.096U	<0.096U	<0.096U	<0.096U	<0.096U	<0.096U	<0.19U	<0.096U	<0.096U	<0.19U	<0.27U	<0.35U	<0.17U	<0.26U	<0.6U
	1,2-Dichlorotetrafluoroethane	µg/m3	21,325,973	28	22	17	14	11	6.7	5.2	2.9	1.2J	<0.29U	<0.29U	<0.29U	2.3	4.5	36	24	37	39	<1.1U	<1.5U	<0.73U	52	25
	2,2,4-Trimethylpentane	µg/m3	4,139,748	<0.27U	<0.46U	<0.3U	0.49J	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.2U	<0.4U	<0.2U	<0.2U	<0.4U	<0.33U	<0.43U	<0.21U	<0.32U	<0.74U
	Butane	µg/m3	71,504,733	4.2	2.3J	3.6	2.8	4.4	1.6	<0.11U	0.45J	0.23J	<0.11U	<0.11U	<0.11U	<0.11U	<0.11U	1.6J	0.86J	1.5	2.1J	<1.3U	<1.7U	<0.86U	4.2	17
	2-Propanol	µg/m3	8,781,283	<3.6U	<6U	2.8J	0.74J	4.2J	8.5J	<0.32U	0.87J	20	<0.32U	<0.32U	2J	<0.32U	0.41J	<0.64U	<0.32U	<0.32U	18J	<1.1U	<1.5U	<0.74U	<1.1U	<2.5U
	tert-Butyl alcohol	µg/m3	903,218	<3.9U	<6.4U	<7.7U	<7.7U	<5.2U	<5.2U	<5.2U	<5.2U	<5.2U	<5.2U	<5.2U	<5.2U	<5.2U	<5.2U	<10U	<5.2U	<5.2U	<10U	<1.1U	<1.5U	<0.73U	<1.1U	<2.5U
	Field Screening PID	ppmv		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NM	0	0	0	0	0
	Total Detected VOCs	µg/m3		425	418	392	319	339	191	107	102	94	27	77	103	89	117	264	192	308	#N/A	365	338	347	1,004	2,169
	Total Flow Rate	CFM		588	594	604	609	614	628	561	590	574	585	549	553	552	552	552	570	546	546	NA	NA	NA	NA	NA
	VOC Mass Flow Rate	lb/hr		0.0009	0.0009	0.0009	0.0007	0.0008	0.0004	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005	0.0004	0.0006	#N/A	NA	NA	NA	NA	NA

TABLE 7
SUMMARY OF TO-15 ANALYSES OF VGAC MONITORING POINTS

Cortese Landfill Site
Narrowsburg, New York

Notes:

	Detected results are shown in bold. Detections above the VGAC Threshold Concentrations are shown in bold and shaded.
VGAC	Vapor-phase Activated Carbon.
PID (ppmv)	Photoionization detector field screening measurement of total VOCs in parts per million by volume.
µg/m3	micrograms per cubic meter
J	Estimated
B	Analyte was detected in the Method Blank
U	Not detected above the laboratory reporting limit
NA	Not Available

TABLE 8
SUMMARY OF OU4 TRANSECT TOTAL VOC MASS DISCHARGE

Cortese Landfill
Narrowsburg, New York

Monitoring Well	Baseline Mass Discharge [1]	Apr-14		Oct-14		Apr-15		Jul-15		Oct-15		May-16		Jul-16		Oct-16	
		Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline
Units	µg/sec	µg/sec	%	µg/sec	%	µg/sec	%	µg/sec	%	µg/sec	%	µg/sec	%	µg/sec	%	µg/sec	%
MW-10	7.7E+00	2.5E+01	227%	5.6E-01	-93%	1.3E+01	62%	3.0E-01	-96%	2.5E-01	-97%	4.9E-01	-94%	7.3E-01	-91%	1.2E-01	-99%
MW-11	3.2E-01	0.0E+00	-100%	*0.0E+00*	*-100%*	0.0E+00	-100%	*0.0E+00*	-100%	*0.0E+00*	-100%	0.0E+00	-100%	*0.0E+00*	-100%	*0.0E+00*	-100%
EX-1	3.2E+03	2.4E+03	-25%	4.3E+02	-87%	1.4E+03	-55%	9.5E+01	-97%	5.4E+01	-98%	1.4E+03	-58%	9.1E+01	-97%	3.0E+01	-99%
MW-1A	0.0E+00	*0.0E+00*	*0%*	*0.0E+00*	*0%*	0.0E+00	0%	*0.0E+00*	0%	*0.0E+00*	0%	0.0E+00	0%	*0.0E+00*	0%	*0.0E+00*	0%
MW-1B	9.9E+02	2.2E+02	-78%	4.6E+02	-53%	3.6E+01	-96%	4.6E+01	-95%	2.6E+01	-97%	3.3E+01	-97%	2.3E+01	-98%	8.6E+00	-99%
MW-1C	3.8E+01	3.0E+01	-21%	4.6E+00	-88%	5.3E+00	-86%	1.2E+00	-97%	9.2E-01	-98%	2.0E-01	-99%	4.8E-01	-99%	1.7E+00	-95%
MW-20A	1.2E+00	9.2E-01	-21%	1.1E+00	-7%	9.3E-01	-19%	*9.3E-01*	*-19%*	8.7E-01	-25%	8.7E-01	-25%	*8.7E-01*	*-25%*	9.2E-01	-21%
MW-20B	1.3E+02	6.1E+00	-95%	1.7E+02	34%	7.9E+00	-94%	*7.9E+00*	*-94%*	1.8E+01	-86%	2.2E+00	-98%	*2.2E+00*	*-98%*	1.4E+01	-89%
MW-8A	0.0E+00	*0.0E+00*	*0%*	*0.0E+00*	*0%*	*0.0E+00*	*0%*	*0.0E+00*	0%	*0.0E+00*	0%	*0.0E+00*	*0%*	*0.0E+00*	0%	*0.0E+00*	0%
MW-8B	0.0E+00	*0.0E+00*	*0%*	*0.0E+00*	*0%*	*0.0E+00*	*0%*	*0.0E+00*	0%	*0.0E+00*	0%	*0.0E+00*	*0%*	*0.0E+00*	0%	*0.0E+00*	0%
Total for Source Area Transect	4.4E+03	2.7E+03	-39%	1.1E+03	-76%	1.5E+03	-65%	1.5E+02	-97%	1.0E+02	-98%	1.4E+03	-68%	1.2E+02	-97%	5.6E+01	-99%

Monitoring Well	Baseline Mass Discharge [1]	Apr-17		Jul-17		Oct-17		May-18		Jul-18		Oct-18		Apr-19		Jul-19	
		Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline
Units	µg/sec	µg/sec	%	µg/sec	%	µg/sec	%	µg/sec	%	µg/sec	%	µg/sec	%	µg/sec	%	µg/sec	%
MW-10	7.7E+00	3.2E+00	-58%	1.0E+00	-87%	1.2E-01	-98%	1.8E+00	-76%	5.5E-01	-93%	4.5E-01	-94%	6.7E+00	-13%	3.1E+00	-60%
MW-11	3.2E-01	0.0E+00	-100%	0.0E+00	-100%	0.0E+00	-100%	0.0E+00	-100%	0.0E+00	-100%	0.0E+00	-100%	0.0E+00	-100%	0.0E+00	-100%
EX-1	3.2E+03	3.2E+02	-90%	9.5E+00	-100%	1.9E+01	-99%	1.6E+02	-95%	1.1E+02	-97%	1.1E+02	-96%	1.8E+02	-94%	4.0E+02	-88%
MW-1A	0.0E+00	*0.0E+00*	*0%*	*0.0E+00*	*0%*	*0.0E+00*	*0%*	2.7E-02	0%	*2.7E-02*	0%	*2.7E-02*	0%	0.0E+00	0%	*0.0E+00*	0%
MW-1B	9.9E+02	4.6E+00	-100%	1.4E+01	-99%	5.3E+00	-99%	5.0E+00	-99%	3.6E+01	-96%	9.6E+00	-99%	1.8E+00	-100%	2.2E+01	-98%
MW-1C	3.8E+01	7.6E-01	-98%	1.5E+00	-96%	0.0E+00	-100%	0.0E+00	-100%	1.5E+00	-96%	0.0E+00	-100%	0.0E+00	-100%	0.0E+00	-100%
MW-20A	1.2E+00	8.4E-01	-27%	*8.4E-01*	*-27%*	8.7E-01	-25%	7.0E-01	-40%	*7.0E-01*	-40%	7.6E-01	-34%	6.6E-01	-42%	*6.6E-01*	-42%
MW-20B	1.3E+02	1.1E+01	-91%	*1.1E+01*	*-91%*	5.7E+00	-96%	5.3E+00	-96%	*5.3E+00*	-96%	2.4E+00	-98%	0.0E+00	-100%	*0.0E+00*	-100%
MW-8A	0.0E+00	*0.0E+00*	*0%*	*0.0E+00*	*0%*	*0.0E+00*	*0%*	*0.0E+00*	0%	*0.0E+00*	0%	*0.0E+00*	0%	*0.0E+00*	0%	*0.0E+00*	0%
MW-8B	0.0E+00	*0.0E+00*	*0%*	*0.0E+00*	*0%*	*0.0E+00*	*0%*	*0.0E+00*	0%	*0.0E+00*	0%	*0.0E+00*	0%	*0.0E+00*	0%	*0.0E+00*	0%
Total for Source Area Transect	4.4E+03	3.4E+02	-92%	3.8E+01	-99%	3.1E+01	-99%	1.8E+02	-96%	1.5E+02	-96%	1.3E+02	-97%	1.9E+02	-96%	4.2E+02	-90%

Monitoring Well	Baseline Mass Discharge [1]	Oct-19		Apr-20		Jul-20	
		Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline	Mass Discharge	RPD From Baseline
Units	µg/sec	µg/sec	%	µg/sec	%	µg/sec	%
MW-10	7.7E+00	1.2E+00	-85%	2.0E+00	-75%	9.6E-01	-88%
MW-11	3.2E-01	0.0E+00	-100%	0.0E+00	-100%	1.0E-02	-97%
EX-1	3.2E+03	3.1E+02	-90%	3.0E+02	-91%	0.0E+00	-100%
MW-1A	0.0E+00	*0.0E+00*	0%	0.0E+00	0%	0.0E+00	0%
MW-1B	9.9E+02	5.3E+01	-95%	3.3E+00	-100%	5.5E+01	-94%
MW-1C	3.8E+01	0.0E+00	-100%	1.2E+01	-69%	5.5E+01	46%
MW-20A	1.2E+00	9.5E-01	-18%	3.3E-01	-71%	4.0E-01	-65%
MW-20B	1.3E+02	1.8E+01	-86%	3.0E+00	-98%	0.0E+00	-100%
MW-8A	0.0E+00	*0.0E+00*	0%	0.0E+00	0%	0.0E+00	0%
MW-8B	0.0E+00	*0.0E+00*	0%	0.0E+00	0%	3.2E+01	0%
Total for Source Area Transect	4.4E+03	3.8E+02	-91%	3.2E+02	-93%	1.4E+02	-97%

Notes:

[1] Baseline mass discharge presented in Operations, Maintenance, and Monitoring Plan, Revision 1 (July, 2014).

Italics - Indicates total VOC concentration from previous sampling event used to calculate mass dicharge and RPD.

RPD - relative precent difference calculated as (Δ mass discharge/baseline mass discharge).

% - percent

µg/sec - micrograms per second

TABLE 9

SITE CHRONOLOGY

Cortese Landfill Site
Narrowsburg, New York

EVENT	DATE(S)
1994 Record of Decision	1994
Removal Action Administrative Order on Consent with Town of Tusten	1994
Removal Action (drainage swale construction, septage lagoon excavation, and removal of drums from southern trench	1995 - 1996
Remedial Design (RD)/Remedial Action Consent Decree	1996
Drum Removal	1996
Initiation of Triannual Groundwater Monitoring	1997
Part 360 Cap Installation	1997 - 1998
Supplemental Groundwater Investigation	2001
Phase I Groundwater Bench and Pilot Scale Testing	2002 - 2003
Supplemental Source-Area Investigation	2004
Phase II Groundwater Bench and Pilot Scale Testing	2005
Groundwater RD (30%)	2006
Soil-Vapor Intrusion Investigation	2007 - 2009
Source Characterization	2008 - 2009
Groundwater Contingency Remedy RD (100%)	2010
Source Area Feasibility Study	2010
2010 ROD/ROD Amendment	2010
RD Administrative Order on Consent	2011
AS/SVE Pilot Test	2011
Source Area Remedial Design (100%)	2011 - 2012
Amendment to RD/RA Consent Decree	30 August 2012
Remedial Action Work Plan	November 2012
Source Areas RA Pre-Construction Meeting	5 December 2012
End of First Season of Source Areas RA Construction	29 January 2013
Beginning of Second Season of Source Areas RA Construction	8 April 2013
OU3 and OU4 O&M Quality Assurance Project Plan	31 May 2013
Pre-Final Inspection of Source Areas RA Construction	11 September 2013
Submittal of Operation, Maintenance and Monitoring Plan	11 October 2013
Submittal of Interim Source Area Remedial Action Report	3 January 2014
Submittal of Revised OM&M Plan	2 July 2014
Initial Startup of SVE system	2 September 2014
Submittal of Addendum No. 1 to the OM&M Plan	3 October 2014
Initial Startup of AS system	18 November 2014
VGAC Fire Incident – Suspension of AS/SVE systems	9 April 2015

TABLE 9

SITE CHRONOLOGY

Cortese Landfill Site
Narrowsburg, New York

Geosyntec and GWTT submit proposals for repairs and safety modifications to the Source Area RA	21 July 2015
Replacement VGAC units delivered to Site	6 August 2015
Construction of RA repairs and safety upgrades	7 – 29 October 2015
Installation and testing of modifications to RA system controls	4 – 5 November 2015
Operation of AS/SVE systems restarted	5 November 2015
Submittal of Addendum No. 2 to the OM&M Plan	15 November 2015
Submittal of VGAC Fire Incident Report	May 2016
AS/SVE system operation shut down	18 October 2017
Post-shutdown monitoring	2018 - Present

Note:

The site chronology presented above through the 2010 ROD/ROD Amendment is based on the Site chronology presented in the third Five-Year Review Report, Cortese Landfill Superfund Site, Sullivan County, Town of Tusten, New York prepared by USEPA (2011). Site chronology from the RD Administrative Order on Consent through present day is based on the Annual O&M Reports.

APPENDIX A

Operation, Maintenance, and Monitoring Plan, Revision 1

APPENDIX B

Operation and Maintenance Forms – In-Situ Source Treatment

APPENDIX C

VGAC Fire Incident Report

APPENDIX D

Terra Nova Sampling Forms

APPENDIX E

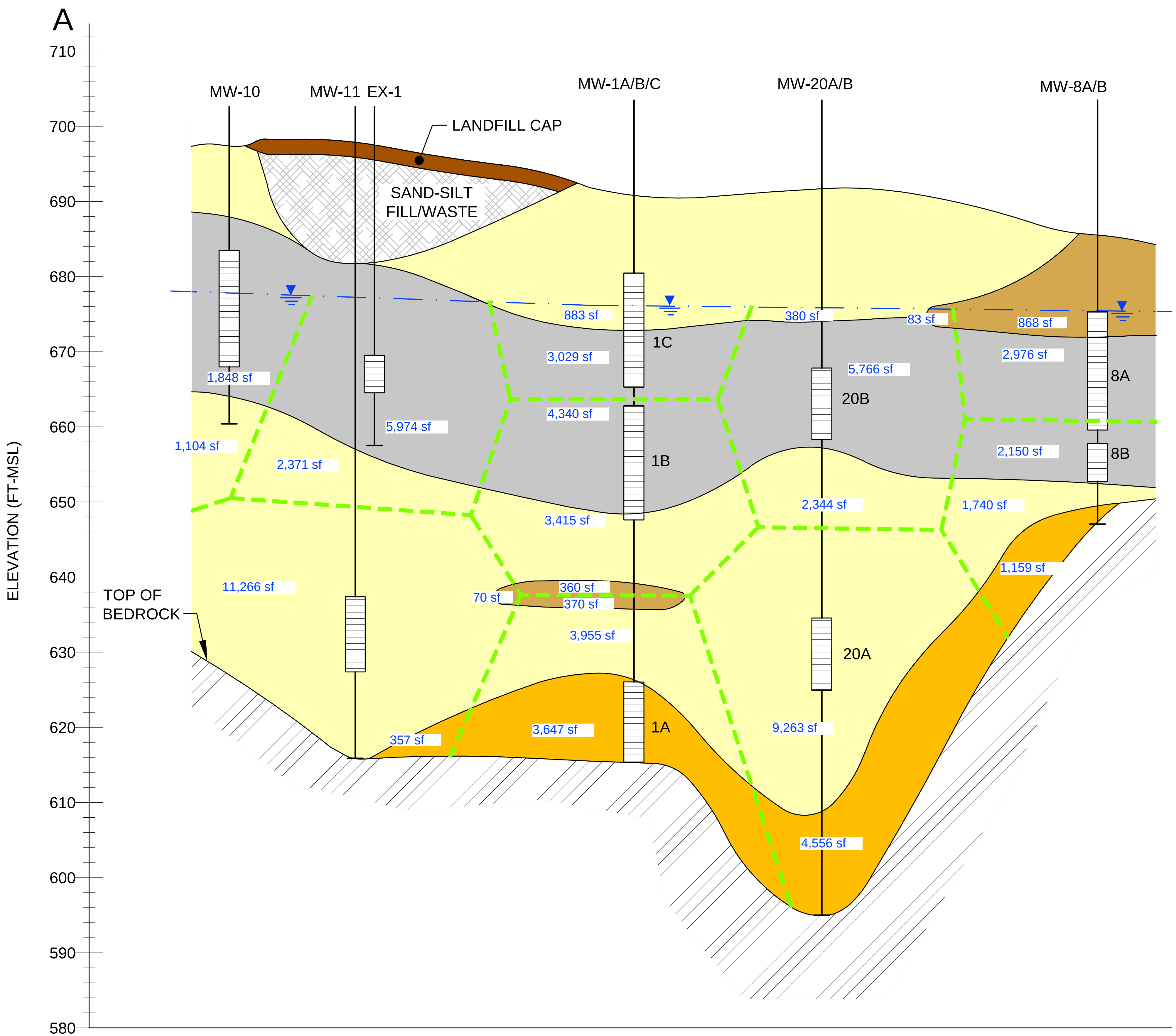
Groundwater Laboratory Analysis Reports

APPENDIX F

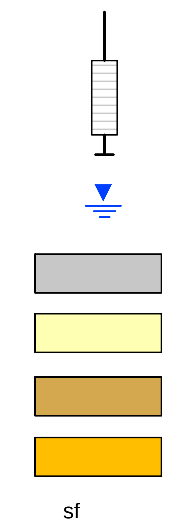
VGAC TO-15 Laboratory Analysis Reports

APPENDIX G

Mass Discharge Documentation



LEGEND



NOTE:

1. LOCATION OF CROSS SECTION SHOWN ON FIGURE 4-1.
2. WELL CLUSTERS ARE SEPARATE COMPLETIONS IN SEPARATE BOREHOLES BUT SHOWN ON ONE WELL SYMBOL FOR CLARITY.
3. GEOLOGIC AND EXISTING WELL CONSTRUCTION DATA FROM GOLDER AND GEOSYNTEC (VARIOUS).
4. CONDITIONS MAY VARY FROM THAT SHOWN BETWEEN EXISTING BORINGS.

150 75 0 150
HORIZONTAL SCALE: 1" = 150'

15 7.5 0 15
VERTICAL SCALE: 1" = 15'

CROSS SECTION A-A' OF SOURCE AREAS TRANSECT

CORTESE LANDFILL SITE
NARROWSBURG, NEW YORK

Geosyntec consultants
COLUMBIA, MARYLAND

DATE:	MARCH 2019
PROJECT NO.	MR0562L
DOCUMENT NO.	MD19022
FILE NO.	056216d1
FIGURE NO.	1

P:\cadd\0562-cortese\0562160\056216d1.dwg, 1, 2/5/2019 11:09:45 AM, bferrick

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - BASELINE

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	55	0.055	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	7.6E+00
	55	0.055	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	8.5E-02
MW-11	20	0.02	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	3.1E-01
	20	0.02	Clayey Silt	1.0E-06	70	6.5E+04	0.003	3.9E-06
	20	0.02	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	4.6E-03
EX-1	7,060	7.06	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	3.2E+03
	7,060	7.06	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	2.3E+01
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	2,983	2.983	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	9.7E+02
	2,983	2.983	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	1.4E+01
	2,983	2.983	Clayey Silt	1.0E-06	360	3.3E+05	0.003	3.0E-03
MW-1C	165	0.165	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	3.8E+01
	165	0.165	Silty Sand	5.0E-04	883	8.2E+05	0.003	2.0E-01
MW-20A	73	0.073	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	9.4E-01
	73	0.073	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	2.1E-01
MW-20B	291	0.291	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	1.3E+02
	291	0.291	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	1.1E+00
	291	0.291	Clayey Silt	1.0E-06	83	7.7E+04	0.003	6.7E-05
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)	
4.4E+03	µg/sec
3.8E+02	mg/day

Notes:

(1) Baseline value is an average concentration. Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - APRIL 2014

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	180	0.18	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	2.5E+01
	180	0.18	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	2.8E-01
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	5,300	5.3	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	2.4E+03
	5,300	5.3	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	1.8E+01
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	650	0.65	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	2.1E+02
	650	0.65	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	3.1E+00
	650	0.65	Clayey Silt	1.0E-06	360	3.3E+05	0.003	6.5E-04
MW-1C	130	0.13	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	3.0E+01
	130	0.13	Silty Sand	5.0E-04	883	8.2E+05	0.003	1.6E-01
MW-20A	58	0.058	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	7.5E-01
	58	0.058	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.7E-01
MW-20B	14	0.014	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	6.1E+00
	14	0.014	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	5.3E-02
	14	0.014	Clayey Silt	1.0E-06	83	7.7E+04	0.003	3.2E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)
2.7E+03 µg/sec
2.3E+02 mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - OCTOBER 2014

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	μg/l	μg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	μg/sec
MW-10	4	0.004	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	5.6E-01
	4	0.004	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	6.2E-03
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	940	0.94	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	4.2E+02
	940	0.94	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	3.1E+00
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	1,400	1.4	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	4.6E+02
	1,400	1.4	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	6.7E+00
	1,400	1.4	Clayey Silt	1.0E-06	360	3.3E+05	0.003	1.4E-03
MW-1C	20	0.02	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	4.6E+00
	20	0.02	Silty Sand	5.0E-04	883	8.2E+05	0.003	2.5E-02
MW-20A	68	0.068	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	8.8E-01
	68	0.068	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	2.0E-01
MW-20B	390	0.39	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	1.7E+02
	390	0.39	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	1.5E+00
	390	0.39	Clayey Silt	1.0E-06	83	7.7E+04	0.003	9.0E-05
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)	
1.1E+03	μg/sec
9.2E+01	mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

μg/l - micrograms per liter

μg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

μg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - APRIL 2015

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm³ *	-	cm/sec *	ft²	cm² *	cm/cm *	µg/sec
MW-10	89	0.089	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	1.2E+01
	89	0.089	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	1.4E-01
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	3,200	3.2	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	1.4E+03
	3,200	3.2	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	1.1E+01
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	110	0.11	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	3.6E+01
	110	0.11	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	5.2E-01
	110	0.11	Clayey Silt	1.0E-06	360	3.3E+05	0.003	1.1E-04
MW-1C	23	0.023	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	5.2E+00
	23	0.023	Silty Sand	5.0E-04	883	8.2E+05	0.003	2.8E-02
MW-20A	59	0.059	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	7.6E-01
	59	0.059	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.7E-01
MW-20B	18	0.018	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	7.8E+00
	18	0.018	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	6.8E-02
	18	0.018	Clayey Silt	1.0E-06	83	7.7E+04	0.003	4.2E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)
1.5E+03 µg/sec
1.3E+02 mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm³ - micrograms per cubic centimeter

cm/sec - centimeters per second

ft² - square feet

cm² - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - JULY 2015

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	2.1	0.0021	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	2.9E-01
	2.1	0.0021	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	3.2E-03
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	210	0.21	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	9.4E+01
	210	0.21	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	6.9E-01
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	140	0.14	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	4.6E+01
	140	0.14	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	6.7E-01
	140	0.14	Clayey Silt	1.0E-06	360	3.3E+05	0.003	1.4E-04
MW-1C	5.1	0.0051	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	1.2E+00
	5.1	0.0051	Silty Sand	5.0E-04	883	8.2E+05	0.003	6.3E-03
MW-20A	59	0.059	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	7.6E-01
	59	0.059	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.7E-01
MW-20B	18	0.018	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	7.8E+00
	18	0.018	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	6.8E-02
	18	0.018	Clayey Silt	1.0E-06	83	7.7E+04	0.003	4.2E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)
1.5E+02 µg/sec
1.3E+01 mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - OCTOBER 2015

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	1.8	0.0018	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	2.5E-01
	1.8	0.0018	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	2.8E-03
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	120	0.12	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	5.4E+01
	120	0.12	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	4.0E-01
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	78	0.078	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	2.5E+01
	78	0.078	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	3.7E-01
	78	0.078	Clayey Silt	1.0E-06	360	3.3E+05	0.003	7.8E-05
MW-1C	4	0.004	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	9.1E-01
	4	0.004	Silty Sand	5.0E-04	883	8.2E+05	0.003	4.9E-03
MW-20A	55	0.055	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	7.1E-01
	55	0.055	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.6E-01
MW-20B	40	0.04	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	1.7E+01
	40	0.04	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	1.5E-01
	40	0.04	Clayey Silt	1.0E-06	83	7.7E+04	0.003	9.3E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)
1.0E+02 µg/sec
8.6E+00 mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - MAY 2016

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) [1]		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) [2]		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm³ *	-	cm/sec *	ft²	cm² *	cm/cm *	µg/sec
MW-10	3.5	0.0035	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	4.9E-01
	3.5	0.0035	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	5.4E-03
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	3,000	3	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	1.3E+03
	3,000	3	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	9.9E+00
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	99	0.099	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	3.2E+01
	99	0.099	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	4.7E-01
	99	0.099	Clayey Silt	1.0E-06	360	3.3E+05	0.003	9.9E-05
MW-1C	0.86	0.00086	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	2.0E-01
	0.86	0.00086	Silty Sand	5.0E-04	883	8.2E+05	0.003	1.1E-03
MW-20A	55	0.055	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	7.1E-01
	55	0.055	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.6E-01
MW-20B	5	0.005	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	2.2E+00
	5	0.005	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	1.9E-02
	5	0.005	Clayey Silt	1.0E-06	83	7.7E+04	0.003	1.2E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)	
1.4E+03	µg/sec
1.2E+02	mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm³ - micrograms per cubic centimeter

cm/sec - centimeters per second

ft² - square feet

cm² - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - JULY 2016

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm³ *	-	cm/sec *	ft²	cm² *	cm/cm *	µg/sec
MW-10	5.2	0.0052	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	7.2E-01
	5.2	0.0052	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	8.0E-03
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	200	0.2	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	9.0E+01
	200	0.2	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	6.6E-01
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	68	0.068	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	2.2E+01
	68	0.068	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	3.2E-01
	68	0.068	Clayey Silt	1.0E-06	360	3.3E+05	0.003	6.8E-05
MW-1C	2.1	0.0021	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	4.8E-01
	2.1	0.0021	Silty Sand	5.0E-04	883	8.2E+05	0.003	2.6E-03
MW-20A	55	0.055	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	7.1E-01
	55	0.055	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.6E-01
MW-20B	5	0.005	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	2.2E+00
	5	0.005	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	1.9E-02
	5	0.005	Clayey Silt	1.0E-06	83	7.7E+04	0.003	1.2E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)
1.2E+02 µg/sec
1.0E+01 mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm³ - micrograms per cubic centimeter

cm/sec - centimeters per second

ft² - square feet

cm² - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - OCTOBER 2016

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	0.82	0.00082	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	1.1E-01
	0.82	0.00082	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	1.3E-03
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	67	0.067	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	3.0E+01
	67	0.067	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	2.2E-01
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	26	0.026	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	8.5E+00
	26	0.026	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	1.2E-01
	26	0.026	Clayey Silt	1.0E-06	360	3.3E+05	0.003	2.6E-05
MW-1C	7.5	0.0075	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	1.7E+00
	7.5	0.0075	Silty Sand	5.0E-04	883	8.2E+05	0.003	9.2E-03
MW-20A	58	0.058	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	7.5E-01
	58	0.058	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.7E-01
MW-20B	32	0.032	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	1.4E+01
	32	0.032	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	1.2E-01
	32	0.032	Clayey Silt	1.0E-06	83	7.7E+04	0.003	7.4E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)
5.6E+01 µg/sec
4.8E+00 mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - APRIL 2017

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	23	0.023	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	3.2E+00
	23	0.023	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	3.5E-02
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	700	0.7	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	3.1E+02
	700	0.7	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	2.3E+00
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	14	0.014	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	4.6E+00
	14	0.014	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	6.7E-02
	14	0.014	Clayey Silt	1.0E-06	360	3.3E+05	0.003	1.4E-05
MW-1C	3.3	0.0033	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	7.5E-01
	3.3	0.0033	Silty Sand	5.0E-04	883	8.2E+05	0.003	4.1E-03
MW-20A	53	0.053	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	6.8E-01
	53	0.053	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.5E-01
MW-20B	25	0.025	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	1.1E+01
	25	0.025	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	9.5E-02
	25	0.025	Clayey Silt	1.0E-06	83	7.7E+04	0.003	5.8E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)	
3.4E+02	µg/sec
2.9E+01	mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - JULY 2017

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) [1]		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) [2]		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	7.3	0.0073	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	1.0E+00
	7.3	0.0073	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	1.1E-02
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	21	0.021	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	9.4E+00
	21	0.021	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	6.9E-02
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	42	0.042	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	1.4E+01
	42	0.042	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	2.0E-01
	42	0.042	Clayey Silt	1.0E-06	360	3.3E+05	0.003	4.2E-05
MW-1C	6.4	0.0064	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	1.5E+00
	6.4	0.0064	Silty Sand	5.0E-04	883	8.2E+05	0.003	7.9E-03
MW-20A	53	0.053	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	6.8E-01
	53	0.053	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.5E-01
MW-20B	25	0.025	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	1.1E+01
	25	0.025	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	9.5E-02
	25	0.025	Clayey Silt	1.0E-06	83	7.7E+04	0.003	5.8E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)
3.8E+01 µg/sec
3.3E+00 mg/day

Notes:

[1] Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

[2] square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - OCTOBER 2017

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	0.86	0.00086	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	1.2E-01
	0.86	0.00086	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	1.3E-03
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	42	0.042	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	1.9E+01
	42	0.042	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	1.4E-01
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	16	0.016	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	5.2E+00
	16	0.016	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	7.6E-02
	16	0.016	Clayey Silt	1.0E-06	360	3.3E+05	0.003	1.6E-05
MW-1C	0	0	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	883	8.2E+05	0.003	0.0E+00
MW-20A	55	0.055	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	7.1E-01
	55	0.055	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.6E-01
MW-20B	13	0.013	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	5.6E+00
	13	0.013	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	4.9E-02
	13	0.013	Clayey Silt	1.0E-06	83	7.7E+04	0.003	3.0E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)	
3.1E+01	µg/sec
2.7E+00	mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - MAY 2018

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	13	0.013	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	1.8E+00
	13	0.013	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	2.0E-02
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	360	0.36	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	1.6E+02
	360	0.36	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	1.2E+00
MW-1A	3.5	0.0035	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	1.9E-02
	3.5	0.0035	Clayey Silt	1.0E-06	370	3.4E+05	0.003	3.6E-06
	3.5	0.0035	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	8.2E-03
MW-1B	15	0.015	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	4.9E+00
	15	0.015	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	7.1E-02
	15	0.015	Clayey Silt	1.0E-06	360	3.3E+05	0.003	1.5E-05
MW-1C	0	0	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	883	8.2E+05	0.003	0.0E+00
MW-20A	44	0.044	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	5.7E-01
	44	0.044	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.3E-01
MW-20B	12	0.012	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	5.2E+00
	12	0.012	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	4.6E-02
	12	0.012	Clayey Silt	1.0E-06	83	7.7E+04	0.003	2.8E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)	
1.8E+02	µg/sec
1.5E+01	mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - JULY 2018

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	3.9	0.0039	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	5.4E-01
	3.9	0.0039	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	6.0E-03
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	240	0.24	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	1.1E+02
	240	0.24	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	7.9E-01
MW-1A	3.5	0.0035	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	1.9E-02
	3.5	0.0035	Clayey Silt	1.0E-06	370	3.4E+05	0.003	3.6E-06
	3.5	0.0035	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	8.2E-03
MW-1B	110	0.11	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	3.6E+01
	110	0.11	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	5.2E-01
	110	0.11	Clayey Silt	1.0E-06	360	3.3E+05	0.003	1.1E-04
MW-1C	6.6	0.0066	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	1.5E+00
	6.6	0.0066	Silty Sand	5.0E-04	883	8.2E+05	0.003	8.1E-03
MW-20A	44	0.044	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	5.7E-01
	44	0.044	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.3E-01
MW-20B	12	0.012	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	5.2E+00
	12	0.012	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	4.6E-02
	12	0.012	Clayey Silt	1.0E-06	83	7.7E+04	0.003	2.8E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)	
1.5E+02	µg/sec
1.3E+01	mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - OCTOBER 2018

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	3.2	0.0032	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	4.4E-01
	3.2	0.0032	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	4.9E-03
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	250	0.25	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	1.1E+02
	250	0.25	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	8.3E-01
MW-1A	3.5	0.0035	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	1.9E-02
	3.5	0.0035	Clayey Silt	1.0E-06	370	3.4E+05	0.003	3.6E-06
	3.5	0.0035	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	8.2E-03
MW-1B	29	0.029	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	9.5E+00
	29	0.029	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	1.4E-01
	29	0.029	Clayey Silt	1.0E-06	360	3.3E+05	0.003	2.9E-05
MW-1C	0	0	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	883	8.2E+05	0.003	0.0E+00
MW-20A	48	0.048	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	6.2E-01
	48	0.048	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.4E-01
MW-20B	5.5	0.0055	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	2.4E+00
	5.5	0.0055	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	2.1E-02
	5.5	0.0055	Clayey Silt	1.0E-06	83	7.7E+04	0.003	1.3E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)	
1.3E+02	µg/sec
1.1E+01	mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - APRIL 2019

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	48	0.048	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	6.7E+00
	48	0.048	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	7.4E-02
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	390	0.39	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	1.8E+02
	390	0.39	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	1.3E+00
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	6	0.0055	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	1.8E+00
	6	0.0055	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	2.6E-02
	6	0.0055	Clayey Silt	1.0E-06	360	3.3E+05	0.003	5.5E-06
MW-1C	0	0	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	883	8.2E+05	0.003	0.0E+00
MW-20A	42	0.042	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	5.4E-01
	42	0.042	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.2E-01
MW-20B	0	0	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	83	7.7E+04	0.003	0.0E+00
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)
1.9E+02 µg/sec
1.6E+01 mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - JULY 2019

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm³ *	-	cm/sec *	ft²	cm² *	cm/cm *	µg/sec
MW-10	22	0.022	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	3.1E+00
	22	0.022	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	3.4E-02
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	880	0.88	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	4.0E+02
	880	0.88	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	2.9E+00
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	67	0.067	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	2.2E+01
	67	0.067	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	3.2E-01
	67	0.067	Clayey Silt	1.0E-06	360	3.3E+05	0.003	6.7E-05
MW-1C	0	0	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	883	8.2E+05	0.003	0.0E+00
MW-20A	42	0.042	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	5.4E-01
	42	0.042	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.2E-01
MW-20B	0	0	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	83	7.7E+04	0.003	0.0E+00
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)
4.2E+02 µg/sec
3.7E+01 mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm³ - micrograms per cubic centimeter

cm/sec - centimeters per second

ft² - square feet

cm² - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - OCTOBER 2019

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	8.5	0.0085	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	1.2E+00
	8.5	0.0085	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	1.3E-02
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	680	0.68	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	3.1E+02
	680	0.68	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	2.2E+00
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	160	0.16	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	5.2E+01
	160	0.16	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	7.6E-01
	160	0.16	Clayey Silt	1.0E-06	360	3.3E+05	0.003	1.6E-04
MW-1C	0	0	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	883	8.2E+05	0.003	0.0E+00
MW-20A	60	0.06	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	7.7E-01
	60	0.06	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	1.8E-01
MW-20B	41	0.041	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	1.8E+01
	41	0.041	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	1.6E-01
	41	0.041	Clayey Silt	1.0E-06	83	7.7E+04	0.003	9.5E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)	
3.8E+02	µg/sec
3.3E+01	mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - APRIL 2020

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	14	0.014	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	1.9E+00
	14	0.014	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	2.2E-02
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	658	0.658	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	3.0E+02
	658	0.658	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	2.2E+00
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	10	0.01	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	3.3E+00
	10	0.01	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	4.8E-02
	10	0.01	Clayey Silt	1.0E-06	360	3.3E+05	0.003	1.0E-05
MW-1C	51	0.051	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	1.2E+01
	51	0.051	Silty Sand	5.0E-04	883	8.2E+05	0.003	6.3E-02
MW-20A	21	0.021	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	2.7E-01
	21	0.021	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	6.1E-02
MW-20B	6.8	0.0068	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	3.0E+00
	6.8	0.0068	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	2.6E-02
	6.8	0.0068	Clayey Silt	1.0E-06	83	7.7E+04	0.003	1.6E-06
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)
3.2E+02 µg/sec
2.7E+01 mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day

APPENDIX G
OU4 TRANSECT TOTAL VOC MASS DISCHARGE - JULY 2020

Cortese Landfill
Narrowsburg, New York

Monitoring Well/Polygon	Total VOC Concentration (C_j) (1)		Geologic Material	Hydraulic Conductivity (K_j)	Area (A_j) (2)		Hydraulic Gradient (i_j)	Mass Discharge (M_{dj})
Units	µg/l	µg/cm^3 *	-	cm/sec *	ft^2	cm^2 *	cm/cm *	µg/sec
MW-10	6.8	0.0068	Sand and Gravel	2.7E-02	1,848	1.7E+06	0.003	9.5E-01
	6.8	0.0068	Silty Sand	5.0E-04	1,104	1.0E+06	0.003	1.0E-02
MW-11	0	0	Silty Sand	5.0E-04	11,266	1.0E+07	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	70	6.5E+04	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	357	3.3E+05	0.003	0.0E+00
EX-1	122	0.122	Sand and Gravel	2.7E-02	5,974	5.5E+06	0.003	5.5E+01
	122	0.122	Silty Sand	5.0E-04	2,371	2.2E+06	0.003	4.0E-01
MW-1A	0	0	Silty Sand	5.0E-04	3,955	3.7E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	370	3.4E+05	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	3,647	3.4E+06	0.003	0.0E+00
MW-1B	97	0.097	Sand and Gravel	2.7E-02	4,340	4.0E+06	0.003	3.2E+01
	97	0.097	Silty Sand	5.0E-04	3,415	3.2E+06	0.003	4.6E-01
	97	0.097	Clayey Silt	1.0E-06	360	3.3E+05	0.003	9.7E-05
MW-1C	218	0.218	Sand and Gravel	2.7E-02	3,029	2.8E+06	0.003	5.0E+01
	218	0.218	Silty Sand	5.0E-04	883	8.2E+05	0.003	2.7E-01
MW-20A	0	0	Silty Sand	5.0E-04	9,263	8.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	4,556	4.2E+06	0.003	0.0E+00
MW-20B	0	0	Sand and Gravel	2.7E-02	5,766	5.4E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	2,724	2.5E+06	0.003	0.0E+00
	0	0	Clayey Silt	1.0E-06	83	7.7E+04	0.003	0.0E+00
MW-8A	0	0	Clayey Silt	1.0E-06	868	8.1E+05	0.003	0.0E+00
	0	0	Sand and Gravel	2.7E-02	2,976	2.8E+06	0.003	0.0E+00
MW-8B	0	0	Sand and Gravel	2.7E-02	2,150	2.0E+06	0.003	0.0E+00
	0	0	Silty Sand	5.0E-04	1,740	1.6E+06	0.003	0.0E+00
	0	0	Sand w/ some Gravel	2.3E-04	1,159	1.1E+06	0.003	0.0E+00

Total Mass Dicharge (M_d)
1.4E+02 µg/sec
1.2E+01 mg/day

Notes:

(1) Micrograms per liter converted to micrograms per cubic centimeter by dividing by 1,000

(2) square feet converted to square centimeters by multiplying by 929

* The product of these columns in each row is M_{dj}

µg/l - micrograms per liter

µg/cm^3 - micrograms per cubic centimeter

cm/sec - centimeters per second

ft^2 - square feet

cm^2 - square centimeters

cm/cm - centimeters per centimeter

µg/sec - micrograms per second

mg/day - milligrams per day