PERIODIC REVIEW REPORT
OCTOBER 2019 – OCTOBER 2020

CROSS-COUNTY SANITARY - KESSMAN LANDFILL SITE
TOWN OF PATTERSON, NEW YORK 12563

NYSDEC Site No. 340011
Work Assignment No. D009812-07

Prepared for:

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

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TRC Project No. 387570

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LIST OF ACRONYMS AND ABBREVIATIONS

AMSL	above mean sea level
COCs	Contaminants of Concern
DER	Division of Environmental Remediation
DTW	Depth to Water
DUSR	Data Usability Summary Report
EC	Engineering Control
EDD	Electronic Data Deliverable
EE	Environmental Easement
FS	Feasibility Study
ft. bgs	feet below ground surface
IC	Institutional Control
ND	Not detected
ng/L	nanograms per liter
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCBs	Polychlorinated Biphenyls
PFAS	Per- and Polyfluoroalkyl Substances
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctanesulfonic acid
PRR	Periodic Review Report
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
RA	Remedial Action
RI	Remedial Investigation
ROD	Record of Decision
SCG	Standard, Criteria, and Guidance
SCO	Soil Cleanup Objective
SIM	Selective Ion Monitoring
SMP	Site Management Plan
SVOCs	Semi-volatile Organic Compounds
TAL	Target Analyte List
TCL	Target Compound List
TOC	Total Organic Carbon
TOGS	Technical and Operational Guidance Series
TSS	Total Suspended Solids
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds
WA	Work Assignment
µg/L	micrograms per liter

Executive Summary

Category	Summary/Results
Engineering Controls	• Cover System • Leachate Collection System (Inactive) • Fencing/Access Control • Monitoring Wells
Institutional Controls	• Environmental Easement (EE) • Groundwater Use Restriction • Land-Use Restriction • Site Management Plan (SMP) with annual monitoring and reporting requirements
Site Classification	Class 4 Inactive Hazardous Waste Disposal Site
Site Management Plan	SMP Rev. No. 0 – June 2011 SMP Rev. No. 1 – January 2014
Certification/Reporting Period	This PRR has been prepared to cover the period of time that TRC has been involved in the Site (October 2019 through October 2020).
Inspection	**Frequency**
Site Inspection	Annual, as requested by NYSDEC
Monitoring	**Frequency**
Groundwater	Annual, as requested by NYSDEC.
Sediment, Surface Water, and Prior PRR Recommendations	An investigation into residual sediment and surface water contamination in the adjacent wetland area has recently been completed and a Remedial System Optimization (RSO) Report has been prepared outlining the preferred remedy. The remedy is currently in the design and permitting stage. Since this residual contamination is being adequately addressed under the RSO program, this PRR will be limited to evaluation of the cover system, fencing/access controls, and groundwater conditions.
Site Management Activities	Two groundwater sampling events were conducted (in addition to the ongoing sediment and surface water investigation) in support of this PRR: • September 27-28, 2018: Groundwater samples were collected from 8 monitoring wells in the monitoring well network. Monitoring wells were gauged and inspected for the presence of non-aqueous phase liquids. Samples were submitted for laboratory analysis of TCL VOCs and SVOCs, PCBs, 1,4-Dioxane, and PFAS. • June 15-17, 2020: Detailed site inspection was conducted and groundwater samples were collected from 8 monitoring wells in the monitoring well network. Monitoring wells were gauged and inspected for the presence of non-aqueous phase liquids. Samples were submitted for laboratory analysis of TCL VOCs and SVOCs, PCBs, PFAS, TAL Metals, and General Chemistry Parameters (TOC, Cyanide, and TSS). • October 2016 – Ongoing: Investigations related to sediment contamination adjacent to the northeast corner of the landfill are ongoing. Activities, findings, recommendations, conclusions, and remedial design related to this issue are reported under separate cover.
Significant Findings or Concerns	<u>September 27-28, 2018</u> • VOCs, SVOCs, and PCBs were not detected above the respective SGVs. • 1,4-Dioxane (no SGV) was detected at concentrations ranging from 0.22 micrograms per liter (ug/L) to 1 ug/L in five of the eight samples collected (CCSK-MW-03A, CCSK-MW-05A/B, CCSK-MW-20A/B). • PFAS were detected above the Screening Levels (SLs) in "Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs", January 2020, in four of the eight groundwater samples collected. Perfluorooctanesulfonic

	acid (PFOS) was detected above the SL of 10 ng/L in samples from CCSK-MW-05A/B (87 ng/L and 100 ng/L) and CCSK-MW-20A/B (35 ng/L and 36 ng/L). Concentrations of perfluorooctanoic acid (PFOA) was also detected above the SL of 10 ng/L in samples from CCSK-MW-05A/B (36 ng/L and 64 ng/L) and CCSK-MW-20A/B (28 ng/L and 26 ng/L). • There was no evidence of non-aqueous phase liquid (NAPL) in any of the site monitoring wells. <u>June 15-17, 2020</u> • SVOCs and PCBs were not detected above the respective SGVs. • 1,2-Dichloroethane was detected slightly above the SGV of 0.6 ug/L in two of the eight samples collected (CCSK-MW-20A/B: 1.2 ug/L and 1.1 ug/L, respectively). • Benzene was detected slightly above the SGV of 1 ug/L in one of the eight samples collected (CCSK-MW-05A: 1.7 ug/L). • Chlorobenzene was detected slightly above the SGV of 5 ug/L in one of the eight samples collected (CCSK-MW-05A: 6.6 ug/L). • 1,4-Dioxane (no SGV) was detected at concentrations ranging from 0.14 ug/L to 0.88 ug/L in six of the eight samples collected (CCSK-MW-03A/B, CCSK-MW-05A/B, CCSK-MW-20A/B). • PFAS were detected above the NYSDEC SLs in five of the eight groundwater samples collected. PFOS was detected above the SL of 10 ng/L in samples from CCSK-MW-05A/B (96 ng/L and 120 ng/L) and CCSK-MW-20A/B (45 ng/L and 54 ng/L). PFOA was also detected above the SL of 10 ng/L in samples from CCSK-MW-05A/B (46 ng/L and 54 ng/L) and CCSK-MW-20A/B (27 ng/L and 24 ng/L). The total PFAS concentration for the sample from CCSK-MW-01A was 577 ng/L, above the SL of 500 ng/L, largely due to the concentration of 6:2 Perfluorooctane Sulfonate which was detected at 570 ng/L (SL of 100 ng/L). • Several metals were detected above the respective NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 – "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" for Class GA groundwater. Iron was detected above the SGV (300 ug/L) in samples from six of the eight monitoring wells (CCSK-MW-03A/B, CCSK-MW-05A/B, CCSK-MW-20A/B). Concentrations of iron ranged from 2,830 ug/L to 12,000 ug/L in these samples. Magnesium was detected at above the SGV (35,000 ug/L) in seven of the eight monitoring wells (CCSK-MW-01A, CCSK-MW-03A/B, CCSK-MW-05A/B, CCSK-MW-20A/B). Concentrations of magnesium ranged from 62,300 ug/L to 291,000 ug/L in these samples. Manganese (SGV of 300 ug/L) was detected in CCSK-MW-05B at a concentration of 674 ug/L. Sodium was detected above the SGV (20,000 ug/L) in five of the eight samples collected (CCSK-MW-01A/B, CCSK-MW-03A/B, CCSK-MW-05AB). Concentrations of sodium ranged from 43,900 ug/L to 1,950,000 ug/L in these samples. Thallium was detected above the SGV (0.5 ug/L) in two of the eight samples collected (CCSK-MW-01A, CCSK-MW-03A). Concentrations or thallium ranged from 8.4 ug/L to 15.9 ug/L in these samples. • Total Organic Carbon (TOC) was measured in all eight wells (no SGV) and concentrations ranged from 800 to 6,300 ug/L. Total Suspended Solids (TSS) was also measured in all eight wells (no SGV) and ranged from 1,700 to 83,700 ug/L. • There was no evidence of NAPL detected in any of the groundwater monitoring wells.
Category	**Summary/Results**
Recommendations	1. The SMP should undergo a full review and revision once the RSO sediment remediation project is completed. The revised SMP should include continued groundwater, sediment, and surface water sample collection and analysis, in addition to the site wide inspections currently included in the program.

	2. Annual site inspection (concurrent with groundwater sampling events, when possible), including water level measurements and additional inspections, as necessary, following severe weather events should continue through the sediment remediation project. 3. Contaminant trends should be evaluated once sufficient data is available. 4. SVOCs and PCBs should be considered for removal from the analytical list following another complete round of sampling after the sediment removal project is completed.
Cost Evaluation	The total cost of site management activities this reporting period was approximately $62,190.00. This cost includes engineering (e.g., labor and expense) and subcontractor costs (e.g., laboratory, equipment, rentals, etc.) for collection and analysis of two rounds of groundwater samples, site wide inspection, and preparation of this PRR. It should be noted that this total does not include any direct costs incurred by the NYSDEC.

1.0 Introduction

This PRR has been prepared for the Cross-County Sanitary - Kessman Landfill Site (referred to as "the Site") and covers the period, October 2019 through October 2020. This PRR was prepared in accordance with NYSDEC WA No. D009812-07, Title 6 of New York Code, Rules, and Regulations (6 NYCRR) Part 375, and NYSDEC DER-10, Technical Guidance for Site Investigation and Remediation. A Site summary and applicable remedial program information are presented below.

Site Information			
Site Name:	Cross-County Sanitary - Kessman Landfill Site	**NYSDEC Site No:**	340011
Site Location:	286 Cornwall Hill Road, Patterson, Putnam County, New York	**Remedial Program:**	State Superfund Program
Site Type:	Landfill	**Classification:**	04
Parcel Identification(s):	13-3-14, 16, & 17, Town of Patterson Tax Mapping	**Parcel Acreage / EE Acreage:**	10
Selected Remedy:	Excavation, Cover System, Long-term Monitoring with Routine Operation and Maintenance	**Site COCs:**	• VOCs • SVOCs • PFAS • PCBs in Sediment (refer to Remedial System Optimization)
Current Remedial Program Phase:	Site Management of the landfill capping system. Optimization of remedy related to the impacted sediment and surface water is also underway in the adjacent wetland area.	**Institutional Controls:**	• ROD (1994) • SMP (Rev. 1 2014) • Environmental Easements (2014)
Post-Remediation Monitoring and Sampling Frequency:	Groundwater monitoring and site inspection as determined by NYSDEC	**Engineering Controls:**	Cover System, Restricted Site Access (e.g., fenced in area), and Passive Landfill Gas Vents
Monitoring Locations:	Overburden monitoring wells (8)	**Required Reporting:**	Annual, per the SMP

1.1 Site Location, Ownership, and Description

The Site is located on the east side of Cornwall Hill Road, approximately 1 mile south of the Village of Patterson, Putnam County, New York. Currently, the Site, which occupies two parcels (Tax Map Nos. 13-3-16 and 13-3-17) and a portion of a third parcel (Tax Map No. 13-3-14), is zoned as R4 – Residential according to the Putnam County eParcel GIS viewer. Lot 14 is presently owned by the Kessman Brothers, Jeffrey and Marvin, whereas Lots 16 and 17 are currently owned by the County of Putnam. The Site is an approximately ten-acre area bounded by undeveloped land to the north, a commercial property to the south, residential properties and Cornwall Hill Road to the west, and the Metropolitan Transportation Authority (MTA) Metro North Railroad and the Great Swamp of Patterson, a protected wetland (NYSDEC Classification DP-22) to the east. There are several single-family residences located northwest of the Site, along Cornwall Hill Road. The Patterson Municipal Landfill and the Patterson Town Garage are located southwest of the Site, and a maintenance and repair facility for heavy excavation equipment is adjacent to the southern site boundary. The Site consists of approximately 7.2 acres of landfill and 2.8 acres of low-lying wetland area (residual contamination in this wetland area is being addressed under a Remedial System Optimization (RSO) and, aside from such reference, is not discussed in this PRR).

The surface elevation of the landfill is approximately 440 feet above mean sea level (AMSL), 10 to 12 feet above the surrounding ground and the original elevation of the Great Swamp. The landfill and the adjacent wetland area are relatively flat, in contrast to hills and ridges west and south of the Site, which rise to more than 550 feet AMSL. Site location and layout maps are provided on Figure 1 and Figure 2, respectively.

1.2 Investigation/Remedial History

The Site was operated as a municipal landfill by the Town of Patterson on the Kessman family property from approximately 1963 to 1972. In 1972, the landfill was sold to Cross-County Sanitation, Inc. (CCS), a private carting company which operated at the Site until 1974. Historic information provided by NYSDEC indicated unknown types and quantities of industrial and hazardous wastes were disposed at the Site between 1972 and 1974. NYSDEC forced the closure of the landfill and the property was repossessed by the Kessman family. Clean soil obtained from nearby locations was used to cover the refuse after landfill operations ceased. The Site was inactive for nearly 10 years after placement of the cover.

In 1983, a Phase I Environmental Site Assessment (Phase I ESA) was performed by Camp, Dresser, and McKee, Inc. Based on the Phase I ESA findings, a Phase II Environmental Site Investigation (Phase II ESI) was performed by Wehran Engineering, P.C. in 1985. The Phase II ESI included a magnetometer survey; collection and analysis of surface water, groundwater, sediment, and leachate samples; excavation of test pits and collection of soil samples; and collection of a groundwater sample from a nearby domestic water well and installed wells. The analytical results from the samples collected during the Phase II ESI recorded several detections of VOCs and SVOCs. Based on the results of the Phase II ESI, the Site was reclassified to Class 2. By May 1991, the NYSDEC, under the State Superfund Program, initiated a Remedial Investigation/Feasibility Study (RI/FS) to address the contamination.

From December 1991 to May 1992, ABB Environmental Services (ABB) conducted the RI for the Site. During the RI, site-specific data was obtained from: aerial photographs and historical records; ecological inventories; geophysical surveys; samples of cover soil, landfill refuse, and overburden soil collected from beneath the fill areas via test pits and soil borings; groundwater samples collected from existing and newly installed monitoring wells and nearby private potable wells; shallow groundwater via leachate seeps, wetland surface water and sediment; hydrogeologic testing; and, photogrammetric survey maps. The objective of the RI was to measure the nature and extent of contamination in soil, sediment, surface water, and groundwater at the site and evaluate the risk for migration from the site to sensitive receptors. Various samples came back with traces of VOCs, SVOCs, pesticides, PCBs, and inorganics.

The RI concluded that site-related organic compounds and inorganic constituents were detected in surface soil, refuse, marsh deposits beneath the refuse, glacial overburden underlying the marsh deposits, and bedrock. The site-related organic compounds (PCBs and VOCs) originated from four drum nests identified along the eastern boundary of the landfill adjacent to the wetland. In addition, the RI identified the landfill refuse as the source of the SVOCs, pesticides, and inorganic constituents. Combinations of these constituents were detected in the leachate, groundwater, sediment and surface water. Based on these findings, the RI was completed in 1994 and concluded that site-related compounds were migrating off-site. ABB used the data collected during the RI to prepare a Feasibility Study later in 1994 to evaluate potential remedial strategies for the site.

While the RI/FS was underway, NYSDEC undertook an Interim Remedial Measure (IRM) beginning in the fall of 1993. More than 115 drums were removed and surrounding contaminated soil was excavated from the northern

toe of the landfill (adjacent to the wetland). Drum removal continued through June 1994. In total, 157 drums and 100 cubic yards of contaminated soil were reportedly removed/excavated. In December 1994 the disposal of all staged drums and soil were completed

Subsequent to the IRM, RI/FS, and publication of the Record of Decision (ROD) in November 1994, remediation activities at the site were initiated in August 1995 and completed in August 1996. The remediation consisted of: excavation of PCB-impacted sediment from the wetland immediately adjacent to the landfill; restoration of the remediated wetland area; and, capping the landfill in accordance with Title 6 of New York Codes, Rules, and Regulations (6 NYCRR) Part 360 and installing landfill gas ventilation and leachate collection systems. Once these remedial activities were completed, routine operation, maintenance, and monitoring activities were performed by O'Brien & Gere Engineers, Inc. (OBG) and Iyer Environmental Group, PLLC (IEG) from February 2002 through November 2007. Site monitoring and maintenance activities were conducted by various engineering firms through 2012. In October 2016, TRC Engineers, Inc. began work on the Site and in 2018 conducted the first of two groundwater monitoring events discussed in this PRR.

A detailed Site history, including the dates and descriptions of significant events, and a Custodial Record detailing known and available Site reports, are included in **Appendix A.**

1.3 Remaining Contamination

The remaining contamination consists of the landfilled contents, as well as any indications of contamination detected in the ongoing environmental monitoring program. Two groundwater monitoring events were conducted in support of this PRR: September 2018 and June 2020. Although the results of both events are provided in the analytical summary tables, only the most recent results (June 2020) are discussed in detail in Section 3.0. It should be noted that there was no physical/visual/olfactory evidence of contamination observed in any of the groundwater samples collected from the 2018 or 2020 field activities.

As discussed previously, residual contamination has been detected in the adjacent wetland area (sediment and surface water), which is being addressed under a RSO program. This contamination is believed to have been left in place following the 1995 and 1996 Remedial Action, and is not believed to be related to landfill cap failure or leakage/leaching. A remedy has been selected to address the residual contamination and the design is currently underway. For further details related to the RSO, refer to the RSO Report prepared under separate cover.

1.4 Regulatory Requirements/Cleanup Goals

Remedial Action Objectives (RAOs) are developed in order to set objectives for protecting public health and the environment. RAOs developed in the ROD stated that at a minimum, the remedy selected should eliminate or mitigate all significant threats to public health and the environment presented by the hazardous waste disposed at the Site, through the proper application of scientific and engineering principles.

The RAOs for the project, as presented in the ROD, are listed below. Several of the RAOs are applicable to sediment and surface water, and the RSO program being implemented in parallel with the SMP, is designed to ensure that these RAOs are achieved. The remaining RAOs (highlighted in bold text below) are being used to measure the success of the remedy relative to the landfill, leachate, and groundwater:

1. **Reduce, control, or eliminate the impact of the contamination present within the soils/waste on Site (generation of leachate within the fill mass) – this RAO has been addressed through consolidation and closure of the landfill (capping);**
2. Eliminate the threat to surface waters by eliminating any future contaminated surface run-off from the contaminated soils on site – this RAO is being addressed in the RSO Program;
3. Eliminate the potential for direct human or animal contact with the contaminated soils and sediments on site – this RAO is being addressed in the RSO Program;
4. **Mitigate the impacts of contaminated groundwater to the environment – this RAO has been addressed through landfill capping and mitigating leachate generation, and continued monitoring through implementation of SMP;**
5. **Prevent, to the extent possible, migration of contaminants in the landfill to groundwater – this RAO has been addressed through landfill capping, mitigating leachate generation and migration, as well as through implementation of the SMP; and**
6. **Provide for attainment of SCGs for groundwater quality at the limits of the area of concern (AOC) – this RAO is continuing to be addressed through SMP.**

With respect to those RAOs that are being addressed through implementation of the SMP and this PRR, the remedy appears to be: effectively reducing the generation of leachate (RAO 1); mitigating impacts to groundwater (RAO 4); preventing migration of contaminants to groundwater (RAO 5); and providing for attainment of groundwater quality standards (RAO 6).

Evidence of these findings is presented in the following sections. Groundwater monitoring results for organics and inorganics are evaluated against the Class GA Groundwater Standards and Guidance Values (SGVs) contained in NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 – "Ambient Water Quality Standards and Groundwater Effluent Guidance Values". Analytical results for PFAS are evaluated against the Screening Levels (SLs) presented in NYSDEC "Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Program", January 2020.

2.0 Institutional and Engineering Controls Compliance

2.1 Institutional Controls

The Site is managed under the New York State Superfund Program. The Site's inclusion on the Registry of Inactive Hazardous Waste Disposal Sites, the ROD, Environmental Easements, land use restrictions, and the SMP act as the ICs for the Site.

The 2014 Environmental Easements specify the following for the Controlled Property:

- Requires compliance with the approved SMP;
- Limits the property use and development to commercial or industrial activities;
- Requires that all Engineering Controls must be operated, maintained, and inspected as specified in the SMP;
- Restricts the use of groundwater as a source of potable or process water without necessary water quality treatment as determined by the NYSDOH;
- Requires that groundwater and other environmental or public health monitoring must be performed as defined in the SMP;
- Requires that data and information pertinent to the Site Management of the Controlled Property must be reported as defined in the SMP;
- Requires that all future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;
- Requires that monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;
- Specifies that operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP; and,
- Requires that access to the Site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owners to assure compliance with the restrictions identified in the Environmental Easements.

2.2 Engineering Controls

The Site ECs include a locked entrance gate, gravel access road, engineered landfill cap with landfill gas ventilation and vegetative surface cover, a leachate collection system (inactive), access limitations (perimeter fencing) where needed, and a network of groundwater monitoring wells for periodic groundwater monitoring.

3.0 Monitoring and Sampling Plan Compliance

The January 2014 SMP was prepared to manage contamination remaining on the Site and ensure that the remedy remains effective by restricting site use and future site development. Based on the January 2014 SMP and NYSDEC requests, the following summary of the Site monitoring and sampling activities has been prepared:

Summary of SMP Site Monitoring and Sampling Plan			
Site Management Activity	**Frequency***	**Location**	**Laboratory Analysis**
Site Inspection	With each groundwater sampling event at the discretion of NYSDEC	Site property, perimeter areas, site access/entrance	Not Applicable
Groundwater Monitoring	Annual	• MW-01A • MW-01B • MW-03A • MW-03B • MW-05A • MW-05B • MW-20A • MW-20B	• TCL VOCs by USEPA Method 8260 – Low Level • TCL SVOCs by USEPA Method 8270 • TCL PCBs by USEPA Method 8082 • TAL Metals by USEPA Methods 6010 and 7470 • Cyanide by USEPA Method 9010 • TSS by USEPA Method 160.2 • TOC by USEPA Method 415.1 • 1,4-Dioxane by USEPA Method 8270 with Selected Ion Monitoring (SIM) • PFAS Analyte List by Modified USEPA Method 537
Landfill Gas Monitoring	Annual (Inspection and/or Sampling)	Landfill Gas Vents	Samples collected at the discretion of NYSDEC. No samples were ordered/collected in 2020
Surface Water Monitoring	Annual – Currently being managed under the RSO Program	Not Applicable	Surface Water is being addressed through the RSO Program and numerous samples have been collected under that program. Samples will be collected at the discretion of NYSDEC. No PRR-specific samples were collected in 2020
Sediment Monitoring	Annual – Currently being managed under the RSO Program	Wetland Area northeast of the capped landfill	Sediment is being addressed through the RSO Program and numerous samples have been collected under that program. Samples will be collected at the discretion of NYSDEC. No PRR-specific sediment samples were collected in 2020
Periodic Review Report Preparation	Annual, or at the discretion of NYSDEC	Not Applicable	Not Applicable

*: The frequency of events will be conducted as specified until otherwise approved by NYSDEC.

3.1 Site Inspection

In June 2020, TRC performed a Site visit to conduct groundwater monitoring and inspection activities in accordance with the January 2014 SMP. The site inspection included an evaluation of the current site use, condition of the engineered landfill cap, site access roads, vegetative cover, monitoring wells, landfill gas vents, and partial perimeter fence and security gate.

A summary of the Site visit is as follows:

Summary of Site Inspection June 2020		
Site Management Activity	**Summary of Results**	**Maintenance/Corrective Measure**
Landfill Cap Inspection	The landfill inspection included walking the perimeter of the landfill, random areas of the landfill slope and the top of the landfill. The landfill cap was dry and the soil stable, meaning no visible erosion, cracks, settlement or seeps were observed. The landfill cap is intact and the vegetation appeared in good condition. No animals or animal burrows were observed at the time of the inspection.	No routine maintenance or corrective measures needed at this time.
Vegetation/Cover System	Vegetation on the cap is well-established and appears to be healthy. No woody-stemmed plants or other vegetation that could puncture the landfill cap were observed. The cap appeared to have been mowed recently.	No routine maintenance or corrective measures needed at this time.
Landfill Gas Venting System	The landfill gas venting system (above ground portion) was inspected for signs of damage during the site inspection. The inspection was limited to visible portions of the system and the ground surface above the gas collection system to check for evidence of settlement that could affect the gas collection piping. No gas odors or problems related to the gas venting system were observed during the site inspection.	No routine maintenance or corrective measures needed at this time.
Site Access Roads and Gates	Site access road leading from the front gate to the landfill cap was wet and muddy, with ruts beginning to form after vehicles were driven on to the Site. While this did not cause any issues accessing the site at the time, some work on the road may be necessary in the future to ensure site access is not impeded. No signs of erosion were observed along the road in this area. The exterior fence is in good condition and the gate was secure upon arrival to the Site. The interior fence is also in good condition, except for one broken section on the north end of the Site (see Photolog). The condition of the exterior fence will continue to be monitored and repairs will be made to the fence as needed.	Since the wetland sediment project is being planned for 2021, this roadway is expected to be enhanced as a result. No routine maintenance or corrective measures are needed at this time. The interior fence gate at the landfill toe of slope will require a new lock for security. The gate will be locked at the next site visit.

Summary of Site Inspection June 2020		
Site Management Activity	**Summary of Results**	**Maintenance/Corrective Measure**
Monitoring Well Network	In general, groundwater monitoring wells at the Site were in good condition, with locks and caps in place. Each monitoring well inspection was documented on a well inspection form (Appendix B). The only exception was MW-20A/B, which had no well plug and a very short well casing riser. Since these two wells will be removed and replaced during the RSO, no corrective action is recommended at this time.	The obstruction of bushes, seen at various wells, should be trimmed before next inspection. Water was above top of the casing of MW-20A/B and no well plug was present. Riser should be added to reach top of casing and have plugs installed.
Groundwater Gauging and Sampling	All eight wells were gauged. Groundwater samples were collected from each well utilizing standard low-flow sampling techniques.	No routine maintenance or corrective measures needed at this time.

Field activity reports and photographic log from the June 2020 inspection activities can be found in **Appendix B**.

3.2 Groundwater Monitoring Summary

3.2.1 Groundwater Gauging

Groundwater gauging and sampling activities discussed in this PRR were conducted during two events: September 2018 and June 2020. Data from the 2018 groundwater monitoring event is included in the analytical summary tables (**Tables 1** through **6**). However, detailed evaluations of the results from the June 2020 event only, are discussed in detail in the sections below.

All wells were gauged for depth to groundwater to evaluate potential groundwater flow direction. The groundwater gauging and elevation measurements can be found in the groundwater sampling logs, as well as, in the monitoring well construction summary included at the end of Appendix A. A summary of the Site hydrogeologic information is presented below:

Site Hydrogeologic Summary June 2020			
Number of Wells Gauged	**Hydrogeologic Units**	**Hydrogeologic Strata**	**Monitoring Wells per Unit**
8	Overburden	Overburden	8
Overburden Groundwater Elevation Range			
Lowest groundwater elevation: 426.83 feet AMSL (MW-20B) Highest groundwater elevation: 453.22 feet AMSL (MW-01B)			
Inferred Overburden Groundwater Flow Direction		**Inferred Bedrock Groundwater Flow Direction**	
Groundwater Flow Direction is from west to east, from MW-01A/B toward MW-20A/B, across the Site		N/A	

3.2.2 Groundwater Sampling

TRC collected groundwater samples from all eight monitoring wells in the monitoring well network utilizing standard low-flow sampling techniques. Groundwater sampling logs are included in **Appendix C**. All eight groundwater samples, in addition to standard QA/QC samples collected at the frequencies specified in TRC's Generic Quality Assurance Project Plan (QAPP), were submitted to ALS Environmental for analysis of the following:

- TCL VOCs by USEPA Method 8260 – Low Level
- TCL SVOCs by USEPA Method 8270
- TCL PCBs by USEPA Method 8082
- TAL Metals by USEPA Methods 6010 and 7470
- Cyanide by USEPA Method 9010
- TSS by USEPA Method 160.2
- TOC by USEPA Method 415.1
- 1,4-Dioxane by USEPA Method 8270 with Selected Ion Monitoring (SIM)
- PFAS Analyte List by Modified USEPA Method 537

A summary of the groundwater sampling information and pertinent well details for each well is presented in Appendix A and summarized below:

Summary of Groundwater Monitoring Well Details and Sampling Activities
June 2020

Well ID	Monitoring Well Details				2020 Groundwater Monitoring Event		
	Northing	Easting	Screen Zone (ft. bgs)	Material Screened	Depth to Water (ft. bgs)	Groundwater Elevation (ft. AMSL)	Analyses Performed
MW-01A	971,712.7	735,779.7	53.4 – 60.9	Overburden	13.60	448.97	All samples analyzed for TCL VOCs, SVOCs, and PCBs, TAL Metals, TSS, TOC, 1,4-Dioxane, and PFAS
MW-01B	971,723.3	735,778.6	15.1 – 23.6	Overburden	9.06	453.22	
MW-03A	971,325.3	736,514.0	25.7 – 41.2	Overburden	2.83	430.87	
MW-03B	971,321.5	736,501.7	23.8 – 31.3	Overburden	3.69	431.43	
MW-05A	972,198.8	736,440.2	62.8 – 70.8	Overburden	3.10	429.78	
MW-05B	972,192.0	736,453.1	21.3 – 30.3	Overburden	2.63	430.77	
MW-20A	971,857.3	736,631.5	31.0 – 40.0	Overburden	2.17	428.20	
MW-20B	971,866.0	736,627.9	10.8 – 19.8	Overburden	3.39	426.83	

Additional construction details are included the Well Summary (**Appendix A)** and Well Inspection Forms (**Appendix B)**.

3.2.3 Groundwater Analytical Results

The complete groundwater analytical results are included in Appendix D. There were no detections of SVOCs or PCBs at concentrations above Class GA Standards/Guidance Values (SGVs) in any of the eight groundwater samples during either of the groundwater monitoring events (2018 and 2020).

There were three VOCs detected above the respective SGVs, all during the 2020 groundwater monitoring event:

- 1,2-Dichloroethane was detected slightly above the SGV of 0.6 ug/L in two of the eight samples collected (CCSK-MW-20A/B: 1.2 ug/L and 1.1 ug/L, respectively).
- Benzene was detected slightly above the SGV of 1 ug/L in one of the eight samples collected (CCSK-MW-05A: 1.7 ug/L).
- Chlorobenzene was detected slightly above the SGV of 5 ug/L in one of the eight samples collected (CCSK-MW-05A: 6.6 ug/L).
- There were no VOCs detected above the SGVs during the 2018 groundwater monitoring event.
- **Table 1** presents a summary of the results of analyses for VOCs in groundwater for the 2018 and 2020 groundwater monitoring events.

1,4-Dioxane (no SGV) was detected at concentrations ranging from 0.14 ug/L to 0.88 ug/L in six of the eight samples collected (CCSK-MW-03A/B, CCSK-MW-05A/B, CCSK-MW-20A/B). 1,4-Dioxane was detected during both groundwater monitoring events, and the concentrations are comparable between the two events. **Table 2** presents a summary of the results of analyses for SVOCs (including 1,4-Dioxane) in groundwater for the 2018 and 2020 groundwater monitoring events.

Table 3 presents a summary of the results of analyses for PCBs in groundwater for the 2018 and 2020 groundwater monitoring events (no PCBs detected above the SGVs during either event).

PFAS were detected above the Screening Levels (SLs) in "Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs", January 2020, in four of the eight samples collected in 2018, and five of the eight samples collected in 2020. Perfluorooctanesulfonic acid (PFOS) was detected in 2018 and 2020, at concentrations above the SL of 10 ng/L. In 2018, these samples included: CCSK-MW-05A/B (87 ng/L and 100 ng/L) and CCSK-MW-20A/B (35 ng/L and 36 ng/L). In 2020, these samples again included CCSK-MW-05A/B (96 ng/L and 120 ng/L) and CCSK-MW-20A/B (45 ng/L and 54 ng/L). Overall, there was a slight increase in the PFOS concentration in each well between 2018 and 2020.

Concentrations of perfluorooctanoic acid (PFOA) were also detected above the SL of 10 ng/L in these same 4 locations. In 2018, the concentrations of PFOA in these samples was: CCSK-MW-05A/B (36 ng/L and 64 ng/L) and CCSK-MW-20A/B (28 ng/L and 26 ng/L). In 2020, these samples again included CCSK-MW-05A/B (46 ng/L and 54 ng/L) and CCSK-MW-20A/B (27 ng/L and 24 ng/L). Overall, the concentrations of PFOA remained relatively consistent between 2018 and 2020.

During the 2020 groundwater monitoring event, Total PFAS was measured at 577 ng/L in CCSK-MW-01A (above the SL of 500 ng/L for that group of compounds), largely due to the detected concentration of 6:2 Perfluorooctane Sulfonate (570 ng/L versus the SL of 100 ng/L for that compound). **Table 4** presents a summary of the results of analyses for PFAS in groundwater for the 2018 and 2020 groundwater monitoring events.

Several TAL metals were detected at concentrations above the respective SGVs in the 2020 groundwater monitoring event:

- Iron (SGV = 300 ug/L) was detected at concentrations ranging from 2,830 ug/L to 12,000 ug/L in six of the eight samples collected (CCSK-MW-03A/B, CCSK-MW-05A/B, CCSK-MW-20A/B).
- Magnesium (SGV = 35,000 ug/L) was detected at concentrations ranging from 62,300 ug/L to 291,000 ug/L in seven of the eight samples collected (CCSK-MW-01A, CCSK-MW-03A/B, CCSK-MW-05A/B, CCSK-MW-20A/B).
- Manganese (SGV = 300 ug/L) was detected in CCSK-MW-05B at a concentration of 674 ug/L.
- Sodium was detected above the SGV (20,000 ug/L) in five of the eight samples collected (CCSK-MW-01A/B, CCSK-MW-03A/B, CCSK-MW-05B). Concentrations of sodium ranged from 43,900 ug/L to 1,950,000 ug/L in these samples.
- Thallium (SGV = 0.5 ug/L) was detected at concentrations ranging from 8.4 ug/L to 15.9 ug/L in two of the eight samples collected (CCSK-MW-01A, CCSK-MW-03A).
- Other metals detected with no SGV include:
    - Aluminum (four wells ranging from 68.7 to 1,550 ug/L),
    - Calcium (all eight wells ranged from 21,800 to 382,000 ug/L), and
    - Potassium (all eight wells ranged from 3,400 to 62,600 ug/L).
- Metals were not evaluated in the 2018 groundwater monitoring event.
- **Table 5** presents a summary of the results of analyses for metals in groundwater for the 2018 and 2020 groundwater monitoring events.

General chemistry parameters that have no SGV but which were detected in more than one sample were: TOC (all eight wells ranged from 800 to 6,300 ug/L), and TSS (all eight wells ranged from 1,700 to 83,700 ug/L). **Table 6** presents a summary of the results of analyses for the general chemistry parameters (including TOC and TSS) in groundwater for the 2018 and 2020 groundwater monitoring events.

The completed results of the groundwater sample analyses for 2018 and 2020 are presented in **Table 1** through **Table 6**. All of the analytical data has been validated and complete Data Usability and Summary Reports are included in **Appendix D**. Detected compounds exceeding their respective NYSDEC Class GA Values for each well are highlighted and bolded within the tables. A tabular summary of the June 2020 groundwater analytical results is provided below:

Summary of Groundwater Analytical Results - TCL Organics and TAL Inorganics June 2020					
Constituent	**Units**	**SCG**	**Concentration Range (µg/L)**	**Location with Highest Concentration**	**Frequency Exceeding SCG**
VOCs					
1,2-Dichloroethane	ug/L	0.6*	1.1 – 1.2	MW-20A	2/8
Benzene	ug/L	1*	1.7	MW-05A	1/8
Chlorobenzene	ug/L	5*	6.6	MW-05A	1/8
SVOCs					
No Results above NYSDEC Class GA Values					
1,4-Dioxane	ug/L	1	ND – 0.88	MW-05B	0/8
PCBs Aroclors					
No Results above NYSDEC Class GA Values					
Metals					
Iron	ug/L	300*	2,830 – 12,000	MW-03B/05A	6/8
Magnesium	ug/L	35,000*	62,300 – 291,000	MW-03A	7/8
Manganese	ug/L	300*	674	MW-05B	1/8
Sodium	ug/L	20,000*	43,900 – 1,950,000	MW-03A	5/8
Thallium	ug/L	0.5*	8.4 – 15.9	MW-03A	2/8
PFAS					
Perfluorooctanesulfonic acid (PFOS)	ng/L	10**	45 – 120	MW-05B	4/8
Perfluorooctanoic acid (PFOA)	ng/L	10**	24 – 54	MW-05B	4/8
6:2 Perfluorooctane Sulfonate (6:2 FTS)	ng/L	100**	570	MW-01A	1/8
Total PFAS	ng/L	*500***	*577*	*MW-01A*	*1/8*
General Chemistry					
Total Organic Carbon (TOC)	ug/L	NC	800 – 6,300	MW-05A	N/A
Total Suspended Solids (TSS)	ug/L	NC	1,700 – 83,700	MW-05B	N/A

Notes:
NC – No SGVs available for this analyte.
* - Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitation, Technical and Operational Guidance Series (TOGS) 1.1.1, New York State Department of Environmental Conservation, Division of Water, June 1998.
** - Recommended Guidance Values from the Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs, January 2020.

Groundwater contaminant concentration trend graphs were not prepared for the Site since a sufficient number of post-remedial action groundwater sampling events has not been completed.

4.0 Cost Summary

The total estimated cost of the site management activities conducted between October 2019 and October 2020 was approximately $62,190. Site management activities included project management/administration, site inspections, performance of two groundwater monitoring events including analysis for the parameters listed in Section 3.0, and preparation of a PRR. The total estimated cost includes engineering and subcontractor costs, as well as expenses associated with the project. It should be noted that the total does not include direct costs incurred by NYSDEC in support of the project. A summary of the current site management costs is presented below:

Summary of Site Management Costs
October 2019 through October 2020

Cost Item	Estimated Amount Expended	Percent of Total Cost
Engineering Support		
TRC	$48,990	79%
Subcontractors		
Laboratory	$12,000	19%
Expenses		
TRC	$1200	2%
Total Cost	**$62,190**	----

The following provides a review of each cost item:

- Engineering support includes labor costs associated with project management (e.g., WA Package preparation, monthly invoicing, project scheduling and coordination, etc.), site inspections, performing 2 groundwater sampling events, data validation, and reporting (i.e., DUSR and PRR).
- Subcontractors include analytical laboratory costs associated with the 2 groundwater sampling events.
- Expense costs include travel, equipment, and supplies in support of the site inspection, groundwater sampling event, and routine site maintenance activities.

5.0 Conclusions and Recommendations

5.1 Conclusions

- The Engineering Controls in place at the site did not appear to require any substantial repair, modification, or corrective action. Minor observations included:
    - the entrance roadway was muddy and rutted,
    - the inner fence gate at the toe of the landfill was unlocked (the main, outer gate was locked, however),
    - the groundwater monitoring wells were not labeled,
    - the vegetation around some monitoring wells, specifically those locate in or near wetland locations (MW-20A/B) was overgrown and had not been maintained; and,
    - there was a small section of fence near the north end of the Site that was damaged.
- Based on the groundwater elevations measured during the 2020 groundwater monitoring event, groundwater flow in the overburden appears to be from west to east across the site, as expected. This observation is consistent with the regional groundwater flow, suggesting that the bordering wetland is a key receiving surface water body for the majority of the shallow groundwater in the area.
- Low levels of VOCs were detected above their respective SGVs in several monitoring wells. Benzene and Chlorobenzene were detected in MW-05A (north of the capped landfill, cross gradient from the primary groundwater flow direction). 1,2-Dichloroethane was detected in MW-20A and MW-20B (downgradient of the landfill), only slightly above the Class GA groundwater standard. Due to the limited concentrations detected in the down gradient well cluster, off-site migration of VOCs appears to be insignificant.
- Metals including iron, magnesium, manganese, sodium, and thallium were detected at concentrations above their respective SGVs in several monitoring wells. It should be noted that none of the exceedances occurred in the upgradient monitoring well cluster MW-01A/B, or in the down gradient well cluster MW-20A/B. While these metals are likely not indicative of Site contaminant migration and are typically regulated for aesthetic purposes such as odor, taste, and clarity in drinking water, they may be indicative of the overall geochemical quality of the groundwater at the Site.
- PFAS compounds were detected at concentrations exceeding their respective SLs in five monitoring wells. PFOS and PFOA exceedances were detected in MW-05A and MW-05B, cross-gradient from the groundwater flow direction beneath the landfill. Similar concentrations of PFOS and PFOA were also detected in the downgradient well pair MW-20A/B. One PFAS compound, 6:2 Perfluorooctane Sulfonate, was detected in upgradient monitoring well MW-01A. It is unlikely that these PFAS detections are related to the Site, but continued monitoring of PFAS is recommended to establish concentration trends. It is possible that the upgradient PFAS detection is related to the Town Landfill located across Cornwall Hill Road. This potential connection will continue to be evaluated in subsequent PRRs.
- Site and groundwater use were consistent with the restrictions set forth in the Environmental Easements and the SMP. Groundwater monitoring activities were completed in September 2018 and June 2020 for the certification period. A site inspection and an inspection report were also completed. The Institutional Controls appear to be performing as intended during this reporting period.
- The remedy continued to be protective of human health and the environment during this reporting period.

- Residual contamination has been detected in sediment and surface water in the wetland to the north and east of the capped landfill. This contamination has been delineated and is being addressed under the RSO. Therefore, this PRR does not address residual contamination in sediment and surface water, and the evaluation of protectiveness is limited to the capped landfill.

5.2 Recommendations

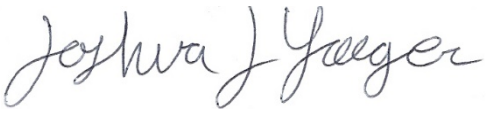
- The Site inspection and groundwater monitoring events should continue on an annual basis to certify that the ICs and ECs are functioning as intended. These annual programs should continue until groundwater contaminant trends are established and the sediment and surface water residual contamination is addressed under the RSO Program.
- Since extensive site work is expected to be undertaken as part of the RSO, the minor site improvements and corrective action that were identified in this PRR will be addressed as part of that program.
- A PRR should continue to be prepared on an annual basis until NYSDEC establishes an alternate frequency.
- Based on the emerging contaminant groundwater sampling results, PFAS should be included as an analyte for all monitoring wells for at least one future round of groundwater sampling events to evaluate PFAS impacts to groundwater at the Site.
- Contaminant trends for Site-related COCs should be established once sufficient data has been generated (at least three consecutive groundwater monitoring events). Once these trends are established, conclusions can be made related to contaminant migration, and evaluations can be performed to potentially reduce the analytical list for groundwater going forward.
- The 2014 SMP should be revised to reflect the above changes/modifications, as well as the monitoring activities recommended following completion of the RSO.

6.0 Certification of Engineering and Institutional Controls

Excepting the ongoing sediment investigation and proposed sediment/wetland area remediation, for each institutional or engineering control identified for the Site, I certify that all of the following statements are true:

- The institutional controls and/or engineering controls employed at this Site are unchanged from the date the respective controls were put in place, or last approved by NYSDEC DER;
- Nothing has occurred that would impair the ability of such controls to protect public health and the environment;
- Nothing has occurred that would constitute a violation or failure to comply with any Site Management Plan for these controls; and
- Access to the Site will continued to be provided to NYSDEC DER to evaluate the remedy, including access to evaluate the continued maintenance of these controls.

TRC Engineers, Inc.



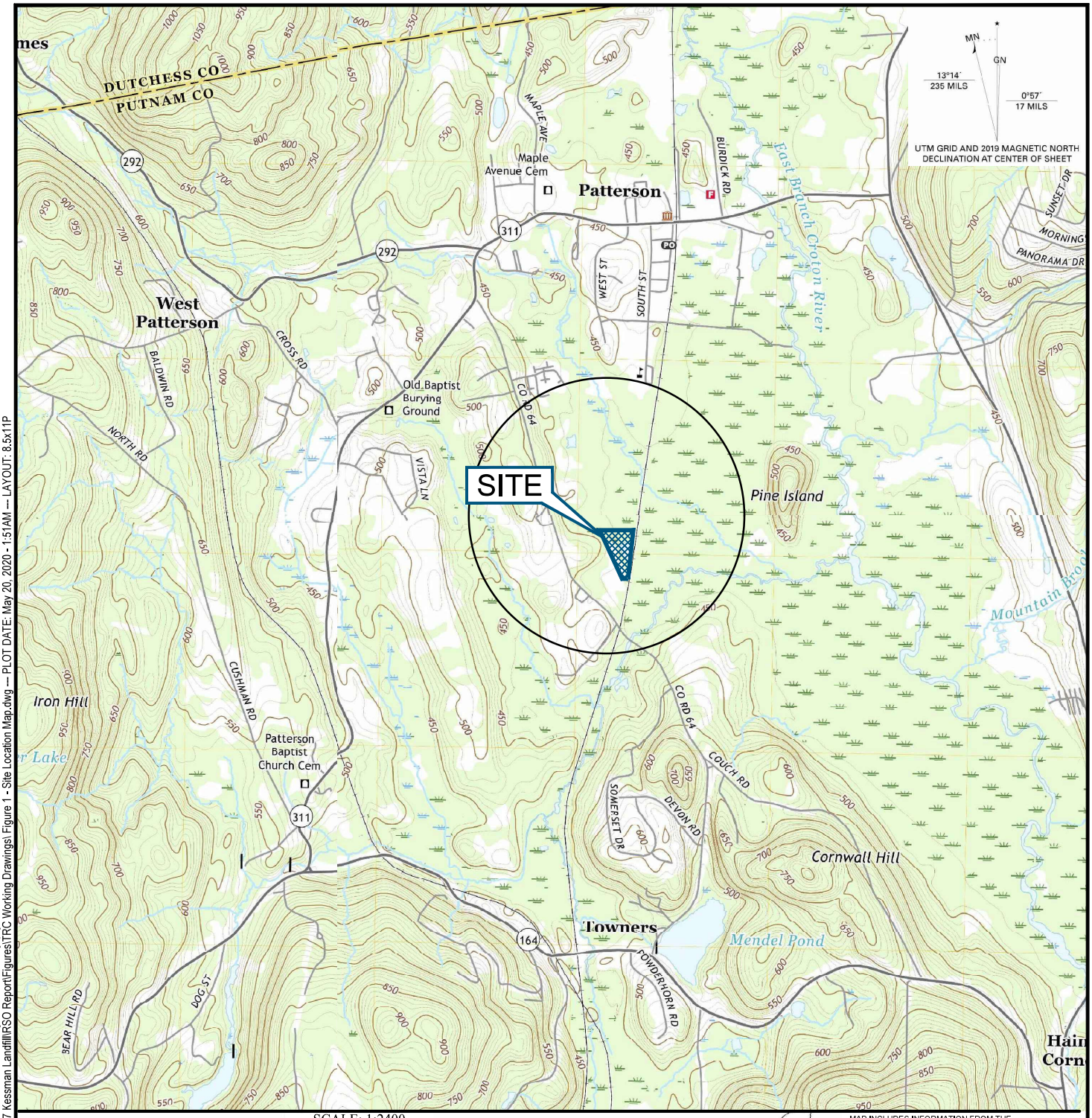
Prepared By: _____
Joshua J. Yaeger, E.I.T
Environmental Engineer I

Reviewed By: _____
Kevin D. Sullivan, P.E.
Project Manager

7.0 Future Site Activities

Future groundwater monitoring and site inspection activities are planned per the SMP and at the discretion of NYSDEC. Based on the recommendations in **Section 5.0,** the next groundwater monitoring event and site inspection should be conducted in Q2 2021 and the next Periodic Review Report prepared by November 2021.

FIGURES



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1 0.5 0 1

MILES

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FEET

QUADRANGLE LOCATION

MAP INCLUDES INFORMATION FROM THE FOLLOWING MAP SHEET(S):
TP, BREWSTER, NY, CT, 7.5-MINUTE DATED 2019.
NE, PAWLING, NY, CT, 7.5-MINUTE DATED 2019.
NW, POUGHQUAG, NY, 7.5-MINUTE DATED 2019.
W, LAKE CARMEL, NY, 7.5-MINUTE DATED 2019.

MAP OBTAINED THROUGH USE OF TOPOVIEW WITH THE INTERFACE CREATED BY THE NATIONAL GEOLOGIC MAP DATABASE PROJECT (NGMDB), IN SUPPORT OF THE TOPOGRAPHIC MAPPING PROGRAM, MANAGED BY THE USGS NATIONAL GEOSPATIAL PROGRAM (NGP).

TRC
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PROJECT:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SITE NO. 340011 - CROSS-COUNTY SANITARY/KESSMAN LANDFILL
286 CORNWALL HILL ROAD
PATTERSON, NEW YORK 12563

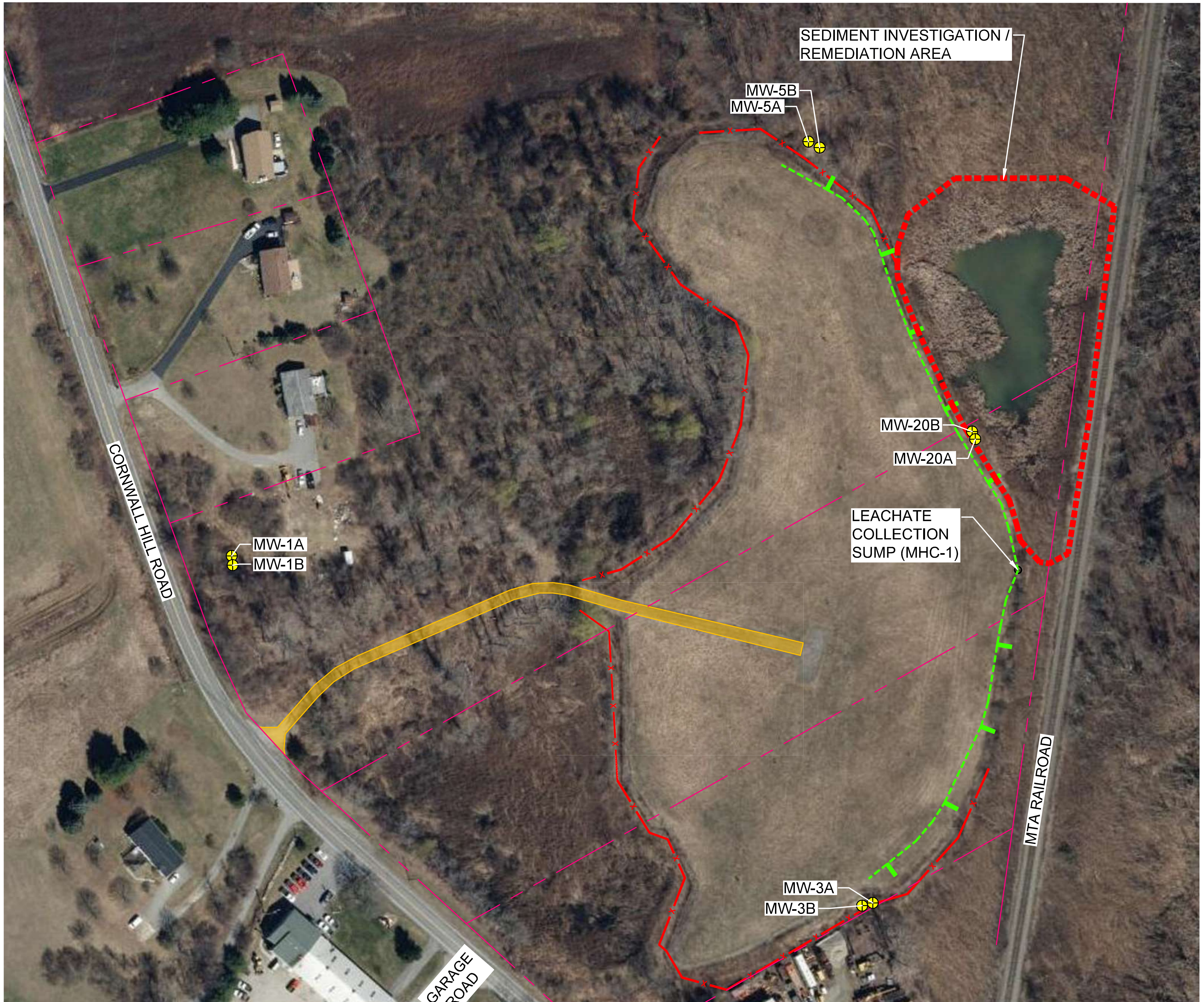
TITLE:

SITE LOCATION MAP

DRAWN BY:	H. DELGADO
CHECKED BY:	J. YAEGER
APPROVED BY:	K. SULLIVAN
DATE:	JUNE 2020
PROJ. NO.:	387570.0000.0000
FILE:	Figure 1 - Site Location Map.dwg

FIGURE 1

8.5x11 --- ATTACHED XREFS --- ATTACHED IMAGES: NY_Brewster_20190930_TM, NY_Lake_Carmel_20190930_TM, NY_Pawling_20190926_TM, NY_Poughquag_20190927_TM
DRAWING NAME: B:\NYSDEC\D009812\Work Assignments\D009812-07 Kessman Landfill\RSO Report\Figures\TRC Working Drawings\ Figure 1 - Site Location Map.dwg --- PLOT DATE: May 20, 2020 - 1:51AM --- LAYOUT: 8.5x11P



0 120' 240'

SCALE: 1" = 120'

LEGEND (SYMBOLS NOT TO SCALE):

- ACCESS ROAD
- FENCE LINE
- PROPERTY BOUNDARY
- SEDIMENT INVESTIGATION / REMEDIATION AREA
- MW-XX — MONITORING WELL LOCATION AND IDENTIFICATION NUMBER
- MH — LEACHATE MANHOLE LOCATION
- LEACHATE COLLECTION PIPE (WITH APPROXIMATE LOCATION OF OUTLETS SHOWN. NOT FIELD VERIFIED.)

N

NOTES:

1. BASEMAP IMAGERY SOURCED FROM ESRI DATABASE DATED NOVEMBER 5, 2019.
2. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES AND BOUNDARIES ARE APPROXIMATE.

SHEET SIZE: 11" BY 17"

PROJECT:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SITE NO. 340011 - CROSS-COUNTY SANITARY/KESSMAN LANDFILL
286 CORNWALL HILL ROAD
PATTERSON, NEW YORK 12563

TITLE:

SITE LAYOUT

DRAWN BY:	H. DELGADO	PROJ NO.:	387570.0000.0000
CHECKED BY:	J. YAEGER	FIGURE 2	
APPROVED BY:	K. SULLIVAN		
DATE:	JUNE 2020		

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FILE NO.: Figure 2 - Site Layout.dwg

TABLES

Table 1
New York State Department of Environmental Conservation
Cross-County Sanitary - Kessman Landfill, Site No. 340011
Summary of Results of Analysis for Volatile Organic Compounds in Groundwater (2018 and 2020)

		Sample Location:	CCSK-MW-01A				CCSK-MW-01B				CCSK-MW-03A				CCSK-MW-03B				CCSK-MW-05A				CCSK-MW-05B				CCSK-MW-20A				CCSK-MW-20B			
		Sample Date:	09/28/2018		06/16/2020		09/28/2018		06/16/2020		09/27/2018		06/16/2020		09/27/2018		06/15/2020		09/28/2018		06/17/2020		09/28/2018		06/17/2020		09/28/2018		06/17/2020		09/28/2018		06/16/2020	
Analyte	Unit	SGV*																																
VOCs																																		
1,1,1-Trichloroethane	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
1,1,2,2-Tetrachloroethane	ug/L	5	0.5	U	1.0	UJ	0.5	U	1.0	UJ	0.5	U	1.0	UJ	0.5	U	1.0	UJ	0.5	U	1.0	UJ	0.5	U	1.0	UJ	0.5	U	1.0	UJ	0.5	U	1.0	UJ
1,1,2-Trichloroethane	ug/L	1	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
1,1,2-Trichloro- 1,2,2-trifluoroethane	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
1,1-Dichloroethane	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	**0.20**	**J**	**0.86**	**J**	**0.82**	**J**	1	U	**0.28**	**J**
1,1-Dichloroethene	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
1,2,3-Trichlorobenzene	ug/L	5	5	U	1.0	UJ	5	U	1.0	U	5	U	1.0	U	5	U	1.0	UJ	5	U	1.0	U	5	U	1.0	U	5	U	1.0	U	5	U	1.0	UJ
1,2,4-Trichlorobenzene	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
1,2-Dibromo-3-chloropropane	ug/L	0.04	5	U	2.0	UJ	5	U	2.0	U	5	U	2.0	U	5	U	2.0	UJ	5	U	2.0	U	5	U	2.0	U	5	U	2.0	U	5	U	2.0	UJ
1,2-Dibromoethane	ug/L	0.0006	0.5	U	1.0	UJ	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	UJ	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	UJ
1,2-Dichlorobenzene	ug/L	3	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	**1.3**		**0.69**	**J**	**0.57**	**J**	1	U	1.0	U	1	U	1.0	UJ
1,2-Dichloroethane	ug/L	0.6	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	**1.2**		1	U	**1.1**	**J-**
1,2-Dichloropropane	ug/L	1	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
1,3-Dichlorobenzene	ug/L	3	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	**0.48**	**J**	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
1,4-Dichlorobenzene	ug/L	3	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	**2.4**		**1.1**		**0.99**	**J**	1	U	1.0	U	1	U	1.0	UJ
2-Butanone (MEK)	ug/L	50	20	U	5.0	UJ	20	U	5.0	U	20	U	5.0	U	20	U	5.0	UJ	20	U	5.0	U	20	U	5.0	U	20	U	5.0	U	20	U	5.0	UJ
2-Hexanone	ug/L	50	10	U	5.0	UJ	10	U	5.0	U	10	U	5.0	U	10	U	5.0	UJ	10	U	5.0	U	10	U	5.0	U	10	U	5.0	U	10	U	5.0	UJ
4-Methyl-2-pentanone	ug/L	NC	10	U	5.0	UJ	10	U	5.0	U	10	U	5.0	U	10	U	5.0	UJ	10	U	5.0	U	10	U	5.0	U	10	U	5.0	U	10	U	5.0	UJ
Acetone	ug/L	50	50	UJ	5.0	UJ	50	UJ	5.0	U	50	UJ	5.0	U	50	UJ	5.0	UJ	50	UJ	5.0	U	50	UJ	5.0	U	50	UJ	5.0	U	50	UJ	5.0	UJ
Benzene	ug/L	1	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	**1.7**		**0.91**	**J**	**0.87**	**J**	**0.4**	**J**	**0.46**	**J**	1	U	**0.37**	**J**
Bromochloromethane	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
Bromodichloromethane	ug/L	50	0.5	U	1.0	UJ	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	UJ	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	UJ
Bromoform	ug/L	50	2	U	1.0	UJ	2	U	1.0	U	2	U	1.0	U	2	U	1.0	UJ	2	U	1.0	U	2	U	1.0	U	2	U	1.0	U	2	U	1.0	UJ
Bromomethane	ug/L	5	2	U	1.0	UJ	2	U	1.0	UJ	2	U	1.0	UJ	2	U	1.0	UJ	2	U	1.0	UJ	2	U	1.0	UJ	2	U	1.0	UJ	2	U	1.0	UJ
Carbon disulfide	ug/L	60	4	U	1.0	UJ	4	U	1.0	U	4	U	1.0	U	4	U	1.0	UJ	4	U	1.0	U	4	U	1.0	U	4	U	1.0	U	4	U	1.0	UJ
Carbon tetrachloride	ug/L	5	5	UJ	1.0	UJ	5	UJ	1.0	U	5	UJ	1.0	U	5	UJ	1.0	UJ	5	UJ	1.0	U	5	UJ	1.0	U	5	UJ	1.0	U	5	UJ	1.0	UJ
Chlorobenzene	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	**0.45**	**J**	**6.6**		**3.8**		**2.8**		1	U	1.0	U	1	U	1.0	UJ
Chloroethane	ug/L	5	2	U	1.0	UJ	2	U	1.0	U	2	U	1.0	U	2	U	1.0	UJ	2	U	1.0	U	2	U	1.0	U	2	U	1.0	U	2	U	1.0	UJ
Chloroform	ug/L	7	2	U	1.0	UJ	2	U	1.0	U	2	U	1.0	U	2	U	1.0	UJ	2	U	1.0	U	2	U	1.0	U	2	U	1.0	U	2	U	1.0	UJ
Chloromethane	ug/L	5	2	U	1.0	UJ	2	U	1.0	U	2	U	1.0	U	2	U	1.0	UJ	2	U	1.0	U	2	U	1.0	U	2	U	1.0	U	2	U	1.0	UJ
Cyclohexane	ug/L	NC	5	U	1.0	UJ	5	U	1.0	U	5	U	1.0	U	5	U	1.0	UJ	5	U	1.0	U	5	U	1.0	U	5	U	1.0	U	5	U	1.0	UJ
Dibromochloromethane	ug/L	50	0.5	U	1.0	UJ	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	UJ	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	UJ
Dichlorodifluoromethane	ug/L	5	2	UJ	1.0	UJ	2	UJ	1.0	U	2	UJ	1.0	U	2	UJ	1.0	UJ	2	UJ	1.0	U	2	UJ	**0.42**	**J**	2	UJ	1.0	U	2	UJ	1.0	UJ
Methylene chloride	ug/L	5	5	U	1.0	UJ	5	U	1.0	U	5	U	1.0	U	5	U	1.0	UJ	5	U	1.0	U	5	U	1.0	U	5	U	1.0	U	5	U	1.0	UJ
Ethylbenzene	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
Isopropylbenzene	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
Methyl acetate	ug/L	NC	1	UJ	2.0	UJ	1	UJ	2.0	U	1	UJ	2.0	U	1	UJ	2.0	UJ	1	UJ	2.0	U	1	UJ	2.0	U	1	UJ	2.0	U	1	UJ	2.0	UJ
Methyl tert-butyl ether	ug/L	10	1	U	1.0	UJ	1	U	1.0	U	**0.72**	**J**	**0.69**	**J**	**0.57**	**J**	**0.47**	**J**	1	U	1.0	U	**0.12**	**J**	1.0	U	1	U	1.0	U	1	U	1.0	UJ
Methylcyclohexane	ug/L	NC	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
Styrene	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
Tetrachloroethene	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
Toluene	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
Trichloroethene	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
Trichlorofluoromethane	ug/L	5	2	UJ	1.0	UJ	2	UJ	1.0	U	2	UJ	1.0	U	2	UJ	1.0	UJ	2	UJ	1.0	U	2	UJ	1.0	U	2	UJ	1.0	U	2	UJ	1.0	UJ
Vinyl chloride	ug/L	2	2	U	1.0	UJ	2	U	1.0	U	2	U	1.0	U	2	U	1.0	UJ	2	U	1.0	U	2	U	1.0	U	2	U	**0.50**	**J**	2	U	**0.40**	**J**
cis-1,2-Dichloroethene	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	**0.36**	**J**	**0.39**	**J**	**0.69**	**J**	**1.3**		**0.51**	**J**	**0.68**	**J**
cis-1,3-Dichloropropene	ug/L	0.4(b)	0.5	U	1.0	UJ	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	UJ	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	UJ
m,p-Xylene	ug/L	5(a)	2	U	2.0	UJ	2	U	2.0	U	2	U	2.0	U	2	U	2.0	UJ	2	U	2.0	U	2	U	2.0	U	2	U	2.0	U	2	U	2.0	UJ
o-Xylene	ug/L	5(a)	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
trans-1,2-Dichloroethene	ug/L	5	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ	1	U	1.0	U	1	U	1.0	U	1	U	1.0	U	1	U	1.0	UJ
trans-1,3-Dichloropropene	ug/L	0.4(b)	0.5	U	1.0	UJ	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	UJ	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	U	0.5	U	1.0	UJ

Notes:

ug/L - micrograms per liter.

J - Estimated value.

U - Analyte was not detected at specified quantitation limit.

UJ - Estimated non-detect.

SGV - Standard or Guidance Value

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed criteria.

VOCs - Volatile Organic Compounds.

* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.

(a) - criteria applicable to xylene (total), the sum of the xylene isomers.

(b) - criteria applicable to the sum of the cis and trans isomers.

Table 2
New York State Department of Environmental Conservation
Cross-County Sanitary - Kessman Landfill, Site No. 340011
Summary of Results of Analysis for Semi-Volatile Organic Compounds in Groundwater (2018 and 2020)

		Sample Location:	CCSK-MW-01A		CCSK-MW-01B		CCSK-MW-03A		CCSK-MW-03B		CCSK-MW-05A		CCSK-MW-05B		CCSK-MW-20A		CCSK-MW-20B	
		Sample Date:	09/28/2018	06/16/2020	09/28/2018	06/16/2020	09/27/2018	06/16/2020	09/27/2018	06/15/2020	09/28/2018	06/17/2020	09/28/2018	06/17/2020	09/28/2018	06/17/2020	09/28/2018	06/16/2020
Analyte	Unit	SGV*																
SVOCs																		
1,2,4,5-Tetrachlorobenzene	ug/L	5	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
2,3,4,6-Tetrachlorophenol	ug/L	1(c)	NA	9.1 U	NA	9.1 U	NA	9.1 U	NA	9.1 U	NA	10 U	NA	10 U	NA	9.1 U	NA	9.1 U
2,4,5-Trichlorophenol	ug/L	1(c)	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
2,4,6-Trichlorophenol	ug/L	1(c)	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
2,4-Dichlorophenol	ug/L	5	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
2,4-Dimethylphenol	ug/L	50	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
2,4-Dinitrophenol	ug/L	10	10 U	45 U	10 U	45 U	10 U	45 U	10 U	45 U	10 U	50 U	10 U	50 U	10 U	45 U	10 U	45 U
2,4-Dinitrotoluene	ug/L	5	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	10 U	10 UJ	10 U	10 UJ	9.1 U	10 UJ	9.1 U
2,6-Dinitrotoluene	ug/L	5	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
2-Chloronaphthalene	ug/L	10	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
2-Chlorophenol	ug/L	1(c)	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
2-Methylnaphthalene	ug/L	NC	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
2-Methylphenol	ug/L	1(c)	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
2-Nitroaniline	ug/L	5	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
2-Nitrophenol	ug/L	1(c)	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
3,3'-Dichlorobenzidine	ug/L	5	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	10 U	10 UJ	10 U	10 UJ	9.1 U	10 UJ	9.1 U
3,4-Methylphenol	ug/L	1(c)	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
3-Nitroaniline	ug/L	5	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
4,6-Dinitro-2-methylphenol	ug/L	1(c)	10 U	45 U	10 U	45 U	10 U	45 U	10 U	45 U	10 U	50 U	10 U	50 U	10 U	45 U	10 U	45 U
4-Bromophenyl-phenylether	ug/L	NC	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
4-Chloro-3-methylphenol	ug/L	1(c)	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
4-Chloroaniline	ug/L	5	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
4-Chlorophenyl-phenyl ether	ug/L	NC	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
4-Nitroaniline	ug/L	5	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
4-Nitrophenol	ug/L	1(c)	10 U	45 U	10 U	45 U	10 U	45 U	10 U	45 U	10 U	50 U	10 U	50 U	10 U	45 U	10 U	45 U
Acenaphthene	ug/L	20	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Acenaphthylene	ug/L	NC	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Acetophenone	ug/L	NC	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Anthracene	ug/L	50	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Atrazine	ug/L	7.5	20 U	9.1 U	20 U	9.1 U	20 U	9.1 U	20 U	9.1 U	20 U	10 U	20 U	10 U	20 U	9.1 U	20 U	9.1 U
Benzo(a)anthracene	ug/L	0.002	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Benzaldehyde	ug/L	NC	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Benzo(a)pyrene	ug/L	ND	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Benzo(b)fluoranthene	ug/L	0.002	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Benzo(g,h,i)perylene	ug/L	NC	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Benzo(k)fluoranthene	ug/L	0.002	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
1,1'-Biphenyl	ug/L	5	20 U	9.1 U	20 U	9.1 U	20 U	9.1 U	20 U	9.1 U	20 U	10 U	20 U	10 U	20 U	9.1 U	20 U	9.1 U
2,2'-Oxybis(1-chloropropane)	ug/L	5	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	10 U	10 UJ	10 U	10 UJ	9.1 U	10 UJ	9.1 U
Bis(2-chloroethoxy)methane	ug/L	5	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Bis(2-chloroethyl) ether	ug/L	1	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Bis(2-ethylhexyl)phthalate	ug/L	5	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Butylbenzylphthalate	ug/L	50	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Caprolactam	ug/L	NC	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	10 U	10 UJ	10 U	10 UJ	9.1 U	10 UJ	9.1 U
Carbazole	ug/L	NC	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Chrysene	ug/L	0.002	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Di-n-butylphthalate	ug/L	50	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Di-n-octylphthalate	ug/L	NC	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Dibenz(a,h)anthracene	ug/L	NC	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Dibenzofuran	ug/L	NC	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Diethyl phthalate	ug/L	50	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Dimethylphthalate	ug/L	50	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Fluoranthene	ug/L	50	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Fluorene	ug/L	50	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Hexachlorobenzene	ug/L	0.04	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Hexachlorobutadiene	ug/L	0.5	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	9.1 U	10 UJ	10 U	10 UJ	10 U	10 UJ	9.1 U	10 UJ	9.1 U
Hexachlorocyclopentadiene	ug/L	5	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Hexachloroethane	ug/L	5	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Indeno(1,2,3-cd)pyrene	ug/L	0.002	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Isophorone	ug/L	50	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
n-Nitroso-di-n-propylamine	ug/L	NC	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
N-Nitrosodiphenylamine	ug/L	50	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Naphthalene	ug/L	10	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Nitrobenzene	ug/L	0.4	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Pentachlorophenol	ug/L	1(c)	10 U	45 U	10 U	45 U	10 U	45 U	10 U	45 U	10 U	50 U	10 U	50 U	10 U	45 U	10 U	45 U
Phenanthrene	ug/L	50	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
Phenol	ug/L	1(c)	10 U	9.1 U	10 U	9.1 U	10 U	9.1 U	10 UJ	9.1 U	10 U	10 U	10 U	10 U	10 U	9.1 U	10 U	9.1 U
Pyrene	ug/L	50	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	9.1 U	5 U	10 U	5 U	10 U	5 U	9.1 U	5 U	9.1 U
1,4-Dioxane	ug/L	NC	0.2 U	0.040 U	0.2 U	0.040 U	**0.22**	**0.21**	0.19 U	**0.14**	**0.28**	**0.42**	**1**	**0.88**	**0.54**	**0.40**	**0.46**	**0.30**

Notes:
ug/L - micrograms per liter.
J - Estimated value.
NA - Sample not analyzed for the listed analyte.
NC - No NYSDEC standard exists for this analyte.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
SGV - Standard or Guidance Value
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed the listed criteria.
SVOCs - Semivolatile Organic Compounds.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
(c) - criteria applicable to total phenolics.

Table 3
New York State Department of Environmental Conservation
Cross-County Sanitary - Kessman Landfill, Site No. 340011
Summary of Results of Analysis for Polychlorinated Biphenyls in Groundwater (2018 and 2020)

		Sample Location:	CCSK-MW-01A				CCSK-MW-01B				CCSK-MW-03A				CCSK-MW-03B				CCSK-MW-05A				CCSK-MW-05B				CCSK-MW-20A				CCSK-MW-20B			
		Sample Date:	09/28/2018		06/16/2020		09/28/2018		06/16/2020		09/27/2018		06/16/2020		09/27/2018		06/15/2020		09/28/2018		06/17/2020		09/28/2018		06/17/2020		09/28/2018		06/17/2020		09/28/2018		06/16/2020	
Analyte	Unit	SGV*																																
PCB Aroclors																																		
Aroclor-1016	ug/L	NC	0.2	U	0.047	U	0.2	U	0.047	U	0.19	U	0.047	U	0.2	U	0.047	U	0.2	U	0.047	U	0.2	U	0.051	U	0.2	U	0.047	U	0.2	U	0.047	U
Aroclor-1221	ug/L	NC	0.2	U	0.047	U	0.2	U	0.047	U	0.19	U	0.047	U	0.2	U	0.047	U	0.2	U	0.047	U	0.2	U	0.051	U	0.2	U	0.047	U	0.2	U	0.047	U
Aroclor-1232	ug/L	NC	0.2	U	0.047	U	0.2	U	0.047	U	0.19	U	0.047	U	0.2	U	0.047	U	0.2	U	0.047	U	0.2	U	0.051	U	0.2	U	0.047	U	0.2	U	0.047	U
Aroclor-1242	ug/L	NC	0.2	U	0.047	U	0.2	U	0.047	U	0.19	U	0.047	U	0.2	U	0.047	U	0.2	U	0.047	U	0.2	U	0.051	U	0.2	U	0.047	U	0.2	U	0.047	U
Aroclor-1248	ug/L	NC	0.2	U	0.047	U	0.2	U	0.047	U	0.19	U	0.047	U	0.2	U	0.047	U	0.2	U	0.047	U	0.2	U	0.051	U	0.2	U	0.047	U	0.2	U	0.047	U
Aroclor-1254	ug/L	NC	0.2	U	0.047	U	0.2	U	0.047	U	0.19	U	0.047	U	0.2	U	0.047	U	0.2	U	0.047	U	0.2	U	0.051	U	0.2	U	0.047	U	0.2	U	0.047	U
Aroclor-1260	ug/L	NC	0.2	U	0.047	U	0.2	U	0.047	U	0.19	U	0.047	U	0.2	U	0.047	U	0.2	U	0.047	U	0.2	U	0.051	U	0.2	U	0.047	U	0.2	U	0.047	U
Aroclor-1262	ug/L	NC	0.2	U	NA		0.2	U	NA		0.19	U	NA		0.2	U	NA		0.2	U	NA		0.2	U	NA		0.2	U	NA		0.2	U	NA	
Aroclor-1268	ug/L	NC	0.2	U	NA		0.2	U	NA		0.19	U	NA		0.2	U	NA		0.2	U	NA		0.2	U	NA		0.2	U	NA		0.2	U	NA	
PCBs, Total	ug/L	0.09	0.2	U	0.047	U	0.2	U	0.047	U	0.19	U	0.047	U	0.2	U	0.047	U	0.2	U	0.047	U	0.2	U	0.051	U	0.2	U	0.047	U	0.2	U	0.047	U

Notes:

ug/L - micrograms per liter.

J - Estimated value.

J- - Estimated value; biased low.

J+ - Estimated value; biased high.

NA - Sample not analyzed for the listed analyte.

NC - No NYSDEC standard exists for this analyte.

U - Analyte was not detected at specified quantitation limit.

UJ - Estimated non-detect.

SGV - Standard or Guidance Value

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed criteria.

PCBs - Polychlorinated Biphenyls.

* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.

Table 4
New York State Department of Environmental Conservation
Cross-County Sanitary - Kessman Landfill, Site No. 340011
Summary of Results of Analysis for Per- and Polyfluoroalkyl Substances in Groundwater (2018 and 2020)

Sample Location:			CCSK-MW-01A				CCSK-MW-01B				CCSK-MW-03A				CCSK-MW-03B				CCSK-MW-05A				CCSK-MW-05B				CCSK-MW-20A				CCSK-MW-20B			
Sample Date:			09/28/2018		06/16/2020		09/28/2018		06/16/2020		09/27/2018		06/16/2020		09/27/2018		06/15/2020		09/28/2018		06/17/2020		09/28/2018		06/17/2020		09/28/2018		06/17/2020		09/28/2018		06/16/2020	
Analysis	Unit	SL**																																
PFAS																																		
Perfluorobutanesulfonic acid (PFBS)	ng/L	100**	2	U	4.4	U	2	U	4.4	U	2	U	**0.62**	**J**	2	U	**0.79**	**J**	**5.1**		**2.5**	**J**	**3.9**		**1.9**	**J**	**2.8**		**1.6**	**J**	**2**		**1.6**	**J**
Perfluorohexanesulfonic acid (PFHxS)	ng/L	100**	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	**3**		4.2	U	**6.4**		**7.8**		**7.8**		**6.9**		**7.9**		**7.1**		**4.6**		**5.8**	
Perfluoroheptanesulfonic acid (PFHpS)	ng/L	100**	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	U	4.2	U	**2**		**1.8**	**J**	**3.2**		**2.6**	**J**	2	U	**0.77**	**J**	2	U	**0.74**	**J**
Perfluorooctanesulfonic acid (PFOS)	ng/L	10**	2	U	**0.83**	**J**	**2.6**		**1.6**	**J**	2	U	1.7	U	**2.6**		**3.9**		**87**		**96**		**100**		**120**		**35**		**45**		**36**		**54**	
Perfluorodecanesulfonic acid (PFDS)	ng/L	100**	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	U	4.2	U	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	U	4.4	U
Perfluorobutanoic acid (PFBA)	ng/L	100**	2	UJ	4.4	U	2	UJ	4.4	U	2	UJ	**8.6**		2	UJ	**5.3**	**J+**	2	UJ	4.4	U	**2.3**	**J-**	**12**		2	UJ	**8.2**		**2.1**	**J-**	**6.6**	
Perfluoropentanoic acid (PFPeA)	ng/L	100**	**3**		**1.2**	**J**	**2.3**		4.4	U	**4.9**		**3.9**	**J**	**7.5**		**2.5**	**J**	**6.1**		**5.4**		**13**		**5.6**		**4.7**		**4.3**		**4.6**		**4.3**	**J**
Perfluorohexanoic acid (PFHxA)	ng/L	100**	2	U	**1.3**	**J**	2	U	4.4	U	**5.7**		**5.3**		**4.3**		**3.6**	**J**	**7**		**11**		**11**		**12**		**8.9**		**7.8**		**7.7**		**6.2**	
Perfluoroheptanoic acid (PFHpA)	ng/L	100**	2	U	**0.60**	**J**	2	U	**0.71**	**J**	**2.1**		**1.6**	**J**	**2.2**		**2.1**	**J**	**5.6**		**8.4**		**10**		**9.6**		**5.7**		**4.8**		**4.7**		**4.4**	**J**
Perfluorooctanoic acid (PFOA)	ng/L	10**	2	U	**1.8**	**J**	**2.5**		**2.2**		2	U	**1.8**		**5.9**		**5.3**		**36**		**46**		**64**		**54**		**28**		**27**		**26**		**24**	
Perfluorononanoic acid (PFNA)	ng/L	100**	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	U	4.2	U	**6.7**		**9.4**		**20**		**21**		**2.2**		**2.4**	**J**	2	U	**2.0**	**J**
Perfluorodecanoic acid (PFDA)	ng/L	100**	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	U	4.2	U	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	U	4.4	U
Perfluoroundecanoic acid (PFUnA)	ng/L	100**	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	U	4.2	U	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	U	4.4	U
Perfluorododecanoic acid (PFDoA)	ng/L	100**	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	U	4.2	U	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	U	4.4	U
Perfluorotridecanoic acid (PFTriA)	ng/L	100**	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	UJ	4.2	U	2	U	4.4	U	2	U	4.4	U	2	U	4.3	UJ	2	U	4.4	U
Perfluorotetradecanoic acid (PFTeA)	ng/L	100**	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	UJ	4.2	U	2	U	4.4	U	2	U	4.4	U	2	U	4.3	UJ	2	U	4.4	U
Perfluorooctane Sulfonamide (PFOSA)	ng/L	100**	2	UJ	4.4	U	2	UJ	4.4	U	2	UJ	4.3	U	2	UJ	4.2	U	2	UJ	4.4	U	2	UJ	4.4	U	2	UJ	4.3	U	2	UJ	4.4	U
2-(N-methyl perfluorooctanesulfonamido) acetic acid (N-MeFOSAA)	ng/L	100**	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	U	4.2	U	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	U	4.4	U
N-Ethyl-N-((heptadecafluorooctyl) sulphonyl) glycine (N-EtFOSAA)	ng/L	100**	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	U	**2.1**	**J**	2	U	4.4	U	2	U	4.4	U	2	U	4.3	U	2	U	4.4	U
6:2 Perfluorooctane Sulfonate (6:2 FTS)	ng/L	100**	2	UJ	**570**	**J**	2	UJ	**10**		2	UJ	**0.64**	**J**	2	UJ	**13**		2	UJ	**0.63**	**J**	2	UJ	**1.6**	**J**	2	U	**0.61**	**J**	2	U	**1.7**	**J**
8:2 Perfluorodecane Sulfonate (8:2 FTS)	ng/L	100**	2	UJ	**1.5**	**J**	2	UJ	4.4	U	2	UJ	4.3	U	2	UJ	4.2	U	2	UJ	4.4	U	2	UJ	4.4	U	2	U	4.3	U	2	U	4.4	U
Total PFAS	ng/L	500**	***3.0***		***577***	***J***	***7.40***		***14.5***	***J***	***12.7***		***22.5***	***J***	***25.5***		***38.6***	***J***	***162***		***189***	***J***	***235***	***J***	***247***	***J***	***95.2***		***110***	***J***	***87.7***	***J***	***111***	***J***

Notes:
ng/L - nanograms per liter
J - Estimated value.
J- - Estimated value; biased low.
J+ - Estimated value; biased high.
NC - No NYSDEC standard exists for this analyte.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
SL - Screening Level
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed the listed criteria.
PFAS - Per- and Polyfluoroalkyl Substances.
** - Guidelines for Sampling and Analysis of PFAS, NYSDEC Part 375 Remedial Programs, January 2020.

Table 5
New York State Department of Environmental Conservation
Cross-County Sanitary - Kessman Landfill, Site No. 340011
Summary of Results of Analysis for Metals in Groundwater (2018 and 2020)

		Sample Location:	CCSK-MW-01A		CCSK-MW-01B		CCSK-MW-03A		CCSK-MW-03B		CCSK-MW-05A		CCSK-MW-05B		CCSK-MW-20A		CCSK-MW-20B	
		Sample Date:	09/28/2018	06/16/2020	09/28/2018	06/16/2020	09/27/2018	06/16/2020	09/27/2018	06/15/2020	09/28/2018	06/17/2020	09/28/2018	06/17/2020	09/28/2018	06/17/2020	09/28/2018	06/16/2020
Analysis	Unit	SGV*																
Metals, total																		
Aluminum	ug/L	NC	NA	**68.7** J	NA	**126**	NA	100 U	NA	100 U	NA	100 U	NA	**755**	NA	100 U	NA	**1,550**
Antimony	ug/L	3	NA	60 UJ	NA	60 U	NA	60 UJ	NA	60 UJ	NA	60 U	NA	60 UJ	NA	60 U	NA	60 U
Arsenic	ug/L	25	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	**13.6**	NA	10 U	NA	10 U	NA	10 U
Barium	ug/L	1,000	NA	**117**	NA	**42.9**	NA	**574**	NA	**658**	NA	**155**	NA	**114**	NA	**89.6**	NA	**87.8**
Beryllium	ug/L	3	NA	3 U	NA	3 U	NA	3 U	NA	3 U	NA	3 U	NA	3 U	NA	3 U	NA	3 U
Cadmium	ug/L	5	NA	5 UJ	NA	5 U	NA	5 UJ	NA	5 UJ	NA	5 U	NA	5 UJ	NA	5 U	NA	5 U
Calcium	ug/L	NC	NA	**172,000 J**	NA	**21,800 J**	NA	**382,000 J**	NA	**205,000 J**	NA	**97,100 J**	NA	**139,000 J**	NA	**76,100 J**	NA	**71,200 J**
Chromium	ug/L	50	NA	10 U	NA	**0.7 J**	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	**1.9 J**
Cobalt	ug/L	NC	NA	50 U	NA	50 U	NA	50 UJ	NA	50 UJ	NA	**7 J**	NA	**2.3 J**	NA	50 U	NA	**1.1 J**
Copper	ug/L	200	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA	20 U
Iron	ug/L	300	NA	100 U	NA	**253**	NA	**10,900**	NA	**12,000**	NA	**12,000**	NA	**3,630**	NA	**2,830**	NA	**6,690**
Lead	ug/L	25	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA	5 U
Magnesium	ug/L	35,000	NA	**85,300**	NA	**17,100**	NA	**291,000**	NA	**189,000**	NA	**76,000**	NA	**78,400**	NA	**62,300**	NA	**63,500**
Manganese	ug/L	300	NA	10 U	NA	**7.2 J**	NA	**256**	NA	**90.5**	NA	**124**	NA	**674**	NA	**14.7**	NA	**63.8**
Mercury	ug/L	0.7	NA	0.2 U	NA	0.2 U	NA	0.2 U	NA	0.2 U	NA	0.2 U	NA	0.2 U	NA	0.2 U	NA	0.2 U
Nickel	ug/L	100	NA	40 U	NA	40 U	NA	40 U	NA	40 U	NA	40 U	NA	40 U	NA	40 U	NA	40 U
Potassium	ug/L	NC	NA	**11,400 J**	NA	**3,400 J**	NA	**62,600 J**	NA	**43,600 J**	NA	**11,100 J**	NA	**12,700 J**	NA	**13,200 J**	NA	**13,400 J**
Selenium	ug/L	10	NA	10 UJ	NA	10 U	NA	10 UJ	NA	10 UJ	NA	10 U	NA	10 UJ	NA	10 U	NA	10 U
Silver	ug/L	50	NA	**0.6 J**	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Sodium	ug/L	20,000	NA	**171,000**	NA	**159,000**	NA	**1,950,000**	NA	**1,870,000**	NA	**10,200**	NA	**43,900**	NA	**17,700**	NA	**16,700**
Thallium	ug/L	0.5	NA	**8.4 J**	NA	10 U	NA	**15.9**	NA	100 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Vanadium	ug/L	NC	NA	50 U	NA	**1.1 J**	NA	50 U	NA	50 U	NA	50 U	NA	50 U	NA	50 U	NA	**2.2 J**
Zinc	ug/L	2,000	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA	20 U	NA	20 U

Notes:

ug/L - micrograms per liter.

J - Estimated value.

J- - Estimated value; biased low.

J+ - Estimated value; biased high.

NA - Sample not analyzed for the listed analyte.

NC - No NYSDEC standard exists for this analyte.

U - Analyte was not detected at specified quantitation limit.

UJ - Estimated non-detect.

SGV - Standard or Guidance Value

Values in **bold** indicate the analyte was detected.

Values shown in bold and sh

* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.

Table 6
New York State Department of Environmental Conservation
Cross-County Sanitary - Kessman Landfill, Site No. 340011
Summary of Results of Analysis for General Chemistry Parameters in Groundwater (2018 and 2020)

		Sample Location:	CCSK-MW-01A		CCSK-MW-01B		CCSK-MW-03A		CCSK-MW-03B		CCSK-MW-05A		CCSK-MW-05B		CCSK-MW-20A		CCSK-MW-20B	
		Sample Date:	09/28/2018	06/16/2020	09/28/2018	06/16/2020	09/27/2018	06/16/2020	09/27/2018	06/15/2020	09/28/2018	06/17/2020	09/28/2018	06/17/2020	09/28/2018	06/17/2020	09/28/2018	06/16/2020
Analyte	Unit	SGV*																
General Chemistry																		
Total Organic Carbon (TOC)	ug/L	NC	NA	**1,600**	NA	**1,100**	NA	**800** J	NA	**2,000**	NA	**6,300**	NA	**5,400**	NA	**2,800**	NA	**2,400**
Cyanide	ug/L	200	NA	**5.4**	NA	5 U	NA	5 U	NA	5 U	NA	5 U	NA	10 U	NA	5 U	NA	5 U
Total Suspended Solids (TSS)	ug/L	NC	NA	**1,700**	NA	**2,700**	NA	**23,000**	NA	**25,600**	NA	NA	NA	**44,000**	NA	**6,200**	NA	**83,700**

Notes:

ug/L - micrograms per liter.

J - Estimated value.

NA - Sample not analyzed for the listed analyte.

NC - No NYSDEC standard exists for this analyte.

U - Analyte was not detected at specified quantitation limit.

UJ - Estimated non-detect.

SGV - Standard or Guidance Value

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed criteria.

TOC - Total Organic Carbon

TSS - Total Suspended Solids

* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.

Appendix A

Site History, Custodial Record, and Well Summary

SITE HISTORY
New York State Department of Environmental Conservation
Cross-County Sanitary – Kessman Landfill, Site No. 340011
Patterson, New York

Date	Description
1963 - 1972	The Site was operated as a municipal landfill by the Town of Patterson on property owned by the Kessman family.
1972	The landfill was purchased by Cross County Sanitation, Inc., a private carting company.
1972 - 1974	Historical information provided by the NYSDEC indicates that unknown types and quantities of industrial and hazardous wastes were disposed at the Site.
1974	NYSDEC forced the landfill to close and the Kessman family repossessed the property. The landfill was covered with clean soil at that time in order to support a thin layer of vegetation.
1983	A Phase I Site Assessment (Phase I) was prepared for the Site by Camp, Dresser, and McKee, Inc. (CDM). During the Phase I, field personnel observed several leachate seeps on the north and east sides of the landfill that had discolored the wetland vegetation located between the toe of the landfill and the railroad embankment. The Phase I assessment also documented observations from site workers in which an estimated 40 to 60 partially exposed 55-gallon drums were seen in the landfill toe adjacent to the wetland.
1985	Wehran Engineering, P.C. (Wehran) conducted a Phase II Site Investigation (Phase II) at the site that included a subsurface investigation; a metal detection survey; sampling of surface water, sediments, and leachate; advancing two test pits and collecting composite soil samples; installing four (4) groundwater monitoring wells; and collecting a groundwater sample from a nearby domestic water well. The analytical results from the samples collected during the Phase II recorded several detections of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). Based on the results of the Phase II investigation, the site was reclassified to a Class 2 inactive hazardous waste site under the NYSDECs Registry of Inactive Hazardous Waste Sites in New York State.
May 1991	The NYSDEC, under the State Superfund Program, initiated a Remedial Investigation/Feasibility Study (RI/FS) to address the contamination.
December 1991 - May 1992	ABB Environmental Services (ABB-ES) conducted a Remedial Investigation (RI) of the site. During the RI, site-specific data was obtained from: (1) aerial photographs and historical records; (2) ecological inventories; (3) geophysical surveys; (4) samples of cover soil, landfill refuse, and overburden soil collected from beneath the fill areas via test pits and soil borings; (5) groundwater samples collected from existing and newly installed monitoring wells and nearby private potable wells; (6) shallow groundwater via leachate seeps, wetland surface water and sediment; (7) hydrogeologic testing; and, (8) photogrammetric survey maps.
October 1993 – December 1994	An interim remedial measure (IRM) was conducted at the Site beginning in the fall of 1993. The drum removal project extended through June 1994. In total, 157 drums and 100 cubic yards of contaminated soil were reportedly removed/excavated from the northern toe of the landfill (adjacent to the wetland). In December 1994 the disposal of all staged drums and soil were completed
1994	ABB-ES used the data collected during the RI to prepare a Feasibility Study to evaluate potential remedial strategies for the site.
November 1994	A Record of Decision (ROD) was prepared by the New York State Department of Environmental Conservation.

August 1995 - August 1996	Remediation activities at the site were initiated in 1995 and completed in 1996. The remediation consisted of: (1) excavation of PCB-impacted sediment from the wetland immediately adjacent to the east of the landfill; (2) restoration of the remediated wetland area; and, (3) capping the landfill in accordance with New York Codes, Rules, and Regulations (NYCRR) Part 360 and (4) installing landfill gas ventilation and leachate collection systems.
1996	A Construction Certification Report was prepared by ABB Environmental Services, to document the remedial activities undertaken.
February 2002 - November 2007	Once the remedial activities were completed, routine operation, maintenance, and monitoring (OM&M) activities were performed by O'Brien & Gere Engineers, Inc. (OBG) and Iyer Environmental Group, PLLC (IEG).
November 2007	An OM&M Report was prepared by Iyer Environmental Group, PLLC, and submitted by O'Brien & Gere Engineers, Inc, to NYSDEC.
June 2011	A Site Management Plan (SMP) was prepared by Aztec Technologies, Inc., summarizing remedial investigation findings, remedial actions, and contingency plan with ongoing site monitoring.
2007 - 2012	Ongoing Site monitoring and maintenance activities were conducted by various engineering firms.
Early 2012 - January 2013	Aztec Technologies, Inc. (Aztec) became involved in the Site management program beginning in 2012, and undertook a sediment delineation activity. The results of this study are presented in the report titled, "PCB Sediment Delineation Report, Cross County/Kessman Landfill", dated January 29, 2013.
January 2014	Aztec Technologies, Inc. prepared an update to the SMP to correct tax parcel numbers for the Site (current SMP).
October 2016	TRC undertook an investigation focusing on further delineation of the areas of impacted soil, sediment, and surface water identified in the Aztec report.
November 2017	During the November 2017 investigation, attempts were made to locate the leachate collection system discharge points, along the northern and eastern landfill perimeter, to determine if a correlation exists between these locations and observed concentrations of PCBs in sediment. A combination of methods/techniques were used including visual inspection, GPS equipment, and field measurements. TRC was unable to locate any of the leachate collection system discharge points.
September 2018 - November 2018	TRC performed supplemental sediment and groundwater sampling, a geotechnical investigation, and a geophysical investigation centered on the leachate collection system.
February 2019	Detailed descriptions of the activities and findings were presented in a memorandum to NYSDEC.
December 2019	A Fish and Wildlife Resource Impact Analysis (FWRIA) was conducted in accordance with the guidance provided in the document "Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites".
June 2020	TRC performed additional groundwater sampling along with a Phase 1 Bog Turtle Habitat Survey. The habitat survey was performed to determine whether or not the wetland is a potential bog turtle habitat, and to understand what (i.e., Phase 2, education, etc.), if anything, will need to be considered as part of the remedial plan for the wetland.
June 2020 - Present	TRC prepared a Remedial System Optimization (RSO) Report, summarizing the investigations performed to date, documenting the nature and extent of contamination in the wetland area north and east of the capped landfill, and evaluating remedial options for consideration in addressing the issues. TRC also began preparation of a Remedial Design package for the selected remedy (excavation and offsite disposal).

CUSTODIAL RECORD/PERTINENT SITE DOCUMENTS
New York State Department of Environmental Conservation
Cross-County Sanitary – Kessman Landfill, Site No. 340011
Patterson, New York

Camp, Dresser, and McKee, Inc., *Phase I Environmental Site Assessment (Phase 1 ESA)*, Cross County Sanitary - Kessman Landfill Site, 1983

Wehran Engineering, P.C., *Phase II Environmental Site Investigation (Phase II ESI)*, Cross County Sanitary - Kessman Landfill Site, 1985

EC Jordan Co., *Remedial Investigation / Feasibility Study Health and Safety Plan, Part II,* Kessman Landfill Site, August 1991

EC Jordan Co., *Final Remedial Investigation / Feasibility Study Quality Assurance Project Plan*, Kessman Landfill Site, November 1991

ABB Environmental Services, *Final Remedial Investigation / Feasibility Study Work Plan*, Kessman / Cross County Sanitation Landfill Site, November 1991

ABB Environmental Services, *Remedial Investigation Report – Volume I and II*, Kessman / Cross County Sanitation Landfill Site, November 1992

ABB Environmental Services, *Phase I Feasibility Study Report*, Kessman / Cross County Sanitation Landfill Site, December 1992

ABB Environmental Services, *Phase II Feasibility Study Report*, Kessman / Cross County Sanitation Landfill Site, January 1993

ABB Environmental Services, *Phase II RI Sediment / Surface Water Sampling Data Summary Report*, Kessman / Cross County Sanitation Landfill Site, September 1993

ABB Environmental Services, *Drum Removal IRM Work Plan*, Kessman / Cross County Sanitation Landfill Site, September 1993

NYSDEC, *Proposed Remedial Action Plan,* Kessman / Cross County Sanitation Landfill Site, July 1994

ABB Environmental Services, *Remedial Investigation Report, Volumes I and II*, Kessman / Cross County Sanitation Landfill Site, September 1994

ABB Environmental Services, *Feasibility Study Report*, Kessman / Cross County Sanitation Landfill Site, September 1994

NYSDEC, *Record of Decision (ROD)*, Kessman / Cross County Sanitation Landfill Inactive Hazardous Waste Site, November 1994

ABB Environmental Services, *Final Remedial Design Work Plan,* Kessman / Cross County Sanitation Landfill Site, December 1994

ABB Environmental Services, *Construction Management Work Plan*, Kessman / Cross County Sanitation Landfill Site, August 1995

ABB Environmental Services, *Final Remediation Report, Volumes I and II,* Kessman / Cross County Sanitation Landfill Site, July 1997

Iyer Environmental Group, PLLC, *Operation, Maintenance and Monitoring (OM&M) Report*, Cross County Sanitation / Kessman Landfill, Site No. 340011, March 2005

Iyer Environmental Group, PLLC, *OM&M Report (2005 – 2007)*, Cross County Sanitation / Kessman Landfill, Site No. 340011, November 2007

NYSDEC, *Site Management Plan (SMP)*, Cross County Sanitation - Kessman Landfill, June 2011

Aztech Technologies, Inc., *PCB Delineation Sampling Report*, Cross County / Kessman Landfill, Site No. 340011, January 2013

Aztech Technologies, Inc., *Site Management Plan (Rev. 1)*, Cross County Sanitary – Kessman Landfill, NYSDEC Site Number: 3-40-011, January 2014

NYSDEC, *Environmental Easement*, Site No. 340011(e), May 2014

NYSDEC, *Environmental Easement*, Site No. 340011(e1), August 2014

New York State Department of Environmental Conservation
Cross County Sanitary - Kessman Landfill Site — Site No. 340011
Town of Patterson, New York
Monitoring Well Construction Summary

Well ID	Well Diameter (inches)[3]	Well Material[3]	Well Depth (ft btoc)[2]	Screened Formation	*Screen* Top (ft btoc)[5]	*Screen* Bottom (ft btoc)[2]	*Screen* Length (ft)[4]	DTW (ft btoc)[2]	*Elevation (feet AMSL)* Top of Casing[1]	*Elevation (feet AMSL)* Ground Surface[1]	*Elevation (feet AMSL)* Groundwater Elevation[1]	*Elevation (feet AMSL)* Screen Top	*Elevation (feet AMSL)* Screen Bottom	*Location*[1] Northing (feet)	*Location*[1] Easting (feet)
MW-01A	2	PVC	60.90	Overburden	53.40	60.90	7.50	13.60	462.57	460.20	448.97	409.17	401.67	971,712.7	735,779.7
MW-01B	2	PVC	23.62	Overburden	15.12	23.62	8.50	9.06	462.28	460.00	453.22	447.16	438.66	971,723.3	735,778.6
MW-03A	2	PVC	41.15	Overburden	25.65	41.15	15.50	2.83	433.70	431.20	430.87	408.05	392.55	971,325.3	736,514.0
MW-03B	4	PVC	31.28	Overburden	23.78	31.28	7.50	3.69	435.12	431.50	431.43	411.34	403.84	971,321.5	736,501.7
MW-05A	2	PVC	70.80	Overburden	62.80	70.80	8.00	3.10	432.88	430.60	429.78	370.08	362.08	972,198.8	736,440.2
MW-05B	2	PVC	30.25	Overburden	21.25	30.25	9.00	2.63	433.40	430.30	430.77	412.15	403.15	972,192.0	736,453.1
MW-20A	4	PVC	39.95	Overburden	30.95	39.95	9.00	2.17	430.37	430.50	428.20	399.42	390.42	971,857.3	736,631.5
MW-20B	2	PVC	19.75	Overburden	10.75	19.75	9.00	3.39	430.22	430.20	426.83	419.47	410.47	971,866.0	736,627.9

Notes

AMSL : above mean sea level
ft btoc : feet below Top of Casing
DTW : Depth to Water
PVC : polyvinyl chloride

1 : based on July 2020 Survey Data
2 : based on June 15-17, 2020 Groundwater Sampling Forms
3 : based on June 1, 2020 Well Inspection Form Data
4 : based on 2014 SMP
5 : calculated value (Well Depth - Screen Length)

Appendix B

Site Inspection Form and Photographic Log – June 2020

TRC		**DATE:** Monday, June 1, 2020
		REPORT NO.: 060120
		PAGE NO.: 1 of 2
		PROJECT NO.: 387570.0000.0000
		LOGBOOK NO.: -- **PAGES:** -- to --

DAILY FIELD ACTIVITY REPORT

PROJECT Cross County Sanitary-Kessman Landfill

LOCATION Patterson, New York

ATTACHMENTS Photo Log, Well Inspection Forms

WEATHER	TIME	TEMP.	PRECIP.	WIND (MPH)	WIND (DIR)
Cloudy	1030	57°F	None	0-10	WNW
Partly Cloudy	1400	63°F	None	0-10	W

SITE CONDITIONS: Mostly Dry

WORK GOAL FOR DAY: Site Inspection

PERSONNEL ON SITE:

NAME	AFFILIATION	ARRIVAL TIME	DEPART TIME
Nathaniel Peterson	TRC Engineers, Inc.	900	1430

EQUIPMENT ON SITE:

TYPE	MODEL	TYPE	MODEL
Not Applicable	Not Applicable	Not Applicable	Not Applicable

HEALTH & SAFETY:

PPE REQUIRED: ☒ LEVEL D ☐ LEVEL C ☐ LEVEL B ☐ LEVEL A **HASP?** YES

SITE SAFETY OFFICER: Steve Johansson

H & S NOTES: Site work performed in Level D PPE

TRC		**DATE:** Monday, June 1, 2019
		REPORT NO.: 060120
		PAGE NO.: 2 of 2
		PROJECT NO.: 387570.0000.0000
		LOGBOOK NO.: -- **PAGES:** -- to --

DAILY FIELD ACTIVITY REPORT

DESCRIPTION OF WORK PERFORMED AND OBSERVED

TRC Engineers, Inc. (TRC) conducted a semiannual inspection of Cross County Sanitary Kessman Landfill (Site) located along Cornwall Hill Road, in Patterson, NY on Monday, June 1, 2019. The objective of the site inspection was to document conditions of the landfill cap, drainage swales, monitoring wells, gas vents, constructed wetland area, access roads, and fence lines.

The landfill inspection included walking the perimeter of the landfill, random areas of the landfill slope and the top of the landfill. The landfill cap was dry and the soil stable, meaning no visible erosion, cracks, settlement or seeps were observed. The landfill cap is intact and in good condition. No animals or animal burrows were observed at the time of the inspection.

Vegetation on the cap is well-established and appears to be healthy. No woody-stemmed plants or other vegetation that could puncture the landfill cap were observed. The cap appears to have been mowed recently.

The landfill gas venting system was inspected for signs of damage during the site inspection. The inspection was limited to visible portions of the system and the ground surface above the gas collection system to check for evidence of settlement that could affect the gas collection piping. No gas odors or problems related to the gas venting system were observed during the site inspection.

Site access road leading from the front gate to the landfill cap was wet and muddy, with ruts beginning to form after vehicles were driven on to the Site. While this did not cause any issues accessing the site at the time, some work on the road may be necessary in the future to ensure site access is not impeded. No signs of erosion were observed along the road in this area.

Groundwater monitoring wells at the Site are in good condition. Each monitoring well's condition was inspected (refer to Well Inspection Form). Wells were all in good condition with locks and caps in place.

The exterior fence is in good condition and the gate was secure upon arrival at the Site. The interior fence is also in good condition, except for one broken section on the north end of the Site (see Photolog). The condition of the exterior fence will continue to be monitored and repairs will be made to the fence as needed.

The mitigated wetland appears to be functioning well, as designed and, at this point, does not require any spraying to address invasive species.

PREPARED BY (OBSERVER):	**REVIEWED BY:**
PRINT NAME: Nathaniel Peterson	**PRINT NAME:** Kevin Sullivan

NYSDEC Cross-County Sanitary – Kessman Landfill
Photograph Log
Date: June 1, 2020

Photo 1: View of the entrance to the site, the gate was locked and secure upon arrival at the Site

Photo 2: View of the Leachate Collection System Sump Manhole

Photo 3: View of the southern wetland area

Photo 4: View of the location of the location of CCSK-MW-3A and 3B

Photo 5: View of the southeastern portion of the landfill cap.

Photo 6: View of the southwestern portion of the landfill cap

NYSDEC Cross-County Sanitary – Kessman Landfill
Photograph Log
Date: June 1, 2020

Photo 7: View of CCSK-MW-3A

Photo 8: View of CCSK-MW-3B

Photo 9: View of CCSK-MW-20A and 20B with northeastern wetland area in the background

Photo 10: View of the gate that provides access to CCSK-MW-5A and 5B

Photo 11: View of the landfill cap and gas vents looking south

Photo 12: View of CCSK-MW-5A

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	TRC
387570.0000	Nathaniel Peterson	2 of 2	NYSDEC	Cross-County Sanitary – Kessman Landfill Site, Patterson, NY	

New York State Department of Environmental Conservation
Cross County Sanitary - Kessman Landfill Site — Site No. 340011
Town of Patterson, New York
Monitoring Well Inspection Form

INSPECTOR: N. Peterson
DATE: 6/15/2020
WELL ID: CCSK-MW-01A

	YES	NO
WELL VISIBLE? (If not, provided directions below) ……..	X	
WELL I.D. APPEARS ON PROTECTIVE CASING OR WELL: ……..		X
WELL LOCATTIONS MATCH SITE MAP? (If not, sketch actual location on back) ……..	X	

	YES	NO
SURFACE SEAL PRESENT? ……	X	
SURFACE SEAL COMPETENT? (if cracked, heaved, etc., describe below) ……..	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below) ……..	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED ……	0.0 PPM
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ……..	Stick-up / 2.0
PROTECTIVE CASING MATERIAL TYPE: ……..	Steel
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): ……	6 - inches

	YES	NO
LOCK PRESENT? ……..	X	
LOCK FUNCTIONAL? ……..	X	
DID YOU REPLACE THE LOCK? ……		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE-CASED? (If yes, describe below) ……..		X
WELL MEASURING POINT VISIBLE? ……..	X	

WELL DEPTH FROM MEASURING POINT (Feet): ……..	60.9
DEPTH OF WATER FROM MEASURING POINT (Feet):……..	12.85
WELL DIAMETER (Inches): ……..	2 - inches
WELL CASING MATERIAL: ……	PVC
PHYSICAL CONDITION OF VISIBLE WELL CASING: ……	Good
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ……	Will place ID tags next inspection
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ……	NA

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.
The well is located down the path to the left of the main enterence to the Site. It is partially obscured by bushes to on the right side of the path as you walk towards the houses north of the Site enterence.

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.
Located in some brush and bushes in a partially wooded area.

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):
Near a residential house.

REMARKS:
Bushes should be trimmed before next inspection.

New York State Department of Environmental Conservation
Cross County Sanitary - Kessman Landfill Site — Site No. 340011
Town of Patterson, New York
Monitoring Well Inspection Form

INSPECTOR: N. Peterson
DATE: 6/15/2020
WELL ID: CCSK-MW-01B

	YES	NO
WELL VISIBLE? (If not, provided directions below) ……..	X	
WELL I.D. APPEARS ON PROTECTIVE CASING OR WELL: ……..		X
WELL LOCATTIONS MATCH SITE MAP? (If not, sketch actual location on back) ……..	X	

	YES	NO
SURFACE SEAL PRESENT? ……	X	
SURFACE SEAL COMPETENT? (if cracked, heaved, etc., describe below) ……..	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below) ……..	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED ……	0.0 PPM
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ……..	Stick-up / 1.94
PROTECTIVE CASING MATERIAL TYPE: ……..	Steel
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): ……	6 - inches

	YES	NO
LOCK PRESENT? ……..	X	
LOCK FUNCTIONAL? ……..	X	
DID YOU REPLACE THE LOCK? ……		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE-CASED? (If yes, describe below) ……..		X
WELL MEASURING POINT VISIBLE? ……..	X	

WELL DEPTH FROM MEASURING POINT (Feet): ……..	23.62
DEPTH OF WATER FROM MEASURING POINT (Feet):……..	8.88
WELL DIAMETER (Inches): ……..	2 - inches
WELL CASING MATERIAL: ……	PVC
PHYSICAL CONDITION OF VISIBLE WELL CASING: ……	Good
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ……	Will place ID tags next inspection
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ……	NA

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.
The well is located down the path to the left of the main enterence to the Site. It is partially obscured by bushes to on the right side of the path as you walk towards the houses north of the Site enterence.

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.
Located in some brush and bushes in a partially wooded area.

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):
Near a residential house.

REMARKS:
Bushes should be trimmed before next inspection.

New York State Department of Environmental Conservation
Cross County Sanitary - Kessman Landfill Site — Site No. 340011
Town of Patterson, New York
Monitoring Well Inspection Form

INSPECTOR: N. Peterson
DATE: 6/15/2020
WELL ID: CCSK-MW-03A

	YES	NO
WELL VISIBLE? (If not, provided directions below) ……..	X	
WELL I.D. APPEARS ON PROTECTIVE CASING OR WELL: ……..		X
WELL LOCATTIONS MATCH SITE MAP? (If not, sketch actual location on back) ……..	X	

	YES	NO
SURFACE SEAL PRESENT? ……	X	
SURFACE SEAL COMPETENT? (if cracked, heaved, etc., describe below) ……..	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below) ……..	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED ……	0.0 PPM
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ……..	Stick-up / 2.83
PROTECTIVE CASING MATERIAL TYPE: ……..	Steel
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): ……	6 - inches

	YES	NO
LOCK PRESENT? ……..	X	
LOCK FUNCTIONAL? ……..	X	
DID YOU REPLACE THE LOCK? ……		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE-CASED? (If yes, describe below) ……..		X
WELL MEASURING POINT VISIBLE? ……..	X	

WELL DEPTH FROM MEASURING POINT (Feet): ……..	41.15
DEPTH OF WATER FROM MEASURING POINT (Feet):……..	3.65
WELL DIAMETER (Inches): ……..	2 - inches
WELL CASING MATERIAL: ……	PVC
PHYSICAL CONDITION OF VISIBLE WELL CASING: ……	Good
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ……	Will place ID tags next inspection
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ……	NA

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.
Well is located along the southern perimeter fence.

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.
Located in brush.

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):
Business with equipment located to the south.

REMARKS:
None

New York State Department of Environmental Conservation
Cross County Sanitary - Kessman Landfill Site — Site No. 340011
Town of Patterson, New York
Monitoring Well Inspection Form

INSPECTOR: N. Peterson
DATE: 6/15/2020
WELL ID: CCSK-MW-03B

	YES	NO
WELL VISIBLE? (If not, provided directions below) ……..	X	
WELL I.D. APPEARS ON PROTECTIVE CASING OR WELL: ……..		X
WELL LOCATTIONS MATCH SITE MAP? (If not, sketch actual location on back) ……..	X	

	YES	NO
SURFACE SEAL PRESENT? ……	X	
SURFACE SEAL COMPETENT? (if cracked, heaved, etc., describe below) ……..	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below) ……..	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED ……	0.0 PPM
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ……..	Stick-up / 3.1
PROTECTIVE CASING MATERIAL TYPE: ……..	Steel
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): ……	6 - inches

	YES	NO
LOCK PRESENT? ……..	X	
LOCK FUNCTIONAL? ……..	X	
DID YOU REPLACE THE LOCK? ……		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE-CASED? (If yes, describe below) ……..		X
WELL MEASURING POINT VISIBLE? ……..	X	

WELL DEPTH FROM MEASURING POINT (Feet): ……..	31.28
DEPTH OF WATER FROM MEASURING POINT (Feet):……..	3.69
WELL DIAMETER (Inches): ……..	4 - inches
WELL CASING MATERIAL: ……	PVC
PHYSICAL CONDITION OF VISIBLE WELL CASING: ……	Good
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ……	Will place ID tags next inspection
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ……	NA

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.
Well is located along the southern perimeter fence.

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.
Located in brush.

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):
Business with equipment located to the south.

REMARKS:
None

New York State Department of Environmental Conservation
Cross County Sanitary - Kessman Landfill Site — Site No. 340011
Town of Patterson, New York
Monitoring Well Inspection Form

INSPECTOR: N. Peterson
DATE: 6/15/2020
WELL ID: CCSK-MW-05A

	YES	NO
WELL VISIBLE? (If not, provided directions below) ……..	X	
WELL I.D. APPEARS ON PROTECTIVE CASING OR WELL: ……..		X
WELL LOCATTIONS MATCH SITE MAP? (If not, sketch actual location on back) ……..	X	

	YES	NO
SURFACE SEAL PRESENT? ……	X	
SURFACE SEAL COMPETENT? (if cracked, heaved, etc., describe below) ……..	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below) ……..	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED ……	0.0 PPM
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ……..	Stick-up / 2.46
PROTECTIVE CASING MATERIAL TYPE: ……..	Steel
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): ……	6 - inches

	YES	NO
LOCK PRESENT? ……..	X	
LOCK FUNCTIONAL? ……..	X	
DID YOU REPLACE THE LOCK? ……		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE-CASED? (If yes, describe below) ……..		X
WELL MEASURING POINT VISIBLE? ……..	X	

WELL DEPTH FROM MEASURING POINT (Feet): ……..	70.8
DEPTH OF WATER FROM MEASURING POINT (Feet):……..	2.49
WELL DIAMETER (Inches): ……..	2 - inches
WELL CASING MATERIAL: ……	PVC
PHYSICAL CONDITION OF VISIBLE WELL CASING: ……	Good
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ……	Will place ID tags next inspection
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ……	NA

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.
Well is located outside the perimeter fence, throuh a small gate on the northern edge of the site.

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.
Located in brush

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):
None

REMARKS:
None

New York State Department of Environmental Conservation
Cross County Sanitary - Kessman Landfill Site — Site No. 340011
Town of Patterson, New York
Monitoring Well Inspection Form

INSPECTOR: N. Peterson
DATE: 6/15/2020
WELL ID: CCSK-MW-05B

	YES	NO
WELL VISIBLE? (If not, provided directions below) ……..	X	
WELL I.D. APPEARS ON PROTECTIVE CASING OR WELL: ……..		X
WELL LOCATTIONS MATCH SITE MAP? (If not, sketch actual location on back) ……..	X	

	YES	NO
SURFACE SEAL PRESENT? ……	X	
SURFACE SEAL COMPETENT? (if cracked, heaved, etc., describe below) ……..	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below) ……..	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED ……	0.1 PPM
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ……..	Stick-up / 2.60
PROTECTIVE CASING MATERIAL TYPE: ……..	Steel
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): ……	6 - inches

	YES	NO
LOCK PRESENT? ……..	X	
LOCK FUNCTIONAL? ……..	X	
DID YOU REPLACE THE LOCK? ……		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE-CASED? (If yes, describe below) ……..		X
WELL MEASURING POINT VISIBLE? ……..	X	

WELL DEPTH FROM MEASURING POINT (Feet): ……..	30.25
DEPTH OF WATER FROM MEASURING POINT (Feet):……..	3.35
WELL DIAMETER (Inches): ……..	2 - inches
WELL CASING MATERIAL: ……	PVC
PHYSICAL CONDITION OF VISIBLE WELL CASING: ……	Good
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ……	Will place ID tags next inspection
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ……	NA

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.
Well is located outside the perimeter fence, throuh a small gate on the northern edge of the site.

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.
Located in brush

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):
None

REMARKS:
None

New York State Department of Environmental Conservation
Cross County Sanitary - Kessman Landfill Site — Site No. 340011
Town of Patterson, New York
Monitoring Well Inspection Form

INSPECTOR: N. Peterson
DATE: 6/15/2020
WELL ID: CCSK-MW-20A

	YES	NO
WELL VISIBLE? (If not, provided directions below) ……..	X	
WELL I.D. APPEARS ON PROTECTIVE CASING OR WELL: ……..		X
WELL LOCATTIONS MATCH SITE MAP? (If not, sketch actual location on back) ……..	X	

	YES	NO
SURFACE SEAL PRESENT? ……	X	
SURFACE SEAL COMPETENT? (if cracked, heaved, etc., describe below) ……..	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below) ……..	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED ……	0.3 PPM
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ……..	Stick-up / 3.45
PROTECTIVE CASING MATERIAL TYPE: ……..	Steel
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): ……	6 - inches

	YES	NO
LOCK PRESENT? ……..	X	
LOCK FUNCTIONAL? ……..	X	
DID YOU REPLACE THE LOCK? ……		X
IS THERE EVIDENCE THAT THE WELL IS DOUBLE-CASED? (If yes, describe below) ……..		X
WELL MEASURING POINT VISIBLE? ……..	X	

WELL DEPTH FROM MEASURING POINT (Feet): ……..	39.95
DEPTH OF WATER FROM MEASURING POINT (Feet):……..	2.07
WELL DIAMETER (Inches): ……..	4 - inches
WELL CASING MATERIAL: ……	PVC
PHYSICAL CONDITION OF VISIBLE WELL CASING: ……	Good
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ……	Will place ID tags next inspection
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ……	NA

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.
Well is located on the eastern edge of the landfill, between the landfill cap and the wetland.

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.
Located in brush.

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):
None

REMARKS:
Water was above top of casing and no well plug is present. Riser should be added to reach top of casing.

New York State Department of Environmental Conservation
Cross County Sanitary - Kessman Landfill Site — Site No. 340011
Town of Patterson, New York
Monitoring Well Inspection Form

INSPECTOR: N. Peterson
DATE: 6/15/2020
WELL ID: CCSK-MW-20B

	YES	NO
WELL VISIBLE? (If not, provided directions below) ……..	X	
WELL I.D. APPEARS ON PROTECTIVE CASING OR WELL: ……..		X
WELL LOCATTIONS MATCH SITE MAP? (If not, sketch actual location on back) ……..	X	

	YES	NO
SURFACE SEAL PRESENT? ……	X	
SURFACE SEAL COMPETENT? (if cracked, heaved, etc., describe below) ……..	X	
PROTECTIVE CASING IN GOOD CONDITION? (If damaged, describe below) ……..	X	

HEADSPACE READING (ppm) AND INSTRUMENT USED ……	0.0 PPM
TYPE OF PROTECTIVE CASING AND HEIGHT OF STICKUP IN FEET (If applicable) ……..	Stick-up / 3.35
PROTECTIVE CASING MATERIAL TYPE: ……..	Steel
MEASURE PROTECTIVE CASING INSIDE DIAMETER (Inches): ……	6 - inches

	YES	NO
LOCK PRESENT? ……..	X	
LOCK FUNCTIONAL? ……..	X	
DID YOU REPLACE THE LOCK? ……		X
IS THER EVIDENCE THAT THE WELL IS DOUBLE-CASED? (If yes, describe below) ……..		X
WELL MEASURING POINT VISIBLE? ……..	X	

WELL DEPTH FROM MEASURING POINT (Feet): ……..	19.75
DEPTH OF WATER FROM MEASURING POINT (Feet):……..	3.35
WELL DIAMETER (Inches): ……..	2 - inches
WELL CASING MATERIAL: ……	PVC
PHYSICAL CONDITION OF VISIBLE WELL CASING: ……	Good
ATTACH ID MARKER (if well ID is confirmed) and IDENTIFY MARKER TYPE ……	Will place ID tags next inspection
PROXIMITY TO UNDERGROUND OR OVERHEAD UTILITIES ……	NA

DESCRIBE ACCESS TO WELL: (Include accessibility to truck mounted rig, natural obstructions, overhead power lines, proximity to permanent structures, etc.); ADD SKETCH OF LOCATION ON BACK, IF NECESSARY.
Well is located on the eastern edge of the landfill, between the landfill cap and the wetland.

DESCRIBE WELL SETTING (For example, located in a field, in a playground, on pavement, in a garden, etc.) AND ASSESS THE TYPE OF RESTORATION REQUIRED.
Located in brush

IDENTIFY ANY NEARBY POTENTIAL SOURCES OF CONTAMINATION, IF PRESENT (e.g. Gas station, salt pile, etc.):
None

REMARKS:
Water was above top of casing and no well plug is present. Riser should be added to reach top of casing.

Appendix C

Groundwater Sampling Logs – June 15th through 17th, 2020

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Cross County Sanitary - Kessman Landfill	LOCATION ID: CCSK-MW-3B; DATE: 6/15/2020
PROJECT NUMBER: 387570.0000.0000	START TIME: 13:58; END TIME: 16:30
SAMPLE ID: CCSK-MW-03B + MS/MSD; SAMPLE TIME: 1435	SITE NAME/NUMBER: 340011; PAGE: 1 OF 1

WELL DIAMETER (INCHES): ☐ 1 ☐ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES): ☑ 1/8 ☐ 1/4 ☒ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☐ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	3.69 FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	31.29 FT	SCREEN LENGTH	FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	FT	DRAWDOWN VOLUME (final DTW - initial DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1358	BEGIN PURGING									
1400	5.63	300	12.56	12.0	6.99	2.34	12.3	-88	25	clear, no odor
1407	6.40	300	12.15	11.9	6.93	1.65	11.9	-99	25	SAA
1410	6.55	300	12.11	11.8	6.94	1.52	13.8	-101	25	SAA
1415	6.78	300	12.02	~~11.0~~ 11.9	6.93	1.42	14.0	-102	25	SAA
1420	6.80	300	12.14	11.8	6.92	1.30	12.6	-103	25	SAA
1425	6.80	300	12.13	11.8	6.94	1.21	6.9	-106	25	SAA

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

12.13	11.8	6.94	1.21	6.9	-106	

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☑ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ BLADDER
- ☐ WATTERA
- ☐ OTHER
- ☐ OTHER

DECON FLUIDS USED
- ☐ LIQUINOX
- ☑ DEIONIZED WATER
- ☐ POTABLE WATER
- ☐ NITRIC ACID
- ☐ HEXANE
- ☐ METHANOL
- ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS
- ☐ SILICON TUBING
- ☐ TEFLON TUBING
- ☐ TEFLON LINED TUBING
- ☑ HDPE TUBING
- ☐ LDPE TUBING
- ☐ OTHER
- ☐ OTHER
- ☐ S. STEEL PUMP MATERIAL
- ☐ PVC PUMP MATERIAL
- ☐ GEOPROBE SCREEN
- ☐ TEFLON BLADDER
- ☐ OTHER
- ☐ OTHER
- ☐ OTHER

EQUIPMENT USED
- ☐ WL METER
- ☐ PID
- ☐ WQ METER
- ☐ TURB. METER
- ☐ PUMP
- ☐ OTHER
- ☐ FILTERS NO. ___ TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	See Chain of Custody							

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	☐	☐
NO-PURGE METHOD UTILIZED	☐	☐

NUMBER OF GALLONS GENERATED

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature: Lexi Lill Print Name: Lexie Lill

Checked By: Date: 6/15/20

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Cross County Sanitary - Kessman Landfill
PROJECT NUMBER	387570.0000.0000
SAMPLE ID	CCSK-MW-01BR
SAMPLE TIME	1020
LOCATION ID	CCSK-MW-01BR
DATE	6/16/20
START TIME	9:43 AM
END TIME	10:45 am
SITE NAME/NUMBER	340011
PAGE	1 OF 1

WELL DIAMETER (INCHES): ☐ 1 ☐ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES): ☑ 1/8 ☐ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☐ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	9.06 FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	23.62 FT	SCREEN LENGTH	FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	FT	DRAWDOWN VOLUME (final DTW - initial DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
9:43	BEGIN PURGING									
9:55	10.09	250	12.04	1.17	7.73	3.56	0.0	144	17	clear, no odor
1000	10.42	250	11.88	1.08	7.66	3.05	0.0	152	17	SAA
1005	10.44	250	11.87	1.07	7.71	2.99	0.0	150	17	SAA
1010	10.47	250	11.91	1.06	7.74	2.95	0.0	152	17	SAA

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	11.91	1.06	7.74	2.95	0.0	152

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☑ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ BLADDER
- ☐ WATTERA
- ☐ OTHER
- ☐ OTHER

DECON FLUIDS USED
- ☐ LIQUINOX
- ☑ DEIONIZED WATER
- ☐ POTABLE WATER
- ☐ NITRIC ACID
- ☐ HEXANE
- ☐ METHANOL
- ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS
- ☐ SILICON TUBING
- ☐ TEFLON TUBING
- ☐ TEFLON LINED TUBING
- ☑ HDPE TUBING
- ☐ LDPE TUBING
- ☐ OTHER
- ☐ OTHER
- ☐ S. STEEL PUMP MATERIAL
- ☐ PVC PUMP MATERIAL
- ☐ GEOPROBE SCREEN
- ☐ TEFLON BLADDER
- ☐ OTHER
- ☐ OTHER
- ☐ OTHER

EQUIPMENT USED
- ☐ WL METER
- ☐ PID
- ☐ WQ METER
- ☐ TURB. METER
- ☐ PUMP
- ☐ OTHER
- ☐ FILTERS NO. ___ TYPE

ANALYTICAL PARAMETERS

X	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	See Chain of Custody							

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	☐	☐
NO-PURGE METHOD UTILIZED	☐	☐

NUMBER OF GALLONS GENERATED

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature: Lexie Lill Print Name: Lexie Lill

Checked By: Date: 6/16/20

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME: Cross County Sanitary - Kessman Landfill	LOCATION ID: CCSK-MW-01BA
PROJECT NUMBER: 387570.0000.0000	DATE: 6/16/20
SAMPLE ID: CCSK-MW-01BA	START TIME: 11:00 am
SAMPLE TIME:	END TIME:
	SITE NAME/NUMBER: 340011
	PAGE: 1 OF 2

WELL DIAMETER (INCHES): ☐ 1 ☐ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES): ☑ 1/8 ☐ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☐ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	13.60 FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	60.90 FT	SCREEN LENGTH	FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	FT	DRAWDOWN VOLUME (final DTW - initial DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1055	BEGIN PURGING									
1100	14.40	300	12.52	2.16	7.24	3.45	0.0	184	SS	clear, no odor
1105	15.10	300	12.14	2.33	7.06	3.02	0.0	190	SS	SAA
1110	15.99	300	12.08	2.40	7.03	2.83	0.0	193	SS	SAA
Pump died, restarted purging on purge 2										

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☑ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ BLADDER
- ☐ WATTERA
- ☐ OTHER
- ☐ OTHER

DECON FLUIDS USED
- ☐ LIQUINOX
- ☑ DEIONIZED WATER
- ☐ POTABLE WATER
- ☐ NITRIC ACID
- ☐ HEXANE
- ☐ METHANOL
- ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS
- ☐ SILICON TUBING
- ☐ TEFLON TUBING
- ☐ TEFLON LINED TUBING
- ☑ HDPE TUBING
- ☐ LDPE TUBING
- ☐ OTHER
- ☐ OTHER
- ☐ S. STEEL PUMP MATERIAL
- ☐ PVC PUMP MATERIAL
- ☐ GEOPROBE SCREEN
- ☐ TEFLON BLADDER
- ☐ OTHER
- ☐ OTHER
- ☐ OTHER

EQUIPMENT USED
- ☐ WL METER
- ☐ PID
- ☐ WQ METER
- ☐ TURB. METER
- ☐ PUMP
- ☐ OTHER
- ☐ FILTERS NO. ___ TYPE

ANALYTICAL PARAMETERS

X	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	See Chain of Custody							

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES ☐ NO ☐

NO-PURGE METHOD UTILIZED: YES ☐ NO ☐

NUMBER OF GALLONS GENERATED

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature: Lexie Lill Print Name: Lexie Lill

Checked By: Date: 6/16/20

TRC

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Cross County Sanitary - Kessman Landfill
PROJECT NUMBER	387570.0000.0000
SAMPLE ID	CCSK-MW-01BA
SAMPLE TIME	12:50

LOCATION ID	CCSK-MW-01BA
DATE	6/16/20
START TIME	12:30 pm
END TIME	13:20 pm
SITE NAME/NUMBER	340011
PAGE	2 OF 2

WELL DIAMETER (INCHES): ☐ 1 ☐ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES): ☑ 1/8 ☐ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☐ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	17.52 FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	60.90 FT	SCREEN LENGTH	FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	FT	DRAWDOWN VOLUME (final DTW - initial DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1225	BEGIN PURGING									
1230	17.21	300	13.72	2.46	7.22	4.20	0.0	182	55	Clear, no odor
1235	17.87	300	12.93	2.45	7.08	3.43	0.0	185	55	SAA
1238	18.37	300	12.77	2.45	7.04	3.16	0.0	186	55	SAA
1241	18.87	300	12.84	2.44	7.03	3.02	0.0	185	55	SAA
1244	19.13	300	12.82	2.44	7.03	2.99	0.0	186	55	SAA
1247	19.19	300	12.85	2.44	7.03	3.00	0.0	185	55	SAA

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	12.85	2.44	7.03	3.00	0.0	185

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☑ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ BLADDER
- ☐ WATTERA
- ☐ OTHER
- ☐ OTHER

DECON FLUIDS USED
- ☐ LIQUINOX
- ☑ DEIONIZED WATER
- ☐ POTABLE WATER
- ☐ NITRIC ACID
- ☐ HEXANE
- ☐ METHANOL
- ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS
- ☐ SILICON TUBING
- ☐ TEFLON TUBING
- ☑ TEFLON LINED TUBING
- ☐ HDPE TUBING
- ☐ LDPE TUBING
- ☐ OTHER
- ☐ OTHER

- ☐ S. STEEL PUMP MATERIAL
- ☐ PVC PUMP MATERIAL
- ☐ GEOPROBE SCREEN
- ☐ TEFLON BLADDER
- ☐ OTHER
- ☐ OTHER
- ☐ OTHER

EQUIPMENT USED
- ☐ WL METER
- ☐ PID
- ☐ WQ METER
- ☐ TURB. METER
- ☐ PUMP
- ☐ OTHER
- ☐ FILTERS NO. ___ TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	See Chain of Custody							

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES ☐ NO ☐

NO-PURGE METHOD UTILIZED: YES ☐ NO ☐

NUMBER OF GALLONS GENERATED

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

Sampler Signature: Lexie Lill Print Name: Lexie Lill

Checked By: Date: 6/16/20

TRC

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Cross County Sanitary - Kessman Landfill
PROJECT NUMBER	387570.0000.0000
SAMPLE ID	CCSK-MW-03A
SAMPLE TIME	14:10
LOCATION ID	CCSK-MW-03A
DATE	6/16/2020
START TIME	13:50
END TIME	14:30
SITE NAME/NUMBER	340011
PAGE	1 OF 1

WELL DIAMETER (INCHES): ☐ 1 ☐ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES): ☑ 1/8 ☐ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☐ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	~~3.65~~ 3.83 FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	~~20.50~~ 41.15 FT	SCREEN LENGTH	FT	PID AMBIENT AIR	0.0 PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	FT	DRAWDOWN VOLUME (final DTW - initial DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	0.0 PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1340	BEGIN PURGING									
1350	3.18	350	17.57	13.5	6.97	2.08	4.6	-88	35	Clear, no odor
1355	2.80	350	16.60	13.5	6.93	1.24	0.2	-95	35	SAA
1400	2.57	350	16.45	13.4	6.90	1.02	0.0	-98	35	SAA
1405	2.73	350	16.09	13.5	6.90	0.94	0.0	-100	35	SAA

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	16	13.5	6.9	0.9	0.0	-100

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☑ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ BLADDER
- ☐ WATTERA
- ☐ OTHER
- ☐ OTHER

DECON FLUIDS USED
- ☐ LIQUINOX
- ☑ DEIONIZED WATER
- ☐ POTABLE WATER
- ☐ NITRIC ACID
- ☐ HEXANE
- ☐ METHANOL
- ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS
- ☐ SILICON TUBING
- ☐ TEFLON TUBING
- ☑ TEFLON LINED TUBING
- ☐ HDPE TUBING
- ☐ LDPE TUBING
- ☐ OTHER
- ☐ OTHER
- ☐ S. STEEL PUMP MATERIAL
- ☐ PVC PUMP MATERIAL
- ☐ GEOPROBE SCREEN
- ☐ TEFLON BLADDER
- ☐ OTHER
- ☐ OTHER
- ☐ OTHER

EQUIPMENT USED
- ☐ WL METER
- ☐ PID
- ☐ WQ METER
- ☐ TURB. METER
- ☐ PUMP
- ☐ OTHER
- ☐ FILTERS NO. ___ TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	See Chain of Custody							

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES ☐ NO ☐

NO-PURGE METHOD UTILIZED: YES ☐ NO ☐

NUMBER OF GALLONS GENERATED

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature: Lexie Lill Print Name: Lexie Lill

Checked By: Date: 6/16/20

TRC

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Cross County Sanitary - Kessman Landfill
PROJECT NUMBER	387570.0000.0000
SAMPLE ID	CCSK-MW-20~~A~~B
SAMPLE TIME	1535
LOCATION ID	CCSK-MW-20~~A~~B
DATE	6/16/20
START TIME	1510
END TIME	1600
SITE NAME/NUMBER	340011
PAGE	1 OF 1

WELL DIAMETER (INCHES): ☐ 1 ☐ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER _____

TUBING ID (INCHES): ☑ 1/8 ☐ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER _____

MEASUREMENT POINT (MP): ☐ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER _____

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	3.39 FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	19.75 FT	SCREEN LENGTH	FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	FT	DRAWDOWN VOLUME (final DTW - initial DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1500	BEGIN PURGING									
1510	5.08	400	14.35	1.03	7.31	1.00	33.6	-153	15	Clear, petroleum smell
1515	5.12	400	14.20	0.881	7.30	0.95	41.6	-163	15	SAA
1520	5.18	400	14.01	0.853	7.26	0.70	57.6	-162	15	SAA
1525	5.18	400	13.89	0.842	7.15	0.65	57.9	-159	15	SAA
1530	5.18	400	13.84	0.837	7.17	0.64	56.3	-158	15	SAA
~~1535~~	~~5.18~~	~~400~~							~~15~~	~~SAA~~

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

13.84	0.837	7.17	0.64	56.3	-158	

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☑ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ BLADDER
- ☐ _____
- ☐ WATTERA
- ☐ OTHER _____
- ☐ OTHER _____

DECON FLUIDS USED
- ☐ LIQUINOX
- ☑ DEIONIZED WATER
- ☐ POTABLE WATER
- ☐ NITRIC ACID
- ☐ HEXANE
- ☐ METHANOL
- ☐ OTHER _____

TUBING/PUMP/BLADDER MATERIALS
- ☐ SILICON TUBING
- ☐ TEFLON TUBING
- ☐ TEFLON LINED TUBING
- ☑ HDPE TUBING
- ☐ LDPE TUBING
- ☐ OTHER _____
- ☐ OTHER _____

- ☐ S. STEEL PUMP MATERIAL
- ☐ PVC PUMP MATERIAL
- ☐ GEOPROBE SCREEN
- ☐ TEFLON BLADDER
- ☐ OTHER _____
- ☐ OTHER _____
- ☐ OTHER _____

EQUIPMENT USED
- ☐ WL METER _____
- ☐ PID _____
- ☐ WQ METER _____
- ☐ TURB. METER _____
- ☐ PUMP _____
- ☐ OTHER _____
- ☐ FILTERS NO. ___ TYPE _____

ANALYTICAL PARAMETERS

X	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	See Chain of Custody							

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	☐	☐
NO-PURGE METHOD UTILIZED	☐	☐

NUMBER OF GALLONS GENERATED

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature: Yuri Yim Print Name: Lexie Lill

Checked By: Date: 6/16/20

TRC

LOW FLOW GROUNDWATER SAMPLING RECORD

10 Maxwell Drive, Suite 200, Clifton Park, NY 12065

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Cross County Sanitary - Kessman Landfill
PROJECT NUMBER	387570.0000.0000
SAMPLE ID	CCSK-MW-20BA
SAMPLE TIME	1015
LOCATION ID	CCSK-MW-20BA
DATE	6/17/20
START TIME	9:44
END TIME	10:35
SITE NAME/NUMBER	340011
PAGE	1 OF 1

WELL DIAMETER (INCHES): ☐ 1 ☐ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES): ☑ 1/8 ☐ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☐ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	2.17 FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	39.95 FT	SCREEN LENGTH	FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	FT	DRAWDOWN VOLUME (final DTW - initial DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
944	BEGIN PURGING									
950	2.17	400	14.10	0.864	7.43	0.47	0.0	-147	35	Clear, slight petroleum odor
955	2.17	400	13.82	0.856	7.38	0.29	0.0	-151	35	SAA
1000	2.17	400	13.77	0.853	7.35	0.28	0.0	-151	35	SAA
1005	2.17	400	13.50	0.851	7.33	0.28	0.0	-151	35	SAA
		LY	~~WWWW~~	~~0.878~~						

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	13.56	0.851	7.33	0.28	0.0	-151

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☑ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ BLADDER
- ☐ WATTERA
- ☐ OTHER
- ☐ OTHER

DECON FLUIDS USED
- ☐ LIQUINOX
- ☑ DEIONIZED WATER
- ☐ POTABLE WATER
- ☐ NITRIC ACID
- ☐ HEXANE
- ☐ METHANOL
- ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS
- ☐ SILICON TUBING
- ☐ TEFLON TUBING
- ☐ TEFLON LINED TUBING
- ☑ HDPE TUBING
- ☐ LDPE TUBING
- ☐ OTHER
- ☐ OTHER
- ☐ S. STEEL PUMP MATERIAL
- ☐ PVC PUMP MATERIAL
- ☐ GEOPROBE SCREEN
- ☐ TEFLON BLADDER
- ☐ OTHER
- ☐ OTHER
- ☐ OTHER

EQUIPMENT USED
- ☐ WL METER
- ☐ PID
- ☐ WQ METER
- ☐ TURB. METER
- ☐ PUMP
- ☐ OTHER
- ☐ FILTERS NO. TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	See Chain of Custody							

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: YES ☐ NO ☐

NO-PURGE METHOD UTILIZED: YES ☐ NO ☐

NUMBER OF GALLONS GENERATED

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Water above top of casing at start.

Sampler Signature: Lexie Lin Print Name: Lexie Lin

Checked By: Date: 6/17/20

TRC

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Cross County Sanitary - Kessman Landfill
PROJECT NUMBER	387570.0000.0000
SAMPLE ID	CCSK-MW-05B
SAMPLE TIME	1200
LOCATION ID	CCSK-MW-05B
DATE	6/17/20
START TIME	1108
END TIME	1230
SITE NAME/NUMBER	340011
PAGE	1 OF 1

WELL DIAMETER (INCHES): ☐ 1 ☐ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES): ☑ 1/8 ☐ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☐ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	3.10 FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	10.8 FT	SCREEN LENGTH	FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	FT	DRAWDOWN VOLUME (final DTW - initial DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1108	BEGIN PURGING									
1115	4.65	300	12.34	1.25	6.73	1.14	18.9	-49	25	clear, no odor
1120	4.86	300	12.12	1.24	6.75	1.32	17.1	-56	25	SAA
1125	5.10	300	11.92	1.23	6.66	1.02	21.6	-58	25	SAA
1130	5.25	300	11.92	1.23	6.74	0.86	18.0	-66	25	SAA
1135	5.45	300	11.83	1.24	6.76	0.71	15.9	-68	25	SAA
1140	5.50	300	12.05	1.24	6.81	0.47	14.9	-71	25	SAA
1145	5.50	300	12.19	1.24	6.83	0.34	13.4	-73	25	SAA
1150	5.50	300	12.46	1.25	6.84	0.32	13.3	-74	25	SAA
1155	5.50	300	12.30	1.25	6.84	0.30	14.3	-74	25	SAA

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

Yes	12	1.25	6.8	0.3	14.3	-74

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☑ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ BLADDER
- ☐ WATTERA
- ☐ OTHER
- ☐ OTHER

DECON FLUIDS USED
- ☐ LIQUINOX
- ☑ DEIONIZED WATER
- ☐ POTABLE WATER
- ☐ NITRIC ACID
- ☐ HEXANE
- ☐ METHANOL
- ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS
- ☐ SILICON TUBING
- ☐ TEFLON TUBING
- ☑ TEFLON LINED TUBING
- ☐ HDPE TUBING
- ☐ LDPE TUBING
- ☐ OTHER
- ☐ OTHER
- ☐ S. STEEL PUMP MATERIAL
- ☐ PVC PUMP MATERIAL
- ☐ GEOPROBE SCREEN
- ☐ TEFLON BLADDER
- ☐ OTHER
- ☐ OTHER
- ☐ OTHER

EQUIPMENT USED
- ☐ WL METER
- ☐ PID
- ☐ WQ METER
- ☐ TURB. METER
- ☐ PUMP
- ☐ OTHER
- ☐ FILTERS NO. ___ TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	See Chain of Custody							

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	☐	☐
NO-PURGE METHOD UTILIZED	☐	☐

NUMBER OF GALLONS GENERATED

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

Water has a light pink color in sample bottles

Sampler Signature: Lexi Lill Print Name: Lexi Lill

Checked By: Date: 6/17/20

TRC

LOW FLOW GROUNDWATER SAMPLING RECORD

10 Maxwell Drive, Suite 200, Clifton Park, NY 12065

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Cross County Sanitary - Kessman Landfill
PROJECT NUMBER	387570.0000.0000
SAMPLE ID	CCSk-MW-05A
SAMPLE TIME	1255
LOCATION ID	CCSk-MW-05A
DATE	~~1255~~ 6/17/20
START TIME	1225
END TIME	
SITE NAME/NUMBER	340011
PAGE	1 OF 1

WELL DIAMETER (INCHES) ☐ 1 ☐ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES) ☐ 1/8 ☐ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP) ☐ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	2.63 FT	FINAL DTW (BMP)	FT	PROT. CASING STICKUP (AGS)	FT	TOC/TOR DIFFERENCE	FT
WELL DEPTH (BMP)	30.25 FT	SCREEN LENGTH	FT	PID AMBIENT AIR	PPM	REFILL TIMER SETTING	SEC
WATER COLUMN	FT	DRAWDOWN VOLUME (final DTW - initial DTW X well diam. squared X 0.041)	GAL	PID WELL MOUTH	PPM	DISCHARGE TIMER SETTING	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	GAL	DRAWDOWN/ TOTAL PURGED		PRESSURE TO PUMP	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1225	BEGIN PURGING									
1230	3.30	300	16.16	1.02	6.90	~~2.44~~ 1.39 (NCP)	11.8	-81	55	Clear, no odor
1235	3.39	300	13.07	1.04	6.74	0.90	0.0	-84	SS	SAA
1240	3.43	300	12.95	1.02	6.65	0.64	0.0	-83	SS	SAA
1245	3.43	300	12.66	1.01	6.57	0.53	0.0	-79	SS	SAA
1250	3.43	300	12.46	1.01	6.56	0.51	0.0	-79	SS	SAA

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	12	1.01	6.6	0.5	0.0	-79

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☑ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ BLADDER
- ☐ WATTERA
- ☐ OTHER
- ☐ OTHER

DECON FLUIDS USED
- ☐ LIQUINOX
- ☑ DEIONIZED WATER
- ☐ POTABLE WATER
- ☐ NITRIC ACID
- ☐ HEXANE
- ☐ METHANOL
- ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS
- ☐ SILICON TUBING
- ☐ TEFLON TUBING
- ☐ TEFLON LINED TUBING
- ☑ HDPE TUBING
- ☐ LDPE TUBING
- ☐ OTHER
- ☐ OTHER

- ☐ S. STEEL PUMP MATERIAL
- ☐ PVC PUMP MATERIAL
- ☐ GEOPROBE SCREEN
- ☐ TEFLON BLADDER
- ☐ OTHER
- ☐ OTHER
- ☐ OTHER

EQUIPMENT USED
- ☐ WL METER
- ☐ PID
- ☐ WQ METER
- ☐ TURB. METER
- ☐ PUMP
- ☐ OTHER
- ☐ FILTERS NO. TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
X	See Chain of Custody							

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED ☐ YES ☐ NO

NO-PURGE METHOD UTILIZED ☐ YES ☐ NO

NUMBER OF GALLONS GENERATED

If yes, purged approximately 1 standing volume prior to sampling or _____ mL for this sample location.

SKETCH/NOTES

Sampler Signature: Lexie Lill Print Name Lexie Lill

Checked By: Date: 6/17/20

TRC

Appendix D

Data Usability Summary Reports – Groundwater, June 2020

Data Usability Summary Report

Site:	Cross County Sanitary – Kessman Landfill
Laboratory:	ALS Environmental – Rochester, NY and Holland, MI
SDG:	R2005213
Parameters:	Volatile Organic Compounds (VOCs), Semivolatile Organic Compounds (SVOCs), and Polychlorinated Biphenyl (PCB) Aroclors
Data Reviewer:	Kristen Morin/TRC
Peer Reviewer:	Elizabeth Denly/TRC
Date:	September 9, 2020

Samples Reviewed and Evaluation Summary

8 Groundwater Samples: CCSK-MW-01A, CCSK-MW-01B, CCSK-MW-03A, CCSK-MW-03B, CCSK-MW-05A, CCSK-MW-05B, CCSK-MW-20A, CCSK-MW-20B

The above-listed samples were collected on June 15-17, 2020 and were analyzed for the following parameters:

- VOCs by SW-846 Method 8260C
- SVOCs by SW-846 Method 8270D
- PCB Aroclors by SW-846 Method 8082A

The data validation was performed in accordance with *USEPA National Functional Guidelines for Organic Superfund Methods Data Review (EPA-540-R-2017-002),* January 2017, modified for the SW-846 methodologies utilized.

The data were evaluated based on the following parameters:

	• Overall Evaluation of Data and Potential Usability Issues
	• Data Completeness
	• Holding Times and Sample Preservation
*	• Gas Chromatography/Mass Spectrometry (GC/MS) Tunes
	• Initial and Continuing Calibrations
	• Blanks
*	• Surrogate Recoveries
	• Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Results
	• Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
*	• Internal Standards
NA	• Field Duplicate Results
	• Sample Results and Reported Quantitation Limits (QLs)
*	• Target Compound Identification

*	-	All criteria were met.
NA	-	A field duplicate pair was not associated with this sample set.

Overall Evaluation of Data and Potential Usability Issues

All results are usable for project objectives with the exception of the nondetect results for 1,4-dioxane analyzed by method SW-846 Method 8260C in all samples in this data set. Since these samples were

also analyzed for 1,4-dioxane by SW-846 Method 8270D with selective ion monitoring (SIM) with acceptable results, there was no adverse effect on the achievement of project objectives due to this issue. Qualifications applied to the data as a result of sampling error are discussed below.

- The positive and nondetect results for all VOCs in samples CCSK-MW-01A, CCSK-MW-03B, and CCSK-MW-20B were qualified as estimated (J-/UJ) with a potential low bias due to the presence of headspace in the sample vials. However, select positive results in samples CCSK-MW-03B and CCSK-MW-20B were also qualified as estimated (J) by the laboratory due to detection below the lowest calibration stand and QL; thus, the overall qualification was J for these compounds. These results can be used for project objectives as estimated values and as nondetects with estimated QLs, which may have a minor impact on the data usability.

Qualifications applied to the data as a result of analytical error are discussed below.

- Potential uncertainty exists for select VOCs results that were below the lowest calibration standard and QL. These results were qualified as estimated (J) in the associated samples. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

- The nondetect results for 1,4-dioxane analyzed by method SW-846 Method 8260C in all samples in this data set were rejected (R) due to low relative response factors (RRFs) in initial and continuing calibrations. These results are not usable for project objectives which may have a major impact on the data usability.

- The positive results for chloromethane in all samples in this data set except CCSK MW-03B were qualified as nondetect (U) at the QL due to method blank contamination. These results can be used for project objectives as nondetects, which may have a minor impact on the data usability.

- The nondetect results for 1,1,2,2-tetrachloroethane and bromomethane in all samples in this data set except CCSK MW-03B were qualified as estimated (UJ) due to continuing calibration nonconformances. These results can be used for project objectives as nondetects with estimated QLs, which may have a minor impact on the data usability.

Data Completeness

The data package was a complete Level IV data deliverable package with one exception. A discrepancy was noted with the relative and raw abundances for the VOC GC/MS tune analyzed on 6/25/20. The laboratory was contacted during validation and provided a response to this issue. Due to laboratory error, the raw data associated with this tune file was lost but the correct values were reported in the laboratory's computer system and on the summary form. Since the relative and raw abundances reported on both the raw data and summary form were within acceptance criteria, no validation actions were taken on this basis.

The following issues were noted regarding sample receipt:

- Pesticides and GC VOCs were requested on the chain-of-custody (COC) but were not reported by the laboratory. The project manager was contacted during validation and verified that the laboratory was instructed not to analyze these parameters.

- 1,4-Dioxane analyses were requested via method 8270D using SIM on the COC. However,

the 1,4-dioxane analyses were performed using method 8260C and 8270D SIM. The project manager was contacted during validation and verified that the laboratory was instructed to also analyze 1,4-dioxane via method 8260C.

Holding Times and Sample Preservation

All holding time and sample preservation method criteria were met for the VOC, SVOC, and PCB analyses with the following exceptions.

The laboratory noted that all three vials for samples CCSK-MW-01A, CCSK-MW-03B, and CCSK-MW-20B were received with headspace. Therefore, the positive and nondetect results for all VOCs in these samples were qualified as estimated (J-/UJ) with a potential low bias. However, select positive results in samples CCSK-MW-03B and CCSK-MW-20B were also qualified as estimated (J) by the laboratory due to detection below the lowest calibration stand and QL; thus, the overall qualification was J for these compounds.

The laboratory noted that one of the three vials for sample CCSK-MW-01B was received with headspace. No validation actions were taken on the basis of this issue since the analysis of this sample was performed from an acceptable vial without headspace.

GC/MS Tunes

All criteria were met in the VOC and SVOC analyses.

Initial and Continuing Calibrations

VOCs

All percent relative standard deviations (%RSDs) and coefficients of determination (COD) were within the acceptance criteria in the initial calibrations (ICs) associated with the samples in this data set.

The following table summarizes the RRFs that did not meet the method acceptance criteria in the ICs associated with the samples in this data set.

IC	Compound	RRF	Validation Actions
R-MS-10 6/17/20	1,4-Dioxane	0.007376	The nondetect result for 1,4-dioxane was rejected (R) in the associated sample.
Associated sample: CCSK-MW-03B			
R-MS-14 6/12/20	1,4-Dioxane	0.006913	The nondetect results for 1,4-dioxane were rejected (R) in the associated samples.
Associated samples: CCSK-MW-01A, CCSK-MW-01B, CCSK-MW-03A, CCSK-MW-05A, CCSK-MW-05B, CCSK-MW-20A, CCSK-MW-20B			

The following table summarizes the percent differences (%Ds) or drifts and RRFs that did not meet the method acceptance criteria in the continuing calibration (CC) standards associated with the samples in this data set.

CC	Compound	RRF	%D	Validation Actions
R-MS-14 6/23/20	1,4-Dioxane	0.0072	-	The nondetect results were for 1,4-dioxane was rejected (R) in the associated samples.
	1,1,2,2-Tetrachloroethane	-	20.6	The nondetect results for 1,1,2,2-tetrachloroethane and bromomethane were qualified as estimated (UJ) in the associated samples.
	Bromomethane	-	-34.3	
Associated samples: CCSK-MW-01A, CCSK-MW-01B, CCSK-MW-03A, CCSK-MW-05A, CCSK-MW-05B, CCSK-MW-20A, CCSK-MW-20B				
R-MS-10 6/25/20	1,4-Dioxane	0.0071	-	The nondetect result for 1,4-dioxane was rejected (R) in the associated sample.
Associated sample: CCSK-MW-03B				
-: Met criteria				

SVOCs

All %RSDs, CODs, and RRFs were within the method acceptance criteria in the IC associated with the samples in this data set. The %Ds were within the method acceptance criteria in the CC standard associated with the samples in this data set.

PCBs

All %RSDs were within the method acceptance criteria for the target analytes in the PCB ICs associated with the samples in this data set. The %Ds of all PCB Aroclors were within the acceptance criteria in the CC standards associated with the samples in this data set.

Blanks

There were no target compounds detected in the method blanks associated with this sample set for SVOC and PCB analyses.

The following table summarizes the VOCs detected in the laboratory method blanks, the associated samples, and the validation actions.

Blank ID	Compound	Blank concentration (µg/L)	QL (µg/L)	Validation Action
RQ2006641-04	Chloroethane	0.34 J	1.0	Qualification was not required since chloroethane was not detected in the associated samples.
	Chloromethane	0.31 J	1.0	The positive results for chloromethane in the associated samples were qualified as nondetect (U) at the QL since results were < the QL. The results for chloromethane in samples CCSK-MW-01A and CCSK MW-20B were further qualified as estimated (UJ) due to the presence of headspace in the sample vials.
Associated Samples: CCSK-MW-01A, CCSK-MW-01B, CCSK-MW-03A, CCSK-MW-05A, CCSK-MW-05B, CCSK-MW-20A, CCSK-MW-20B				

Surrogate Recoveries

The surrogate percent recoveries (%Rs) met the laboratory acceptance criteria in the VOC, SVOC, and PCB analyses.

LCS/LCSD Results

The LCS/LCSD %Rs and relative percent differences (RPDs) were within the laboratory acceptance criteria in the PCB analyses.

The table below summarizes the VOC and/or SVOC LCS/LCSD %Rs and/or RPDs that did not meet the laboratory acceptance criteria and the validation actions.

Parameter	LCS/LCSD ID	Compound	LCS %R	LCSD %R	RPD (%)	%R/RPD QC Limits	Validation Action
VOCs	RQ2006641-03/ N/A	1,1,2,2-Tetrachloroethane	141	N/A	N/A	78-126/ N/A	Qualification was not required since 1,1,2,2-tetrachloroethane was not detected in the associated samples.
	Associated Samples: CCSK-MW-01A, CCSK-MW-01B, CCSK-MW-03A, CCSK-MW-05A, **C**CSK-MW-05B, CCSK-MW-20A, CCSK-MW-20B						
SVOCs	RQ2006527-04/ RQ2006527-05	Hexachlorocy-clopentadiene	-	-	40	-/30	Qualification was not required since hexachlorocyclopentadiene was not detected in the associated samples.
	Associated Samples: CCSK-MW-03A, CCSK-MW-03B, CCSK-MW-05A, CCSK-MW-05B, CCSK-MW-20A, CCSK-MW-20B						
-: Met criteria N/A: Not applicable; and LCSD was not analyzed.							

The laboratory indicated in the case narrative that due to limitations of the laboratory's software, %Rs for 4,6-dinitro-2-methylphenol were reported as 0%R on the LCS/LCSD summary forms even though the %Rs were within the laboratory's acceptance criteria; this was confirmed during validation after review of the raw data for the LCS/LCSD analyses. Since the %Rs were within the laboratory's acceptance limits, no validation actions were required on this basis.

MS/MSD Results

MS/MSD analyses were performed on sample CCSK-MW-03B for VOCs, SVOCs, and PCBs. The table below summarizes the MS/MSD %Rs and/or RPDs that did not meet the laboratory acceptance criteria and the validation actions.

MS/MSD Sample ID	Compound	MS %R	MSD %R	RPD (%)	MS/MSD %R/RPD QC Limits	Validation Action
CCSK-MW-03B	1,1,2,2-Tetrachloroethane	126	131	-	72-122/-	Qualification was not required since these compounds were not detected in sample CCSK-MW-03B.
	Hexachlorobutadiene	-	-	31	-/30	
	Hexachloroethane	-	-	38	-/30	
	Phenol	-	-	31	-/30	
-: Met criteria						

Internal Standards

All criteria were met in the VOC and SVOC analyses.

Field Duplicate Results

No field duplicate pairs were submitted with this sample set.

Sample Results and Reported Quantitation Limits

Sample calculations were spot-checked; there were no errors noted. There were no dilutions performed on samples in this data set.

The method detection limit and QL were reported as the same value for acetone. No validation actions were required on this basis.

Select VOC results were reported below the lowest calibration standard level and QL. These results were qualified as estimated (J) in the associated samples by the laboratory.

Target Compound Identification

All criteria were met for the VOC, SVOC, and PCB analyses.

QUALIFIED FORM 1s

Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/15/20 14:35
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-03B	**Units:**	ug/L
Lab Code:	R2005213-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U J	1.0	0.20	1	06/25/20 16:14	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	06/25/20 16:14	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	06/25/20 16:14	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 U	1.0	0.20	1	06/25/20 16:14	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	06/25/20 16:14	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	06/25/20 16:14	
1,2,3-Trichlorobenzene	1.0 U	1.0	0.25	1	06/25/20 16:14	
1,2,4-Trichlorobenzene	1.0 U	1.0	0.34	1	06/25/20 16:14	
1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	2.0	0.45	1	06/25/20 16:14	
1,2-Dibromoethane	1.0 U	1.0	0.20	1	06/25/20 16:14	
1,2-Dichlorobenzene	1.0 U	1.0	0.20	1	06/25/20 16:14	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	06/25/20 16:14	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	06/25/20 16:14	
1,3-Dichlorobenzene	1.0 U	1.0	0.20	1	06/25/20 16:14	
1,4-Dichlorobenzene	1.0 U J	1.0	0.20	1	06/25/20 16:14	
1,4-Dioxane R	~~40 U~~	~~40~~	~~13~~	~~1~~	~~06/25/20 16:14~~	
2-Butanone (MEK)	5.0 U J	5.0	0.78	1	06/25/20 16:14	
2-Hexanone	5.0 U	5.0	0.20	1	06/25/20 16:14	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	06/25/20 16:14	
Acetone	5.0 U	5.0	5.0	1	06/25/20 16:14	
Benzene	1.0 U	1.0	0.20	1	06/25/20 16:14	
Bromochloromethane	1.0 U	1.0	0.20	1	06/25/20 16:14	
Bromodichloromethane	1.0 U	1.0	0.20	1	06/25/20 16:14	
Bromoform	1.0 U	1.0	0.25	1	06/25/20 16:14	
Bromomethane	1.0 U	1.0	0.70	1	06/25/20 16:14	
Carbon Disulfide	1.0 U	1.0	0.42	1	06/25/20 16:14	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	06/25/20 16:14	
Chlorobenzene	1.0 U	1.0	0.20	1	06/25/20 16:14	
Chloroethane	1.0 U	1.0	0.23	1	06/25/20 16:14	
Chloroform	1.0 U	1.0	0.24	1	06/25/20 16:14	
Chloromethane	1.0 U	1.0	0.28	1	06/25/20 16:14	
Cyclohexane	1.0 U	1.0	0.26	1	06/25/20 16:14	
Dibromochloromethane	1.0 U	1.0	0.20	1	06/25/20 16:14	
Dichlorodifluoromethane (CFC 12)	1.0 U	1.0	0.21	1	06/25/20 16:14	
Dichloromethane	1.0 U	1.0	0.65	1	06/25/20 16:14	
Ethylbenzene	1.0 U	1.0	0.20	1	06/25/20 16:14	
Isopropylbenzene (Cumene)	1.0 U	1.0	0.20	1	06/25/20 16:14	
Methyl Acetate	2.0 U J	2.0	0.33	1	06/25/20 16:14	
Methyl tert-Butyl Ether	**0.47 J**	1.0	0.20	1	06/25/20 16:14	
Methylcyclohexane	1.0 U J	1.0	0.20	1	06/25/20 16:14	
Styrene	1.0 U	1.0	0.20	1	06/25/20 16:14	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	06/25/20 16:14	
Toluene	1.0 U J	1.0	0.20	1	06/25/20 16:14	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/15/20 14:35
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-03B	**Units:**	ug/L
Lab Code:	R2005213-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Trichloroethene (TCE)	1.0 U J	1.0	0.20	1	06/25/20 16:14	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.24	1	06/25/20 16:14	
Vinyl Chloride	1.0 U	1.0	0.20	1	06/25/20 16:14	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	06/25/20 16:14	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	06/25/20 16:14	
m,p-Xylenes	2.0 U	2.0	0.20	1	06/25/20 16:14	
o-Xylene	1.0 U	1.0	0.20	1	06/25/20 16:14	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	06/25/20 16:14	
trans-1,3-Dichloropropene	1.0 U J	1.0	0.23	1	06/25/20 16:14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	85 - 122	06/25/20 16:14	
Dibromofluoromethane	103	89 - 119	06/25/20 16:14	
Toluene-d8	106	87 - 121	06/25/20 16:14	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 10:20
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-01B	**Units:**	ug/L
Lab Code:	R2005213-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	06/23/20 21:32	
1,1,2,2-Tetrachloroethane	1.0 U J	1.0	0.20	1	06/23/20 21:32	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	06/23/20 21:32	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 U	1.0	0.20	1	06/23/20 21:32	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	06/23/20 21:32	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	06/23/20 21:32	
1,2,3-Trichlorobenzene	1.0 U	1.0	0.25	1	06/23/20 21:32	
1,2,4-Trichlorobenzene	1.0 U	1.0	0.34	1	06/23/20 21:32	
1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	2.0	0.45	1	06/23/20 21:32	
1,2-Dibromoethane	1.0 U	1.0	0.20	1	06/23/20 21:32	
1,2-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 21:32	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	06/23/20 21:32	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	06/23/20 21:32	
1,3-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 21:32	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 21:32	
1,4-Dioxane	R ~~40 U~~	~~40~~	~~13~~	1	~~06/23/20 21:32~~	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	06/23/20 21:32	
2-Hexanone	5.0 U	5.0	0.20	1	06/23/20 21:32	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	06/23/20 21:32	
Acetone	5.0 U	5.0	5.0	1	06/23/20 21:32	
Benzene	1.0 U	1.0	0.20	1	06/23/20 21:32	
Bromochloromethane	1.0 U	1.0	0.20	1	06/23/20 21:32	
Bromodichloromethane	1.0 U	1.0	0.20	1	06/23/20 21:32	
Bromoform	1.0 U	1.0	0.25	1	06/23/20 21:32	
Bromomethane	1.0 U J	1.0	0.70	1	06/23/20 21:32	
Carbon Disulfide	1.0 U	1.0	0.42	1	06/23/20 21:32	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	06/23/20 21:32	
Chlorobenzene	1.0 U	1.0	0.20	1	06/23/20 21:32	
Chloroethane	1.0 U	1.0	0.23	1	06/23/20 21:32	
Chloroform	1.0 U	1.0	0.24	1	06/23/20 21:32	
Chloromethane	ND/1.0 U ~~0.32 BJ~~	1.0	0.28	1	06/23/20 21:32	
Cyclohexane	1.0 U	1.0	0.26	1	06/23/20 21:32	
Dibromochloromethane	1.0 U	1.0	0.20	1	06/23/20 21:32	
Dichlorodifluoromethane (CFC 12)	1.0 U	1.0	0.21	1	06/23/20 21:32	
Dichloromethane	1.0 U	1.0	0.65	1	06/23/20 21:32	
Ethylbenzene	1.0 U	1.0	0.20	1	06/23/20 21:32	
Isopropylbenzene (Cumene)	1.0 U	1.0	0.20	1	06/23/20 21:32	
Methyl Acetate	2.0 U	2.0	0.33	1	06/23/20 21:32	
Methyl tert-Butyl Ether	1.0 U	1.0	0.20	1	06/23/20 21:32	
Methylcyclohexane	1.0 U	1.0	0.20	1	06/23/20 21:32	
Styrene	1.0 U	1.0	0.20	1	06/23/20 21:32	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	06/23/20 21:32	
Toluene	1.0 U	1.0	0.20	1	06/23/20 21:32	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 10:20
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-01B	**Units:**	ug/L
Lab Code:	R2005213-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	06/23/20 21:32	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.24	1	06/23/20 21:32	
Vinyl Chloride	1.0 U	1.0	0.20	1	06/23/20 21:32	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	06/23/20 21:32	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	06/23/20 21:32	
m,p-Xylenes	2.0 U	2.0	0.20	1	06/23/20 21:32	
o-Xylene	1.0 U	1.0	0.20	1	06/23/20 21:32	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	06/23/20 21:32	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	06/23/20 21:32	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	85 - 122	06/23/20 21:32	
Dibromofluoromethane	92	89 - 119	06/23/20 21:32	
Toluene-d8	95	87 - 121	06/23/20 21:32	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 12:50
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-01A	**Units:**	ug/L
Lab Code:	R2005213-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U J	1.0	0.20	1	06/23/20 21:54	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	06/23/20 21:54	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	06/23/20 21:54	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 U	1.0	0.20	1	06/23/20 21:54	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	06/23/20 21:54	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	06/23/20 21:54	
1,2,3-Trichlorobenzene	1.0 U	1.0	0.25	1	06/23/20 21:54	
1,2,4-Trichlorobenzene	1.0 U	1.0	0.34	1	06/23/20 21:54	
1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	2.0	0.45	1	06/23/20 21:54	
1,2-Dibromoethane	1.0 U	1.0	0.20	1	06/23/20 21:54	
1,2-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 21:54	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	06/23/20 21:54	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	06/23/20 21:54	
1,3-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 21:54	
1,4-Dichlorobenzene	1.0 U J	1.0	0.20	1	06/23/20 21:54	
1,4-Dioxane	R ~~40 U~~	~~40~~	~~13~~	1	~~06/23/20 21:54~~	
2-Butanone (MEK)	5.0 U J	5.0	0.78	1	06/23/20 21:54	
2-Hexanone	5.0 U	5.0	0.20	1	06/23/20 21:54	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	06/23/20 21:54	
Acetone	5.0 U	5.0	5.0	1	06/23/20 21:54	
Benzene	1.0 U	1.0	0.20	1	06/23/20 21:54	
Bromochloromethane	1.0 U	1.0	0.20	1	06/23/20 21:54	
Bromodichloromethane	1.0 U	1.0	0.20	1	06/23/20 21:54	
Bromoform	1.0 U	1.0	0.25	1	06/23/20 21:54	
Bromomethane	1.0 U	1.0	0.70	1	06/23/20 21:54	
Carbon Disulfide	1.0 U	1.0	0.42	1	06/23/20 21:54	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	06/23/20 21:54	
Chlorobenzene	1.0 U	1.0	0.20	1	06/23/20 21:54	
Chloroethane	1.0 U	1.0	0.23	1	06/23/20 21:54	
Chloroform	1.0 U	1.0	0.24	1	06/23/20 21:54	
Chloromethane	ND/1.0 U ~~0.38 BJ~~	1.0	0.28	1	06/23/20 21:54	
Cyclohexane	1.0 U	1.0	0.26	1	06/23/20 21:54	
Dibromochloromethane	1.0 U	1.0	0.20	1	06/23/20 21:54	
Dichlorodifluoromethane (CFC 12)	1.0 U	1.0	0.21	1	06/23/20 21:54	
Dichloromethane	1.0 U	1.0	0.65	1	06/23/20 21:54	
Ethylbenzene	1.0 U	1.0	0.20	1	06/23/20 21:54	
Isopropylbenzene (Cumene)	1.0 U	1.0	0.20	1	06/23/20 21:54	
Methyl Acetate	2.0 U	2.0	0.33	1	06/23/20 21:54	
Methyl tert-Butyl Ether	1.0 U	1.0	0.20	1	06/23/20 21:54	
Methylcyclohexane	1.0 U	1.0	0.20	1	06/23/20 21:54	
Styrene	1.0 U	1.0	0.20	1	06/23/20 21:54	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	06/23/20 21:54	
Toluene	1.0 U J	1.0	0.20	1	06/23/20 21:54	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 12:50
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-01A	**Units:**	ug/L
Lab Code:	R2005213-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Trichloroethene (TCE)	1.0 U J	1.0	0.20	1	06/23/20 21:54	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.24	1	06/23/20 21:54	
Vinyl Chloride	1.0 U	1.0	0.20	1	06/23/20 21:54	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	06/23/20 21:54	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	06/23/20 21:54	
m,p-Xylenes	2.0 U	2.0	0.20	1	06/23/20 21:54	
o-Xylene	1.0 U	1.0	0.20	1	06/23/20 21:54	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	06/23/20 21:54	
trans-1,3-Dichloropropene	1.0 U J	1.0	0.23	1	06/23/20 21:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	85 - 122	06/23/20 21:54	
Dibromofluoromethane	93	89 - 119	06/23/20 21:54	
Toluene-d8	95	87 - 121	06/23/20 21:54	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 13:50
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-03A	**Units:**	ug/L
Lab Code:	R2005213-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	06/23/20 22:16	
1,1,2,2-Tetrachloroethane	1.0 U J	1.0	0.20	1	06/23/20 22:16	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	06/23/20 22:16	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 U	1.0	0.20	1	06/23/20 22:16	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	06/23/20 22:16	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	06/23/20 22:16	
1,2,3-Trichlorobenzene	1.0 U	1.0	0.25	1	06/23/20 22:16	
1,2,4-Trichlorobenzene	1.0 U	1.0	0.34	1	06/23/20 22:16	
1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	2.0	0.45	1	06/23/20 22:16	
1,2-Dibromoethane	1.0 U	1.0	0.20	1	06/23/20 22:16	
1,2-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 22:16	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	06/23/20 22:16	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	06/23/20 22:16	
1,3-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 22:16	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 22:16	
1,4-Dioxane	R ~~40 U~~	~~40~~	~~13~~	~~1~~	~~06/23/20 22:16~~	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	06/23/20 22:16	
2-Hexanone	5.0 U	5.0	0.20	1	06/23/20 22:16	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	06/23/20 22:16	
Acetone	5.0 U	5.0	5.0	1	06/23/20 22:16	
Benzene	1.0 U	1.0	0.20	1	06/23/20 22:16	
Bromochloromethane	1.0 U	1.0	0.20	1	06/23/20 22:16	
Bromodichloromethane	1.0 U	1.0	0.20	1	06/23/20 22:16	
Bromoform	1.0 U	1.0	0.25	1	06/23/20 22:16	
Bromomethane	1.0 UJ	1.0	0.70	1	06/23/20 22:16	
Carbon Disulfide	1.0 U	1.0	0.42	1	06/23/20 22:16	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	06/23/20 22:16	
Chlorobenzene	1.0 U	1.0	0.20	1	06/23/20 22:16	
Chloroethane	1.0 U	1.0	0.23	1	06/23/20 22:16	
Chloroform	1.0 U	1.0	0.24	1	06/23/20 22:16	
Chloromethane	ND/1.0 U ~~0.35 BJ~~	1.0	0.28	1	06/23/20 22:16	
Cyclohexane	1.0 U	1.0	0.26	1	06/23/20 22:16	
Dibromochloromethane	1.0 U	1.0	0.20	1	06/23/20 22:16	
Dichlorodifluoromethane (CFC 12)	1.0 U	1.0	0.21	1	06/23/20 22:16	
Dichloromethane	1.0 U	1.0	0.65	1	06/23/20 22:16	
Ethylbenzene	1.0 U	1.0	0.20	1	06/23/20 22:16	
Isopropylbenzene (Cumene)	1.0 U	1.0	0.20	1	06/23/20 22:16	
Methyl Acetate	2.0 U	2.0	0.33	1	06/23/20 22:16	
Methyl tert-Butyl Ether	**0.69 J**	1.0	0.20	1	06/23/20 22:16	
Methylcyclohexane	1.0 U	1.0	0.20	1	06/23/20 22:16	
Styrene	1.0 U	1.0	0.20	1	06/23/20 22:16	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	06/23/20 22:16	
Toluene	1.0 U	1.0	0.20	1	06/23/20 22:16	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 13:50
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-03A	**Units:**	ug/L
Lab Code:	R2005213-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	06/23/20 22:16	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.24	1	06/23/20 22:16	
Vinyl Chloride	1.0 U	1.0	0.20	1	06/23/20 22:16	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	06/23/20 22:16	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	06/23/20 22:16	
m,p-Xylenes	2.0 U	2.0	0.20	1	06/23/20 22:16	
o-Xylene	1.0 U	1.0	0.20	1	06/23/20 22:16	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	06/23/20 22:16	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	06/23/20 22:16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	85 - 122	06/23/20 22:16	
Dibromofluoromethane	93	89 - 119	06/23/20 22:16	
Toluene-d8	95	87 - 121	06/23/20 22:16	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 15:35
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-20B	**Units:**	ug/L
Lab Code:	R2005213-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U J	1.0	0.20	1	06/23/20 22:38	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	06/23/20 22:38	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	06/23/20 22:38	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 U J	1.0	0.20	1	06/23/20 22:38	
1,1-Dichloroethane (1,1-DCA)	**0.28 J**	1.0	0.20	1	06/23/20 22:38	
1,1-Dichloroethene (1,1-DCE)	1.0 U J	1.0	0.20	1	06/23/20 22:38	
1,2,3-Trichlorobenzene	1.0 U	1.0	0.25	1	06/23/20 22:38	
1,2,4-Trichlorobenzene	1.0 U	1.0	0.34	1	06/23/20 22:38	
1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	2.0	0.45	1	06/23/20 22:38	
1,2-Dibromoethane	1.0 U	1.0	0.20	1	06/23/20 22:38	
1,2-Dichlorobenzene	1.0 U J	1.0	0.20	1	06/23/20 22:38	
1,2-Dichloroethane	**1.1** J-	1.0	0.20	1	06/23/20 22:38	
1,2-Dichloropropane	1.0 U J	1.0	0.20	1	06/23/20 22:38	
1,3-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 22:38	
1,4-Dichlorobenzene	1.0 U J	1.0	0.20	1	06/23/20 22:38	
1,4-Dioxane	R ~~40 U~~	~~40~~	~~13~~	1	~~06/23/20 22:38~~	
2-Butanone (MEK)	5.0 U J	5.0	0.78	1	06/23/20 22:38	
2-Hexanone	5.0 U	5.0	0.20	1	06/23/20 22:38	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	06/23/20 22:38	
Acetone	5.0 U J	5.0	5.0	1	06/23/20 22:38	
Benzene	**0.37 J**	1.0	0.20	1	06/23/20 22:38	
Bromochloromethane	1.0 U J	1.0	0.20	1	06/23/20 22:38	
Bromodichloromethane	1.0 U	1.0	0.20	1	06/23/20 22:38	
Bromoform	1.0 U	1.0	0.25	1	06/23/20 22:38	
Bromomethane	1.0 U	1.0	0.70	1	06/23/20 22:38	
Carbon Disulfide	1.0 U	1.0	0.42	1	06/23/20 22:38	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	06/23/20 22:38	
Chlorobenzene	1.0 U	1.0	0.20	1	06/23/20 22:38	
Chloroethane	1.0 U	1.0	0.23	1	06/23/20 22:38	
Chloroform	1.0 U	1.0	0.24	1	06/23/20 22:38	
Chloromethane	ND/1.0 U ~~0.34 BJ~~	1.0	0.28	1	06/23/20 22:38	
Cyclohexane	1.0 U	1.0	0.26	1	06/23/20 22:38	
Dibromochloromethane	1.0 U	1.0	0.20	1	06/23/20 22:38	
Dichlorodifluoromethane (CFC 12)	1.0 U	1.0	0.21	1	06/23/20 22:38	
Dichloromethane	1.0 U	1.0	0.65	1	06/23/20 22:38	
Ethylbenzene	1.0 U	1.0	0.20	1	06/23/20 22:38	
Isopropylbenzene (Cumene)	1.0 U	1.0	0.20	1	06/23/20 22:38	
Methyl Acetate	2.0 U	2.0	0.33	1	06/23/20 22:38	
Methyl tert-Butyl Ether	1.0 U	1.0	0.20	1	06/23/20 22:38	
Methylcyclohexane	1.0 U	1.0	0.20	1	06/23/20 22:38	
Styrene	1.0 U	1.0	0.20	1	06/23/20 22:38	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	06/23/20 22:38	
Toluene	1.0 U J	1.0	0.20	1	06/23/20 22:38	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 15:35
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-20B	**Units:**	ug/L
Lab Code:	R2005213-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Trichloroethene (TCE)	1.0 U J	1.0	0.20	1	06/23/20 22:38	
Trichlorofluoromethane (CFC 11)	1.0 U J	1.0	0.24	1	06/23/20 22:38	
Vinyl Chloride	**0.40 J**	1.0	0.20	1	06/23/20 22:38	
cis-1,2-Dichloroethene	**0.68 J**	1.0	0.23	1	06/23/20 22:38	
cis-1,3-Dichloropropene	1.0 U J	1.0	0.20	1	06/23/20 22:38	
m,p-Xylenes	2.0 U	2.0	0.20	1	06/23/20 22:38	
o-Xylene	1.0 U	1.0	0.20	1	06/23/20 22:38	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	06/23/20 22:38	
trans-1,3-Dichloropropene	1.0 U J	1.0	0.23	1	06/23/20 22:38	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	85 - 122	06/23/20 22:38	
Dibromofluoromethane	93	89 - 119	06/23/20 22:38	
Toluene-d8	94	87 - 121	06/23/20 22:38	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 10:15
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-20A	**Units:**	ug/L
Lab Code:	R2005213-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	06/23/20 23:00	
1,1,2,2-Tetrachloroethane	1.0 U J	1.0	0.20	1	06/23/20 23:00	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	06/23/20 23:00	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 U	1.0	0.20	1	06/23/20 23:00	
1,1-Dichloroethane (1,1-DCA)	**0.82 J**	1.0	0.20	1	06/23/20 23:00	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	06/23/20 23:00	
1,2,3-Trichlorobenzene	1.0 U	1.0	0.25	1	06/23/20 23:00	
1,2,4-Trichlorobenzene	1.0 U	1.0	0.34	1	06/23/20 23:00	
1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	2.0	0.45	1	06/23/20 23:00	
1,2-Dibromoethane	1.0 U	1.0	0.20	1	06/23/20 23:00	
1,2-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 23:00	
1,2-Dichloroethane	**1.2**	1.0	0.20	1	06/23/20 23:00	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	06/23/20 23:00	
1,3-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 23:00	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 23:00	
1,4-Dioxane R	~~40 U~~	~~40~~	~~13~~	1	~~06/23/20 23:00~~	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	06/23/20 23:00	
2-Hexanone	5.0 U	5.0	0.20	1	06/23/20 23:00	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	06/23/20 23:00	
Acetone	5.0 U	5.0	5.0	1	06/23/20 23:00	
Benzene	**0.46 J**	1.0	0.20	1	06/23/20 23:00	
Bromochloromethane	1.0 U	1.0	0.20	1	06/23/20 23:00	
Bromodichloromethane	1.0 U	1.0	0.20	1	06/23/20 23:00	
Bromoform	1.0 U	1.0	0.25	1	06/23/20 23:00	
Bromomethane	1.0 U J	1.0	0.70	1	06/23/20 23:00	
Carbon Disulfide	1.0 U	1.0	0.42	1	06/23/20 23:00	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	06/23/20 23:00	
Chlorobenzene	1.0 U	1.0	0.20	1	06/23/20 23:00	
Chloroethane	1.0 U	1.0	0.23	1	06/23/20 23:00	
Chloroform	1.0 U	1.0	0.24	1	06/23/20 23:00	
Chloromethane ND/1.0 U	~~**0.32 BJ**~~	1.0	0.28	1	06/23/20 23:00	
Cyclohexane	1.0 U	1.0	0.26	1	06/23/20 23:00	
Dibromochloromethane	1.0 U	1.0	0.20	1	06/23/20 23:00	
Dichlorodifluoromethane (CFC 12)	1.0 U	1.0	0.21	1	06/23/20 23:00	
Dichloromethane	1.0 U	1.0	0.65	1	06/23/20 23:00	
Ethylbenzene	1.0 U	1.0	0.20	1	06/23/20 23:00	
Isopropylbenzene (Cumene)	1.0 U	1.0	0.20	1	06/23/20 23:00	
Methyl Acetate	2.0 U	2.0	0.33	1	06/23/20 23:00	
Methyl tert-Butyl Ether	1.0 U	1.0	0.20	1	06/23/20 23:00	
Methylcyclohexane	1.0 U	1.0	0.20	1	06/23/20 23:00	
Styrene	1.0 U	1.0	0.20	1	06/23/20 23:00	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	06/23/20 23:00	
Toluene	1.0 U	1.0	0.20	1	06/23/20 23:00	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 10:15
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-20A	**Units:**	ug/L
Lab Code:	R2005213-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	06/23/20 23:00	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.24	1	06/23/20 23:00	
Vinyl Chloride	**0.50 J**	1.0	0.20	1	06/23/20 23:00	
cis-1,2-Dichloroethene	**1.3**	1.0	0.23	1	06/23/20 23:00	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	06/23/20 23:00	
m,p-Xylenes	2.0 U	2.0	0.20	1	06/23/20 23:00	
o-Xylene	1.0 U	1.0	0.20	1	06/23/20 23:00	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	06/23/20 23:00	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	06/23/20 23:00	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	85 - 122	06/23/20 23:00	
Dibromofluoromethane	92	89 - 119	06/23/20 23:00	
Toluene-d8	93	87 - 121	06/23/20 23:00	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 12:00
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-05B	**Units:**	ug/L
Lab Code:	R2005213-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	06/23/20 23:23	
1,1,2,2-Tetrachloroethane	1.0 U J	1.0	0.20	1	06/23/20 23:23	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	06/23/20 23:23	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 U	1.0	0.20	1	06/23/20 23:23	
1,1-Dichloroethane (1,1-DCA)	**0.20 J**	1.0	0.20	1	06/23/20 23:23	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	06/23/20 23:23	
1,2,3-Trichlorobenzene	1.0 U	1.0	0.25	1	06/23/20 23:23	
1,2,4-Trichlorobenzene	1.0 U	1.0	0.34	1	06/23/20 23:23	
1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	2.0	0.45	1	06/23/20 23:23	
1,2-Dibromoethane	1.0 U	1.0	0.20	1	06/23/20 23:23	
1,2-Dichlorobenzene	**0.57 J**	1.0	0.20	1	06/23/20 23:23	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	06/23/20 23:23	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	06/23/20 23:23	
1,3-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 23:23	
1,4-Dichlorobenzene	**0.99 J**	1.0	0.20	1	06/23/20 23:23	
1,4-Dioxane	R ~~40 U~~	~~40~~	~~13~~	~~1~~	~~06/23/20 23:23~~	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	06/23/20 23:23	
2-Hexanone	5.0 U	5.0	0.20	1	06/23/20 23:23	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	06/23/20 23:23	
Acetone	5.0 U	5.0	5.0	1	06/23/20 23:23	
Benzene	**0.87 J**	1.0	0.20	1	06/23/20 23:23	
Bromochloromethane	1.0 U	1.0	0.20	1	06/23/20 23:23	
Bromodichloromethane	1.0 U	1.0	0.20	1	06/23/20 23:23	
Bromoform	1.0 U	1.0	0.25	1	06/23/20 23:23	
Bromomethane	1.0 U J	1.0	0.70	1	06/23/20 23:23	
Carbon Disulfide	1.0 U	1.0	0.42	1	06/23/20 23:23	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	06/23/20 23:23	
Chlorobenzene	**2.8**	1.0	0.20	1	06/23/20 23:23	
Chloroethane	1.0 U	1.0	0.23	1	06/23/20 23:23	
Chloroform	1.0 U	1.0	0.24	1	06/23/20 23:23	
Chloromethane	ND/1.0 U ~~0.32 BJ~~	1.0	0.28	1	06/23/20 23:23	
Cyclohexane	1.0 U	1.0	0.26	1	06/23/20 23:23	
Dibromochloromethane	1.0 U	1.0	0.20	1	06/23/20 23:23	
Dichlorodifluoromethane (CFC 12)	**0.42 J**	1.0	0.21	1	06/23/20 23:23	
Dichloromethane	1.0 U	1.0	0.65	1	06/23/20 23:23	
Ethylbenzene	1.0 U	1.0	0.20	1	06/23/20 23:23	
Isopropylbenzene (Cumene)	1.0 U	1.0	0.20	1	06/23/20 23:23	
Methyl Acetate	2.0 U	2.0	0.33	1	06/23/20 23:23	
Methyl tert-Butyl Ether	1.0 U	1.0	0.20	1	06/23/20 23:23	
Methylcyclohexane	1.0 U	1.0	0.20	1	06/23/20 23:23	
Styrene	1.0 U	1.0	0.20	1	06/23/20 23:23	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	06/23/20 23:23	
Toluene	1.0 U	1.0	0.20	1	06/23/20 23:23	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 12:00
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-05B	**Units:**	ug/L
Lab Code:	R2005213-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	06/23/20 23:23	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.24	1	06/23/20 23:23	
Vinyl Chloride	1.0 U	1.0	0.20	1	06/23/20 23:23	
cis-1,2-Dichloroethene	**0.39 J**	1.0	0.23	1	06/23/20 23:23	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	06/23/20 23:23	
m,p-Xylenes	2.0 U	2.0	0.20	1	06/23/20 23:23	
o-Xylene	1.0 U	1.0	0.20	1	06/23/20 23:23	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	06/23/20 23:23	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	06/23/20 23:23	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	85 - 122	06/23/20 23:23	
Dibromofluoromethane	91	89 - 119	06/23/20 23:23	
Toluene-d8	93	87 - 121	06/23/20 23:23	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 12:55
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-05A	**Units:**	ug/L
Lab Code:	R2005213-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	06/23/20 23:45	
1,1,2,2-Tetrachloroethane	1.0 U J	1.0	0.20	1	06/23/20 23:45	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	06/23/20 23:45	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 U	1.0	0.20	1	06/23/20 23:45	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	06/23/20 23:45	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	06/23/20 23:45	
1,2,3-Trichlorobenzene	1.0 U	1.0	0.25	1	06/23/20 23:45	
1,2,4-Trichlorobenzene	1.0 U	1.0	0.34	1	06/23/20 23:45	
1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	2.0	0.45	1	06/23/20 23:45	
1,2-Dibromoethane	1.0 U	1.0	0.20	1	06/23/20 23:45	
1,2-Dichlorobenzene	**1.3**	1.0	0.20	1	06/23/20 23:45	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	06/23/20 23:45	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	06/23/20 23:45	
1,3-Dichlorobenzene	**0.48 J**	1.0	0.20	1	06/23/20 23:45	
1,4-Dichlorobenzene	**2.4**	1.0	0.20	1	06/23/20 23:45	
1,4-Dioxane	R ~~40 U~~	~~40~~	~~13~~	1	~~06/23/20 23:45~~	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	06/23/20 23:45	
2-Hexanone	5.0 U	5.0	0.20	1	06/23/20 23:45	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	06/23/20 23:45	
Acetone	5.0 U	5.0	5.0	1	06/23/20 23:45	
Benzene	**1.7**	1.0	0.20	1	06/23/20 23:45	
Bromochloromethane	1.0 U	1.0	0.20	1	06/23/20 23:45	
Bromodichloromethane	1.0 U	1.0	0.20	1	06/23/20 23:45	
Bromoform	1.0 U	1.0	0.25	1	06/23/20 23:45	
Bromomethane	1.0 UJ	1.0	0.70	1	06/23/20 23:45	
Carbon Disulfide	1.0 U	1.0	0.42	1	06/23/20 23:45	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	06/23/20 23:45	
Chlorobenzene	**6.6**	1.0	0.20	1	06/23/20 23:45	
Chloroethane	1.0 U	1.0	0.23	1	06/23/20 23:45	
Chloroform	1.0 U	1.0	0.24	1	06/23/20 23:45	
Chloromethane	ND/1.0 U ~~0.31 BJ~~	1.0	0.28	1	06/23/20 23:45	
Cyclohexane	1.0 U	1.0	0.26	1	06/23/20 23:45	
Dibromochloromethane	1.0 U	1.0	0.20	1	06/23/20 23:45	
Dichlorodifluoromethane (CFC 12)	1.0 U	1.0	0.21	1	06/23/20 23:45	
Dichloromethane	1.0 U	1.0	0.65	1	06/23/20 23:45	
Ethylbenzene	1.0 U	1.0	0.20	1	06/23/20 23:45	
Isopropylbenzene (Cumene)	1.0 U	1.0	0.20	1	06/23/20 23:45	
Methyl Acetate	2.0 U	2.0	0.33	1	06/23/20 23:45	
Methyl tert-Butyl Ether	1.0 U	1.0	0.20	1	06/23/20 23:45	
Methylcyclohexane	1.0 U	1.0	0.20	1	06/23/20 23:45	
Styrene	1.0 U	1.0	0.20	1	06/23/20 23:45	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	06/23/20 23:45	
Toluene	1.0 U	1.0	0.20	1	06/23/20 23:45	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 12:55
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-05A	**Units:**	ug/L
Lab Code:	R2005213-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Trichloroethene (TCE)	1.0 U	1.0	0.20	1	06/23/20 23:45	
Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.24	1	06/23/20 23:45	
Vinyl Chloride	1.0 U	1.0	0.20	1	06/23/20 23:45	
cis-1,2-Dichloroethene	1.0 U	1.0	0.23	1	06/23/20 23:45	
cis-1,3-Dichloropropene	1.0 U	1.0	0.20	1	06/23/20 23:45	
m,p-Xylenes	2.0 U	2.0	0.20	1	06/23/20 23:45	
o-Xylene	1.0 U	1.0	0.20	1	06/23/20 23:45	
trans-1,2-Dichloroethene	1.0 U	1.0	0.20	1	06/23/20 23:45	
trans-1,3-Dichloropropene	1.0 U	1.0	0.23	1	06/23/20 23:45	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	85 - 122	06/23/20 23:45	
Dibromofluoromethane	91	89 - 119	06/23/20 23:45	
Toluene-d8	93	87 - 121	06/23/20 23:45	

Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/15/20 14:35
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-03B	**Units:**	ug/L
Lab Code:	R2005213-001	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	9.1 U	9.1	1.1	1	06/23/20 17:28	6/22/20	
2,3,4,6-Tetrachlorophenol	9.1 U	9.1	1.1	1	06/23/20 17:28	6/22/20	
2,4,5-Trichlorophenol	9.1 U	9.1	0.99	1	06/23/20 17:28	6/22/20	
2,4,6-Trichlorophenol	9.1 U	9.1	1.3	1	06/23/20 17:28	6/22/20	
2,4-Dichlorophenol	9.1 U	9.1	1.2	1	06/23/20 17:28	6/22/20	
2,4-Dimethylphenol	9.1 U	9.1	1.3	1	06/23/20 17:28	6/22/20	
2,4-Dinitrophenol	45 U	45	19	1	06/23/20 17:28	6/22/20	
2,4-Dinitrotoluene	9.1 U	9.1	2.2	1	06/23/20 17:28	6/22/20	
2,6-Dinitrotoluene	9.1 U	9.1	1.2	1	06/23/20 17:28	6/22/20	
2-Chloronaphthalene	9.1 U	9.1	1.3	1	06/23/20 17:28	6/22/20	
2-Chlorophenol	9.1 U	9.1	0.97	1	06/23/20 17:28	6/22/20	
2-Methylnaphthalene	9.1 U	9.1	1.2	1	06/23/20 17:28	6/22/20	
2-Methylphenol	9.1 U	9.1	0.91	1	06/23/20 17:28	6/22/20	
2-Nitroaniline	9.1 U	9.1	1.3	1	06/23/20 17:28	6/22/20	
2-Nitrophenol	9.1 U	9.1	1.4	1	06/23/20 17:28	6/22/20	
3,3'-Dichlorobenzidine	9.1 U	9.1	1.1	1	06/23/20 17:28	6/22/20	
3- and 4-Methylphenol Coelution	9.1 U	9.1	1.1	1	06/23/20 17:28	6/22/20	
3-Nitroaniline	9.1 U	9.1	2.3	1	06/23/20 17:28	6/22/20	
4,6-Dinitro-2-methylphenol	45 U	45	18	1	06/23/20 17:28	6/22/20	
4-Bromophenyl Phenyl Ether	9.1 U	9.1	1.5	1	06/23/20 17:28	6/22/20	
4-Chloro-3-methylphenol	9.1 U	9.1	0.98	1	06/23/20 17:28	6/22/20	
4-Chloroaniline	9.1 U	9.1	0.91	1	06/23/20 17:28	6/22/20	
4-Chlorophenyl Phenyl Ether	9.1 U	9.1	1.4	1	06/23/20 17:28	6/22/20	
4-Nitroaniline	9.1 U	9.1	2.5	1	06/23/20 17:28	6/22/20	
4-Nitrophenol	45 U	45	5.8	1	06/23/20 17:28	6/22/20	
Acenaphthene	9.1 U	9.1	1.3	1	06/23/20 17:28	6/22/20	
Acenaphthylene	9.1 U	9.1	1.3	1	06/23/20 17:28	6/22/20	
Acetophenone	9.1 U	9.1	1.2	1	06/23/20 17:28	6/22/20	
Anthracene	9.1 U	9.1	1.2	1	06/23/20 17:28	6/22/20	
Atrazine	9.1 U	9.1	1.9	1	06/23/20 17:28	6/22/20	
Benz(a)anthracene	9.1 U	9.1	1.5	1	06/23/20 17:28	6/22/20	
Benzaldehyde	9.1 U	9.1	3.4	1	06/23/20 17:28	6/22/20	
Benzo(a)pyrene	9.1 U	9.1	1.1	1	06/23/20 17:28	6/22/20	
Benzo(b)fluoranthene	9.1 U	9.1	1.1	1	06/23/20 17:28	6/22/20	
Benzo(g,h,i)perylene	9.1 U	9.1	0.91	1	06/23/20 17:28	6/22/20	
Benzo(k)fluoranthene	9.1 U	9.1	1.1	1	06/23/20 17:28	6/22/20	
Biphenyl	9.1 U	9.1	1.3	1	06/23/20 17:28	6/22/20	
2,2'-Oxybis(1-chloropropane)	9.1 U	9.1	1.3	1	06/23/20 17:28	6/22/20	
Bis(2-chloroethoxy)methane	9.1 U	9.1	1.8	1	06/23/20 17:28	6/22/20	
Bis(2-chloroethyl) Ether	9.1 U	9.1	1.2	1	06/23/20 17:28	6/22/20	
Bis(2-ethylhexyl) Phthalate	9.1 U	9.1	0.91	1	06/23/20 17:28	6/22/20	
Butyl Benzyl Phthalate	9.1 U	9.1	1.3	1	06/23/20 17:28	6/22/20	
Caprolactam	9.1 U	9.1	0.91	1	06/23/20 17:28	6/22/20	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/15/20 14:35
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-03B	**Units:**	ug/L
Lab Code:	R2005213-001	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	9.1 U	9.1	1.4	1	06/23/20 17:28	6/22/20	
Chrysene	9.1 U	9.1	1.1	1	06/23/20 17:28	6/22/20	
Di-n-butyl Phthalate	9.1 U	9.1	1.5	1	06/23/20 17:28	6/22/20	
Di-n-octyl Phthalate	9.1 U	9.1	3.0	1	06/23/20 17:28	6/22/20	
Dibenz(a,h)anthracene	9.1 U	9.1	0.93	1	06/23/20 17:28	6/22/20	
Dibenzofuran	9.1 U	9.1	1.3	1	06/23/20 17:28	6/22/20	
Diethyl Phthalate	9.1 U	9.1	0.98	1	06/23/20 17:28	6/22/20	
Dimethyl Phthalate	9.1 U	9.1	1.2	1	06/23/20 17:28	6/22/20	
Fluoranthene	9.1 U	9.1	1.4	1	06/23/20 17:28	6/22/20	
Fluorene	9.1 U	9.1	1.2	1	06/23/20 17:28	6/22/20	
Hexachlorobenzene	9.1 U	9.1	1.4	1	06/23/20 17:28	6/22/20	
Hexachlorobutadiene	9.1 U	9.1	0.91	1	06/23/20 17:28	6/22/20	
Hexachlorocyclopentadiene	9.1 U	9.1	2.0	1	06/23/20 17:28	6/22/20	
Hexachloroethane	9.1 U	9.1	0.96	1	06/23/20 17:28	6/22/20	
Indeno(1,2,3-cd)pyrene	9.1 U	9.1	1.6	1	06/23/20 17:28	6/22/20	
Isophorone	9.1 U	9.1	1.3	1	06/23/20 17:28	6/22/20	
N-Nitrosodi-n-propylamine	9.1 U	9.1	1.1	1	06/23/20 17:28	6/22/20	
N-Nitrosodiphenylamine	9.1 U	9.1	2.4	1	06/23/20 17:28	6/22/20	
Naphthalene	9.1 U	9.1	1.1	1	06/23/20 17:28	6/22/20	
Nitrobenzene	9.1 U	9.1	1.4	1	06/23/20 17:28	6/22/20	
Pentachlorophenol (PCP)	45 U	45	8.9	1	06/23/20 17:28	6/22/20	
Phenanthrene	9.1 U	9.1	1.3	1	06/23/20 17:28	6/22/20	
Phenol	9.1 U	9.1	0.91	1	06/23/20 17:28	6/22/20	
Pyrene	9.1 U	9.1	1.3	1	06/23/20 17:28	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	69	35 - 141	06/23/20 17:28	
2-Fluorobiphenyl	59	31 - 118	06/23/20 17:28	
2-Fluorophenol	41	10 - 105	06/23/20 17:28	
Nitrobenzene-d5	63	31 - 110	06/23/20 17:28	
Phenol-d6	30	10 - 107	06/23/20 17:28	
Terphenyl-d14	82	10 - 165	06/23/20 17:28	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 10:20
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-01B	**Units:**	ug/L
Lab Code:	R2005213-002	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	9.1 U	9.1	1.1	1	06/23/20 14:03	6/19/20	
2,3,4,6-Tetrachlorophenol	9.1 U	9.1	1.1	1	06/23/20 14:03	6/19/20	
2,4,5-Trichlorophenol	9.1 U	9.1	0.99	1	06/23/20 14:03	6/19/20	
2,4,6-Trichlorophenol	9.1 U	9.1	1.3	1	06/23/20 14:03	6/19/20	
2,4-Dichlorophenol	9.1 U	9.1	1.2	1	06/23/20 14:03	6/19/20	
2,4-Dimethylphenol	9.1 U	9.1	1.3	1	06/23/20 14:03	6/19/20	
2,4-Dinitrophenol	45 U	45	19	1	06/23/20 14:03	6/19/20	
2,4-Dinitrotoluene	9.1 U	9.1	2.2	1	06/23/20 14:03	6/19/20	
2,6-Dinitrotoluene	9.1 U	9.1	1.2	1	06/23/20 14:03	6/19/20	
2-Chloronaphthalene	9.1 U	9.1	1.3	1	06/23/20 14:03	6/19/20	
2-Chlorophenol	9.1 U	9.1	0.97	1	06/23/20 14:03	6/19/20	
2-Methylnaphthalene	9.1 U	9.1	1.2	1	06/23/20 14:03	6/19/20	
2-Methylphenol	9.1 U	9.1	0.91	1	06/23/20 14:03	6/19/20	
2-Nitroaniline	9.1 U	9.1	1.3	1	06/23/20 14:03	6/19/20	
2-Nitrophenol	9.1 U	9.1	1.4	1	06/23/20 14:03	6/19/20	
3,3'-Dichlorobenzidine	9.1 U	9.1	1.1	1	06/23/20 14:03	6/19/20	
3- and 4-Methylphenol Coelution	9.1 U	9.1	1.1	1	06/23/20 14:03	6/19/20	
3-Nitroaniline	9.1 U	9.1	2.3	1	06/23/20 14:03	6/19/20	
4,6-Dinitro-2-methylphenol	45 U	45	18	1	06/23/20 14:03	6/19/20	
4-Bromophenyl Phenyl Ether	9.1 U	9.1	1.5	1	06/23/20 14:03	6/19/20	
4-Chloro-3-methylphenol	9.1 U	9.1	0.98	1	06/23/20 14:03	6/19/20	
4-Chloroaniline	9.1 U	9.1	0.91	1	06/23/20 14:03	6/19/20	
4-Chlorophenyl Phenyl Ether	9.1 U	9.1	1.4	1	06/23/20 14:03	6/19/20	
4-Nitroaniline	9.1 U	9.1	2.5	1	06/23/20 14:03	6/19/20	
4-Nitrophenol	45 U	45	5.8	1	06/23/20 14:03	6/19/20	
Acenaphthene	9.1 U	9.1	1.3	1	06/23/20 14:03	6/19/20	
Acenaphthylene	9.1 U	9.1	1.3	1	06/23/20 14:03	6/19/20	
Acetophenone	9.1 U	9.1	1.2	1	06/23/20 14:03	6/19/20	
Anthracene	9.1 U	9.1	1.2	1	06/23/20 14:03	6/19/20	
Atrazine	9.1 U	9.1	1.9	1	06/23/20 14:03	6/19/20	
Benz(a)anthracene	9.1 U	9.1	1.5	1	06/23/20 14:03	6/19/20	
Benzaldehyde	9.1 U	9.1	3.4	1	06/23/20 14:03	6/19/20	
Benzo(a)pyrene	9.1 U	9.1	1.1	1	06/23/20 14:03	6/19/20	
Benzo(b)fluoranthene	9.1 U	9.1	1.1	1	06/23/20 14:03	6/19/20	
Benzo(g,h,i)perylene	9.1 U	9.1	0.91	1	06/23/20 14:03	6/19/20	
Benzo(k)fluoranthene	9.1 U	9.1	1.1	1	06/23/20 14:03	6/19/20	
Biphenyl	9.1 U	9.1	1.3	1	06/23/20 14:03	6/19/20	
2,2'-Oxybis(1-chloropropane)	9.1 U	9.1	1.3	1	06/23/20 14:03	6/19/20	
Bis(2-chloroethoxy)methane	9.1 U	9.1	1.8	1	06/23/20 14:03	6/19/20	
Bis(2-chloroethyl) Ether	9.1 U	9.1	1.2	1	06/23/20 14:03	6/19/20	
Bis(2-ethylhexyl) Phthalate	9.1 U	9.1	0.91	1	06/23/20 14:03	6/19/20	
Butyl Benzyl Phthalate	9.1 U	9.1	1.3	1	06/23/20 14:03	6/19/20	
Caprolactam	9.1 U	9.1	0.91	1	06/23/20 14:03	6/19/20	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 10:20
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-01B	**Units:**	ug/L
Lab Code:	R2005213-002	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	9.1 U	9.1	1.4	1	06/23/20 14:03	6/19/20	
Chrysene	9.1 U	9.1	1.1	1	06/23/20 14:03	6/19/20	
Di-n-butyl Phthalate	9.1 U	9.1	1.5	1	06/23/20 14:03	6/19/20	
Di-n-octyl Phthalate	9.1 U	9.1	3.0	1	06/23/20 14:03	6/19/20	
Dibenz(a,h)anthracene	9.1 U	9.1	0.93	1	06/23/20 14:03	6/19/20	
Dibenzofuran	9.1 U	9.1	1.3	1	06/23/20 14:03	6/19/20	
Diethyl Phthalate	9.1 U	9.1	0.98	1	06/23/20 14:03	6/19/20	
Dimethyl Phthalate	9.1 U	9.1	1.2	1	06/23/20 14:03	6/19/20	
Fluoranthene	9.1 U	9.1	1.4	1	06/23/20 14:03	6/19/20	
Fluorene	9.1 U	9.1	1.2	1	06/23/20 14:03	6/19/20	
Hexachlorobenzene	9.1 U	9.1	1.4	1	06/23/20 14:03	6/19/20	
Hexachlorobutadiene	9.1 U	9.1	0.91	1	06/23/20 14:03	6/19/20	
Hexachlorocyclopentadiene	9.1 U	9.1	2.0	1	06/23/20 14:03	6/19/20	
Hexachloroethane	9.1 U	9.1	0.96	1	06/23/20 14:03	6/19/20	
Indeno(1,2,3-cd)pyrene	9.1 U	9.1	1.6	1	06/23/20 14:03	6/19/20	
Isophorone	9.1 U	9.1	1.3	1	06/23/20 14:03	6/19/20	
N-Nitrosodi-n-propylamine	9.1 U	9.1	1.1	1	06/23/20 14:03	6/19/20	
N-Nitrosodiphenylamine	9.1 U	9.1	2.4	1	06/23/20 14:03	6/19/20	
Naphthalene	9.1 U	9.1	1.1	1	06/23/20 14:03	6/19/20	
Nitrobenzene	9.1 U	9.1	1.4	1	06/23/20 14:03	6/19/20	
Pentachlorophenol (PCP)	45 U	45	8.9	1	06/23/20 14:03	6/19/20	
Phenanthrene	9.1 U	9.1	1.3	1	06/23/20 14:03	6/19/20	
Phenol	9.1 U	9.1	0.91	1	06/23/20 14:03	6/19/20	
Pyrene	9.1 U	9.1	1.3	1	06/23/20 14:03	6/19/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	86	35 - 141	06/23/20 14:03	
2-Fluorobiphenyl	66	31 - 118	06/23/20 14:03	
2-Fluorophenol	38	10 - 105	06/23/20 14:03	
Nitrobenzene-d5	59	31 - 110	06/23/20 14:03	
Phenol-d6	27	10 - 107	06/23/20 14:03	
Terphenyl-d14	92	10 - 165	06/23/20 14:03	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 12:50
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-01A	**Units:**	ug/L
Lab Code:	R2005213-003	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	9.1 U	9.1	1.1	1	06/23/20 14:33	6/19/20	
2,3,4,6-Tetrachlorophenol	9.1 U	9.1	1.1	1	06/23/20 14:33	6/19/20	
2,4,5-Trichlorophenol	9.1 U	9.1	0.99	1	06/23/20 14:33	6/19/20	
2,4,6-Trichlorophenol	9.1 U	9.1	1.3	1	06/23/20 14:33	6/19/20	
2,4-Dichlorophenol	9.1 U	9.1	1.2	1	06/23/20 14:33	6/19/20	
2,4-Dimethylphenol	9.1 U	9.1	1.3	1	06/23/20 14:33	6/19/20	
2,4-Dinitrophenol	45 U	45	19	1	06/23/20 14:33	6/19/20	
2,4-Dinitrotoluene	9.1 U	9.1	2.2	1	06/23/20 14:33	6/19/20	
2,6-Dinitrotoluene	9.1 U	9.1	1.2	1	06/23/20 14:33	6/19/20	
2-Chloronaphthalene	9.1 U	9.1	1.3	1	06/23/20 14:33	6/19/20	
2-Chlorophenol	9.1 U	9.1	0.97	1	06/23/20 14:33	6/19/20	
2-Methylnaphthalene	9.1 U	9.1	1.2	1	06/23/20 14:33	6/19/20	
2-Methylphenol	9.1 U	9.1	0.91	1	06/23/20 14:33	6/19/20	
2-Nitroaniline	9.1 U	9.1	1.3	1	06/23/20 14:33	6/19/20	
2-Nitrophenol	9.1 U	9.1	1.4	1	06/23/20 14:33	6/19/20	
3,3'-Dichlorobenzidine	9.1 U	9.1	1.1	1	06/23/20 14:33	6/19/20	
3- and 4-Methylphenol Coelution	9.1 U	9.1	1.1	1	06/23/20 14:33	6/19/20	
3-Nitroaniline	9.1 U	9.1	2.3	1	06/23/20 14:33	6/19/20	
4,6-Dinitro-2-methylphenol	45 U	45	18	1	06/23/20 14:33	6/19/20	
4-Bromophenyl Phenyl Ether	9.1 U	9.1	1.5	1	06/23/20 14:33	6/19/20	
4-Chloro-3-methylphenol	9.1 U	9.1	0.98	1	06/23/20 14:33	6/19/20	
4-Chloroaniline	9.1 U	9.1	0.91	1	06/23/20 14:33	6/19/20	
4-Chlorophenyl Phenyl Ether	9.1 U	9.1	1.4	1	06/23/20 14:33	6/19/20	
4-Nitroaniline	9.1 U	9.1	2.5	1	06/23/20 14:33	6/19/20	
4-Nitrophenol	45 U	45	5.8	1	06/23/20 14:33	6/19/20	
Acenaphthene	9.1 U	9.1	1.3	1	06/23/20 14:33	6/19/20	
Acenaphthylene	9.1 U	9.1	1.3	1	06/23/20 14:33	6/19/20	
Acetophenone	9.1 U	9.1	1.2	1	06/23/20 14:33	6/19/20	
Anthracene	9.1 U	9.1	1.2	1	06/23/20 14:33	6/19/20	
Atrazine	9.1 U	9.1	1.9	1	06/23/20 14:33	6/19/20	
Benz(a)anthracene	9.1 U	9.1	1.5	1	06/23/20 14:33	6/19/20	
Benzaldehyde	9.1 U	9.1	3.4	1	06/23/20 14:33	6/19/20	
Benzo(a)pyrene	9.1 U	9.1	1.1	1	06/23/20 14:33	6/19/20	
Benzo(b)fluoranthene	9.1 U	9.1	1.1	1	06/23/20 14:33	6/19/20	
Benzo(g,h,i)perylene	9.1 U	9.1	0.91	1	06/23/20 14:33	6/19/20	
Benzo(k)fluoranthene	9.1 U	9.1	1.1	1	06/23/20 14:33	6/19/20	
Biphenyl	9.1 U	9.1	1.3	1	06/23/20 14:33	6/19/20	
2,2'-Oxybis(1-chloropropane)	9.1 U	9.1	1.3	1	06/23/20 14:33	6/19/20	
Bis(2-chloroethoxy)methane	9.1 U	9.1	1.8	1	06/23/20 14:33	6/19/20	
Bis(2-chloroethyl) Ether	9.1 U	9.1	1.2	1	06/23/20 14:33	6/19/20	
Bis(2-ethylhexyl) Phthalate	9.1 U	9.1	0.91	1	06/23/20 14:33	6/19/20	
Butyl Benzyl Phthalate	9.1 U	9.1	1.3	1	06/23/20 14:33	6/19/20	
Caprolactam	9.1 U	9.1	0.91	1	06/23/20 14:33	6/19/20	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 12:50
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-01A	**Units:**	ug/L
Lab Code:	R2005213-003	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	9.1 U	9.1	1.4	1	06/23/20 14:33	6/19/20	
Chrysene	9.1 U	9.1	1.1	1	06/23/20 14:33	6/19/20	
Di-n-butyl Phthalate	9.1 U	9.1	1.5	1	06/23/20 14:33	6/19/20	
Di-n-octyl Phthalate	9.1 U	9.1	3.0	1	06/23/20 14:33	6/19/20	
Dibenz(a,h)anthracene	9.1 U	9.1	0.93	1	06/23/20 14:33	6/19/20	
Dibenzofuran	9.1 U	9.1	1.3	1	06/23/20 14:33	6/19/20	
Diethyl Phthalate	9.1 U	9.1	0.98	1	06/23/20 14:33	6/19/20	
Dimethyl Phthalate	9.1 U	9.1	1.2	1	06/23/20 14:33	6/19/20	
Fluoranthene	9.1 U	9.1	1.4	1	06/23/20 14:33	6/19/20	
Fluorene	9.1 U	9.1	1.2	1	06/23/20 14:33	6/19/20	
Hexachlorobenzene	9.1 U	9.1	1.4	1	06/23/20 14:33	6/19/20	
Hexachlorobutadiene	9.1 U	9.1	0.91	1	06/23/20 14:33	6/19/20	
Hexachlorocyclopentadiene	9.1 U	9.1	2.0	1	06/23/20 14:33	6/19/20	
Hexachloroethane	9.1 U	9.1	0.96	1	06/23/20 14:33	6/19/20	
Indeno(1,2,3-cd)pyrene	9.1 U	9.1	1.6	1	06/23/20 14:33	6/19/20	
Isophorone	9.1 U	9.1	1.3	1	06/23/20 14:33	6/19/20	
N-Nitrosodi-n-propylamine	9.1 U	9.1	1.1	1	06/23/20 14:33	6/19/20	
N-Nitrosodiphenylamine	9.1 U	9.1	2.4	1	06/23/20 14:33	6/19/20	
Naphthalene	9.1 U	9.1	1.1	1	06/23/20 14:33	6/19/20	
Nitrobenzene	9.1 U	9.1	1.4	1	06/23/20 14:33	6/19/20	
Pentachlorophenol (PCP)	45 U	45	8.9	1	06/23/20 14:33	6/19/20	
Phenanthrene	9.1 U	9.1	1.3	1	06/23/20 14:33	6/19/20	
Phenol	9.1 U	9.1	0.91	1	06/23/20 14:33	6/19/20	
Pyrene	9.1 U	9.1	1.3	1	06/23/20 14:33	6/19/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	70	35 - 141	06/23/20 14:33	
2-Fluorobiphenyl	65	31 - 118	06/23/20 14:33	
2-Fluorophenol	36	10 - 105	06/23/20 14:33	
Nitrobenzene-d5	59	31 - 110	06/23/20 14:33	
Phenol-d6	27	10 - 107	06/23/20 14:33	
Terphenyl-d14	81	10 - 165	06/23/20 14:33	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 13:50
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-03A	**Units:**	ug/L
Lab Code:	R2005213-004	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	9.1 U	9.1	1.1	1	06/23/20 18:54	6/22/20	
2,3,4,6-Tetrachlorophenol	9.1 U	9.1	1.1	1	06/23/20 18:54	6/22/20	
2,4,5-Trichlorophenol	9.1 U	9.1	0.99	1	06/23/20 18:54	6/22/20	
2,4,6-Trichlorophenol	9.1 U	9.1	1.3	1	06/23/20 18:54	6/22/20	
2,4-Dichlorophenol	9.1 U	9.1	1.2	1	06/23/20 18:54	6/22/20	
2,4-Dimethylphenol	9.1 U	9.1	1.3	1	06/23/20 18:54	6/22/20	
2,4-Dinitrophenol	45 U	45	19	1	06/23/20 18:54	6/22/20	
2,4-Dinitrotoluene	9.1 U	9.1	2.2	1	06/23/20 18:54	6/22/20	
2,6-Dinitrotoluene	9.1 U	9.1	1.2	1	06/23/20 18:54	6/22/20	
2-Chloronaphthalene	9.1 U	9.1	1.3	1	06/23/20 18:54	6/22/20	
2-Chlorophenol	9.1 U	9.1	0.97	1	06/23/20 18:54	6/22/20	
2-Methylnaphthalene	9.1 U	9.1	1.2	1	06/23/20 18:54	6/22/20	
2-Methylphenol	9.1 U	9.1	0.91	1	06/23/20 18:54	6/22/20	
2-Nitroaniline	9.1 U	9.1	1.3	1	06/23/20 18:54	6/22/20	
2-Nitrophenol	9.1 U	9.1	1.4	1	06/23/20 18:54	6/22/20	
3,3'-Dichlorobenzidine	9.1 U	9.1	1.1	1	06/23/20 18:54	6/22/20	
3- and 4-Methylphenol Coelution	9.1 U	9.1	1.1	1	06/23/20 18:54	6/22/20	
3-Nitroaniline	9.1 U	9.1	2.3	1	06/23/20 18:54	6/22/20	
4,6-Dinitro-2-methylphenol	45 U	45	18	1	06/23/20 18:54	6/22/20	
4-Bromophenyl Phenyl Ether	9.1 U	9.1	1.5	1	06/23/20 18:54	6/22/20	
4-Chloro-3-methylphenol	9.1 U	9.1	0.98	1	06/23/20 18:54	6/22/20	
4-Chloroaniline	9.1 U	9.1	0.91	1	06/23/20 18:54	6/22/20	
4-Chlorophenyl Phenyl Ether	9.1 U	9.1	1.4	1	06/23/20 18:54	6/22/20	
4-Nitroaniline	9.1 U	9.1	2.5	1	06/23/20 18:54	6/22/20	
4-Nitrophenol	45 U	45	5.8	1	06/23/20 18:54	6/22/20	
Acenaphthene	9.1 U	9.1	1.3	1	06/23/20 18:54	6/22/20	
Acenaphthylene	9.1 U	9.1	1.3	1	06/23/20 18:54	6/22/20	
Acetophenone	9.1 U	9.1	1.2	1	06/23/20 18:54	6/22/20	
Anthracene	9.1 U	9.1	1.2	1	06/23/20 18:54	6/22/20	
Atrazine	9.1 U	9.1	1.9	1	06/23/20 18:54	6/22/20	
Benz(a)anthracene	9.1 U	9.1	1.5	1	06/23/20 18:54	6/22/20	
Benzaldehyde	9.1 U	9.1	3.4	1	06/23/20 18:54	6/22/20	
Benzo(a)pyrene	9.1 U	9.1	1.1	1	06/23/20 18:54	6/22/20	
Benzo(b)fluoranthene	9.1 U	9.1	1.1	1	06/23/20 18:54	6/22/20	
Benzo(g,h,i)perylene	9.1 U	9.1	0.91	1	06/23/20 18:54	6/22/20	
Benzo(k)fluoranthene	9.1 U	9.1	1.1	1	06/23/20 18:54	6/22/20	
Biphenyl	9.1 U	9.1	1.3	1	06/23/20 18:54	6/22/20	
2,2'-Oxybis(1-chloropropane)	9.1 U	9.1	1.3	1	06/23/20 18:54	6/22/20	
Bis(2-chloroethoxy)methane	9.1 U	9.1	1.8	1	06/23/20 18:54	6/22/20	
Bis(2-chloroethyl) Ether	9.1 U	9.1	1.2	1	06/23/20 18:54	6/22/20	
Bis(2-ethylhexyl) Phthalate	9.1 U	9.1	0.91	1	06/23/20 18:54	6/22/20	
Butyl Benzyl Phthalate	9.1 U	9.1	1.3	1	06/23/20 18:54	6/22/20	
Caprolactam	9.1 U	9.1	0.91	1	06/23/20 18:54	6/22/20	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 13:50
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-03A	**Units:**	ug/L
Lab Code:	R2005213-004	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	9.1 U	9.1	1.4	1	06/23/20 18:54	6/22/20	
Chrysene	9.1 U	9.1	1.1	1	06/23/20 18:54	6/22/20	
Di-n-butyl Phthalate	9.1 U	9.1	1.5	1	06/23/20 18:54	6/22/20	
Di-n-octyl Phthalate	9.1 U	9.1	3.0	1	06/23/20 18:54	6/22/20	
Dibenz(a,h)anthracene	9.1 U	9.1	0.93	1	06/23/20 18:54	6/22/20	
Dibenzofuran	9.1 U	9.1	1.3	1	06/23/20 18:54	6/22/20	
Diethyl Phthalate	9.1 U	9.1	0.98	1	06/23/20 18:54	6/22/20	
Dimethyl Phthalate	9.1 U	9.1	1.2	1	06/23/20 18:54	6/22/20	
Fluoranthene	9.1 U	9.1	1.4	1	06/23/20 18:54	6/22/20	
Fluorene	9.1 U	9.1	1.2	1	06/23/20 18:54	6/22/20	
Hexachlorobenzene	9.1 U	9.1	1.4	1	06/23/20 18:54	6/22/20	
Hexachlorobutadiene	9.1 U	9.1	0.91	1	06/23/20 18:54	6/22/20	
Hexachlorocyclopentadiene	9.1 U	9.1	2.0	1	06/23/20 18:54	6/22/20	
Hexachloroethane	9.1 U	9.1	0.96	1	06/23/20 18:54	6/22/20	
Indeno(1,2,3-cd)pyrene	9.1 U	9.1	1.6	1	06/23/20 18:54	6/22/20	
Isophorone	9.1 U	9.1	1.3	1	06/23/20 18:54	6/22/20	
N-Nitrosodi-n-propylamine	9.1 U	9.1	1.1	1	06/23/20 18:54	6/22/20	
N-Nitrosodiphenylamine	9.1 U	9.1	2.4	1	06/23/20 18:54	6/22/20	
Naphthalene	9.1 U	9.1	1.1	1	06/23/20 18:54	6/22/20	
Nitrobenzene	9.1 U	9.1	1.4	1	06/23/20 18:54	6/22/20	
Pentachlorophenol (PCP)	45 U	45	8.9	1	06/23/20 18:54	6/22/20	
Phenanthrene	9.1 U	9.1	1.3	1	06/23/20 18:54	6/22/20	
Phenol	9.1 U	9.1	0.91	1	06/23/20 18:54	6/22/20	
Pyrene	9.1 U	9.1	1.3	1	06/23/20 18:54	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	70	35 - 141	06/23/20 18:54	
2-Fluorobiphenyl	60	31 - 118	06/23/20 18:54	
2-Fluorophenol	47	10 - 105	06/23/20 18:54	
Nitrobenzene-d5	62	31 - 110	06/23/20 18:54	
Phenol-d6	34	10 - 107	06/23/20 18:54	
Terphenyl-d14	104	10 - 165	06/23/20 18:54	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 15:35
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-20B	**Units:**	ug/L
Lab Code:	R2005213-005	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	9.1 U	9.1	1.1	1	06/23/20 19:23	6/22/20	
2,3,4,6-Tetrachlorophenol	9.1 U	9.1	1.1	1	06/23/20 19:23	6/22/20	
2,4,5-Trichlorophenol	9.1 U	9.1	0.99	1	06/23/20 19:23	6/22/20	
2,4,6-Trichlorophenol	9.1 U	9.1	1.3	1	06/23/20 19:23	6/22/20	
2,4-Dichlorophenol	9.1 U	9.1	1.2	1	06/23/20 19:23	6/22/20	
2,4-Dimethylphenol	9.1 U	9.1	1.3	1	06/23/20 19:23	6/22/20	
2,4-Dinitrophenol	45 U	45	19	1	06/23/20 19:23	6/22/20	
2,4-Dinitrotoluene	9.1 U	9.1	2.2	1	06/23/20 19:23	6/22/20	
2,6-Dinitrotoluene	9.1 U	9.1	1.2	1	06/23/20 19:23	6/22/20	
2-Chloronaphthalene	9.1 U	9.1	1.3	1	06/23/20 19:23	6/22/20	
2-Chlorophenol	9.1 U	9.1	0.97	1	06/23/20 19:23	6/22/20	
2-Methylnaphthalene	9.1 U	9.1	1.2	1	06/23/20 19:23	6/22/20	
2-Methylphenol	9.1 U	9.1	0.91	1	06/23/20 19:23	6/22/20	
2-Nitroaniline	9.1 U	9.1	1.3	1	06/23/20 19:23	6/22/20	
2-Nitrophenol	9.1 U	9.1	1.4	1	06/23/20 19:23	6/22/20	
3,3'-Dichlorobenzidine	9.1 U	9.1	1.1	1	06/23/20 19:23	6/22/20	
3- and 4-Methylphenol Coelution	9.1 U	9.1	1.1	1	06/23/20 19:23	6/22/20	
3-Nitroaniline	9.1 U	9.1	2.3	1	06/23/20 19:23	6/22/20	
4,6-Dinitro-2-methylphenol	45 U	45	18	1	06/23/20 19:23	6/22/20	
4-Bromophenyl Phenyl Ether	9.1 U	9.1	1.5	1	06/23/20 19:23	6/22/20	
4-Chloro-3-methylphenol	9.1 U	9.1	0.98	1	06/23/20 19:23	6/22/20	
4-Chloroaniline	9.1 U	9.1	0.91	1	06/23/20 19:23	6/22/20	
4-Chlorophenyl Phenyl Ether	9.1 U	9.1	1.4	1	06/23/20 19:23	6/22/20	
4-Nitroaniline	9.1 U	9.1	2.5	1	06/23/20 19:23	6/22/20	
4-Nitrophenol	45 U	45	5.8	1	06/23/20 19:23	6/22/20	
Acenaphthene	9.1 U	9.1	1.3	1	06/23/20 19:23	6/22/20	
Acenaphthylene	9.1 U	9.1	1.3	1	06/23/20 19:23	6/22/20	
Acetophenone	9.1 U	9.1	1.2	1	06/23/20 19:23	6/22/20	
Anthracene	9.1 U	9.1	1.2	1	06/23/20 19:23	6/22/20	
Atrazine	9.1 U	9.1	1.9	1	06/23/20 19:23	6/22/20	
Benz(a)anthracene	9.1 U	9.1	1.5	1	06/23/20 19:23	6/22/20	
Benzaldehyde	9.1 U	9.1	3.4	1	06/23/20 19:23	6/22/20	
Benzo(a)pyrene	9.1 U	9.1	1.1	1	06/23/20 19:23	6/22/20	
Benzo(b)fluoranthene	9.1 U	9.1	1.1	1	06/23/20 19:23	6/22/20	
Benzo(g,h,i)perylene	9.1 U	9.1	0.91	1	06/23/20 19:23	6/22/20	
Benzo(k)fluoranthene	9.1 U	9.1	1.1	1	06/23/20 19:23	6/22/20	
Biphenyl	9.1 U	9.1	1.3	1	06/23/20 19:23	6/22/20	
2,2'-Oxybis(1-chloropropane)	9.1 U	9.1	1.3	1	06/23/20 19:23	6/22/20	
Bis(2-chloroethoxy)methane	9.1 U	9.1	1.8	1	06/23/20 19:23	6/22/20	
Bis(2-chloroethyl) Ether	9.1 U	9.1	1.2	1	06/23/20 19:23	6/22/20	
Bis(2-ethylhexyl) Phthalate	9.1 U	9.1	0.91	1	06/23/20 19:23	6/22/20	
Butyl Benzyl Phthalate	9.1 U	9.1	1.3	1	06/23/20 19:23	6/22/20	
Caprolactam	9.1 U	9.1	0.91	1	06/23/20 19:23	6/22/20	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 15:35
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-20B	**Units:**	ug/L
Lab Code:	R2005213-005	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	9.1 U	9.1	1.4	1	06/23/20 19:23	6/22/20	
Chrysene	9.1 U	9.1	1.1	1	06/23/20 19:23	6/22/20	
Di-n-butyl Phthalate	9.1 U	9.1	1.5	1	06/23/20 19:23	6/22/20	
Di-n-octyl Phthalate	9.1 U	9.1	3.0	1	06/23/20 19:23	6/22/20	
Dibenz(a,h)anthracene	9.1 U	9.1	0.93	1	06/23/20 19:23	6/22/20	
Dibenzofuran	9.1 U	9.1	1.3	1	06/23/20 19:23	6/22/20	
Diethyl Phthalate	9.1 U	9.1	0.98	1	06/23/20 19:23	6/22/20	
Dimethyl Phthalate	9.1 U	9.1	1.2	1	06/23/20 19:23	6/22/20	
Fluoranthene	9.1 U	9.1	1.4	1	06/23/20 19:23	6/22/20	
Fluorene	9.1 U	9.1	1.2	1	06/23/20 19:23	6/22/20	
Hexachlorobenzene	9.1 U	9.1	1.4	1	06/23/20 19:23	6/22/20	
Hexachlorobutadiene	9.1 U	9.1	0.91	1	06/23/20 19:23	6/22/20	
Hexachlorocyclopentadiene	9.1 U	9.1	2.0	1	06/23/20 19:23	6/22/20	
Hexachloroethane	9.1 U	9.1	0.96	1	06/23/20 19:23	6/22/20	
Indeno(1,2,3-cd)pyrene	9.1 U	9.1	1.6	1	06/23/20 19:23	6/22/20	
Isophorone	9.1 U	9.1	1.3	1	06/23/20 19:23	6/22/20	
N-Nitrosodi-n-propylamine	9.1 U	9.1	1.1	1	06/23/20 19:23	6/22/20	
N-Nitrosodiphenylamine	9.1 U	9.1	2.4	1	06/23/20 19:23	6/22/20	
Naphthalene	9.1 U	9.1	1.1	1	06/23/20 19:23	6/22/20	
Nitrobenzene	9.1 U	9.1	1.4	1	06/23/20 19:23	6/22/20	
Pentachlorophenol (PCP)	45 U	45	8.9	1	06/23/20 19:23	6/22/20	
Phenanthrene	9.1 U	9.1	1.3	1	06/23/20 19:23	6/22/20	
Phenol	9.1 U	9.1	0.91	1	06/23/20 19:23	6/22/20	
Pyrene	9.1 U	9.1	1.3	1	06/23/20 19:23	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	50	35 - 141	06/23/20 19:23	
2-Fluorobiphenyl	43	31 - 118	06/23/20 19:23	
2-Fluorophenol	34	10 - 105	06/23/20 19:23	
Nitrobenzene-d5	41	31 - 110	06/23/20 19:23	
Phenol-d6	23	10 - 107	06/23/20 19:23	
Terphenyl-d14	86	10 - 165	06/23/20 19:23	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 10:15
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-20A	**Units:**	ug/L
Lab Code:	R2005213-006	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	9.1 U	9.1	1.1	1	06/23/20 19:51	6/22/20	
2,3,4,6-Tetrachlorophenol	9.1 U	9.1	1.1	1	06/23/20 19:51	6/22/20	
2,4,5-Trichlorophenol	9.1 U	9.1	0.99	1	06/23/20 19:51	6/22/20	
2,4,6-Trichlorophenol	9.1 U	9.1	1.3	1	06/23/20 19:51	6/22/20	
2,4-Dichlorophenol	9.1 U	9.1	1.2	1	06/23/20 19:51	6/22/20	
2,4-Dimethylphenol	9.1 U	9.1	1.3	1	06/23/20 19:51	6/22/20	
2,4-Dinitrophenol	45 U	45	19	1	06/23/20 19:51	6/22/20	
2,4-Dinitrotoluene	9.1 U	9.1	2.2	1	06/23/20 19:51	6/22/20	
2,6-Dinitrotoluene	9.1 U	9.1	1.2	1	06/23/20 19:51	6/22/20	
2-Chloronaphthalene	9.1 U	9.1	1.3	1	06/23/20 19:51	6/22/20	
2-Chlorophenol	9.1 U	9.1	0.97	1	06/23/20 19:51	6/22/20	
2-Methylnaphthalene	9.1 U	9.1	1.2	1	06/23/20 19:51	6/22/20	
2-Methylphenol	9.1 U	9.1	0.91	1	06/23/20 19:51	6/22/20	
2-Nitroaniline	9.1 U	9.1	1.3	1	06/23/20 19:51	6/22/20	
2-Nitrophenol	9.1 U	9.1	1.4	1	06/23/20 19:51	6/22/20	
3,3'-Dichlorobenzidine	9.1 U	9.1	1.1	1	06/23/20 19:51	6/22/20	
3- and 4-Methylphenol Coelution	9.1 U	9.1	1.1	1	06/23/20 19:51	6/22/20	
3-Nitroaniline	9.1 U	9.1	2.3	1	06/23/20 19:51	6/22/20	
4,6-Dinitro-2-methylphenol	45 U	45	18	1	06/23/20 19:51	6/22/20	
4-Bromophenyl Phenyl Ether	9.1 U	9.1	1.5	1	06/23/20 19:51	6/22/20	
4-Chloro-3-methylphenol	9.1 U	9.1	0.98	1	06/23/20 19:51	6/22/20	
4-Chloroaniline	9.1 U	9.1	0.91	1	06/23/20 19:51	6/22/20	
4-Chlorophenyl Phenyl Ether	9.1 U	9.1	1.4	1	06/23/20 19:51	6/22/20	
4-Nitroaniline	9.1 U	9.1	2.5	1	06/23/20 19:51	6/22/20	
4-Nitrophenol	45 U	45	5.8	1	06/23/20 19:51	6/22/20	
Acenaphthene	9.1 U	9.1	1.3	1	06/23/20 19:51	6/22/20	
Acenaphthylene	9.1 U	9.1	1.3	1	06/23/20 19:51	6/22/20	
Acetophenone	9.1 U	9.1	1.2	1	06/23/20 19:51	6/22/20	
Anthracene	9.1 U	9.1	1.2	1	06/23/20 19:51	6/22/20	
Atrazine	9.1 U	9.1	1.9	1	06/23/20 19:51	6/22/20	
Benz(a)anthracene	9.1 U	9.1	1.5	1	06/23/20 19:51	6/22/20	
Benzaldehyde	9.1 U	9.1	3.4	1	06/23/20 19:51	6/22/20	
Benzo(a)pyrene	9.1 U	9.1	1.1	1	06/23/20 19:51	6/22/20	
Benzo(b)fluoranthene	9.1 U	9.1	1.1	1	06/23/20 19:51	6/22/20	
Benzo(g,h,i)perylene	9.1 U	9.1	0.91	1	06/23/20 19:51	6/22/20	
Benzo(k)fluoranthene	9.1 U	9.1	1.1	1	06/23/20 19:51	6/22/20	
Biphenyl	9.1 U	9.1	1.3	1	06/23/20 19:51	6/22/20	
2,2'-Oxybis(1-chloropropane)	9.1 U	9.1	1.3	1	06/23/20 19:51	6/22/20	
Bis(2-chloroethoxy)methane	9.1 U	9.1	1.8	1	06/23/20 19:51	6/22/20	
Bis(2-chloroethyl) Ether	9.1 U	9.1	1.2	1	06/23/20 19:51	6/22/20	
Bis(2-ethylhexyl) Phthalate	9.1 U	9.1	0.91	1	06/23/20 19:51	6/22/20	
Butyl Benzyl Phthalate	9.1 U	9.1	1.3	1	06/23/20 19:51	6/22/20	
Caprolactam	9.1 U	9.1	0.91	1	06/23/20 19:51	6/22/20	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 10:15
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-20A	**Units:**	ug/L
Lab Code:	R2005213-006	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	9.1 U	9.1	1.4	1	06/23/20 19:51	6/22/20	
Chrysene	9.1 U	9.1	1.1	1	06/23/20 19:51	6/22/20	
Di-n-butyl Phthalate	9.1 U	9.1	1.5	1	06/23/20 19:51	6/22/20	
Di-n-octyl Phthalate	9.1 U	9.1	3.0	1	06/23/20 19:51	6/22/20	
Dibenz(a,h)anthracene	9.1 U	9.1	0.93	1	06/23/20 19:51	6/22/20	
Dibenzofuran	9.1 U	9.1	1.3	1	06/23/20 19:51	6/22/20	
Diethyl Phthalate	9.1 U	9.1	0.98	1	06/23/20 19:51	6/22/20	
Dimethyl Phthalate	9.1 U	9.1	1.2	1	06/23/20 19:51	6/22/20	
Fluoranthene	9.1 U	9.1	1.4	1	06/23/20 19:51	6/22/20	
Fluorene	9.1 U	9.1	1.2	1	06/23/20 19:51	6/22/20	
Hexachlorobenzene	9.1 U	9.1	1.4	1	06/23/20 19:51	6/22/20	
Hexachlorobutadiene	9.1 U	9.1	0.91	1	06/23/20 19:51	6/22/20	
Hexachlorocyclopentadiene	9.1 U	9.1	2.0	1	06/23/20 19:51	6/22/20	
Hexachloroethane	9.1 U	9.1	0.96	1	06/23/20 19:51	6/22/20	
Indeno(1,2,3-cd)pyrene	9.1 U	9.1	1.6	1	06/23/20 19:51	6/22/20	
Isophorone	9.1 U	9.1	1.3	1	06/23/20 19:51	6/22/20	
N-Nitrosodi-n-propylamine	9.1 U	9.1	1.1	1	06/23/20 19:51	6/22/20	
N-Nitrosodiphenylamine	9.1 U	9.1	2.4	1	06/23/20 19:51	6/22/20	
Naphthalene	9.1 U	9.1	1.1	1	06/23/20 19:51	6/22/20	
Nitrobenzene	9.1 U	9.1	1.4	1	06/23/20 19:51	6/22/20	
Pentachlorophenol (PCP)	45 U	45	8.9	1	06/23/20 19:51	6/22/20	
Phenanthrene	9.1 U	9.1	1.3	1	06/23/20 19:51	6/22/20	
Phenol	9.1 U	9.1	0.91	1	06/23/20 19:51	6/22/20	
Pyrene	9.1 U	9.1	1.3	1	06/23/20 19:51	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	80	35 - 141	06/23/20 19:51	
2-Fluorobiphenyl	62	31 - 118	06/23/20 19:51	
2-Fluorophenol	42	10 - 105	06/23/20 19:51	
Nitrobenzene-d5	62	31 - 110	06/23/20 19:51	
Phenol-d6	31	10 - 107	06/23/20 19:51	
Terphenyl-d14	108	10 - 165	06/23/20 19:51	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 12:00
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-05B	**Units:**	ug/L
Lab Code:	R2005213-007	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	10 U	10	1.2	1	06/23/20 20:20	6/22/20	
2,3,4,6-Tetrachlorophenol	10 U	10	1.2	1	06/23/20 20:20	6/22/20	
2,4,5-Trichlorophenol	10 U	10	1.1	1	06/23/20 20:20	6/22/20	
2,4,6-Trichlorophenol	10 U	10	1.4	1	06/23/20 20:20	6/22/20	
2,4-Dichlorophenol	10 U	10	1.3	1	06/23/20 20:20	6/22/20	
2,4-Dimethylphenol	10 U	10	1.4	1	06/23/20 20:20	6/22/20	
2,4-Dinitrophenol	50 U	50	20	1	06/23/20 20:20	6/22/20	
2,4-Dinitrotoluene	10 U	10	2.4	1	06/23/20 20:20	6/22/20	
2,6-Dinitrotoluene	10 U	10	1.4	1	06/23/20 20:20	6/22/20	
2-Chloronaphthalene	10 U	10	1.4	1	06/23/20 20:20	6/22/20	
2-Chlorophenol	10 U	10	1.1	1	06/23/20 20:20	6/22/20	
2-Methylnaphthalene	10 U	10	1.3	1	06/23/20 20:20	6/22/20	
2-Methylphenol	10 U	10	1.0	1	06/23/20 20:20	6/22/20	
2-Nitroaniline	10 U	10	1.4	1	06/23/20 20:20	6/22/20	
2-Nitrophenol	10 U	10	1.5	1	06/23/20 20:20	6/22/20	
3,3'-Dichlorobenzidine	10 U	10	1.2	1	06/23/20 20:20	6/22/20	
3- and 4-Methylphenol Coelution	10 U	10	1.2	1	06/23/20 20:20	6/22/20	
3-Nitroaniline	10 U	10	2.5	1	06/23/20 20:20	6/22/20	
4,6-Dinitro-2-methylphenol	50 U	50	20	1	06/23/20 20:20	6/22/20	
4-Bromophenyl Phenyl Ether	10 U	10	1.7	1	06/23/20 20:20	6/22/20	
4-Chloro-3-methylphenol	10 U	10	1.1	1	06/23/20 20:20	6/22/20	
4-Chloroaniline	10 U	10	1.0	1	06/23/20 20:20	6/22/20	
4-Chlorophenyl Phenyl Ether	10 U	10	1.5	1	06/23/20 20:20	6/22/20	
4-Nitroaniline	10 U	10	2.7	1	06/23/20 20:20	6/22/20	
4-Nitrophenol	50 U	50	6.4	1	06/23/20 20:20	6/22/20	
Acenaphthene	10 U	10	1.4	1	06/23/20 20:20	6/22/20	
Acenaphthylene	10 U	10	1.4	1	06/23/20 20:20	6/22/20	
Acetophenone	10 U	10	1.3	1	06/23/20 20:20	6/22/20	
Anthracene	10 U	10	1.3	1	06/23/20 20:20	6/22/20	
Atrazine	10 U	10	2.1	1	06/23/20 20:20	6/22/20	
Benz(a)anthracene	10 U	10	1.6	1	06/23/20 20:20	6/22/20	
Benzaldehyde	10 U	10	3.7	1	06/23/20 20:20	6/22/20	
Benzo(a)pyrene	10 U	10	1.2	1	06/23/20 20:20	6/22/20	
Benzo(b)fluoranthene	10 U	10	1.2	1	06/23/20 20:20	6/22/20	
Benzo(g,h,i)perylene	10 U	10	1.0	1	06/23/20 20:20	6/22/20	
Benzo(k)fluoranthene	10 U	10	1.3	1	06/23/20 20:20	6/22/20	
Biphenyl	10 U	10	1.4	1	06/23/20 20:20	6/22/20	
2,2'-Oxybis(1-chloropropane)	10 U	10	1.4	1	06/23/20 20:20	6/22/20	
Bis(2-chloroethoxy)methane	10 U	10	1.9	1	06/23/20 20:20	6/22/20	
Bis(2-chloroethyl) Ether	10 U	10	1.3	1	06/23/20 20:20	6/22/20	
Bis(2-ethylhexyl) Phthalate	10 U	10	1.0	1	06/23/20 20:20	6/22/20	
Butyl Benzyl Phthalate	10 U	10	1.4	1	06/23/20 20:20	6/22/20	
Caprolactam	10 U	10	1.0	1	06/23/20 20:20	6/22/20	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 12:00
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-05B	**Units:**	ug/L
Lab Code:	R2005213-007	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	10 U	10	1.6	1	06/23/20 20:20	6/22/20	
Chrysene	10 U	10	1.2	1	06/23/20 20:20	6/22/20	
Di-n-butyl Phthalate	10 U	10	1.7	1	06/23/20 20:20	6/22/20	
Di-n-octyl Phthalate	10 U	10	3.3	1	06/23/20 20:20	6/22/20	
Dibenz(a,h)anthracene	10 U	10	1.1	1	06/23/20 20:20	6/22/20	
Dibenzofuran	10 U	10	1.4	1	06/23/20 20:20	6/22/20	
Diethyl Phthalate	10 U	10	1.1	1	06/23/20 20:20	6/22/20	
Dimethyl Phthalate	10 U	10	1.3	1	06/23/20 20:20	6/22/20	
Fluoranthene	10 U	10	1.5	1	06/23/20 20:20	6/22/20	
Fluorene	10 U	10	1.3	1	06/23/20 20:20	6/22/20	
Hexachlorobenzene	10 U	10	1.6	1	06/23/20 20:20	6/22/20	
Hexachlorobutadiene	10 U	10	1.0	1	06/23/20 20:20	6/22/20	
Hexachlorocyclopentadiene	10 U	10	2.2	1	06/23/20 20:20	6/22/20	
Hexachloroethane	10 U	10	1.1	1	06/23/20 20:20	6/22/20	
Indeno(1,2,3-cd)pyrene	10 U	10	1.8	1	06/23/20 20:20	6/22/20	
Isophorone	10 U	10	1.4	1	06/23/20 20:20	6/22/20	
N-Nitrosodi-n-propylamine	10 U	10	1.2	1	06/23/20 20:20	6/22/20	
N-Nitrosodiphenylamine	10 U	10	2.7	1	06/23/20 20:20	6/22/20	
Naphthalene	10 U	10	1.2	1	06/23/20 20:20	6/22/20	
Nitrobenzene	10 U	10	1.5	1	06/23/20 20:20	6/22/20	
Pentachlorophenol (PCP)	50 U	50	9.8	1	06/23/20 20:20	6/22/20	
Phenanthrene	10 U	10	1.4	1	06/23/20 20:20	6/22/20	
Phenol	10 U	10	1.0	1	06/23/20 20:20	6/22/20	
Pyrene	10 U	10	1.5	1	06/23/20 20:20	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	73	35 - 141	06/23/20 20:20	
2-Fluorobiphenyl	53	31 - 118	06/23/20 20:20	
2-Fluorophenol	36	10 - 105	06/23/20 20:20	
Nitrobenzene-d5	45	31 - 110	06/23/20 20:20	
Phenol-d6	25	10 - 107	06/23/20 20:20	
Terphenyl-d14	91	10 - 165	06/23/20 20:20	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 12:55
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-05A	**Units:**	ug/L
Lab Code:	R2005213-008	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,2,4,5-Tetrachlorobenzene	10 U	10	1.2	1	06/23/20 20:48	6/22/20	
2,3,4,6-Tetrachlorophenol	10 U	10	1.2	1	06/23/20 20:48	6/22/20	
2,4,5-Trichlorophenol	10 U	10	1.1	1	06/23/20 20:48	6/22/20	
2,4,6-Trichlorophenol	10 U	10	1.4	1	06/23/20 20:48	6/22/20	
2,4-Dichlorophenol	10 U	10	1.3	1	06/23/20 20:48	6/22/20	
2,4-Dimethylphenol	10 U	10	1.4	1	06/23/20 20:48	6/22/20	
2,4-Dinitrophenol	50 U	50	20	1	06/23/20 20:48	6/22/20	
2,4-Dinitrotoluene	10 U	10	2.4	1	06/23/20 20:48	6/22/20	
2,6-Dinitrotoluene	10 U	10	1.4	1	06/23/20 20:48	6/22/20	
2-Chloronaphthalene	10 U	10	1.4	1	06/23/20 20:48	6/22/20	
2-Chlorophenol	10 U	10	1.1	1	06/23/20 20:48	6/22/20	
2-Methylnaphthalene	10 U	10	1.3	1	06/23/20 20:48	6/22/20	
2-Methylphenol	10 U	10	1.0	1	06/23/20 20:48	6/22/20	
2-Nitroaniline	10 U	10	1.4	1	06/23/20 20:48	6/22/20	
2-Nitrophenol	10 U	10	1.5	1	06/23/20 20:48	6/22/20	
3,3'-Dichlorobenzidine	10 U	10	1.2	1	06/23/20 20:48	6/22/20	
3- and 4-Methylphenol Coelution	10 U	10	1.2	1	06/23/20 20:48	6/22/20	
3-Nitroaniline	10 U	10	2.5	1	06/23/20 20:48	6/22/20	
4,6-Dinitro-2-methylphenol	50 U	50	20	1	06/23/20 20:48	6/22/20	
4-Bromophenyl Phenyl Ether	10 U	10	1.7	1	06/23/20 20:48	6/22/20	
4-Chloro-3-methylphenol	10 U	10	1.1	1	06/23/20 20:48	6/22/20	
4-Chloroaniline	10 U	10	1.0	1	06/23/20 20:48	6/22/20	
4-Chlorophenyl Phenyl Ether	10 U	10	1.5	1	06/23/20 20:48	6/22/20	
4-Nitroaniline	10 U	10	2.7	1	06/23/20 20:48	6/22/20	
4-Nitrophenol	50 U	50	6.4	1	06/23/20 20:48	6/22/20	
Acenaphthene	10 U	10	1.4	1	06/23/20 20:48	6/22/20	
Acenaphthylene	10 U	10	1.4	1	06/23/20 20:48	6/22/20	
Acetophenone	10 U	10	1.3	1	06/23/20 20:48	6/22/20	
Anthracene	10 U	10	1.3	1	06/23/20 20:48	6/22/20	
Atrazine	10 U	10	2.1	1	06/23/20 20:48	6/22/20	
Benz(a)anthracene	10 U	10	1.6	1	06/23/20 20:48	6/22/20	
Benzaldehyde	10 U	10	3.7	1	06/23/20 20:48	6/22/20	
Benzo(a)pyrene	10 U	10	1.2	1	06/23/20 20:48	6/22/20	
Benzo(b)fluoranthene	10 U	10	1.2	1	06/23/20 20:48	6/22/20	
Benzo(g,h,i)perylene	10 U	10	1.0	1	06/23/20 20:48	6/22/20	
Benzo(k)fluoranthene	10 U	10	1.3	1	06/23/20 20:48	6/22/20	
Biphenyl	10 U	10	1.4	1	06/23/20 20:48	6/22/20	
2,2'-Oxybis(1-chloropropane)	10 U	10	1.4	1	06/23/20 20:48	6/22/20	
Bis(2-chloroethoxy)methane	10 U	10	1.9	1	06/23/20 20:48	6/22/20	
Bis(2-chloroethyl) Ether	10 U	10	1.3	1	06/23/20 20:48	6/22/20	
Bis(2-ethylhexyl) Phthalate	10 U	10	1.0	1	06/23/20 20:48	6/22/20	
Butyl Benzyl Phthalate	10 U	10	1.4	1	06/23/20 20:48	6/22/20	
Caprolactam	10 U	10	1.0	1	06/23/20 20:48	6/22/20	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 12:55
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-05A	**Units:**	ug/L
Lab Code:	R2005213-008	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Carbazole	10 U	10	1.6	1	06/23/20 20:48	6/22/20	
Chrysene	10 U	10	1.2	1	06/23/20 20:48	6/22/20	
Di-n-butyl Phthalate	10 U	10	1.7	1	06/23/20 20:48	6/22/20	
Di-n-octyl Phthalate	10 U	10	3.3	1	06/23/20 20:48	6/22/20	
Dibenz(a,h)anthracene	10 U	10	1.1	1	06/23/20 20:48	6/22/20	
Dibenzofuran	10 U	10	1.4	1	06/23/20 20:48	6/22/20	
Diethyl Phthalate	10 U	10	1.1	1	06/23/20 20:48	6/22/20	
Dimethyl Phthalate	10 U	10	1.3	1	06/23/20 20:48	6/22/20	
Fluoranthene	10 U	10	1.5	1	06/23/20 20:48	6/22/20	
Fluorene	10 U	10	1.3	1	06/23/20 20:48	6/22/20	
Hexachlorobenzene	10 U	10	1.6	1	06/23/20 20:48	6/22/20	
Hexachlorobutadiene	10 U	10	1.0	1	06/23/20 20:48	6/22/20	
Hexachlorocyclopentadiene	10 U	10	2.2	1	06/23/20 20:48	6/22/20	
Hexachloroethane	10 U	10	1.1	1	06/23/20 20:48	6/22/20	
Indeno(1,2,3-cd)pyrene	10 U	10	1.8	1	06/23/20 20:48	6/22/20	
Isophorone	10 U	10	1.4	1	06/23/20 20:48	6/22/20	
N-Nitrosodi-n-propylamine	10 U	10	1.2	1	06/23/20 20:48	6/22/20	
N-Nitrosodiphenylamine	10 U	10	2.7	1	06/23/20 20:48	6/22/20	
Naphthalene	10 U	10	1.2	1	06/23/20 20:48	6/22/20	
Nitrobenzene	10 U	10	1.5	1	06/23/20 20:48	6/22/20	
Pentachlorophenol (PCP)	50 U	50	9.8	1	06/23/20 20:48	6/22/20	
Phenanthrene	10 U	10	1.4	1	06/23/20 20:48	6/22/20	
Phenol	10 U	10	1.0	1	06/23/20 20:48	6/22/20	
Pyrene	10 U	10	1.5	1	06/23/20 20:48	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	84	35 - 141	06/23/20 20:48	
2-Fluorobiphenyl	60	31 - 118	06/23/20 20:48	
2-Fluorophenol	40	10 - 105	06/23/20 20:48	
Nitrobenzene-d5	58	31 - 110	06/23/20 20:48	
Phenol-d6	29	10 - 107	06/23/20 20:48	
Terphenyl-d14	98	10 - 165	06/23/20 20:48	

Semivolatile Organic Compounds by GC

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/15/20 14:35
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-03B	**Units:**	ug/L
Lab Code:	R2005213-001	**Basis:**	NA

Low Level Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	0.037	1	06/23/20 21:43	6/22/20	
Aroclor 1221	0.047 U	0.047	0.035	1	06/23/20 21:43	6/22/20	
Aroclor 1232	0.047 U	0.047	0.025	1	06/23/20 21:43	6/22/20	
Aroclor 1242	0.047 U	0.047	0.025	1	06/23/20 21:43	6/22/20	
Aroclor 1248	0.047 U	0.047	0.027	1	06/23/20 21:43	6/22/20	
Aroclor 1254	0.047 U	0.047	0.025	1	06/23/20 21:43	6/22/20	
Aroclor 1260	0.047 U	0.047	0.025	1	06/23/20 21:43	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	38	10 - 125	06/23/20 21:43	
Tetrachloro-m-xylene	57	18 - 126	06/23/20 21:43	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 10:20
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-01B	**Units:**	ug/L
Lab Code:	R2005213-002	**Basis:**	NA

Low Level Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	0.037	1	06/23/20 22:42	6/22/20	
Aroclor 1221	0.047 U	0.047	0.035	1	06/23/20 22:42	6/22/20	
Aroclor 1232	0.047 U	0.047	0.025	1	06/23/20 22:42	6/22/20	
Aroclor 1242	0.047 U	0.047	0.025	1	06/23/20 22:42	6/22/20	
Aroclor 1248	0.047 U	0.047	0.027	1	06/23/20 22:42	6/22/20	
Aroclor 1254	0.047 U	0.047	0.025	1	06/23/20 22:42	6/22/20	
Aroclor 1260	0.047 U	0.047	0.025	1	06/23/20 22:42	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	38	10 - 125	06/23/20 22:42	
Tetrachloro-m-xylene	54	18 - 126	06/23/20 22:42	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 12:50
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-01A	**Units:**	ug/L
Lab Code:	R2005213-003	**Basis:**	NA

Low Level Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	0.037	1	06/23/20 23:02	6/22/20	
Aroclor 1221	0.047 U	0.047	0.035	1	06/23/20 23:02	6/22/20	
Aroclor 1232	0.047 U	0.047	0.025	1	06/23/20 23:02	6/22/20	
Aroclor 1242	0.047 U	0.047	0.025	1	06/23/20 23:02	6/22/20	
Aroclor 1248	0.047 U	0.047	0.027	1	06/23/20 23:02	6/22/20	
Aroclor 1254	0.047 U	0.047	0.025	1	06/23/20 23:02	6/22/20	
Aroclor 1260	0.047 U	0.047	0.025	1	06/23/20 23:02	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	40	10 - 125	06/23/20 23:02	
Tetrachloro-m-xylene	56	18 - 126	06/23/20 23:02	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 13:50
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-03A	**Units:**	ug/L
Lab Code:	R2005213-004	**Basis:**	NA

Low Level Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	0.037	1	06/23/20 23:42	6/22/20	
Aroclor 1221	0.047 U	0.047	0.035	1	06/23/20 23:42	6/22/20	
Aroclor 1232	0.047 U	0.047	0.025	1	06/23/20 23:42	6/22/20	
Aroclor 1242	0.047 U	0.047	0.025	1	06/23/20 23:42	6/22/20	
Aroclor 1248	0.047 U	0.047	0.027	1	06/23/20 23:42	6/22/20	
Aroclor 1254	0.047 U	0.047	0.025	1	06/23/20 23:42	6/22/20	
Aroclor 1260	0.047 U	0.047	0.025	1	06/23/20 23:42	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	48	10 - 125	06/23/20 23:42	
Tetrachloro-m-xylene	54	18 - 126	06/23/20 23:42	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 15:35
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-20B	**Units:**	ug/L
Lab Code:	R2005213-005	**Basis:**	NA

Low Level Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	0.037	1	06/24/20 00:03	6/22/20	
Aroclor 1221	0.047 U	0.047	0.035	1	06/24/20 00:03	6/22/20	
Aroclor 1232	0.047 U	0.047	0.025	1	06/24/20 00:03	6/22/20	
Aroclor 1242	0.047 U	0.047	0.025	1	06/24/20 00:03	6/22/20	
Aroclor 1248	0.047 U	0.047	0.027	1	06/24/20 00:03	6/22/20	
Aroclor 1254	0.047 U	0.047	0.025	1	06/24/20 00:03	6/22/20	
Aroclor 1260	0.047 U	0.047	0.025	1	06/24/20 00:03	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	49	10 - 125	06/24/20 00:03	
Tetrachloro-m-xylene	58	18 - 126	06/24/20 00:03	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 10:15
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-20A	**Units:**	ug/L
Lab Code:	R2005213-006	**Basis:**	NA

Low Level Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	0.037	1	06/24/20 00:23	6/22/20	
Aroclor 1221	0.047 U	0.047	0.035	1	06/24/20 00:23	6/22/20	
Aroclor 1232	0.047 U	0.047	0.025	1	06/24/20 00:23	6/22/20	
Aroclor 1242	0.047 U	0.047	0.025	1	06/24/20 00:23	6/22/20	
Aroclor 1248	0.047 U	0.047	0.027	1	06/24/20 00:23	6/22/20	
Aroclor 1254	0.047 U	0.047	0.025	1	06/24/20 00:23	6/22/20	
Aroclor 1260	0.047 U	0.047	0.025	1	06/24/20 00:23	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	62	10 - 125	06/24/20 00:23	
Tetrachloro-m-xylene	61	18 - 126	06/24/20 00:23	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 12:00
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-05B	**Units:**	ug/L
Lab Code:	R2005213-007	**Basis:**	NA

Low Level Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.051 U	0.051	0.038	1	06/24/20 00:43	6/22/20	
Aroclor 1221	0.051 U	0.051	0.036	1	06/24/20 00:43	6/22/20	
Aroclor 1232	0.051 U	0.051	0.026	1	06/24/20 00:43	6/22/20	
Aroclor 1242	0.051 U	0.051	0.026	1	06/24/20 00:43	6/22/20	
Aroclor 1248	0.051 U	0.051	0.028	1	06/24/20 00:43	6/22/20	
Aroclor 1254	0.051 U	0.051	0.026	1	06/24/20 00:43	6/22/20	
Aroclor 1260	0.051 U	0.051	0.026	1	06/24/20 00:43	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	56	10 - 125	06/24/20 00:43	
Tetrachloro-m-xylene	54	18 - 126	06/24/20 00:43	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 12:55
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-05A	**Units:**	ug/L
Lab Code:	R2005213-008	**Basis:**	NA

Low Level Polychlorinated Biphenyls (PCBs) by GC

Analysis Method: 8082A
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	0.037	1	06/24/20 01:03	6/22/20	
Aroclor 1221	0.047 U	0.047	0.035	1	06/24/20 01:03	6/22/20	
Aroclor 1232	0.047 U	0.047	0.025	1	06/24/20 01:03	6/22/20	
Aroclor 1242	0.047 U	0.047	0.025	1	06/24/20 01:03	6/22/20	
Aroclor 1248	0.047 U	0.047	0.027	1	06/24/20 01:03	6/22/20	
Aroclor 1254	0.047 U	0.047	0.025	1	06/24/20 01:03	6/22/20	
Aroclor 1260	0.047 U	0.047	0.025	1	06/24/20 01:03	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	52	10 - 125	06/24/20 01:03	
Tetrachloro-m-xylene	54	18 - 126	06/24/20 01:03	

QC NONCONFORMANCE DOCUMENTATION

Cooler Receipt and Preservation Check Form

R2005213 5
TRC Environmental Corporation
Cross County Sanitary - Kessman Landfill

Project/Client TRC Folder Number

Cooler received on 6/18/2020 by: CM/IE

COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk, or Sulfide have sig* **bubbles**?	(Y) N NA
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	(ALS/ROC) CLIENT
4	Circle: (Wet Ice) **Dry Ice** **Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

3. Temperature Readings Date: 6/18/2020 Time: 0937 ID: IR#7 (IR#10) From: (Temp Blank) Sample Bottle

Observed Temp (°C)	2.3	2.7	2.9	2.3	2.9	2.8	
Within 0-6°C?	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R.002 by (CM) on 6/18/2020 at 1010
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 6/18/2020 Time: 2010 by: CM

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO (N/A)
13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12	ZZ3419	NaOH	✓		Client label					
≤2	"	HNO_3	✓		"					
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522	✓		If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: Client label

Explain all Discrepancies/ Other Comments:

Headspace: ~~3 vials TB~~ N/A
3 vials 20-B ~~(SAT)~~
~~1 vial MSD (SAT), 3 vials MS~~ N/A
3 vials 01A
1 vial 01B
3 vials 03B

HPROD	BULK
HTR	FLDT
~~SUB~~	HGFB
ALS	LL3541

Labels secondary reviewed by: CM
PC Secondary Review: JMM 6/19/20

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Client: TRC Companies
Project: Cross County Sanitary - Kessman Landfill

Service Request: R2005213
Calibration Date: 6/17/2020

Initial Calibration Summary
Volatile Organic Compounds by GC/MS

Calibration ID: RC2000086
Instrument ID: R-MS-10

Signal ID: 1

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
1,1,1-Trichloroethane (TCA)	TRG	Average RF	% RSD	4.7	≤20	0.7932	0.100
1,1,2,2-Tetrachloroethane	TRG	Average RF	% RSD	3.9	≤20	1.047	0.300
1,1,2-Trichloro-1,2,2-trifluoroethane	TRG	Average RF	% RSD	4.8	≤20	0.4824	0.100
1,1,2-Trichloroethane	TRG	Average RF	% RSD	3.3	≤20	0.3336	0.100
1,1-Dichloroethane (1,1-DCA)	TRG	Average RF	% RSD	2.8	≤20	1.102	0.200
1,1-Dichloroethene (1,1-DCE)	TRG	Average RF	% RSD	5.4	≤20	0.482	0.100
1,2,3-Trichlorobenzene	TRG	Average RF	% RSD	4.1	≤20	1.064	
1,2,4-Trichlorobenzene	TRG	Average RF	% RSD	2.7	≤20	1.045	0.200
1,2-Dibromo-3-chloropropane (DBCP)	TRG	Quadratic	COD	0.9933	≥0.99	0.1845	0.050
1,2-Dibromoethane	TRG	Average RF	% RSD	8.1	≤20	0.3522	0.100
1,2-Dichlorobenzene	TRG	Average RF	% RSD	4.6	≤20	1.499	0.400
1,2-Dichloroethane	TRG	Average RF	% RSD	7.0	≤20	0.5801	0.100
1,2-Dichloropropane	TRG	Average RF	% RSD	4.0	≤20	0.3852	0.100
1,3-Dichlorobenzene	TRG	Average RF	% RSD	4.2	≤20	1.503	0.600
1,4-Dichlorobenzene	TRG	Average RF	% RSD	7.0	≤20	1.583	0.500
1,4-Dioxane	TRG	Average RF	% RSD	5.9	≤20	0.007376	
2-Butanone (MEK)	TRG	Average RF	% RSD	5.3	≤20	0.4902	0.05
2-Hexanone	TRG	Average RF	% RSD	10.7	≤20	0.4099	0.05
4-Bromofluorobenzene	SURR	Average RF	% RSD	4.8	≤20	0.5041	
4-Methyl-2-pentanone	TRG	Average RF	% RSD	11.4	≤20	0.4974	0.05
Acetone	TRG	Average RF	% RSD	6.3	≤20	0.324	0.05
Benzene	TRG	Average RF	% RSD	2.9	≤20	1.427	0.500
Bromochloromethane	TRG	Average RF	% RSD	5.4	≤20	0.3479	
Bromodichloromethane	TRG	Average RF	% RSD	10.7	≤20	0.4133	0.200
Bromoform	TRG	Quadratic	COD	0.9981	≥0.99	0.1903	0.100
Bromomethane	TRG	Quadratic	COD	0.9993	≥0.99	0.5307	0.100
Carbon Disulfide	TRG	Average RF	% RSD	10.6	≤20	1.365	0.100
Carbon Tetrachloride	TRG	Average RF	% RSD	6.6	≤20	0.3749	0.05
Chlorobenzene	TRG	Average RF	% RSD	4.2	≤20	0.9784	0.500
Chloroethane	TRG	Average RF	% RSD	8.4	≤20	0.544	0.100
Chloroform	TRG	Average RF	% RSD	4.7	≤20	1.031	0.200
Chloromethane	TRG	Average RF	% RSD	11.2	≤20	0.9068	0.100
Cyclohexane	TRG	Average RF	% RSD	4.4	≤20	0.3947	0.100
Dibromochloromethane	TRG	Average RF	% RSD	13.3	≤20	0.3129	0.100

Client: TRC Companies **Service Request:** R2005213
Project: Cross County Sanitary - Kessman Landfill **Calibration Date:** 6/12/2020

Initial Calibration Summary
Volatile Organic Compounds by GC/MS

Calibration ID: RC2000082 **Signal ID:** 1
Instrument ID: R-MS-14

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
1,1,1-Trichloroethane (TCA)	TRG	Average RF	% RSD	6.9	≤20	0.6007	0.100
1,1,2,2-Tetrachloroethane	TRG	Quadratic	COD	0.9938	≥0.99	0.8344	0.300
1,1,2-Trichloro-1,2,2-trifluoroethane	TRG	Average RF	% RSD	9.4	≤20	0.4314	0.100
1,1,2-Trichloroethane	TRG	Average RF	% RSD	6.2	≤20	0.3311	0.100
1,1-Dichloroethane (1,1-DCA)	TRG	Average RF	% RSD	5.1	≤20	0.8391	0.200
1,1-Dichloroethene (1,1-DCE)	TRG	Average RF	% RSD	8.2	≤20	0.4455	0.100
1,2,3-Trichlorobenzene	TRG	Average RF	% RSD	8.9	≤20	1.096	
1,2,4-Trichlorobenzene	TRG	Average RF	% RSD	7.0	≤20	1.1	0.200
1,2-Dibromo-3-chloropropane (DBCP)	TRG	Quadratic	COD	0.9944	≥0.99	0.1928	0.050
1,2-Dibromoethane	TRG	Average RF	% RSD	9.1	≤20	0.366	0.100
1,2-Dichlorobenzene	TRG	Average RF	% RSD	5.1	≤20	1.625	0.400
1,2-Dichloroethane	TRG	Average RF	% RSD	4.2	≤20	0.4321	0.100
1,2-Dichloropropane	TRG	Average RF	% RSD	4.7	≤20	0.3363	0.100
1,3-Dichlorobenzene	TRG	Average RF	% RSD	6.1	≤20	1.582	0.600
1,4-Dichlorobenzene	TRG	Average RF	% RSD	6.4	≤20	1.644	0.500
1,4-Dioxane	TRG	Average RF	% RSD	12.1	≤20	0.006913	
2-Butanone (MEK)	TRG	Average RF	% RSD	4.6	≤20	0.3343	0.05
2-Hexanone	TRG	Average RF	% RSD	9.5	≤20	0.2994	0.05
4-Bromofluorobenzene	SURR	Average RF	% RSD	8.5	≤20	0.5014	
4-Methyl-2-pentanone	TRG	Average RF	% RSD	8.9	≤20	0.3641	0.05
Acetone	TRG	Average RF	% RSD	13.5	≤20	0.2265	0.05
Benzene	TRG	Average RF	% RSD	5.0	≤20	1.298	0.500
Bromochloromethane	TRG	Average RF	% RSD	4.7	≤20	0.3543	
Bromodichloromethane	TRG	Average RF	% RSD	8.5	≤20	0.358	0.200
Bromoform	TRG	Quadratic	COD	0.9941	≥0.99	0.199	0.100
Bromomethane	TRG	Quadratic	COD	0.9976	≥0.99	0.517	0.100
Carbon Disulfide	TRG	Average RF	% RSD	7.4	≤20	1.199	0.100
Carbon Tetrachloride	TRG	Average RF	% RSD	7.8	≤20	0.3157	0.05
Chlorobenzene	TRG	Average RF	% RSD	5.5	≤20	1.031	0.500
Chloroethane	TRG	Quadratic	COD	0.9970	≥0.99	0.459	0.100
Chloroform	TRG	Average RF	% RSD	4.9	≤20	0.8183	0.200
Chloromethane	TRG	Average RF	% RSD	12.8	≤20	0.719	0.100
Cyclohexane	TRG	Average RF	% RSD	12.2	≤20	0.2459	0.100
Dibromochloromethane	TRG	Quadratic	COD	0.9976	≥0.99	0.3141	0.100

Client: TRC Companies
Project: Cross County Sanitary - Kessman Landfill/387570.0000.0000

Service Request: R2005213
Date Analyzed: 06/23/20 14:00

Continuing Calibration Verification (CCV) Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
File ID: I:\ACQUDATA\MSVOA14\Data\062320\N6700.D\
Signal ID: 1

Calibration Date: 6/12/2020
Calibration ID: RC2000082
Analysis Lot: 684706
Units: ug/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
1,1,1-Trichloroethane (TCA)	50.0	53.4	0.6007	0.6419	6.9	NA	±20	Average RF
1,1,2,2-Tetrachloroethane	50.0	60.3	0.8344	1.0872	NA	20.6*	±20	Quadratic
1,1,2-Trichloroethane	50.0	52.0	0.3311	0.3441	3.9	NA	±20	Average RF
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	53.7	0.4314	0.4635	7.4	NA	±20	Average RF
1,1-Dichloroethane (1,1-DCA)	50.0	52.9	0.8391	0.8877	5.8	NA	±20	Average RF
1,1-Dichloroethene (1,1-DCE)	50.0	51.8	0.4455	0.4614	3.6	NA	±20	Average RF
1,2,3-Trichlorobenzene	50.0	53.5	1.0965	1.1741	7.1	NA	±20	Average RF
1,2,4-Trichlorobenzene	50.0	53.9	1.1	1.1847	7.7	NA	±20	Average RF
1,2-Dibromo-3-chloropropane (DBCP)	50.0	58.4	0.1928	0.2409	NA	16.7	±20	Quadratic
1,2-Dibromoethane	50.0	52.2	0.366	0.3824	4.5	NA	±20	Average RF
1,2-Dichlorobenzene	50.0	49.9	1.6246	1.622	-0.2	NA	±20	Average RF
1,2-Dichloroethane	50.0	48.5	0.4321	0.4188	-3.1	NA	±20	Average RF
1,2-Dichloropropane	50.0	52.3	0.3363	0.3518	4.6	NA	±20	Average RF
1,3-Dichlorobenzene	50.0	51.8	1.5821	1.639	3.6	NA	±20	Average RF
1,4-Dichlorobenzene	50.0	50.6	1.6439	1.6651	1.3	NA	±20	Average RF
1,4-Dioxane	1000	1050	0.0069	0.0072	4.5	NA	±20	Average RF
2-Butanone (MEK)	50.0	48.0	0.3343	0.3207	-4.1	NA	±20	Average RF
2-Hexanone	50.0	49.1	0.2994	0.2937	-1.9	NA	±20	Average RF
4-Methyl-2-pentanone	50.0	50.1	0.3641	0.3645	0.1	NA	±20	Average RF
Acetone	50.0	43.1	0.2265	0.1953	-13.8	NA	±20	Average RF
Benzene	50.0	51.7	1.2981	1.3422	3.4	NA	±20	Average RF
Bromochloromethane	50.0	50.3	0.3543	0.3566	0.7	NA	±20	Average RF
Bromodichloromethane	50.0	53.0	0.358	0.3798	6.1	NA	±20	Average RF
Bromoform	50.0	54.6	0.199	0.2332	NA	9.1	±20	Quadratic
Bromomethane	50.0	32.8	0.517	0.308	NA	-34.3*	±20	Quadratic
Carbon Disulfide	50.0	50.1	1.1994	1.2023	0.2	NA	±20	Average RF
Carbon Tetrachloride	50.0	55.1	0.3157	0.3476	10.1	NA	±20	Average RF
Chlorobenzene	50.0	51.2	1.0307	1.0552	2.4	NA	±20	Average RF
Chloroethane	50.0	51.4	0.459	0.4024	NA	2.7	±20	Quadratic
Chloroform	50.0	50.7	0.8183	0.8296	1.4	NA	±20	Average RF
Chloromethane	50.0	45.1	0.719	0.649	-9.7	NA	±20	Average RF
Cyclohexane	50.0	50.7	0.2459	0.2495	1.5	NA	±20	Average RF
Dibromochloromethane	50.0	54.4	0.3141	0.3571	NA	8.7	±20	Quadratic
Dichlorodifluoromethane (CFC 12)	50.0	53.4	0.5759	0.6154	6.9	NA	±20	Average RF
Dichloromethane	50.0	49.8	0.5416	0.5398	-0.3	NA	±20	Average RF
Ethylbenzene	50.0	53.6	0.5123	0.5492	7.2	NA	±20	Average RF
Isopropylbenzene (Cumene)	50.0	55.3	1.5636	1.7286	10.6	NA	±20	Average RF
Methyl Acetate	50.0	48.5	0.484	0.4694	-3.0	NA	±20	Average RF
Methyl tert-Butyl Ether	50.0	52.5	1.4028	1.4733	5.0	NA	±20	Average RF

Client: TRC Companies
Project: Cross County Sanitary - Kessman Landfill/387570.0000.0000

Service Request: R2005213
Date Analyzed: 06/25/20 10:40

Continuing Calibration Verification (CCV) Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
File ID: I:\ACQUDATA\msvoa10\data\062520\T0604.D\
Signal ID: 1

Calibration Date: 6/17/2020
Calibration ID: RC2000086
Analysis Lot: 684980
Units: ug/L

Analyte Name	Expected	Result	Average RF	CCV RF	% D	% Drift	Criteria	Curve Fit
1,1,1-Trichloroethane (TCA)	50.0	46.7	0.7932	0.7412	-6.6	NA	±20	Average RF
1,1,2,2-Tetrachloroethane	50.0	49.3	1.0469	1.033	-1.3	NA	±20	Average RF
1,1,2-Trichloroethane	50.0	47.6	0.3336	0.3179	-4.7	NA	±20	Average RF
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	50.4	0.4824	0.4865	0.9	NA	±20	Average RF
1,1-Dichloroethane (1,1-DCA)	50.0	47.4	1.1022	1.044	-5.3	NA	±20	Average RF
1,1-Dichloroethene (1,1-DCE)	50.0	46.8	0.482	0.4513	-6.4	NA	±20	Average RF
1,2,3-Trichlorobenzene	50.0	45.4	1.0638	0.9659	-9.2	NA	±20	Average RF
1,2,4-Trichlorobenzene	50.0	46.3	1.0453	0.9671	-7.5	NA	±20	Average RF
1,2-Dibromo-3-chloropropane (DBCP)	50.0	50.3	0.1845	0.1856	NA	0.6	±20	Quadratic
1,2-Dibromoethane	50.0	47.5	0.3522	0.3347	-5.0	NA	±20	Average RF
1,2-Dichlorobenzene	50.0	45.9	1.4987	1.3762	-8.2	NA	±20	Average RF
1,2-Dichloroethane	50.0	49.1	0.5801	0.5699	-1.8	NA	±20	Average RF
1,2-Dichloropropane	50.0	48.6	0.3852	0.3746	-2.8	NA	±20	Average RF
1,3-Dichlorobenzene	50.0	44.8	1.5029	1.3474	-10.3	NA	±20	Average RF
1,4-Dichlorobenzene	50.0	43.3	1.5825	1.3713	-13.3	NA	±20	Average RF
1,4-Dioxane	1000	967	0.0074	0.0071	-3.3	NA	±20	Average RF
2-Butanone (MEK)	50.0	44.9	0.4902	0.4403	-10.2	NA	±20	Average RF
2-Hexanone	50.0	46.5	0.4099	0.381	-7.1	NA	±20	Average RF
4-Methyl-2-pentanone	50.0	49.4	0.4974	0.4918	-1.1	NA	±20	Average RF
Acetone	50.0	44.5	0.324	0.2884	-11.0	NA	±20	Average RF
Benzene	50.0	48.0	1.4275	1.371	-4.0	NA	±20	Average RF
Bromochloromethane	50.0	49.1	0.3479	0.3418	-1.8	NA	±20	Average RF
Bromodichloromethane	50.0	49.4	0.4133	0.4086	-1.1	NA	±20	Average RF
Bromoform	50.0	46.6	0.1903	0.1818	NA	-6.8	±20	Quadratic
Bromomethane	50.0	51.1	0.5307	0.4209	NA	2.2	±20	Quadratic
Carbon Disulfide	50.0	52.6	1.3652	1.4363	5.2	NA	±20	Average RF
Carbon Tetrachloride	50.0	47.4	0.3749	0.3551	-5.3	NA	±20	Average RF
Chlorobenzene	50.0	45.8	0.9784	0.8965	-8.4	NA	±20	Average RF
Chloroethane	50.0	49.3	0.544	0.5359	-1.5	NA	±20	Average RF
Chloroform	50.0	46.2	1.0314	0.954	-7.5	NA	±20	Average RF
Chloromethane	50.0	45.4	0.9068	0.823	-9.2	NA	±20	Average RF
Cyclohexane	50.0	49.2	0.3947	0.3887	-1.5	NA	±20	Average RF
Dibromochloromethane	50.0	49.2	0.3129	0.3077	-1.7	NA	±20	Average RF
Dichlorodifluoromethane (CFC 12)	50.0	48.5	0.642	0.6223	-3.1	NA	±20	Average RF
Dichloromethane	50.0	46.0	0.6086	0.56	-8.0	NA	±20	Average RF
Ethylbenzene	50.0	47.3	0.5152	0.4876	-5.3	NA	±20	Average RF
Isopropylbenzene (Cumene)	50.0	46.8	1.6491	1.5421	-6.5	NA	±20	Average RF
Methyl Acetate	50.0	47.4	0.6942	0.6587	-5.1	NA	±20	Average RF
Methyl tert-Butyl Ether	50.0	48.5	1.9238	1.8668	-3.0	NA	±20	Average RF

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ2006641-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane (TCA)	1.0 U	1.0	0.20	1	06/23/20 15:51	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.20	1	06/23/20 15:51	
1,1,2-Trichloroethane	1.0 U	1.0	0.20	1	06/23/20 15:51	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 U	1.0	0.20	1	06/23/20 15:51	
1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.20	1	06/23/20 15:51	
1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.20	1	06/23/20 15:51	
1,2,3-Trichlorobenzene	1.0 U	1.0	0.25	1	06/23/20 15:51	
1,2,4-Trichlorobenzene	1.0 U	1.0	0.34	1	06/23/20 15:51	
1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	2.0	0.45	1	06/23/20 15:51	
1,2-Dibromoethane	1.0 U	1.0	0.20	1	06/23/20 15:51	
1,2-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 15:51	
1,2-Dichloroethane	1.0 U	1.0	0.20	1	06/23/20 15:51	
1,2-Dichloropropane	1.0 U	1.0	0.20	1	06/23/20 15:51	
1,3-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 15:51	
1,4-Dichlorobenzene	1.0 U	1.0	0.20	1	06/23/20 15:51	
1,4-Dioxane	40 U	40	13	1	06/23/20 15:51	
2-Butanone (MEK)	5.0 U	5.0	0.78	1	06/23/20 15:51	
2-Hexanone	5.0 U	5.0	0.20	1	06/23/20 15:51	
4-Methyl-2-pentanone	5.0 U	5.0	0.20	1	06/23/20 15:51	
Acetone	5.0 U	5.0	5.0	1	06/23/20 15:51	
Benzene	1.0 U	1.0	0.20	1	06/23/20 15:51	
Bromochloromethane	1.0 U	1.0	0.20	1	06/23/20 15:51	
Bromodichloromethane	1.0 U	1.0	0.20	1	06/23/20 15:51	
Bromoform	1.0 U	1.0	0.25	1	06/23/20 15:51	
Bromomethane	1.0 U	1.0	0.70	1	06/23/20 15:51	
Carbon Disulfide	1.0 U	1.0	0.42	1	06/23/20 15:51	
Carbon Tetrachloride	1.0 U	1.0	0.34	1	06/23/20 15:51	
Chlorobenzene	1.0 U	1.0	0.20	1	06/23/20 15:51	
Chloroethane	**0.34 J**	1.0	0.23	1	06/23/20 15:51	
Chloroform	1.0 U	1.0	0.24	1	06/23/20 15:51	
Chloromethane	**0.31 J**	1.0	0.28	1	06/23/20 15:51	
Cyclohexane	1.0 U	1.0	0.26	1	06/23/20 15:51	
Dibromochloromethane	1.0 U	1.0	0.20	1	06/23/20 15:51	
Dichlorodifluoromethane (CFC 12)	1.0 U	1.0	0.21	1	06/23/20 15:51	
Dichloromethane	1.0 U	1.0	0.65	1	06/23/20 15:51	
Ethylbenzene	1.0 U	1.0	0.20	1	06/23/20 15:51	
Isopropylbenzene (Cumene)	1.0 U	1.0	0.20	1	06/23/20 15:51	
Methyl Acetate	2.0 U	2.0	0.33	1	06/23/20 15:51	
Methyl tert-Butyl Ether	1.0 U	1.0	0.20	1	06/23/20 15:51	
Methylcyclohexane	1.0 U	1.0	0.20	1	06/23/20 15:51	
Styrene	1.0 U	1.0	0.20	1	06/23/20 15:51	
Tetrachloroethene (PCE)	1.0 U	1.0	0.21	1	06/23/20 15:51	
Toluene	1.0 U	1.0	0.20	1	06/23/20 15:51	

Client: TRC Companies
Project: Cross County Sanitary - Kessman Landfill/387570.0000.0000
Sample Matrix: Water

Service Request: R2005213
Date Analyzed: 06/23/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2006641-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	8260C	23.4	20.0	117	75-125
1,1,2,2-Tetrachloroethane	8260C	28.1	20.0	141 *	78-126
1,1,2-Trichloroethane	8260C	22.6	20.0	113	82-121
1,1,2-Trichloro-1,2,2-trifluoroethane	8260C	23.6	20.0	118	67-124
1,1-Dichloroethane (1,1-DCA)	8260C	22.6	20.0	113	80-124
1,1-Dichloroethene (1,1-DCE)	8260C	22.2	20.0	111	71-118
1,2,3-Trichlorobenzene	8260C	23.1	20.0	116	67-136
1,2,4-Trichlorobenzene	8260C	23.3	20.0	116	75-132
1,2-Dibromo-3-chloropropane (DBCP)	8260C	24.8	20.0	124	55-136
1,2-Dibromoethane	8260C	22.0	20.0	110	82-127
1,2-Dichlorobenzene	8260C	21.6	20.0	108	80-119
1,2-Dichloroethane	8260C	20.2	20.0	101	71-127
1,2-Dichloropropane	8260C	22.9	20.0	115	80-119
1,3-Dichlorobenzene	8260C	23.0	20.0	115	83-121
1,4-Dichlorobenzene	8260C	22.3	20.0	112	79-119
1,4-Dioxane	8260C	413	400	103	44-154
2-Butanone (MEK)	8260C	19.2	20.0	96	61-137
2-Hexanone	8260C	19.2	20.0	96	63-124
4-Methyl-2-pentanone	8260C	19.9	20.0	100	66-124
Acetone	8260C	18.8	20.0	94	40-161
Benzene	8260C	22.4	20.0	112	79-119
Bromochloromethane	8260C	21.9	20.0	109	81-126
Bromodichloromethane	8260C	22.7	20.0	114	81-123
Bromoform	8260C	23.7	20.0	119	65-146
Bromomethane	8260C	13.4	20.0	67	42-166
Carbon Disulfide	8260C	20.9	20.0	104	66-128
Carbon Tetrachloride	8260C	22.9	20.0	114	70-127
Chlorobenzene	8260C	22.6	20.0	113	80-121
Chloroethane	8260C	21.1	20.0	106	62-131
Chloroform	8260C	22.0	20.0	110	79-120
Chloromethane	8260C	19.6	20.0	98	65-135
Cyclohexane	8260C	20.8	20.0	104	69-120
Dibromochloromethane	8260C	23.9	20.0	119	72-128

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: TRC Companies
Project: Cross County Sanitary - Kessman Landfill/387570.0000.0000
Sample Matrix: Water

Service Request: R2005213
Date Analyzed: 06/23/20

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

		Lab Control Sample RQ2006527-04			Duplicate Lab Control Sample RQ2006527-05					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Benzo(b)fluoranthene	8270D	34.7	40.0	87	36.4	40.0	91	62-115	4	30
Benzo(g,h,i)perylene	8270D	42.6	40.0	106	43.1	40.0	108	63-136	2	30
Benzo(k)fluoranthene	8270D	40.6	40.0	102	38.5	40.0	96	49-133	6	30
Biphenyl	8270D	25.0	40.0	62	29.8	40.0	75	39-106	19	30
2,2'-Oxybis(1-chloropropane)	8270D	20.0	40.0	50	25.7	40.0	64	32-122	25	30
Bis(2-chloroethoxy)methane	8270D	24.9	40.0	62	28.1	40.0	70	55-110	12	30
Bis(2-chloroethyl) Ether	8270D	21.6	40.0	54	26.4	40.0	66	46-102	20	30
Bis(2-ethylhexyl) Phthalate	8270D	38.1	40.0	95	38.5	40.0	96	51-132	1	30
Butyl Benzyl Phthalate	8270D	37.9	40.0	95	35.0	40.0	88	41-148	8	30
Caprolactam	8270D	13.7	40.0	34	14.8	40.0	37	10-41	8	30
Carbazole	8270D	42.1	40.0	105	40.4	40.0	101	56-139	4	30
Chrysene	8270D	38.4	40.0	96	37.3	40.0	93	57-118	3	30
Di-n-butyl Phthalate	8270D	41.5	40.0	104	39.8	40.0	100	57-128	4	30
Di-n-octyl Phthalate	8270D	39.4	40.0	98	39.7	40.0	99	62-124	1	30
Dibenz(a,h)anthracene	8270D	43.5	40.0	109	42.4	40.0	106	54-135	3	30
Dibenzofuran	8270D	30.5	40.0	76	33.5	40.0	84	55-110	10	30
Diethyl Phthalate	8270D	36.6	40.0	91	35.4	40.0	89	53-113	2	30
Dimethyl Phthalate	8270D	37.5	40.0	94	36.5	40.0	91	51-112	3	30
Fluoranthene	8270D	40.4	40.0	101	37.9	40.0	95	66-127	6	30
Fluorene	8270D	32.9	40.0	82	34.3	40.0	86	54-106	5	30
Hexachlorobenzene	8270D	37.2	40.0	93	37.7	40.0	94	53-123	1	30
Hexachlorobutadiene	8270D	24.6	40.0	61	28.5	40.0	71	16-95	15	30
Hexachlorocyclopentadiene	8270D	10.4	40.0	26	15.8	40.0	39	10-99	40*	30
Hexachloroethane	8270D	20.6	40.0	51	23.6	40.0	59	15-92	15	30
Indeno(1,2,3-cd)pyrene	8270D	40.2	40.0	101	40.3	40.0	101	62-137	<1	30
Isophorone	8270D	21.8	40.0	55	24.3	40.0	61	50-116	10	30
N-Nitrosodi-n-propylamine	8270D	25.9	40.0	65	31.6	40.0	79	49-115	19	30
N-Nitrosodiphenylamine	8270D	42.2	40.0	106	41.4	40.0	103	45-123	3	30
Naphthalene	8270D	24.6	40.0	61	30.2	40.0	75	38-99	21	30
Nitrobenzene	8270D	22.2	40.0	55	28.5	40.0	71	46-108	25	30
Pentachlorophenol (PCP)	8270D	24.5 J	40.0	61	22.9 J	40.0	57	29-164	7	30
Phenanthrene	8270D	35.5	40.0	89	35.7	40.0	89	58-118	<1	30
Phenol	8270D	14.6	40.0	37	17.1	40.0	43	10-113	15	30

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/15/20
Sample Matrix:	Water	**Date Received:**	06/18/20
		Date Analyzed:	06/24/20
		Date Extracted:	NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name:	CCSK - MW-03B	**Units:**	ug/L
Lab Code:	R2005213-001	**Basis:**	NA
Analysis Method:	8260C		
Prep Method:	EPA 5030C		

		Matrix Spike			Duplicate Matrix Spike					
		RQ2006641-05			RQ2006641-06					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1-Trichloroethane (TCA)	1.0 U	54.6	50.0	109	57.6	50.0	115	74-127	5	30
1,1,2,2-Tetrachloroethane	1.0 U	62.8	50.0	126 *	65.6	50.0	131 *	72-122	4	30
1,1,2-Trichloroethane	1.0 U	52.2	50.0	104	54.3	50.0	109	82-121	4	30
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0 U	49.5	50.0	99	53.1	50.0	106	50-147	7	30
1,1-Dichloroethane (1,1-DCA)	1.0 U	53.5	50.0	107	55.6	50.0	111	74-132	4	30
1,1-Dichloroethene (1,1-DCE)	1.0 U	52.2	50.0	104	54.4	50.0	109	71-118	4	30
1,2,3-Trichlorobenzene	1.0 U	51.5	50.0	103	53.9	50.0	108	59-129	5	30
1,2,4-Trichlorobenzene	1.0 U	51.3	50.0	103	55.3	50.0	111	69-122	7	30
1,2-Dibromo-3-chloropropane (DBCP)	2.0 U	56.4	50.0	113	60.9	50.0	122	37-150	8	30
1,2-Dibromoethane	1.0 U	51.0	50.0	102	53.5	50.0	107	67-127	5	30
1,2-Dichlorobenzene	1.0 U	49.4	50.0	99	51.8	50.0	104	77-120	5	30
1,2-Dichloroethane	1.0 U	47.1	50.0	94	48.3	50.0	97	68-130	3	30
1,2-Dichloropropane	1.0 U	51.8	50.0	104	54.7	50.0	109	79-124	5	30
1,3-Dichlorobenzene	1.0 U	51.3	50.0	103	54.2	50.0	108	83-121	5	30
1,4-Dichlorobenzene	1.0 U	49.7	50.0	99	52.6	50.0	105	82-120	6	30
1,4-Dioxane	40 U	1040	1000	104	1100	1000	110	44-154	6	30
2-Butanone (MEK)	5.0 U	45.7	50.0	91	47.4	50.0	95	61-137	3	30
2-Hexanone	5.0 U	51.9	50.0	104	54.2	50.0	108	56-132	4	30
4-Methyl-2-pentanone	5.0 U	52.0	50.0	104	54.4	50.0	109	60-141	4	30
Acetone	5.0 U	44.6	50.0	89	47.0	50.0	94	35-183	5	30
Benzene	1.0 U	52.7	50.0	105	54.6	50.0	109	76-129	4	30
Bromochloromethane	1.0 U	52.0	50.0	104	54.0	50.0	108	80-122	4	30
Bromodichloromethane	1.0 U	52.7	50.0	105	55.1	50.0	110	78-133	5	30
Bromoform	1.0 U	52.7	50.0	105	56.1	50.0	112	58-133	6	30
Bromomethane	1.0 U	33.4	50.0	67	32.2	50.0	64	10-184	4	30
Carbon Disulfide	1.0 U	49.5	50.0	99	51.8	50.0	104	59-140	5	30
Carbon Tetrachloride	1.0 U	53.4	50.0	107	57.3	50.0	115	65-135	7	30
Chlorobenzene	1.0 U	52.2	50.0	104	54.1	50.0	108	76-125	4	30
Chloroethane	1.0 U	49.3	50.0	99	52.3	50.0	105	48-146	6	30
Chloroform	1.0 U	52.2	50.0	104	54.5	50.0	109	75-130	4	30
Chloromethane	1.0 U	50.5	50.0	101	52.7	50.0	105	55-160	4	30
Cyclohexane	1.0 U	46.0	50.0	92	45.0	50.0	90	52-145	2	30
Dibromochloromethane	1.0 U	53.9	50.0	108	56.4	50.0	113	72-128	5	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/15/20
Sample Matrix:	Water	**Date Received:**	06/18/20
		Date Analyzed:	06/23/20
		Date Extracted:	06/22/20

Duplicate Matrix Spike Summary
Semivolatile Organic Compounds by GC/MS

Sample Name:	CCSK - MW-03B	**Units:**	ug/L
Lab Code:	R2005213-001	**Basis:**	NA
Analysis Method:	8270D		
Prep Method:	EPA 3510C		

		Matrix Spike RQ2006527-01			Duplicate Matrix Spike RQ2006527-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Benzo(b)fluoranthene	9.1 U	24.3	36.4	67	23.8	36.4	65	41-127	3	30
Benzo(g,h,i)perylene	9.1 U	28.3	36.4	78	27.7	36.4	76	50-143	3	30
Benzo(k)fluoranthene	9.1 U	27.0	36.4	74	25.6	36.4	70	46-139	6	30
Biphenyl	9.1 U	27.8	36.4	76	22.1	36.4	61	10-126	22	30
2,2'-Oxybis(1-chloropropane)	9.1 U	21.8	36.4	60	16.9	36.4	47	21-126	24	30
Bis(2-chloroethoxy)methane	9.1 U	26.5	36.4	73	21.9	36.4	60	41-118	20	30
Bis(2-chloroethyl) Ether	9.1 U	22.1	36.4	61	18.6	36.4	51	33-108	18	30
Bis(2-ethylhexyl) Phthalate	9.1 U	26.8	36.4	74	25.4	36.4	70	41-132	6	30
Butyl Benzyl Phthalate	9.1 U	32.9	36.4	90	30.2	36.4	83	41-148	8	30
Caprolactam	9.1 U	11.9	36.4	33	9.91	36.4	27	10-48	20	30
Carbazole	9.1 U	40.4	36.4	111	34.3	36.4	94	39-144	17	30
Chrysene	9.1 U	28.8	36.4	79	27.8	36.4	76	47-126	4	30
Di-n-butyl Phthalate	9.1 U	36.4	36.4	100	32.9	36.4	90	43-130	11	30
Di-n-octyl Phthalate	9.1 U	25.5	36.4	70	24.9	36.4	69	40-139	1	30
Dibenz(a,h)anthracene	9.1 U	28.9	36.4	79	27.3	36.4	75	43-136	5	30
Dibenzofuran	9.1 U	32.1	36.4	88	27.1	36.4	75	46-119	16	30
Diethyl Phthalate	9.1 U	34.0	36.4	94	29.4	36.4	81	36-122	15	30
Dimethyl Phthalate	9.1 U	35.7	36.4	98	32.1	36.4	88	33-123	11	30
Fluoranthene	9.1 U	35.2	36.4	97	32.4	36.4	89	43-135	9	30
Fluorene	9.1 U	32.7	36.4	90	28.1	36.4	77	43-113	16	30
Hexachlorobenzene	9.1 U	35.2	36.4	97	31.0	36.4	85	42-125	13	30
Hexachlorobutadiene	9.1 U	24.8	36.4	68	18.1	36.4	50	10-111	31*	30
Hexachlorocyclopentadiene	9.1 U	14.1	36.4	39	10.7	36.4	29	10-103	29	30
Hexachloroethane	9.1 U	21.5	36.4	59	14.5	36.4	40	12-101	38*	30
Indeno(1,2,3-cd)pyrene	9.1 U	26.1	36.4	72	25.4	36.4	70	49-140	3	30
Isophorone	9.1 U	22.7	36.4	62	20.1	36.4	55	40-111	12	30
N-Nitrosodi-n-propylamine	9.1 U	27.3	36.4	75	24.1	36.4	66	35-108	13	30
N-Nitrosodiphenylamine	9.1 U	38.8	36.4	107	35.0	36.4	96	43-127	11	30
Naphthalene	9.1 U	26.1	36.4	72	20.2	36.4	56	37-108	25	30
Nitrobenzene	9.1 U	23.6	36.4	65	19.6	36.4	54	35-112	18	30
Pentachlorophenol (PCP)	45 U	20.9 J	36.4	57	21.5 J	36.4	59	29-164	3	30
Phenanthrene	9.1 U	32.5	36.4	89	29.5	36.4	81	46-123	9	30
Phenol	9.1 U	13.2	36.4	36	17.7	36.4	49	10-113	31*	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Data Usability Summary Report

Site: Cross County Sanitary – Kessman Landfill
Laboratory: ALS Environmental – Rochester, NY
SDG No.: R2005213
Parameter: Metals, Cyanide, Total Organic Carbon (TOC), Total Suspended Solids (TSS)
Data Reviewer: Kristen Morin/TRC
Peer Reviewer: Elizabeth Denly/TRC
Date: September 10, 2020

Samples Reviewed and Evaluation Summary

8 Groundwater Samples: CCSK-MW-01A, CCSK-MW-01B, CCSK-MW-03A, CCSK-MW-03B, CCSK-MW-05A, CCSK-MW-05B, CCSK-MW-20A, CCSK-MW-20B

The above-listed samples were collected on June 15-17, 2020 and were analyzed for one or more of the following parameters:

- Metals by SW-846 Methods 6010C/7471B
- Cyanide by EPA-821-B-01-009: Method Kelada-01
- TOC by Standard Method (SM) 5310 C-2000(2011)
- TSS by SM 2540 D-1997(2011)

The data validation was performed in accordance with *USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review (EPA-540-R-017-001),* January 2017, modified for the methodologies utilized.

The data were evaluated based on the following parameters:

	• Overall Evaluation of Data and Potential Usability Issues
*	• Data Completeness
*	• Holding Times and Sample Preservation
*	• Initial and Continuing Calibrations (Metals, Cyanide, and TOC Only)
	• Interference Check Sample (ICS) Results (Metals Only)
	• Blanks
	• Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results (Metals, Cyanide, and TOC Only)
*	• Laboratory Duplicate Results
	• ICP Serial Dilution Results (Metals Only)
*	• Laboratory Control Sample (LCS) Results
NA	• Field Duplicate Results
	• Sample Results and Reported Quantitation Limits (QLs)

*	-	All criteria were met.
NA	-	A field duplicate pair was not submitted with this sample set.

Overall Evaluation of Data and Potential Usability Issues

All results are usable for project objectives. Qualification of the data due to sampling error was not required. Qualifications applied to the data as a result of analytical error are discussed below.

- Potential uncertainty exists for select metals and TOC results that were detected between the method detection limit (MDL) and QL. These results were qualified as estimated (J) in the associated samples. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

- The positive results for mercury in samples CCSK-MW-01A, CCSK-MW-01B, CCSK-MW-03B, CCSK-MW-05A, CCSK-MW-05B, CCSK-MW-20A, and CCSK-MW-20B were qualified as nondetect (U) at the QL due to preparation blank contamination. These results can be used for project objectives as nondetects, which may have a minor impact on the data usability.

- The nondetect results for antimony, cadmium, selenium, and/or cobalt in select samples were qualified as estimated (UJ) due to negative interference in the ICS analysis. These results can be used for project objectives as nondetects with estimated QLs, which may have a minor impact on the data usability.

- The positive result for cobalt in sample CCSK-MW-05B was qualified as estimated (J) due to negative interference in the ICS analysis and detection between the MDL the QL. This result can be used for project objectives as an estimated value, which may have a minor impact on the data usability.

- The positive results for zinc in sample CCSK-MW-01A, and chromium and vanadium in sample CCSK-MW-05B were qualified as nondetect (U) at the QL due to positive interference in the ICS analysis. These results can be used for project objectives as nondetects, which may have a minor impact on the data usability.

- The positive results for potassium in all samples were qualified as estimated (J) due to high recoveries in the MS/MSD analyses and serial dilution variability. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

- The positive results for calcium in all samples were qualified as estimated (J) due to serial dilution variability. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

Data Completeness

The data package was a complete Level IV data deliverable package.

Holding Times and Sample Preservation

All holding time and sample preservation method criteria were met for the metals, cyanide, TOC, and TSS analyses.

Initial and Continuing Calibrations (Metals, Cyanide, and TOC Only)

The initial calibration verification and/or continuing calibration verification percent recoveries (%Rs) met the acceptance limits for the metals, TOC, and cyanide analyses. All initial calibration coefficients were >0.995. The low-level check standard, as applicable, %Rs met the QC acceptance limits of 70-130%.

Interference Check Sample (ICS) Results (Metals Only)

All spiked analytes in the ICSAB recovered within the acceptance limits. Note that potassium and and sodium were not spiked into the ICSAB analyses; therefore, %Rs could not be evaluated in the ICSAB analyses for these analytes.

Interferents (aluminum, calcium, iron, and magnesium) were detected in samples CCSK-MW-01B, CCSK-MW-05A, CCSK-MW-20A, and CCSK-MW-20B at concentrations less than 50% of the concentrations spiked into ICSA; thus, ICS interferences were not evaluated in these samples.

The following table lists the maximum concentration of analytes that were impacted by the calcium and/or magnesium interferents, the associated samples, and the validation actions based on the positive and/or negative interference detected. Only sample results that were qualified due to ICSA interferences are discussed under the validation actions.

ICSA Date	Analyte	Maximum ICSA Concentration	Validation Actions
6/26/20	Antimony	-5.8 µg/L	The nondetect results for antimony, cadmium, and selenium in the associated samples were qualified as estimated (UJ).
	Cadmium	-1.3 µg/L	
	Selenium	-7.9 µg/L	
	Cobalt	-2.8 µg/L	The nondetect results for cobalt in samples CCSK-MW-01A, CCSK-MW-03A, and CCSK-MW-03B were qualified as estimated (UJ). The positive result for cobalt in sample CCSK-MW-05B would have been qualified as estimated (J-) with a potential low bias; however, this results was also qualified as estimated (J) by the laboratory since the result was < the QL. Thus, the overall qualification was J.
	Chromium	0.9 µg/L	The positive results for chromium and vanadium in sample CCSK-MW-05B were qualified as nondetects (U) at the QL since the results were ≤ QL and the estimates of interference were >10% of the detected sample results.
	Vanadium	2.9 µg/L	
	Zinc	10.3 µg/L	The positive result for zinc in sample CCSK-MW-01A was qualified as nondetect (U) at the QL since the result was ≤ QL and the estimate of interference was >10% of the detected sample result.
Associated samples: CCSK-MW-01A, CCSK-MW-03A, CCSK-MW-03B, CCSK-MW-05B			

No qualifications were required if results were nondetect with positive interference, results were greater than 10x the negative ICSA intereference, and/or if results were detected at concentrations greater than 90% of the estimated ICSA interference. Thus, these results were not summarized above.

Blanks

Cyanide, TOC

There were no target analytes detected in the preparation and calibration blanks.

TSS

There were no target analytes detected in the preparation blank.

Metals

The following table lists the metal that was detected in one of the preparation blanks.

Analyte	Blank Result	Validation Actions
Mercury	0.114 J µg/L	The positive results for mercury in samples CCSK-MW-01A, CCSK-MW-01B, CCSK-MW-03B, CCSK-MW-05A, CCSK-MW-05B, CCSK-MW-20A, and CCSK-MW-20B were qualified as nondetect (U) at the QL since results were < the QL. Qualification was not required in the remaining associated sample since mercury was not detected.
Associated samples: All groundwater samples in this data set		

Initial calibration blanks were not used to qualify sample results since they did not bracket any sample analyses. The following table lists the analytes that were detected in the continuing calibration blanks (CCBs) that were not already qualified based on the preparation blank.

Blank ID	Analyte	Blank Result	Validation Actions
CCB2	Antimony	5.60 J µg/L	Qualification was not required since antimony was not detected in the associated samples.
Associated samples: CCSK-MW-01A, CCSK-MW-01B, CCSK-MW-03A, CCSK-MW-03B			
CCB6	Thallium	8.10 J µg/L	Qualification was not required since thallium was not detected in the associated sample.
Associated sample: CCSK-MW-03B			

MS/MSD Results (Metals, Cyanide, and TOC Only)

Cyanide, TOC

MS/MSD analyses for cyanide and TOC were performed on sample CCSK-MW-03B. The %Rs and relative percent differences (RPDs) were within the laboratory acceptance limits.

Metals

MS/MSD analyses were performed on sample CCSK-MW-03B for all metals. A post-digestion spike (PDS) was also performed on sample CCSK-MW-03B for all metals except mercury. All RPDs were within the laboratory acceptance limits. The following table summarizes the %Rs that were outside of the acceptance criteria, the associated samples, and the validation actions. Evaluation of sample results was not required in cases of nonconformances where the sample concentration was greater than four times the spike concentration. Therefore, these results were not summarized below.

Parent Sample ID	Analyte	MS %R	MSD %R	PDS %R	QC Limits %R	Validation Actions
CCSK-MW-03B	Potassium	130	136	Met criteria	75-125	The positive results for potassium in the associated samples were qualified as estimated (J).
Associated samples: All groundwater samples in this data set						

Laboratory Duplicate Results

Metals, Cyanide, TOC

Laboratory duplicate analyses were not performed on a sample from this data set.

TSS

Laboratory duplicate analysis was performed on sample CCSK-MW-03B. The RPD was within the laboratory acceptance limits.

ICP Serial Dilution Results (Metals Only)

An ICP serial dilution analysis was performed on sample CCSK-MW-03B for all metals except mercury. The following table summarizes the percent differences (%Ds) that were outside of the acceptance criteria, the associated samples, and the validation actions.

Parent Sample ID	Analyte	%D	Validation Actions
CCSK-MW-03B	Calcium	13	The positive results for calcium and potassium in the associated samples were qualified as estimated (J).
	Potassium	18	
Associated samples: All groundwater samples in this data set			
Criteria: <10 %D when parent sample results are >50x the MDL and serial dilution results are > the QL			

LCS Results

The %Rs for all metals, cyanide, TOC, and TSS met the laboratory acceptance criteria in the LCS analyses.

Field Duplicate Results

No field duplicate pairs were submitted with this sample set.

Sample Results and Reported Quantitation Limits

Select metal and TOC results were reported between the MDL and QL. These results were qualified as estimated (J) in the associated samples by the laboratory. Sample calculations were spot-checked; there were no errors noted.

The following table summarizes the dilutions performed on samples in this data set; the QLs were elevated accordingly.

Analyte	Sample ID	Dilution	Reason for Dilution
Calcium	CCSK-MW-03A	10-fold	A 10-fold dilution was performed due to the concentrations of calcium and sodium that exceeded the linear range in the undiluted analysis.
Sodium			
Sodium	CCSK-MW-03B	10-fold	A 10-fold dilution was performed due to the concentration of sodium that exceeded the linear range in the undiluted analysis.
Thallium			A 10-fold dilution was likely performed due to the elevated concentration of an interfering analyte (i.e., sodium).

Analyte	Sample ID	Dilution	Reason for Dilution
TOC	CCSK-MW-20A	2-fold	2-fold dilutions were performed in order to prevent instrument carryover. Since TOC was detected above the QL in these samples, a lesser dilution was not performed by the laboratory.
	CCSK-MW-20B		
	CCSK-MW-05A		
	CCSK-MW-05B		
Cyanide	CCSK-MW-05B	2-fold	A 2-fold dilution was performed due to the color and salinity of the sample.

QUALIFIED FORM 1s

Metals

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METALS
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: TRC Companies
Project No.: R2005213
Project Name:
Matrix: WATER

Service Request: CCSK - MW-03B
Date Collected: 6/15/2020
Date Received: 6/18/2020
Units: ug/L
Basis:

Sample Name: CCSK - MW-03B
Lab Code: R2005213-001

Analyte	Analysis Method	PQL	MDL	Dil. Factor	Result	C	Q
Aluminum	6010C	100	23.0	1.0	100	U	
Antimony	6010C	60.0	4.7	1.0	60.0	UJ	
Arsenic	6010C	10.0	5.5	1.0	10.0	U	
Barium	6010C	20.0	3.0	1.0	658		
Beryllium	6010C	3.0	0.130	1.0	3.0	U	
Cadmium	6010C	5.0	0.350	1.0	5.0	UJ	
Mercury	7470A	0.200	0.077	1.0	0.089	J	0.2 U
Calcium	6010C	1000	220	1.0	205000	J	E
Chromium	6010C	10.0	0.590	1.0	10.0	U	
Cobalt	6010C	50.0	0.890	1.0	50.0	UJ	
Copper	6010C	20.0	3.9	1.0	20.0	U	
Iron	6010C	100	61.0	1.0	12000		
Lead	6010C	5.0	2.1	1.0	5.0	U	
Magnesium	6010C	1000	29.0	1.0	189000		
Manganese	6010C	10.0	3.7	1.0	90.5		
Nickel	6010C	40.0	2.6	1.0	40.0	U	
Potassium	6010C	2000	200	1.0	43600	J	NE
Selenium	6010C	10.0	6.4	1.0	10.0	UJ	
Silver	6010C	10.0	0.570	1.0	10.0	U	
Sodium	6010C	10000	1300	10.0	1870000		
Thallium	6010C	100	66.0	10.0	100	U	
Vanadium	6010C	50.0	0.670	1.0	50.0	U	
Zinc	6010C	20.0	9.4	1.0	20.0	U	

% Solids: 0.0

Comments:

METALS
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: TRC Companies
Project No.: R2005213
Project Name:
Matrix: WATER

Service Request: CCSK - MW-03B
Date Collected: 6/16/2020
Date Received: 6/18/2020
Units: ug/L
Basis:

Sample Name: CCSK - MW-01B
Lab Code: R2005213-002

Analyte	Analysis Method	PQL	MDL	Dil. Factor	Result	C	Q
Aluminum	6010C	100	23.0	1.0	126		
Antimony	6010C	60.0	4.7	1.0	60.0	U	
Arsenic	6010C	10.0	5.5	1.0	10.0	U	
Barium	6010C	20.0	3.0	1.0	42.9		
Beryllium	6010C	3.0	0.130	1.0	3.0	U	
Cadmium	6010C	5.0	0.350	1.0	5.0	U	
Mercury	7470A	0.200	0.077	1.0	0.097	J	0.2 U
Calcium	6010C	1000	220	1.0	21800	J	E
Chromium	6010C	10.0	0.590	1.0	0.700	J	
Cobalt	6010C	50.0	0.890	1.0	50.0	U	
Copper	6010C	20.0	3.9	1.0	20.0	U	
Iron	6010C	100	61.0	1.0	253		
Lead	6010C	5.0	2.1	1.0	5.0	U	
Magnesium	6010C	1000	29.0	1.0	17100		
Manganese	6010C	10.0	3.7	1.0	7.2	J	
Nickel	6010C	40.0	2.6	1.0	40.0	U	
Potassium	6010C	2000	200	1.0	3400	J	NE
Selenium	6010C	10.0	6.4	1.0	10.0	U	
Silver	6010C	10.0	0.570	1.0	10.0	U	
Sodium	6010C	1000	130	1.0	159000		
Thallium	6010C	10.0	6.6	1.0	10.0	U	
Vanadium	6010C	50.0	0.670	1.0	1.1	J	
Zinc	6010C	20.0	9.4	1.0	20.0	U	

% Solids: 0.0

Comments:

METALS
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: TRC Companies
Project No.: R2005213
Project Name:
Matrix: WATER

Service Request: CCSK - MW-03B
Date Collected: 6/16/2020
Date Received: 6/18/2020
Units: ug/L
Basis:

Sample Name: CCSK - MW-01A
Lab Code: R2005213-003

Analyte	Analysis Method	PQL	MDL	Dil. Factor	Result	C	Q
Aluminum	6010C	100	23.0	1.0	68.7	J	
Antimony	6010C	60.0	4.7	1.0	60.0	UJ	
Arsenic	6010C	10.0	5.5	1.0	10.0	U	
Barium	6010C	20.0	3.0	1.0	117		
Beryllium	6010C	3.0	0.130	1.0	3.0	U	
Cadmium	6010C	5.0	0.350	1.0	5.0	UJ	
Mercury	7470A	0.200	0.077	1.0	0.108	J	0.2 U
Calcium	6010C	1000	220	1.0	172000	J	E
Chromium	6010C	10.0	0.590	1.0	10.0	U	
Cobalt	6010C	50.0	0.890	1.0	50.0	UJ	
Copper	6010C	20.0	3.9	1.0	20.0	U	
Iron	6010C	100	61.0	1.0	100	U	
Lead	6010C	5.0	2.1	1.0	5.0	U	
Magnesium	6010C	1000	29.0	1.0	85300		
Manganese	6010C	10.0	3.7	1.0	10.0	U	
Nickel	6010C	40.0	2.6	1.0	40.0	U	
Potassium	6010C	2000	200	1.0	11400	J	NE
Selenium	6010C	10.0	6.4	1.0	10.0	UJ	
Silver	6010C	10.0	0.570	1.0	0.600	J	
Sodium	6010C	1000	130	1.0	171000		
Thallium	6010C	10.0	6.6	1.0	8.4	J	
Vanadium	6010C	50.0	0.670	1.0	50.0	U	
Zinc	6010C	20.0	9.4	1.0	9.8	J	20 U

% Solids: 0.0

Comments:

METALS
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: TRC Companies
Project No.: R2005213
Project Name:
Matrix: WATER

Service Request: CCSK - MW-03B
Date Collected: 6/16/2020
Date Received: 6/18/2020
Units: ug/L
Basis:

Sample Name: CCSK - MW-03A
Lab Code: R2005213-004

Analyte	Analysis Method	PQL	MDL	Dil. Factor	Result	C	Q
Aluminum	6010C	100	23.0	1.0	100	U	
Antimony	6010C	60.0	4.7	1.0	60.0	UJ	
Arsenic	6010C	10.0	5.5	1.0	10.0	U	
Barium	6010C	20.0	3.0	1.0	574		
Beryllium	6010C	3.0	0.130	1.0	3.0	U	
Cadmium	6010C	5.0	0.350	1.0	5.0	UJ	
Mercury	7470A	0.200	0.077	1.0	0.200	U	
Calcium	6010C	10000	2200	10.0	382000	J	E
Chromium	6010C	10.0	0.590	1.0	10.0	U	
Cobalt	6010C	50.0	0.890	1.0	50.0	UJ	
Copper	6010C	20.0	3.9	1.0	20.0	U	
Iron	6010C	100	61.0	1.0	10900		
Lead	6010C	5.0	2.1	1.0	5.0	U	
Magnesium	6010C	1000	29.0	1.0	291000		
Manganese	6010C	10.0	3.7	1.0	256		
Nickel	6010C	40.0	2.6	1.0	40.0	U	
Potassium	6010C	2000	200	1.0	62600	J	NE
Selenium	6010C	10.0	6.4	1.0	10.0	UJ	
Silver	6010C	10.0	0.570	1.0	10.0	U	
Sodium	6010C	10000	1300	10.0	1950000		
Thallium	6010C	10.0	6.6	1.0	15.9		
Vanadium	6010C	50.0	0.670	1.0	50.0	U	
Zinc	6010C	20.0	9.4	1.0	20.0	U	

% Solids: 0.0

Comments:

METALS
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: TRC Companies
Project No.: R2005213
Project Name:
Matrix: WATER

Service Request: CCSK - MW-03B
Date Collected: 6/16/2020
Date Received: 6/18/2020
Units: ug/L
Basis:

Sample Name: CCSK - MW-20B
Lab Code: R2005213-005

Analyte	Analysis Method	PQL	MDL	Dil. Factor	Result	C	Q
Aluminum	6010C	100	23.0	1.0	1550		
Antimony	6010C	60.0	4.7	1.0	60.0	U	
Arsenic	6010C	10.0	5.5	1.0	10.0	U	
Barium	6010C	20.0	3.0	1.0	87.8		
Beryllium	6010C	3.0	0.130	1.0	3.0	U	
Cadmium	6010C	5.0	0.350	1.0	5.0	U	
Mercury	7470A	0.200	0.077	1.0	0.123	J	0.2 U
Calcium	6010C	1000	220	1.0	71200	J	E
Chromium	6010C	10.0	0.590	1.0	1.9	J	
Cobalt	6010C	50.0	0.890	1.0	1.1	J	
Copper	6010C	20.0	3.9	1.0	20.0	U	
Iron	6010C	100	61.0	1.0	6690		
Lead	6010C	5.0	2.1	1.0	5.0	U	
Magnesium	6010C	1000	29.0	1.0	63500		
Manganese	6010C	10.0	3.7	1.0	63.8		
Nickel	6010C	40.0	2.6	1.0	40.0	U	
Potassium	6010C	2000	200	1.0	13400	J	NE
Selenium	6010C	10.0	6.4	1.0	10.0	U	
Silver	6010C	10.0	0.570	1.0	10.0	U	
Sodium	6010C	1000	130	1.0	16700		
Thallium	6010C	10.0	6.6	1.0	10.0	U	
Vanadium	6010C	50.0	0.670	1.0	2.2	J	
Zinc	6010C	20.0	9.4	1.0	20.0	U	

% Solids: 0.0

Comments:

METALS
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: TRC Companies
Project No.: R2005213
Project Name:
Matrix: WATER

Service Request: CCSK - MW-03B
Date Collected: 6/17/2020
Date Received: 6/18/2020
Units: ug/L
Basis:

Sample Name: CCSK - MW-20A
Lab Code: R2005213-006

Analyte	Analysis Method	PQL	MDL	Dil. Factor	Result	C	Q
Aluminum	6010C	100	23.0	1.0	100	U	
Antimony	6010C	60.0	4.7	1.0	60.0	U	
Arsenic	6010C	10.0	5.5	1.0	10.0	U	
Barium	6010C	20.0	3.0	1.0	89.6		
Beryllium	6010C	3.0	0.130	1.0	3.0	U	
Cadmium	6010C	5.0	0.350	1.0	5.0	U	
Mercury	7470A	0.200	0.077	1.0	0.098	J	0.2 U
Calcium	6010C	1000	220	1.0	76100	J	E
Chromium	6010C	10.0	0.590	1.0	10.0	U	
Cobalt	6010C	50.0	0.890	1.0	50.0	U	
Copper	6010C	20.0	3.9	1.0	20.0	U	
Iron	6010C	100	61.0	1.0	2830		
Lead	6010C	5.0	2.1	1.0	5.0	U	
Magnesium	6010C	1000	29.0	1.0	62300		
Manganese	6010C	10.0	3.7	1.0	14.7		
Nickel	6010C	40.0	2.6	1.0	40.0	U	
Potassium	6010C	2000	200	1.0	13200	J	NE
Selenium	6010C	10.0	6.4	1.0	10.0	U	
Silver	6010C	10.0	0.570	1.0	10.0	U	
Sodium	6010C	1000	130	1.0	17700		
Thallium	6010C	10.0	6.6	1.0	10.0	U	
Vanadium	6010C	50.0	0.670	1.0	50.0	U	
Zinc	6010C	20.0	9.4	1.0	20.0	U	

% Solids: 0.0

Comments:

METALS
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	TRC Companies	**Service Request:**	CCSK - MW-03B
Project No.:	R2005213	**Date Collected:**	6/17/2020
Project Name:		**Date Received:**	6/18/2020
Matrix:	WATER	**Units:**	ug/L
		Basis:	

Sample Name: CCSK - MW-05B **Lab Code:** R2005213-007

Analyte	Analysis Method	PQL	MDL	Dil. Factor	Result	C	Q
Aluminum	6010C	100	23.0	1.0	755		
Antimony	6010C	60.0	4.7	1.0	60.0	UJ	
Arsenic	6010C	10.0	5.5	1.0	10.0	U	
Barium	6010C	20.0	3.0	1.0	114		
Beryllium	6010C	3.0	0.130	1.0	3.0	U	
Cadmium	6010C	5.0	0.350	1.0	5.0	UJ	
Mercury	7470A	0.200	0.077	1.0	0.077	J	0.2 U
Calcium	6010C	1000	220	1.0	139000	J	E
Chromium	6010C	10.0	0.590	1.0	1.5	J	10 U
Cobalt	6010C	50.0	0.890	1.0	2.3	J	
Copper	6010C	20.0	3.9	1.0	20.0	U	
Iron	6010C	100	61.0	1.0	3630		
Lead	6010C	5.0	2.1	1.0	5.0	U	
Magnesium	6010C	1000	29.0	1.0	78400		
Manganese	6010C	10.0	3.7	1.0	674		
Nickel	6010C	40.0	2.6	1.0	40.0	U	
Potassium	6010C	2000	200	1.0	12700	J	NE
Selenium	6010C	10.0	6.4	1.0	10.0	UJ	
Silver	6010C	10.0	0.570	1.0	10.0	U	
Sodium	6010C	1000	130	1.0	43900		
Thallium	6010C	10.0	6.6	1.0	10.0	U	
Vanadium	6010C	50.0	0.670	1.0	1.0	J	50 U
Zinc	6010C	20.0	9.4	1.0	20.0	U	

% Solids: 0.0

Comments:

METALS
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: TRC Companies
Project No.: R2005213
Project Name:
Matrix: WATER

Service Request: CCSK - MW-03B
Date Collected: 6/17/2020
Date Received: 6/18/2020
Units: ug/L
Basis:

Sample Name: CCSK - MW-05A
Lab Code: R2005213-008

Analyte	Analysis Method	PQL	MDL	Dil. Factor	Result	C	Q
Aluminum	6010C	100	23.0	1.0	100	U	
Antimony	6010C	60.0	4.7	1.0	60.0	U	
Arsenic	6010C	10.0	5.5	1.0	13.6		
Barium	6010C	20.0	3.0	1.0	155		
Beryllium	6010C	3.0	0.130	1.0	3.0	U	
Cadmium	6010C	5.0	0.350	1.0	5.0	U	
Mercury	7470A	0.200	0.077	1.0	0.117	J	0.2 U
Calcium	6010C	1000	220	1.0	97100	J	E
Chromium	6010C	10.0	0.590	1.0	10.0	U	
Cobalt	6010C	50.0	0.890	1.0	7.0	J	
Copper	6010C	20.0	3.9	1.0	20.0	U	
Iron	6010C	100	61.0	1.0	12000		
Lead	6010C	5.0	2.1	1.0	5.0	U	
Magnesium	6010C	1000	29.0	1.0	76000		
Manganese	6010C	10.0	3.7	1.0	124		
Nickel	6010C	40.0	2.6	1.0	40.0	U	
Potassium	6010C	2000	200	1.0	11100	J	NE
Selenium	6010C	10.0	6.4	1.0	10.0	U	
Silver	6010C	10.0	0.570	1.0	10.0	U	
Sodium	6010C	1000	130	1.0	10200		
Thallium	6010C	10.0	6.6	1.0	10.0	U	
Vanadium	6010C	50.0	0.670	1.0	50.0	U	
Zinc	6010C	20.0	9.4	1.0	20.0	U	

% Solids: 0.0

Comments:

General Chemistry

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/15/20 14:35
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-03B	**Basis:**	NA
Lab Code:	R2005213-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**2.0**	mg/L	1.0	0.5	1	06/25/20 14:35	
Cyanide, Total	Kelada-01	0.0050 U	mg/L	0.0050	0.0040	1	06/24/20 12:29	
Solids, Total Suspended (TSS)	SM 2540 D-1997(2011)	**25.6**	mg/L	1.0	-	1	06/22/20 08:40	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 10:20
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-01B	**Basis:**	NA
Lab Code:	R2005213-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**1.1**	mg/L	1.0	0.5	1	06/25/20 15:38	
Cyanide, Total	Kelada-01	0.0050 U	mg/L	0.0050	0.0040	1	06/24/20 12:41	
Solids, Total Suspended (TSS)	SM 2540 D-1997(2011)	**2.7**	mg/L	1.0	-	1	06/22/20 08:40	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 12:50
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-01A	**Basis:**	NA
Lab Code:	R2005213-003		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**1.6**	mg/L	1.0	0.5	1	06/25/20 15:59	
Cyanide, Total	Kelada-01	**0.0054**	mg/L	0.0050	0.0040	1	06/24/20 12:45	
Solids, Total Suspended (TSS)	SM 2540 D-1997(2011)	**1.7**	mg/L	1.0	-	1	06/22/20 08:40	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 13:50
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-03A	**Basis:**	NA
Lab Code:	R2005213-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**0.8 J**	mg/L	1.0	0.5	1	06/25/20 16:20	
Cyanide, Total	Kelada-01	0.0050 U	mg/L	0.0050	0.0040	1	06/24/20 12:49	
Solids, Total Suspended (TSS)	SM 2540 D-1997(2011)	**23.0**	mg/L	1.0	-	1	06/22/20 08:40	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 15:35
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-20B	**Basis:**	NA
Lab Code:	R2005213-005		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**2.4**	mg/L	2.0	0.9	2	06/24/20 02:43	
Cyanide, Total	Kelada-01	0.0050 U	mg/L	0.0050	0.0040	1	06/24/20 12:53	
Solids, Total Suspended (TSS)	SM 2540 D-1997(2011)	**83.7**	mg/L	1.0	-	1	06/22/20 08:40	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 10:15
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-20A	**Basis:**	NA
Lab Code:	R2005213-006		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**2.8**	mg/L	2.0	0.9	2	06/24/20 03:04	
Cyanide, Total	Kelada-01	0.0050 U	mg/L	0.0050	0.0040	1	06/24/20 12:57	
Solids, Total Suspended (TSS)	SM 2540 D-1997(2011)	**6.2**	mg/L	1.0	-	1	06/22/20 08:40	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 12:00
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-05B	**Basis:**	NA
Lab Code:	R2005213-007		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**5.4**	mg/L	2.0	0.9	2	06/24/20 03:24	
Cyanide, Total	Kelada-01	0.010 U	mg/L	0.010	0.008	2	06/24/20 14:13	
Solids, Total Suspended (TSS)	SM 2540 D-1997(2011)	**44.0**	mg/L	1.0	-	1	06/22/20 08:40	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 12:55
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-05A	**Basis:**	NA
Lab Code:	R2005213-008		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	**6.3**	mg/L	2.0	0.9	2	06/24/20 03:45	
Cyanide, Total	Kelada-01	0.0050 U	mg/L	0.0050	0.0040	1	06/24/20 13:17	

QC NONCONFORMANCE DOCUMENTATION

METALS

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ICP INTERFERENCE CHECK SAMPLE

Contract: R2005213

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: CCSK - MW-03

ICP ID Number: Agilent ICP ICS Source: PERKIN ELMER

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	250000	250000	249000.0	248000	99	251000.0	251000	100
Antimony		600	-4.3	615	102	-5.8	618	103
Arsenic		100	-0.4	95	95	-2.0	103	103
Barium		500	0.2	521	104	0.2	530	106
Beryllium		500	0.0	489	98	-0.1	498	100
Cadmium		1000	-1.3	945	94	-1.2	968	97
Calcium	250000	250000	234000.0	231000	92	236000.0	236000	94
Chromium		500	0.9	496	99	0.8	505	101
Cobalt		500	-2.8	487	97	-2.7	497	99
Copper		500	-0.2	520	104	-0.2	531	106
Iron	100000	100000	89700.0	88900	89	90600.0	90500	90
Lead		50	-1.8	50	100	-1.8	49	98
Magnesium	250000	250000	262000.0	260000	104	265000.0	265000	106
Manganese		500	1.4	491	98	1.5	499	100
Nickel		1000	-0.7	945	94	-1.5	958	96
Potassium			-1.2	-3		-4.2	-7	
Selenium		50	-2.1	49	98	-7.9	49	98
Silver		200	0.2	213	106	0.4	215	108
Sodium			7.6	-2		5.9	1	
Thallium		100	2.5	115	115	3.7	115	115
Vanadium		500	2.5	500	100	2.9	509	102
Zinc		1000	10.3	994	99	9.8	1000	100

METALS

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BLANKS

Contract: R2005213

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: CCSK - MW-03

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L, ppt, or mg/kg): UG/L

Analyte	Initial Calib. Blank ug/L	C	Continuing Calibration Blank ug/L 1	C	2	C	3	C	Preparation Blank	C	M
	not used		not used								
Aluminum	23.00	U	23.00	U	23.00	U	23.00	U	23.000	U	P
Antimony	9.60	J	4.80	J	5.60	J	4.70	U	4.700	U	P
Arsenic	5.50	U	5.50	U	5.50	U	5.50	U	5.500	U	P
Barium	3.00	U	3.00	U	3.00	U	3.00	U	3.000	U	P
Beryllium	0.13	U	0.13	U	0.13	U	0.13	U	0.130	U	P
Cadmium	0.35	U	0.35	U	0.35	U	0.35	U	0.350	U	P
Mercury	0.105	J	0.128	J	0.136	J	0.137	J	0.114	J	CV
Calcium	220.00	U	220.00	U	220.00	U	220.00	U	220.000	U	P
Chromium	0.59	U	0.59	U	0.59	U	0.59	U	0.590	U	P
Cobalt	0.89	U	0.89	U	0.89	U	0.89	U	0.890	U	P
Copper	3.90	U	3.90	U	3.90	U	3.90	U	3.900	U	P
Iron	61.00	U	61.00	U	61.00	U	61.00	U	61.000	U	P
Lead	2.10	U	2.10	U	2.10	U	2.10	U	2.100	U	P
Magnesium	29.00	U	29.00	U	29.00	U	29.00	U	29.000	U	P
Manganese	3.70	U	3.70	U	3.70	U	3.70	U	3.700	U	P
Nickel	2.60	U	2.60	U	2.60	U	2.60	U	2.600	U	P
Potassium	200.00	U	200.00	U	200.00	U	200.00	U	200.000	U	P
Selenium	6.40	U	6.70	J	6.40	U	6.40	U	6.400	U	P
Silver	0.57	U	0.57	U	0.57	U	0.57	U	0.570	U	P
Sodium	130.00	U	130.00	U	130.00	U	130.00	U	130.000	U	P
Thallium	6.60	U	6.60	U	6.60	U	6.60	U	6.600	U	P
Vanadium	0.67	U	0.67	U	0.67	U	0.67	U	0.670	U	P
Zinc	9.40	U	9.40	U	9.40	U	9.40	U	9.400	U	P

Comments:

METALS

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BLANKS

Contract: R2005213

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: CCSK - MW-03

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L, ppt, or mg/kg): UG/L

Analyte	Initial Calib. Blank ug/L	C	Continuing Calibration Blank ug/L CCB 4 1	C	CCB 5 2	C	CCB 6 3	C	Preparation Blank	C	M
Aluminum			23.00	U	23.00	U	23.00	U			P
Antimony			4.70	U	N/A ~~4.80~~	J	N/A 5.10	J			P
Arsenic			5.50	U	5.50	U	5.50	U			P
Barium			3.00	U	3.00	U	3.00	U			P
Beryllium			0.13	U	0.13	U	0.13	U			P
Cadmium			0.35	U	0.35	U	0.35	U			P
Mercury			0.077	U							CV
Calcium			220.00	U	220.00	U	220.00	U			P
Chromium			0.59	U	0.59	U	0.59	U			P
Cobalt			0.89	U	0.89	U	0.89	U			P
Copper			3.90	U	3.90	U	3.90	U			P
Iron			61.00	U	61.00	U	61.00	U			P
Lead			2.10	U	2.10	U	2.10	U			P
Magnesium			29.00	U	29.00	U	29.00	U			P
Manganese			3.70	U	3.70	U	3.70	U			P
Nickel			2.60	U	2.60	U	2.60	U			P
Potassium			200.00	U	200.00	U	200.00	U			P
Selenium			6.40	U	6.40	U	6.40	U			P
Silver			0.57	U	0.57	U	0.57	U			P
Sodium			130.00	U	130.00	U	130.00	U			P
Thallium			6.60	U	6.60	U	8.10	J			P
Vanadium			0.67	U	0.67	U	0.67	U			P
Zinc			9.40	U	9.40	U	9.40	U			P

Comments:

ALS Environmental

METALS

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SPIKE SAMPLE RECOVERY

SAMPLE NO.

CCSK - MW-03BS

Contract: R2005213

Lab Code: ________ Case No.: ________ SAS No.: ________ SDG NO.: CCSK - MW-03

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M	
Aluminum	75 - 125	2210.00		23.00	U	2000.0	110		P	
Antimony	75 - 125	515.00		4.70	U	500.0	103		P	
Arsenic	75 - 125	39.00		5.50	U	40.0	98		P	
Barium	75 - 125	2660.00		658.00		2000.0	100		P	
Beryllium	75 - 125	46.80		0.13	U	50.0	94		P	
Cadmium	75 - 125	45.10		0.35	U	50.0	90		P	
Mercury	75 - 125	0.955		0.089	J	1.00	87		CV	
Calcium		217000.00		205000.00		2000.0	600		P	N/A
Chromium	75 - 125	194.00		0.59	U	200.0	97		P	
Cobalt	75 - 125	482.00		0.89	U	500.0	96		P	
Copper	75 - 125	290.00		3.90	U	250.0	116		P	
Iron		13500.00		12000.00		1000.0	150		P	N/A
Lead	75 - 125	500.00		2.10	U	500.0	100		P	
Magnesium		199000.00		189000.00		2000.0	500		P	N/A
Manganese	75 - 125	565.00		90.50		500.0	95		P	
Nickel	75 - 125	464.00		2.60	U	500.0	93		P	
Potassium	75 - 125	69700.00		43600.00		20000.0	130	N	P	
Selenium	75 - 125	1060.00		6.40	U	1010.0	105		P	
Silver	75 - 125	59.30		0.57	U	50.0	119		P	
Sodium		1880000.00		1870000.00		20000.0	50		P	N/A
Thallium	75 - 125	2050.00		66.00	U	2000.0	102		P	
Vanadium	75 - 125	495.00		0.67	U	500.0	99		P	
Zinc	75 - 125	522.00		9.40	U	500.0	104		P	

Comments:

ALS Environmental

METALS

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SPIKE SAMPLE RECOVERY

SAMPLE NO.

CCSK - MW-03BSD

Contract: R2005213

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: CCSK - MW-03

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M	
Aluminum	75 - 125	2220.00		23.00	U	2000.0	111		P	
Antimony	75 - 125	518.00		4.70	U	500.0	104		P	
Arsenic	75 - 125	40.90		5.50	U	40.0	102		P	
Barium	75 - 125	2670.00		658.00		2000.0	101		P	
Beryllium	75 - 125	46.80		0.13	U	50.0	94		P	
Cadmium	75 - 125	45.50		0.35	U	50.0	91		P	
Mercury	75 - 125	0.937		0.089	J	1.00	85		CV	
Calcium		218000.00		205000.00		2000.0	650		P	N/A
Chromium	75 - 125	194.00		0.59	U	200.0	97		P	
Cobalt	75 - 125	482.00		0.89	U	500.0	96		P	
Copper	75 - 125	290.00		3.90	U	250.0	116		P	
Iron		13500.00		12000.00		1000.0	150		P	N/A
Lead	75 - 125	499.00		2.10	U	500.0	100		P	
Magnesium		200000.00		189000.00		2000.0	550		P	N/A
Manganese	75 - 125	566.00		90.50		500.0	95		P	
Nickel	75 - 125	464.00		2.60	U	500.0	93		P	
Potassium	75 - 125	70800.00		43600.00		20000.0	136	N	P	
Selenium	75 - 125	1060.00		6.40	U	1010.0	105		P	
Silver	75 - 125	59.30		0.57	U	50.0	119		P	
Sodium		1870000.00		1870000.00		20000.0	0		P	N/A
Thallium	75 - 125	2020.00		66.00	U	2000.0	101		P	
Vanadium	75 - 125	495.00		0.67	U	500.0	99		P	
Zinc	75 - 125	522.00		9.40	U	500.0	104		P	

Comments: _____

METALS

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ICP SERIAL DILUTIONS

SAMPLE NO.

CCSK - MW-03BL

Contract: R2005213

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: CCSK - MW-03

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	23.00	U	115.00	U			P
Antimony	4.70	U	23.50	U			P
Arsenic	5.50	U	27.50	U			P
Barium	658.00		706.00		7		P
Beryllium	0.13	U	0.65	U			P
Cadmium	0.35	U	1.75	U			P
Calcium	205000.00		232000.00		13	E	P
Chromium	0.59	U	2.95	U			P
Cobalt	0.89	U	4.45	U			P
Copper	3.90	U	19.50	U			P
Iron	12000.00		13100.00		9		P
Lead	2.10	U	10.50	U			P
Magnesium	189000.00		187000.00		1		P
Manganese	90.50		97.50		8		P
Nickel	2.60	U	13.00	U			P
Potassium	43600.00		35800.00		18	E	P
Selenium	6.40	U	32.00	U			P
Silver	0.57	U	2.85	U			P
Sodium	187000.00		201000.00		7		P
Thallium	6.60	U	33.00	U			P
Vanadium	0.67	U	3.35	U			P
Zinc	9.40	U	47.00	U			P

Comments: _____

Data Usability Summary Report

Site: Cross County Sanitary – Kessman Landfill
Laboratory: ALS Environmental – Rochester, NY and Holland, MI
SDG: R2005213
Parameter: Per- and Poly-fluoroalkyl Substances (PFAS), 1,4-Dioxane
Data Reviewer: Kristen Morin/TRC
Peer Reviewer: Elizabeth Denly/TRC
Date: September 2, 2020

Samples Reviewed and Evaluation Summary

8 Groundwater Samples: CCSK-MW-01A, CCSK-MW-01B, CCSK-MW-03A, CCSK-MW-03B, CCSK-MW-05A, CCSK-MW-05B, CCSK-MW-20A, CCSK-MW-20B

1 Equipment Blank*: CCSK-Equip Blank

* analyzed for PFAS only

The above-listed samples were collected on June 15-17, 2020 and were analyzed for the following parameters:

- 1,4-Dioxane by SW-846 8270D with Selective Ion Monitoring (SIM)
- Per- and Poly-fluoroalkyl substances (PFAS) (21 target analytes) based on USEPA Method 537.1 (modified) using ALS Environmental – Holland, MI standard operating procedure (SOP) HN-LCMS-001-R00, Revision 0.0, effective date 10/07/19.

The samples were analyzed for 1,4-dioxane by ALS Environmental – Rochester, NY and for PFAS by ALS Environmental – Holland, MI. The data validation was performed in accordance with the following guidance, modified for the methodologies utilized:

- USEPA National Functional Guidelines for Organic Superfund Methods Data Review (EPA-540-R-2017-002), January 2017
- USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA-542-B-16-001), April 2016
- USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018
- New York State Department of Environmental Conservation Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids, January 2020

The data were evaluated based on the following parameters:

- Overall Evaluation of Data and Potential Usability Issues
* • Data Completeness
* • Holding Times and Sample Preservation
* • GC/MS Tunes (1,4-Dioxane only)
* • Initial and Continuing Calibrations
- Blanks
* • Surrogate Recoveries (1,4-Dioxane only)
- Isotopically Labeled Surrogate Results (PFAS only)

*	•	Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
	•	Laboratory Control Sample (LCS)/LCS Duplicate (LCSD) Results
*	•	Internal Standards
NA	•	Field Duplicate Results
	•	Sample Results and Reported Quantitation Limits (QLs)
*	•	Target Compound Identification

*	-	All criteria were met.
NA	-	Field duplicates were not associated with this sample set.

Overall Evaluation of Data and Potential Usability Issues

All results are usable for project objectives. There were no qualifications applied to the data as a result of sampling error. Qualifications applied to the data as a result of analytical error are discussed below.

- Potential uncertainty exists for select PFAS results that were between the method detection limit (MDL) and QL. These results were qualified as estimated (J) in the associated samples. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

- The positive results for PFHxS in samples CCSK-MW-01A, CCSK-MW-01B, CCSK-MW-03A, CCSK-MW-03B, and CCSK-Equip Blank was qualified as nondetect (U) at the QL due to method blank contamination. These results can be used for project objectives as nondetects, which may have a minor impact on the data usability.

- The positive results for 6:2 FTS in samples CCSK-MW-05B and CCSK-MW-05A were qualified as estimated (J) due to detection below the lowest calibration standard and QL and high isotopically labeled surrogate recoveries. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

- The nondetect results for PFTeA and PFTriA in sample CCSK-MW-20A, and PFOSA in sample CCSK-Equip Blank were qualified as estimated (UJ) due to low isotopically labeled surrogate recoveries. These results can be used for project objectives as nondetects with estimated QLs, which may have a minor impact on the data usability.

- The positive result for PFBA in sample CCSK-MW-03B was qualified as estimated (J+) with a potential high bias due to high recovery in the LCS. This result can be used for project objectives as an estimated value, which may have a minor impact on the data usability.

- The positive result for 6:2 FTS in sample CCSK-MW-01A was qualified as estimated (J) due to a calibration exceedance. This result can be used for project objectives as an estimated value, which may have a minor impact on the data usability.

Data Completeness

The data package was a complete Level IV data deliverable with the following exceptions.

- Several discrepancies were noted with the calibration summaries provided for select PFAS.
- A discrepancy was noted with the raw data file numbers provided for select calibration standards and quality control samples.

The laboratory was contacted during validation and provided a revised package to address these issues.

Holding Times and Sample Preservation

All holding time and sample preservation criteria were met for the 1,4-dioxane and PFAS analyses.

GC/MS Tunes (1,4-Dioxane only)

All criteria were met in the 1,4-dioxane analyses.

Initial and Continuing Calibrations

1,4-Dioxane

The coefficient of determination was within the method acceptance criteria in the initial calibration (IC). All percent drifts (%Ds) met the method acceptance criteria in the continuing calibration (CC) standards associated with the samples in this data set.

PFAS

All percent relative standard deviations (%RSDs) and correlation coefficients in the ICs were within the method acceptance criteria. All %Ds or percent differences were within the acceptance criteria in the CC standards associated with the samples in this data set.

Blanks

1,4-Dioxane

1,4-Dioxane was not detected in the method blank associated with the samples in this data set.

PFAS

The following table summarizes the contaminant detected in the method blanks, the concentrations detected, and the resulting validation actions. Note that the concentration of PFHxS in the equipment blank (CCSK-Equip Blank) was due to method blank contamination as summarized in the table below and therefore did not further impact the samples in this data set.

Blank ID	Compound	Blank Concentration (ng/L)	Validation Action
MBLK-158242	PFHxS	0.4768 J	The positive results for PFHxS in samples CCSK-MW-01A, CCSK-MW-01B, CCSK-MW-03A, and CCSK-Equip Blank were qualified as nondetect (U) at the QL. No qualification was required for samples CCSK-MW-05A, CCSK-MW-05B, CSK-MW-20A and CCSK-MW-20B since the results for PFHxS were >10x the blank concentration.
Associated samples: CCSK-MW-01A, CCSK-MW-01B, CCSK-MW-03A, CCSK-MW-05A, CCSK-MW-05B, CSK-MW-20A, CCSK-MW-20B, CCSK-Equip Blank			

Blank ID	Compound	Blank Concentration (ng/L)	Validation Action
MBLK-158324	PFHxS	0.5504 J	The positive result for PFHxS in sample CCSK-MW-03B was qualified as nondetect (U) at the QL.
Associated sample: CCSK-MW-03B			
Criteria: • If concentration in sample <QL, replace result with QL flagged with "U" • If concentration in sample ≥QL and <10x blank concentration, qualify result as estimated, biased high (J+) • If concentration in sample ≥QL and ≥10x blank concentration, no qualification			

Surrogate Recoveries (1,4-Dioxane only)

The surrogate percent recoveries (%Rs) were within the laboratory acceptance limits in the 1,4-dioxane analyses.

Isotopically Labeled Surrogate Results (PFAS only)

Twenty isotopically labeled surrogates were spiked into the samples prior to extraction. The %Rs were within the laboratory acceptance limits (50-150%) for all PFAS analyses with the following exceptions.

Sample ID	Surrogate	Surrogate %R	Validation Action
CCSK-MW-05B	13C2-FTS 6:2	212	The positive results for 6:2FTS would have been qualified as estimated (J+) with a potential high bias; however, these results were also qualified as estimated (J) by the laboratory since results were below the lowest calibration standard and QL. Thus, the overall qualification was J in samples CCSK-MW-05B and CCSK-MW-05A.
CCSK-MW-05A		199	
CCSK-MW-20A	13C2-PFTeA	49.7	The nondetect results for PFTeA and PFTriA were qualified as estimated (UJ) in sample CCSK-MW-20A.
CCSK-Equip Blank	13C8-FOSA	49.9	The nondetect result for PFOSA was qualified as estimated (UJ) in sample CCSK-Equip Blank.

MS/MSD Results

MS/MSDs were performed on samples CCSK-MW-03B and CCSK-MW-05A for 1,4-dioxane analyses, and sample CCSK-MW-03B for PFAS analyses. All %Rs and relative percent differences (RPDs) were within the laboratory acceptance limits.

LCS/LCSD Results

1,4-Dioxane

The LCS and LCSD %Rs and RPD were within the laboratory acceptance criteria for the 1,4-dioxane analyses.

PFAS

The following table summarizes the LCS %R that did not meet the laboratory acceptance limits for the PFAS analyses.

LCS ID	Analyte	LCS %R	QC Limits %R	Validation Action
LCS-158324	PFBA	134	73-129	The positive result for PFBA in sample CCSK-MW-03B was qualified as estimated (J+) with a potential high bias.
Associated sample: CCSK-MW-03B				

Internal Standards

1,4-Dioxane

All criteria were met in the 1,4-dioxane analyses.

PFAS

The isotopically labeled internal standard 13C7-PFUnDA was added to each sample prior to injection to monitor for ion suppression/enhancement at the instrument level. The %Rs met the laboratory limits of 50-200% in the PFAS analyses.

Field Duplicate Results

There were no field duplicates associated with this data set.

Sample Results and Reported Quantitation Limits

Sample calculations were spot-checked; there were no errors noted. Select PFAS results were between the MDL and QL. These results were qualified as estimated (J) by the laboratory.

There were no dilutions performed on the samples in this data set for PFAS or 1,4-dioxane analyses.

The response for 6:2 FTS in sample CCSK-MW-01A was above the calibration range but the sample was not re-analyzed on a dilution for this analyte due to laboratory oversight. Thus, the positive result for 6:2FTS in this sample was qualified as estimated (J). It should be noted that the positive result for 6:2 FTS in sample CCSK-MW-03A could have been impacted by the elevated concentration of 6:2 FTS in sample CCSK-MW-01A which was analyzed immediately before sample CCSK-MW-03A. Since the result for 6:2 FTS in sample CCSK-MW-03A was already qualified as estimated by the laboratory due to detection between the MDL and QL, no further action was taken on this basis.

The laboratory noted on the preparation batch worksheet that sample CCSK-MW-05B had a fluorescent pink color in the original sample and in the extract. No qualification was required.

Target Compound Identification

1,4-Dioxane

All criteria were met for 1,4-dioxane.

PFAS

Extracted ion chromatograms were reviewed to verify the target compound identifications. The laboratory manually integrated several peaks to ensure the inclusion of linear and branched isomers for PFOA, PFOS, NEtFOSAA, NMeFOSAA, and/or PFHxS and/or to ensure proper integration.

The laboratory indicated in the SOP that they use second precursor/product ion transitions for identification confirmation for all reported PFAS except PFBA and PFPeA; however, the laboratory does not evaluate ion ratios.

QUALIFIED FORM 1s

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/15/20 14:35
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-03B	**Units:**	ug/L
Lab Code:	R2005213-001	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	**0.14**	0.040	0.027	1	06/22/20 21:47	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	95	64 - 124	06/22/20 21:47	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 10:20
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-01B	**Units:**	ug/L
Lab Code:	R2005213-002	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.040 U	0.040	0.027	1	06/23/20 14:19	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	84	64 - 124	06/23/20 14:19	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 12:50
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-01A	**Units:**	ug/L
Lab Code:	R2005213-003	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.040 U	0.040	0.027	1	06/23/20 14:38	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	90	64 - 124	06/23/20 14:38	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 13:50
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-03A	**Units:**	ug/L
Lab Code:	R2005213-004	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	**0.21**	0.040	0.027	1	06/23/20 14:57	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	89	64 - 124	06/23/20 14:57	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/16/20 15:35
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-20B	**Units:**	ug/L
Lab Code:	R2005213-005	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	**0.30**	0.040	0.027	1	06/23/20 15:15	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	84	64 - 124	06/23/20 15:15	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 10:15
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-20A	**Units:**	ug/L
Lab Code:	R2005213-006	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	**0.40**	0.040	0.027	1	06/23/20 15:34	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	87	64 - 124	06/23/20 15:34	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 12:00
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-05B	**Units:**	ug/L
Lab Code:	R2005213-007	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	**0.88**	0.040	0.027	1	06/23/20 15:52	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	88	64 - 124	06/23/20 15:52	

Analytical Report

Client:	TRC Companies	**Service Request:**	R2005213
Project:	Cross County Sanitary - Kessman Landfill/387570.0000.0000	**Date Collected:**	06/17/20 12:55
Sample Matrix:	Water	**Date Received:**	06/18/20 09:20
Sample Name:	CCSK - MW-05A	**Units:**	ug/L
Lab Code:	R2005213-008	**Basis:**	NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	**0.42**	0.040	0.027	1	06/23/20 16:10	6/22/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	88	64 - 124	06/23/20 16:10	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/15/20 14:35
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-03B	**Units:**	ng/L
Lab Code:	20061912-01	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	**13**	4.2	1	07/06/20 17:37	06/30/20 18:56	
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND U	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluorobutanesulfonic Acid (PFBS)	**0.79 J**	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluorobutanoic Acid (PFBA)	**5.3** J+	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluorodecanesulfonic Acid (PFDS)	ND U	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluorodecanoic Acid (PFDA)	ND U	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluorododecanoic Acid (PFDoA)	ND U	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluoroheptanesulfonic Acid (PFHpS)	ND U	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluoroheptanoic Acid (PFHpA)	**2.1 J**	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluorohexanesulfonic Acid (PFHxS)	~~**3.1 J**~~ ND/4.2 U	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluorohexanoic Acid (PFHxA)	**3.6 J**	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluorononanoic Acid (PFNA)	ND U	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluorooctanesulfonamide (PFOSA)	ND U	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluorooctanesulfonic Acid (PFOS)	**3.9**	1.7	1	07/06/20 17:37	06/30/20 18:56	
Perfluorooctanoic Acid (PFOA)	**5.3**	1.7	1	07/06/20 17:37	06/30/20 18:56	
Perfluoropentanoic Acid (PFPeA)	**2.5 J**	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluorotetradecanoic Acid (PFTeA)	ND U	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluorotridecanoic Acid (PFTriA)	ND U	4.2	1	07/06/20 17:37	06/30/20 18:56	
Perfluoroundecanoic Acid (PFUnA)	ND U	4.2	1	07/06/20 17:37	06/30/20 18:56	
N-Ethylperfluorooctanesulfonamidoacetic Acid	**2.1 J**	4.2	1	07/06/20 17:37	06/30/20 18:56	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/15/20 14:35
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-03B	**Units:**	ng/L
Lab Code:	20061912-01	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
N-Methylperfluorooctanesulfonamidoacetic Acid	ND U	4.2	1	07/06/20 17:37	06/30/20 18:56	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 6:2	129	50 - 150	07/06/20 17:37	
13C2-FtS 8:2	110	50 - 150	07/06/20 17:37	
13C2-PFDA	90.5	50 - 150	07/06/20 17:37	
13C2-PFDoA	92.0	50 - 150	07/06/20 17:37	
13C2-PFHxA	97.7	50 - 150	07/06/20 17:37	
13C2-PFHxDA	104	50 - 150	07/06/20 17:37	
13C2-PFTeA	85.7	50 - 150	07/06/20 17:37	
13C2-PFUnA	99.1	50 - 150	07/06/20 17:37	
13C3-HFPO-DA	85.9	50 - 150	07/06/20 17:37	
13C3-PFBS	109	50 - 150	07/06/20 17:37	
13C4-PFBA	86.4	50 - 150	07/06/20 17:37	
13C4-PFHpA	109	50 - 150	07/06/20 17:37	
13C4-PFOA	106	50 - 150	07/06/20 17:37	
13C4-PFOS	87.4	50 - 150	07/06/20 17:37	
13C5-PFNA	95.6	50 - 150	07/06/20 17:37	
13C5-PFPeA	94.9	50 - 150	07/06/20 17:37	
13C8-FOSA	86.6	50 - 150	07/06/20 17:37	
18O2-PFHxS	92.2	50 - 150	07/06/20 17:37	
d5-N-EtFOSAA	93.3	50 - 150	07/06/20 17:37	
d3-N-MeFOSAA	88.8	50 - 150	07/06/20 17:37	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/16/20 10:20
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-01B	**Units:**	ng/L
Lab Code:	20061912-02	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	**10**	4.4	1	07/06/20 15:42	06/29/20 19:30	
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluorobutanesulfonic Acid (PFBS)	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluorobutanoic Acid (PFBA)	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluorodecanesulfonic Acid (PFDS)	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluorodecanoic Acid (PFDA)	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluorododecanoic Acid (PFDoA)	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluoroheptanesulfonic Acid (PFHpS)	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluoroheptanoic Acid (PFHpA)	**0.71 J**	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluorohexanesulfonic Acid (PFHxS)	~~**0.50 J**~~ ND/4.4 U	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluorohexanoic Acid (PFHxA)	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluorononanoic Acid (PFNA)	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluorooctanesulfonamide (PFOSA)	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluorooctanesulfonic Acid (PFOS)	**1.6 J**	1.7	1	07/06/20 15:42	06/29/20 19:30	
Perfluorooctanoic Acid (PFOA)	**2.2**	1.7	1	07/06/20 15:42	06/29/20 19:30	
Perfluoropentanoic Acid (PFPeA)	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluorotetradecanoic Acid (PFTeA)	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluorotridecanoic Acid (PFTriA)	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	
Perfluoroundecanoic Acid (PFUnA)	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/16/20 10:20
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-01B	**Units:**	ng/L
Lab Code:	20061912-02	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
N-Methylperfluorooctanesulfonamidoacetic Acid	ND U	4.4	1	07/06/20 15:42	06/29/20 19:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 6:2	83.3	50 - 150	07/06/20 15:42	
13C2-FtS 8:2	89.1	50 - 150	07/06/20 15:42	
13C2-PFDA	69.6	50 - 150	07/06/20 15:42	
13C2-PFDoA	67.3	50 - 150	07/06/20 15:42	
13C2-PFHxA	69.3	50 - 150	07/06/20 15:42	
13C2-PFHxDA	72.8	50 - 150	07/06/20 15:42	
13C2-PFTeA	53.8	50 - 150	07/06/20 15:42	
13C2-PFUnA	72.5	50 - 150	07/06/20 15:42	
13C3-HFPO-DA	71.6	50 - 150	07/06/20 15:42	
13C3-PFBS	86.9	50 - 150	07/06/20 15:42	
13C4-PFBA	65.3	50 - 150	07/06/20 15:42	
13C4-PFHpA	83.5	50 - 150	07/06/20 15:42	
13C4-PFOA	74.3	50 - 150	07/06/20 15:42	
13C4-PFOS	64.8	50 - 150	07/06/20 15:42	
13C5-PFNA	67.6	50 - 150	07/06/20 15:42	
13C5-PFPeA	75.5	50 - 150	07/06/20 15:42	
13C8-FOSA	73.8	50 - 150	07/06/20 15:42	
18O2-PFHxS	64.3	50 - 150	07/06/20 15:42	
d5-N-EtFOSAA	78.0	50 - 150	07/06/20 15:42	
d3-N-MeFOSAA	81.2	50 - 150	07/06/20 15:42	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/16/20 12:50
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-01A	**Units:**	ng/L
Lab Code:	20061912-03	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	**570** J	4.4	1	07/06/20 15:53	06/29/20 19:30	
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	**1.5 J**	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluorobutanesulfonic Acid (PFBS)	ND U	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluorobutanoic Acid (PFBA)	ND U	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluorodecanesulfonic Acid (PFDS)	ND U	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluorodecanoic Acid (PFDA)	ND U	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluorododecanoic Acid (PFDoA)	ND U	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluoroheptanesulfonic Acid (PFHpS)	ND U	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluoroheptanoic Acid (PFHpA)	**0.60 J**	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluorohexanesulfonic Acid (PFHxS)	~~**0.87 J**~~ ND/4.4 U	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluorohexanoic Acid (PFHxA)	**1.3 J**	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluorononanoic Acid (PFNA)	ND U	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluorooctanesulfonamide (PFOSA)	ND U	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluorooctanesulfonic Acid (PFOS)	**0.83 J**	1.8	1	07/06/20 15:53	06/29/20 19:30	
Perfluorooctanoic Acid (PFOA)	**1.8 J**	1.8	1	07/06/20 15:53	06/29/20 19:30	
Perfluoropentanoic Acid (PFPeA)	**1.2 J**	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluorotetradecanoic Acid (PFTeA)	ND U	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluorotridecanoic Acid (PFTriA)	ND U	4.4	1	07/06/20 15:53	06/29/20 19:30	
Perfluoroundecanoic Acid (PFUnA)	ND U	4.4	1	07/06/20 15:53	06/29/20 19:30	
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND U	4.4	1	07/06/20 15:53	06/29/20 19:30	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/16/20 12:50
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-01A	**Units:**	ng/L
Lab Code:	20061912-03	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
N-Methylperfluorooctanesulfonamidoacetic Acid	ND U	4.4	1	07/06/20 15:53	06/29/20 19:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 6:2	101	50 - 150	07/06/20 15:53	
13C2-FtS 8:2	88.8	50 - 150	07/06/20 15:53	
13C2-PFDA	64.5	50 - 150	07/06/20 15:53	
13C2-PFDoA	64.7	50 - 150	07/06/20 15:53	
13C2-PFHxA	64.2	50 - 150	07/06/20 15:53	
13C2-PFHxDA	67.4	50 - 150	07/06/20 15:53	
13C2-PFTeA	68.0	50 - 150	07/06/20 15:53	
13C2-PFUnA	67.5	50 - 150	07/06/20 15:53	
13C3-HFPO-DA	60.0	50 - 150	07/06/20 15:53	
13C3-PFBS	77.4	50 - 150	07/06/20 15:53	
13C4-PFBA	60.3	50 - 150	07/06/20 15:53	
13C4-PFHpA	80.5	50 - 150	07/06/20 15:53	
13C4-PFOA	68.5	50 - 150	07/06/20 15:53	
13C4-PFOS	60.4	50 - 150	07/06/20 15:53	
13C5-PFNA	67.5	50 - 150	07/06/20 15:53	
13C5-PFPeA	67.1	50 - 150	07/06/20 15:53	
13C8-FOSA	63.8	50 - 150	07/06/20 15:53	
18O2-PFHxS	62.3	50 - 150	07/06/20 15:53	
d5-N-EtFOSAA	72.2	50 - 150	07/06/20 15:53	
d3-N-MeFOSAA	69.8	50 - 150	07/06/20 15:53	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/16/20 13:50
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-03A	**Units:**	ng/L
Lab Code:	20061912-04	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	**0.64 J**	4.3	1	07/06/20 16:03	06/29/20 19:30	
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND U	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluorobutanesulfonic Acid (PFBS)	**0.62 J**	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluorobutanoic Acid (PFBA)	**8.6**	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluorodecanesulfonic Acid (PFDS)	ND U	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluorodecanoic Acid (PFDA)	ND U	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluorododecanoic Acid (PFDoA)	ND U	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluoroheptanesulfonic Acid (PFHpS)	ND U	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluoroheptanoic Acid (PFHpA)	**1.6 J**	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluorohexanesulfonic Acid (PFHxS)	~~**1.8 J**~~ ND/4.3 U	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluorohexanoic Acid (PFHxA)	**5.3**	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluorononanoic Acid (PFNA)	ND U	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluorooctanesulfonamide (PFOSA)	ND U	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluorooctanesulfonic Acid (PFOS)	ND U	1.7	1	07/06/20 16:03	06/29/20 19:30	
Perfluorooctanoic Acid (PFOA)	**1.8**	1.7	1	07/06/20 16:03	06/29/20 19:30	
Perfluoropentanoic Acid (PFPeA)	**3.9 J**	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluorotetradecanoic Acid (PFTeA)	ND U	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluorotridecanoic Acid (PFTriA)	ND U	4.3	1	07/06/20 16:03	06/29/20 19:30	
Perfluoroundecanoic Acid (PFUnA)	ND U	4.3	1	07/06/20 16:03	06/29/20 19:30	
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND U	4.3	1	07/06/20 16:03	06/29/20 19:30	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/16/20 13:50
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-03A	**Units:**	ng/L
Lab Code:	20061912-04	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
N-Methylperfluorooctanesulfonamidoacetic Acid	ND U	4.3	1	07/06/20 16:03	06/29/20 19:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 6:2	70.0	50 - 150	07/06/20 16:03	
13C2-FtS 8:2	65.6	50 - 150	07/06/20 16:03	
13C2-PFDA	58.0	50 - 150	07/06/20 16:03	
13C2-PFDoA	54.9	50 - 150	07/06/20 16:03	
13C2-PFHxA	65.7	50 - 150	07/06/20 16:03	
13C2-PFHxDA	54.7	50 - 150	07/06/20 16:03	
13C2-PFTeA	52.0	50 - 150	07/06/20 16:03	
13C2-PFUnA	60.3	50 - 150	07/06/20 16:03	
13C3-HFPO-DA	66.8	50 - 150	07/06/20 16:03	
13C3-PFBS	80.2	50 - 150	07/06/20 16:03	
13C4-PFBA	60.7	50 - 150	07/06/20 16:03	
13C4-PFHpA	75.9	50 - 150	07/06/20 16:03	
13C4-PFOA	69.8	50 - 150	07/06/20 16:03	
13C4-PFOS	57.0	50 - 150	07/06/20 16:03	
13C5-PFNA	61.4	50 - 150	07/06/20 16:03	
13C5-PFPeA	68.7	50 - 150	07/06/20 16:03	
13C8-FOSA	62.9	50 - 150	07/06/20 16:03	
18O2-PFHxS	61.7	50 - 150	07/06/20 16:03	
d5-N-EtFOSAA	55.8	50 - 150	07/06/20 16:03	
d3-N-MeFOSAA	56.2	50 - 150	07/06/20 16:03	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/16/20 15:35
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-20B	**Units:**	ng/L
Lab Code:	20061912-05	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result		MRL	Dil.	Date Analyzed	Date Extracted	Q
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	**1.7**	**J**	4.4	1	07/06/20 16:14	06/29/20 19:30	
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND	U	4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluorobutanesulfonic Acid (PFBS)	**1.6**	**J**	4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluorobutanoic Acid (PFBA)	**6.6**		4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluorodecanesulfonic Acid (PFDS)	ND	U	4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluorodecanoic Acid (PFDA)	ND	U	4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluorododecanoic Acid (PFDoA)	ND	U	4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluoroheptanesulfonic Acid (PFHpS)	**0.74**	**J**	4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluoroheptanoic Acid (PFHpA)	**4.4**	**J**	4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluorohexanesulfonic Acid (PFHxS)	**5.8**		4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluorohexanoic Acid (PFHxA)	**6.2**		4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluorononanoic Acid (PFNA)	**2.0**	**J**	4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluorooctanesulfonamide (PFOSA)	ND	U	4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluorooctanesulfonic Acid (PFOS)	**54**		1.7	1	07/06/20 16:14	06/29/20 19:30	
Perfluorooctanoic Acid (PFOA)	**24**		1.7	1	07/06/20 16:14	06/29/20 19:30	
Perfluoropentanoic Acid (PFPeA)	**4.3**	**J**	4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluorotetradecanoic Acid (PFTeA)	ND	U	4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluorotridecanoic Acid (PFTriA)	ND	U	4.4	1	07/06/20 16:14	06/29/20 19:30	
Perfluoroundecanoic Acid (PFUnA)	ND	U	4.4	1	07/06/20 16:14	06/29/20 19:30	
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND	U	4.4	1	07/06/20 16:14	06/29/20 19:30	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/16/20 15:35
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-20B	**Units:**	ng/L
Lab Code:	20061912-05	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
N-Methylperfluorooctanesulfonamidoacetic Acid	ND U	4.4	1	07/06/20 16:14	06/29/20 19:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 6:2	124	50 - 150	07/06/20 16:14	
13C2-FtS 8:2	77.5	50 - 150	07/06/20 16:14	
13C2-PFDA	62.8	50 - 150	07/06/20 16:14	
13C2-PFDoA	59.9	50 - 150	07/06/20 16:14	
13C2-PFHxA	68.3	50 - 150	07/06/20 16:14	
13C2-PFHxDA	66.1	50 - 150	07/06/20 16:14	
13C2-PFTeA	50.7	50 - 150	07/06/20 16:14	
13C2-PFUnA	66.2	50 - 150	07/06/20 16:14	
13C3-HFPO-DA	65.1	50 - 150	07/06/20 16:14	
13C3-PFBS	75.2	50 - 150	07/06/20 16:14	
13C4-PFBA	64.5	50 - 150	07/06/20 16:14	
13C4-PFHpA	78.9	50 - 150	07/06/20 16:14	
13C4-PFOA	72.0	50 - 150	07/06/20 16:14	
13C4-PFOS	58.9	50 - 150	07/06/20 16:14	
13C5-PFNA	67.5	50 - 150	07/06/20 16:14	
13C5-PFPeA	68.2	50 - 150	07/06/20 16:14	
13C8-FOSA	57.5	50 - 150	07/06/20 16:14	
18O2-PFHxS	61.4	50 - 150	07/06/20 16:14	
d5-N-EtFOSAA	59.6	50 - 150	07/06/20 16:14	
d3-N-MeFOSAA	63.5	50 - 150	07/06/20 16:14	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/17/20 10:15
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-20A	**Units:**	ng/L
Lab Code:	20061912-06	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	**0.61 J**	4.3	1	07/06/20 16:24	06/29/20 19:30	
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND U	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluorobutanesulfonic Acid (PFBS)	**1.6 J**	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluorobutanoic Acid (PFBA)	**8.2**	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluorodecanesulfonic Acid (PFDS)	ND U	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluorodecanoic Acid (PFDA)	ND U	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluorododecanoic Acid (PFDoA)	ND U	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluoroheptanesulfonic Acid (PFHpS)	**0.77 J**	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluoroheptanoic Acid (PFHpA)	**4.8**	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluorohexanesulfonic Acid (PFHxS)	**7.1**	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluorohexanoic Acid (PFHxA)	**7.8**	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluorononanoic Acid (PFNA)	**2.4 J**	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluorooctanesulfonamide (PFOSA)	ND U	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluorooctanesulfonic Acid (PFOS)	**45**	1.7	1	07/06/20 16:24	06/29/20 19:30	
Perfluorooctanoic Acid (PFOA)	**27**	1.7	1	07/06/20 16:24	06/29/20 19:30	
Perfluoropentanoic Acid (PFPeA)	**4.3**	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluorotetradecanoic Acid (PFTeA)	ND UJ	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluorotridecanoic Acid (PFTriA)	ND UJ	4.3	1	07/06/20 16:24	06/29/20 19:30	
Perfluoroundecanoic Acid (PFUnA)	ND U	4.3	1	07/06/20 16:24	06/29/20 19:30	
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND U	4.3	1	07/06/20 16:24	06/29/20 19:30	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/17/20 10:15
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-20A	**Units:**	ng/L
Lab Code:	20061912-06	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
N-Methylperfluorooctanesulfonamidoacetic Acid	ND U	4.3	1	07/06/20 16:24	06/29/20 19:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 6:2	119	50 - 150	07/06/20 16:24	
13C2-FtS 8:2	75.9	50 - 150	07/06/20 16:24	
13C2-PFDA	58.1	50 - 150	07/06/20 16:24	
13C2-PFDoA	56.7	50 - 150	07/06/20 16:24	
13C2-PFHxA	62.4	50 - 150	07/06/20 16:24	
13C2-PFHxDA	65.1	50 - 150	07/06/20 16:24	
13C2-PFTeA	49.7	50 - 150	07/06/20 16:24	S
13C2-PFUnA	63.3	50 - 150	07/06/20 16:24	
13C3-HFPO-DA	61.1	50 - 150	07/06/20 16:24	
13C3-PFBS	71.6	50 - 150	07/06/20 16:24	
13C4-PFBA	56.2	50 - 150	07/06/20 16:24	
13C4-PFHpA	74.5	50 - 150	07/06/20 16:24	
13C4-PFOA	64.8	50 - 150	07/06/20 16:24	
13C4-PFOS	54.1	50 - 150	07/06/20 16:24	
13C5-PFNA	60.5	50 - 150	07/06/20 16:24	
13C5-PFPeA	65.1	50 - 150	07/06/20 16:24	
13C8-FOSA	53.5	50 - 150	07/06/20 16:24	
18O2-PFHxS	54.5	50 - 150	07/06/20 16:24	
d5-N-EtFOSAA	65.0	50 - 150	07/06/20 16:24	
d3-N-MeFOSAA	64.0	50 - 150	07/06/20 16:24	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/17/20 12:00
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-05B	**Units:**	ng/L
Lab Code:	20061912-07	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	**1.6 J**	4.4	1	07/06/20 16:35	06/29/20 19:30	
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND U	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluorobutanesulfonic Acid (PFBS)	**1.9 J**	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluorobutanoic Acid (PFBA)	**12**	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluorodecanesulfonic Acid (PFDS)	ND U	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluorodecanoic Acid (PFDA)	ND U	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluorododecanoic Acid (PFDoA)	ND U	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluoroheptanesulfonic Acid (PFHpS)	**2.6 J**	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluoroheptanoic Acid (PFHpA)	**9.6**	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluorohexanesulfonic Acid (PFHxS)	**6.9**	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluorohexanoic Acid (PFHxA)	**12**	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluorononanoic Acid (PFNA)	**21**	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluorooctanesulfonamide (PFOSA)	ND U	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluorooctanesulfonic Acid (PFOS)	**120**	1.8	1	07/06/20 16:35	06/29/20 19:30	
Perfluorooctanoic Acid (PFOA)	**54**	1.8	1	07/06/20 16:35	06/29/20 19:30	
Perfluoropentanoic Acid (PFPeA)	**5.6**	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluorotetradecanoic Acid (PFTeA)	ND U	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluorotridecanoic Acid (PFTriA)	ND U	4.4	1	07/06/20 16:35	06/29/20 19:30	
Perfluoroundecanoic Acid (PFUnA)	ND U	4.4	1	07/06/20 16:35	06/29/20 19:30	
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND U	4.4	1	07/06/20 16:35	06/29/20 19:30	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/17/20 12:00
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-05B	**Units:**	ng/L
Lab Code:	20061912-07	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
N-Methylperfluorooctanesulfonamidoacetic Acid	ND U	4.4	1	07/06/20 16:35	06/29/20 19:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 6:2	212	50 - 150	07/06/20 16:35	S
13C2-FtS 8:2	101	50 - 150	07/06/20 16:35	
13C2-PFDA	62.2	50 - 150	07/06/20 16:35	
13C2-PFDoA	57.1	50 - 150	07/06/20 16:35	
13C2-PFHxA	61.6	50 - 150	07/06/20 16:35	
13C2-PFHxDA	64.1	50 - 150	07/06/20 16:35	
13C2-PFTeA	62.1	50 - 150	07/06/20 16:35	
13C2-PFUnA	62.7	50 - 150	07/06/20 16:35	
13C3-HFPO-DA	53.7	50 - 150	07/06/20 16:35	
13C3-PFBS	51.5	50 - 150	07/06/20 16:35	
13C4-PFBA	57.4	50 - 150	07/06/20 16:35	
13C4-PFHpA	76.2	50 - 150	07/06/20 16:35	
13C4-PFOA	68.7	50 - 150	07/06/20 16:35	
13C4-PFOS	57.4	50 - 150	07/06/20 16:35	
13C5-PFNA	64.3	50 - 150	07/06/20 16:35	
13C5-PFPeA	63.7	50 - 150	07/06/20 16:35	
13C8-FOSA	58.0	50 - 150	07/06/20 16:35	
18O2-PFHxS	59.1	50 - 150	07/06/20 16:35	
d5-N-EtFOSAA	63.0	50 - 150	07/06/20 16:35	
d3-N-MeFOSAA	64.9	50 - 150	07/06/20 16:35	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/17/20 12:55
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-05A	**Units:**	ng/L
Lab Code:	20061912-08	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result		MRL	Dil.	Date Analyzed	Date Extracted	Q
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	**0.63**	**J**	4.4	1	07/06/20 16:45	06/29/20 19:30	
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND	U	4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluorobutanesulfonic Acid (PFBS)	**2.5**	**J**	4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluorobutanoic Acid (PFBA)	ND	U	4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluorodecanesulfonic Acid (PFDS)	ND	U	4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluorodecanoic Acid (PFDA)	ND	U	4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluorododecanoic Acid (PFDoA)	ND	U	4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluoroheptanesulfonic Acid (PFHpS)	**1.8**	**J**	4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluoroheptanoic Acid (PFHpA)	**8.4**		4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluorohexanesulfonic Acid (PFHxS)	**7.8**		4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluorohexanoic Acid (PFHxA)	**11**		4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluorononanoic Acid (PFNA)	**9.4**		4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluorooctanesulfonamide (PFOSA)	ND	U	4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluorooctanesulfonic Acid (PFOS)	**96**		1.7	1	07/06/20 16:45	06/29/20 19:30	
Perfluorooctanoic Acid (PFOA)	**46**		1.7	1	07/06/20 16:45	06/29/20 19:30	
Perfluoropentanoic Acid (PFPeA)	**5.4**		4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluorotetradecanoic Acid (PFTeA)	ND	U	4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluorotridecanoic Acid (PFTriA)	ND	U	4.4	1	07/06/20 16:45	06/29/20 19:30	
Perfluoroundecanoic Acid (PFUnA)	ND	U	4.4	1	07/06/20 16:45	06/29/20 19:30	
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND	U	4.4	1	07/06/20 16:45	06/29/20 19:30	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/17/20 12:55
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-MW-05A	**Units:**	ng/L
Lab Code:	20061912-08	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
N-Methylperfluorooctanesulfonamidoacetic Acid	ND U	4.4	1	07/06/20 16:45	06/29/20 19:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 6:2	199	50 - 150	07/06/20 16:45	S
13C2-FtS 8:2	106	50 - 150	07/06/20 16:45	
13C2-PFDA	55.8	50 - 150	07/06/20 16:45	
13C2-PFDoA	54.3	50 - 150	07/06/20 16:45	
13C2-PFHxA	57.3	50 - 150	07/06/20 16:45	
13C2-PFHxDA	60.8	50 - 150	07/06/20 16:45	
13C2-PFTeA	55.1	50 - 150	07/06/20 16:45	
13C2-PFUnA	63.2	50 - 150	07/06/20 16:45	
13C3-HFPO-DA	52.0	50 - 150	07/06/20 16:45	
13C3-PFBS	66.9	50 - 150	07/06/20 16:45	
13C4-PFBA	53.3	50 - 150	07/06/20 16:45	
13C4-PFHpA	68.2	50 - 150	07/06/20 16:45	
13C4-PFOA	60.0	50 - 150	07/06/20 16:45	
13C4-PFOS	50.4	50 - 150	07/06/20 16:45	
13C5-PFNA	60.4	50 - 150	07/06/20 16:45	
13C5-PFPeA	61.2	50 - 150	07/06/20 16:45	
13C8-FOSA	54.0	50 - 150	07/06/20 16:45	
18O2-PFHxS	50.4	50 - 150	07/06/20 16:45	
d5-N-EtFOSAA	60.2	50 - 150	07/06/20 16:45	
d3-N-MeFOSAA	66.8	50 - 150	07/06/20 16:45	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/17/20 13:25
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-Equip Blank	**Units:**	ng/L
Lab Code:	20061912-09	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluorobutanesulfonic Acid (PFBS)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluorobutanoic Acid (PFBA)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluorodecanesulfonic Acid (PFDS)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluorodecanoic Acid (PFDA)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluorododecanoic Acid (PFDoA)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluoroheptanesulfonic Acid (PFHpS)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluoroheptanoic Acid (PFHpA)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluorohexanesulfonic Acid (PFHxS)	~~0.45 J~~ -- ND/4.3 U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluorohexanoic Acid (PFHxA)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluorononanoic Acid (PFNA)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluorooctanesulfonamide (PFOSA)	ND U J	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluorooctanesulfonic Acid (PFOS)	ND U	1.7	1	07/06/20 16:56	06/29/20 19:30	
Perfluorooctanoic Acid (PFOA)	ND U	1.7	1	07/06/20 16:56	06/29/20 19:30	
Perfluoropentanoic Acid (PFPeA)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluorotetradecanoic Acid (PFTeA)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluorotridecanoic Acid (PFTriA)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
Perfluoroundecanoic Acid (PFUnA)	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	06/17/20 13:25
Sample Matrix:	Water	**Date Received:**	06/23/20 10:00
Sample Name:	CCSK-Equip Blank	**Units:**	ng/L
Lab Code:	20061912-09	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
N-Methylperfluorooctanesulfonamidoacetic Acid	ND U	4.3	1	07/06/20 16:56	06/29/20 19:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-FtS 6:2	66.3	50 - 150	07/06/20 16:56	
13C2-FtS 8:2	76.2	50 - 150	07/06/20 16:56	
13C2-PFDA	67.8	50 - 150	07/06/20 16:56	
13C2-PFDoA	66.0	50 - 150	07/06/20 16:56	
13C2-PFHxA	69.1	50 - 150	07/06/20 16:56	
13C2-PFHxDA	68.6	50 - 150	07/06/20 16:56	
13C2-PFTeA	62.0	50 - 150	07/06/20 16:56	
13C2-PFUnA	77.5	50 - 150	07/06/20 16:56	
13C3-HFPO-DA	65.8	50 - 150	07/06/20 16:56	
13C3-PFBS	78.4	50 - 150	07/06/20 16:56	
13C4-PFBA	65.8	50 - 150	07/06/20 16:56	
13C4-PFHpA	73.2	50 - 150	07/06/20 16:56	
13C4-PFOA	70.6	50 - 150	07/06/20 16:56	
13C4-PFOS	64.2	50 - 150	07/06/20 16:56	
13C5-PFNA	69.7	50 - 150	07/06/20 16:56	
13C5-PFPeA	67.4	50 - 150	07/06/20 16:56	
13C8-FOSA	49.9	50 - 150	07/06/20 16:56	S
18O2-PFHxS	63.9	50 - 150	07/06/20 16:56	
d5-N-EtFOSAA	72.6	50 - 150	07/06/20 16:56	
d3-N-MeFOSAA	68.9	50 - 150	07/06/20 16:56	

QC NONCONFORMANCE DOCUMENTATION

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-158242	**Units:**	ng/L
Lab Code:	MBLK-158242	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluorobutanesulfonic Acid (PFBS)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluorobutanoic Acid (PFBA)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluorodecanesulfonic Acid (PFDS)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluorodecanoic Acid (PFDA)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluorododecanoic Acid (PFDoA)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluoroheptanesulfonic Acid (PFHpS)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluoroheptanoic Acid (PFHpA)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluorohexanesulfonic Acid (PFHxS)	**0.4768 J**	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluorohexanoic Acid (PFHxA)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluorononanoic Acid (PFNA)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluorooctanesulfonamide (PFOSA)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluorooctanesulfonic Acid (PFOS)	ND U	2.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluorooctanoic Acid (PFOA)	ND U	2.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluoropentanoic Acid (PFPeA)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluorotetradecanoic Acid (PFTeA)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluorotridecanoic Acid (PFTriA)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
Perfluoroundecanoic Acid (PFUnA)	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND U	5.0	1	06/30/20 17:19	06/29/20 19:30	

Analytical Report

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	MBLK-158324	**Units:**	ng/L
Lab Code:	MBLK-158324	**Basis:**	Wet

Organic LC

Analysis Method: E537 Mod
Prep Method: E537 Mod

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluorobutanesulfonic Acid (PFBS)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluorobutanoic Acid (PFBA)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluorodecanesulfonic Acid (PFDS)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluorodecanoic Acid (PFDA)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluorododecanoic Acid (PFDoA)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluoroheptanesulfonic Acid (PFHpS)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluoroheptanoic Acid (PFHpA)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluorohexanesulfonic Acid (PFHxS)	**0.5504 J**	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluorohexanoic Acid (PFHxA)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluorononanoic Acid (PFNA)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluorooctanesulfonamide (PFOSA)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluorooctanesulfonic Acid (PFOS)	ND U	2.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluorooctanoic Acid (PFOA)	ND U	2.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluoropentanoic Acid (PFPeA)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluorotetradecanoic Acid (PFTeA)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluorotridecanoic Acid (PFTriA)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
Perfluoroundecanoic Acid (PFUnA)	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	
N-Ethylperfluorooctanesulfonamidoacetic Acid	ND U	5.0	1	07/06/20 17:17	06/30/20 18:56	

Client: ALS - ROCHESTER **Service Request:** 20061912
Project: R2005213
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Organic LC

Analysis Method: E537 Mod
Extraction Method: E537 Mod

Sample Name	Lab Code	13C5-PFPeA 50 - 150	13C8-FOSA 50 - 150	18O2-PFHxS 50 - 150
20061898-03AMS	20061898-03AMS	72.3	55.2	61.4
20061898-03AMSD	20061898-03AMSD	74.5	63.6	68.3
CCSK-MW-03B	20061912-01A	94.9	86.6	92.2
20061912-01AMS	20061912-01AMS	88.2	67.7	84.7
20061912-01AMSD	20061912-01AMSD	84.5	63.7	79.0
CCSK-MW-01B	20061912-02A	75.5	73.8	64.3
CCSK-MW-01A	20061912-03A	67.1	63.8	62.3
CCSK-MW-03A	20061912-04A	68.7	62.9	61.7
CCSK-MW-20B	20061912-05A	68.2	57.5	61.4
CCSK-MW-20A	20061912-06A	65.1	53.5	54.5
CCSK-MW-05B	20061912-07A	63.7	58.0	59.1
CCSK-MW-05A	20061912-08A	61.2	54.0	50.4
CCSK-Equip Blank	20061912-09A	67.4	49.9 S *	63.9
LCS-158242	LCS-158242	77.4	59.9	67.4
LCS-158324	LCS-158324	90.2	86.9	83.9
MBLK-158242	MBLK-158242	73.3	64.1	69.8
MBLK-158324	MBLK-158324	84.9	76.7	94.4

Client: ALS - ROCHESTER **Service Request:** 20061912
Project: R2005213
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Organic LC

Analysis Method: E537 Mod
Extraction Method: E537 Mod

Sample Name	Lab Code	13C2-FtS 6:2 50 - 150	13C2-FtS 8:2 50 - 150	13C2-PFDA 50 - 150
20061898-03AMS	20061898-03AMS	79.1	74.6	58.0
20061898-03AMSD	20061898-03AMSD	83.0	74.8	66.8
CCSK-MW-03B	20061912-01	129	110	90.5
20061912-01AMS	20061912-01AMS	111	104	93.8
20061912-01AMSD	20061912-01AMSD	107	103	83.2
CCSK-MW-01B	20061912-02	83.3	89.1	69.6
CCSK-MW-01A	20061912-03	101	88.8	64.5
CCSK-MW-03A	20061912-04	70.0	65.6	58.0
CCSK-MW-20B	20061912-05	124	77.5	62.8
CCSK-MW-20A	20061912-06	119	75.9	58.1
CCSK-MW-05B	20061912-07	212 S *	101	62.2
CCSK-MW-05A	20061912-08	199 S *	106	55.8
CCSK-Equip Blank	20061912-09	66.3	76.2	67.8
LCS-158242	LCS-158242	81.0	88.9	71.3
LCS-158324	LCS-158324	90.8	108	93.5
MBLK-158242	MBLK-158242	78.4	82.5	72.8
MBLK-158324	MBLK-158324	82.4	91.6	98.5

Client: ALS - ROCHESTER **Service Request:** 20061912
Project: R2005213
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Organic LC

Analysis Method: E537 Mod
Extraction Method: E537 Mod

Sample Name	Lab Code	13C2-PFTeA 50 - 150	13C2-PFUnA 50 - 150	13C3-HFPO-DA 50 - 150
20061898-03AMS	20061898-03AMS	61.8	62.8	70.6
20061898-03AMSD	20061898-03AMSD	68.4	70.6	73.1
CCSK-MW-03B	20061912-01A	85.7	99.1	85.9
20061912-01AMS	20061912-01AMS	103	113	67.9
20061912-01AMSD	20061912-01AMSD	93.7	99.5	64.4
CCSK-MW-01B	20061912-02A	53.8	72.5	71.6
CCSK-MW-01A	20061912-03A	68.0	67.5	60.0
CCSK-MW-03A	20061912-04A	52.0	60.3	66.8
CCSK-MW-20B	20061912-05A	50.7	66.2	65.1
CCSK-MW-20A	20061912-06A	49.7 S *	63.3	61.1
CCSK-MW-05B	20061912-07A	62.1	62.7	53.7
CCSK-MW-05A	20061912-08A	55.1	63.2	52.0
CCSK-Equip Blank	20061912-09A	62.0	77.5	65.8
LCS-158242	LCS-158242	74.3	78.1	76.6
LCS-158324	LCS-158324	88.5	105	91.7
MBLK-158242	MBLK-158242	71.4	77.9	74.5
MBLK-158324	MBLK-158324	74.7	113	82.6

Client:	ALS - ROCHESTER	**Service Request:**	20061912
Project:	R2005213	**Date Analyzed:**	07/06/2020
Sample Matrix:	Water	**Date Extracted:**	06/30/2020

Lab Control Sample Summary
Organic LC

Analysis Method:	E537 Mod	**Units:**	ng/L
Prep Method:	E537 Mod	**Basis:**	Wet
		Analysis Lot:	LCMS1_200706B

LCS-158324

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Fluorotelomer Sulphonic Acid 6:2 (FtS 6:2)	36.71	30.3	121	64-140
Fluorotelomer Sulphonic Acid 8:2 (FtS 8:2)	34.57	30.7	113	67-138
N-Ethylperfluorooctanesulfonamidoacetic Acid	31.46	32	98.3	61-135
N-Methylperfluorooctanesulfonamidoacetic Acid	33.64	32	105	65-136
Perfluorobutanesulfonic Acid (PFBS)	25.8	28.3	91.2	72-130
Perfluorobutanoic Acid (PFBA)	42.92 S	32	134 *	73-129
Perfluorodecanesulfonic Acid (PFDS)	32.59	30.8	106	53-142
Perfluorodecanoic Acid (PFDA)	41.27	32	129	71-129
Perfluorododecanoic Acid (PFDoA)	39	32	122	72-134
Perfluoroheptanesulfonic Acid (PFHpS)	35.34	30.5	116	69-134
Perfluoroheptanoic Acid (PFHpA)	35.44	32	111	72-130
Perfluorohexanesulfonic Acid (PFHxS)	31.98	29.1	110	68-131
Perfluorohexanoic Acid (PFHxA)	38.01	32	119	72-129
Perfluorononanoic Acid (PFNA)	40.25	32	126	69-130
Perfluorooctanesulfonamide (PFOSA)	37.71	32	118	67-137
Perfluorooctanesulfonic Acid (PFOS)	34.07	29.7	115	65-140
Perfluorooctanoic Acid (PFOA)	36.34	32	114	71-133
Perfluoropentanoic Acid (PFPeA)	37.96	32	119	72-129
Perfluorotetradecanoic Acid (PFTeA)	34.92	32	109	71-132
Perfluorotridecanoic Acid (PFTriA)	37.79	32	118	65-144
Perfluoroundecanoic Acid (PFUnA)	36.32	32	114	69-133